FALSE NEGATIVES UNDER A DISCOUNT ATTRIBUTION TEST FOR BUNDLED DISCOUNTS

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I. INTRODUCTION

Most of us love the idea of saving money by purchasing multiple products at once. But are better deals always good for competition and consumers? Answering this question requires a headlong dive into the puzzle[1] of bundling and bundled discounts, and the short answer is: "not always." Bundled discounts include "buy one, get one" offers, prix-fixe dinner specials, and rebates for meeting multi-product sales targets, to name a few prominent examples. A bundled discount occurs "when a seller offers a collection of different goods for a lower price than the aggregate price for which it would sell the constituent products individually."[2] The "defining characteristic" of bundled discounts is that "they are multi-product, purchase target discounts—they are conditioned upon purchasing some quantum of goods from multiple product markets."[3]

This Article considers the legal rules used to determine whether a particular instance of bundled discounting is anticompetitive, and it identifies weaknesses

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1 *See* Frank H. Easterbrook, *When Is It Worthwhile to Use Courts to Search for Exclusionary Conduct?*, 2003 COLUM. BUS. L. REV. 345, 345 (2003) (referring to the "puzzle of exclusionary conduct").

2 Thomas A. Lambert, *Evaluating Bundled Discounts*, 89 MINN. L. REV. 1688, 1689 (2005); *see also* HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY 403 (4th ed. 2008) ("[D]iscounts are often attached to a buyer's purchase of two different things together.").

3 Lambert, *supra* note 2, at 1694.

in a popular approach for evaluating the competitive effects of bundling. A recent set of transactions in the telecommunications sector[4] is utilized to illustrate the shortcomings of a price-cost test for bundled discounts, showing that a rule declaring all discounts that result in prices above some unit of incremental cost often fails to detect anticompetitive bundling in certain industries.[5] This discussion will illustrate the conditions under which a bundling practice may be anticompetitive, but nonetheless legal under the "discount attribution test"—a test that provides a rule of per se legality for "above cost"[6] bundled discounts—adopted by the Ninth Circuit Court of Appeals in *Cascade Health Solutions v. PeaceHealth*.[7] The conclusions drawn in this article, together with the fact that industries prone to such errors are prevalent, indicates that the theory underlying the Ninth Circuit's test is flawed.

Bundled discounts that raise anticompetitive concerns traditionally involve the grouping of one or more products over which an incumbent firm has substantial market power (the "bundling" product) along with a product that faces more robust competition (the "competitive" product).[8] As this Article will demonstrate, it is rather easy for firms to employ bundled discounts anticompetitively, where two conditions are present: the package's bundling products are insulated with high barriers to entry and the bundled products experience extremely low marginal costs.[9] Consequently, where these conditions are present, incumbent firms may successfully deter entry through two primary means: First, they may take advantage of high barriers to entry in the bundling product markets to erect multi-tiered entry barriers, making it harder for com-

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4 *See infra* Part I.

5 The case study I examine has been the subject of a Department of Justice Antitrust Division enforcement action that ended in a consent decree. *See infra*, note 47 and accompanying text.

6 *See* discussion *infra* note 17 (providing a fuller explanation of "above-cost" discounts).

7 Cascade Health Solutions v. PeaceHealth, 502 F.3d 895 (9th Cir. 2007).

8 Many—indeed probably most—bundled discounts do not raise competitive concerns, and are simply groups of products offered at a package price that is discounted off of the price of the products purchased separately. *See*, *e.g.*, Lambert, *supra* note 2, at 1689-92.

9 Although I refer to "marginal costs" at various points in this Article, the *Cascade* test uses average variable cost to determine whether or not a discount is "below cost." *Cascade Health Solution*, 502 F.3d at 910. The conclusions drawn here are not affected by which measure of cost is used, as marginal cost and average variable cost are similar in the industries discussed. The operative intuition for the purposes of this Article is that in certain industries, wireless mobile services being the example used here, the increase in cost that is incurred from serving an additional customer is negligible for an efficient wireless network. Average variable cost is often used to approximate marginal cost, since marginal cost is difficult to measure. *See* Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697, 716 (1975); *see generally Cascade Health Solutions*, 502 F.3d 895.

petitors to contest the individual competitive product market.[10] The difficulty arises because new entrants must invest in entering multiple markets at once to make a comparable package offer to consumers.[11] Second, incumbents may use limit-pricing strategies by effectively dropping the price on the competitive product down to marginal cost—which is often near zero in many industries—to undermine new entry by signaling the unprofitability of entering the competitive product market.[12] This limit-pricing strategy is especially effective where there are substantial barriers to entry into the competitive product market itself, since structural disincentives to enter already exist.[13] Moreover, it is possible for incumbents to achieve this sort of exclusion without offending the *Cascade* rule of per se legality for above-cost discounts, since below-cost (i.e., "predatory") pricing is unnecessary to deter entry in these particular ways.

A typical bundling case is brought under Section 2 of the Sherman Act,[14] and alleges the foreclosure of a dominant firm's horizontal rival from some market, customer, or opportunity.[15] The theory underlying a typical bundling case[16] is that the firm is excluded because it is less diversified in what it produces and cannot offer a comparable bundle consisting of all products sold by the dominant bundling firm.[17] Importantly, under this theory, anticompetitive

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10 *See* Lambert, *supra* note 2, at 1694.

11 *See id*.

12 *See generally* Aaron R. Moore, *Anticompetitive Bundled Discounts: A Way Out of the Wilderness*, 37 J. CORP. L. 951 (2012); *Cascade Health Solutions*, 502 F.3d 895.

13 *See* Lambert, *supra* note 2, at 1694.

14 15 U.S.C. § 2 (2006). This discussion does not delve the specific requirements for making out a claim of monopolization or attempted monopolization in court. Instead, it is concerned with describing bundling as a predicate act for a monopolization-related offense. For such a discussion, see Spectrum Sport v. McQuillan, 506 U.S. 447, 456 (1993) (outlining the specific requirements for making out a claim of monopolization or attempted monopolization); *see also* Moore, *supra* note 12, at 958.

15 Moore, *supra* note 12, at 954 ("There is not yet a Supreme Court ruling concerning bundled discounts, and the circuit courts are in disagreement about which bundled discounts are anticompetitive. Bundled discounts sit in a unique legal middle ground between predatory pricing and product tying, demonstrating some elements of each.")

16 Scholars disagree over whether bundling of this sort can even be anticompetitive; still others believe it can be anticompetitive but should never be illegal. Professor Herbert Hovenkamp sums up the theory underlying anticompetitive bundling in the following way: "Bundled discounts might be thought to threaten competition when the dominant firm makes several goods while rivals make only one good or perhaps some subset of the dominant firm's offering." HOVENKAMP, *supra* note 2, at 404. *See also* Barry Nalebuff, *Bundling As a Way to Leverage Monopoly* (Yale Sch. of Mgmt. Working Paper Series ES, Paper No. 36, Oct. 8, 2004), *available at* http://commcns.org/1dYGM5v (arguing that "in the general case, a monopolist can earn higher profits by leveraging its power into a competitive market."). The late Judge Robert Bork provides a viewpoint critical to this theory of exclusionary bundling, as well as one of the most famous criticisms of the theory. *See* ROBERT A. BORK, THE ANTITRUST PARADOX 372–75 (1978) (proposing an alternative viewpoint regarding leveraging power in a competitive marketplace).

17 *See* Daniel A. Crane, *Mixed Bundling, Profit Sacrifice, and Consumer Welfare*, 55

exclusion is still possible *even if* the marginalized firm can provide the product as efficiently as the bundler. Similarly, the theory holds that exclusion is still a possibility if the incumbent firm's pricing is above cost and, therefore, not "predatory."[18] One of the central difficulties with evaluating bundled discounts then, is to decide how to treat non-predatory bundles that may still be anticompetitive. Courts have endeavored to fashion methodologies that can appropriately separate pro-competitive bundles from anticompetitive ones, and there currently exists a split among the circuits in how to treat bundled discounts under the antitrust laws.[19]

The two dominant schools of thought in antitrust bundling analyses revolve around the Third Circuit's decision in *LePage's, Inc. v. 3M*[20] and the Ninth Circuit's decision in *Cascade Health Solutions v. PeaceHealth*.[21] In the *LePage's* case, the court condemned a self-admitted monopolist's bundled rebate program based on traditional Section 2 principles, without requiring a showing of below-cost pricing.[22] It distinguished bundling from predatory pricing, for which there is a rule of per se legality for above-cost discounts.[23] The

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EMORY L.J. 424, 425 (2006) ("Mixed bundling strategies may be employed by a dominant firm to foreclose competition by a single-product competitor that is unable to match the multiproduct or multimarket discounts and therefore loses sales in the sole market in which it competes with the dominant firm.").

18 An oft-cited example is Judge Kaplan's hypothetical involving the sale of shampoo and conditioner:

> Assume for the sake of simplicity that the case involved the sale of two hair products, shampoo and conditioner, the latter made only by A and the former by both A and B. Assume as well that both must be used to wash one's hair. Assume further that A's average variable cost for conditioner is $2.50, that its average variable cost for shampoo is $1.50, and that B's average variable cost for shampoo is $1.25. B therefore is the more efficient producer of shampoo. Finally, assume that A prices conditioner and shampoo at $5 and $3, respectively, if bought separately but at $3 and $2.25 if bought as part of a package. Absent the package pricing, A's price for both products is $8. B therefore must price its shampoo at or below $3 in order to compete effectively with A, given that the customer will be paying A $5 for conditioner irrespective of which shampoo supplier it chooses. With the package pricing, the customer can purchase both products from A for $5.25, a price above the sum of A's average variable cost for both products. In order for B to compete, however, it must persuade the customer to buy B's shampoo while purchasing its conditioner from A for $5. In order to do that, B cannot charge more than $0.25 for shampoo, as the customer otherwise will find A's package cheaper than buying conditioner from A and shampoo from B. On these assumptions, A would force B out of the shampoo market, notwithstanding that B is the more efficient producer of shampoo, without pricing either of A's products below average variable cost.

Ortho Diagnostic Sys., Inc. v. Abbott Labs., Inc., 920 F. Supp. 455, 467 (S.D.N.Y. 1996).

19 Lambert, *supra* note 2, at 1699-1700 (outlining five possible approaches courts could take in evaluating bundled discounts).

20 *See generally* LePage's, Inc. v. 3M, 324 F.3d 141 (3d Cir. 2003).

21 *See generally* Cascade Health Solutions v. PeaceHealth 515 F.3d 883 (9th Cir. 2007).

22 *LePage's, Inc.*, 324 F.3d at 144.

23 *See* Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 209-11

court held that this rule (i.e., above-cost discounting is always legal) did not apply in non-oligopolistic markets.[24] It ultimately found the monopolist's bundling program to be exclusionary under Section 2. [25] Under the *LePage's* decision, bundling may be deemed unlawful exclusionary conduct under the general rule in *Aspen Skiing*,[26] where the U.S. Supreme Court defined anticompetitive conduct as "behavior that impairs the opportunities of rivals through conduct that either does not constitute competition on the merits or achieves a competitive benefit in an unnecessarily restrictive way."[27]

In the second major bundling case, *Cascade*, the court adopted a "discount attribution" cost-based test containing an above-cost safe harbor.[28] Under that test, the full amount of discounts given by the defendant on the bundle is allocated to the competitive product.[29] The bundle will not be declared illegal under Section 2 unless the resulting price of the competitive product is below the firm's average variable cost to produce it.[30] The *Cascade* court adapted the rule of per se legality for above-cost discounts from predatory pricing doctrine to the bundling scenario.[31] It expressed concern that an erroneous finding of antitrust liability (i.e., a type I error or "false positive"), and concomitant treble damages award, would be too likely to occur under the framework of the *LePage's* decision.[32] That prospect, according to the *LePage's* court, would chill price-cutting and ultimately lead to higher prices for consumers.[33] These concerns prompted the court to adopt a bright-line, price-cost rule that provided a standard of legality based on a company's own cost information.[34]

(1993) (holding that any simple price cut in the single-product context, resulting in a price exceeding the seller's cost, is immune from antitrust liability).

24 *LePage's, Inc.,* 324 F.3d at 168–69.

25 The court upheld jury findings imposing liability on the defendant under section 2 of the Sherman Act. *LePage's, Inc*., 324 F. 3d at 155–57 (explaining that the principal anticompetitive effect of bundled rebates as offered by 3M is that "when offered by a monopolist, they may foreclose portions of the market to a potential competitor who does not manufacture an equally diverse group of products and who therefore cannot make a comparable offer."). It concluded that, "3M used its monopoly in transparent tape, backed by its considerable catalog of products, to squeeze out LePage's." *Id*. at 157 (In effect, customers who wanted to reap the full rebate amount offered by 3M had to purchase products in numerous categories, while LePage's only competed in the transparent tape market.").

26 *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

27 *See* Jonathan Rubin, *Bundling as Exclusionary Pricing to Maintain Monopoly*, COMPETITION POL'Y INT'L 5 (June 2008).

28 Cascade Health Solutions v. PeaceHealth, 515 F.3d 883, 906 (9th Cir. 2007).

29 *Id*.

30 *Id*. The court ultimately adopted average variable cost as the appropriate measurement of incremental cost, and vacated the district court's finding of liability on the bundling-related monopolization claim. *Id*. at 917.

31 *Id*. at 905.

32 *Id*. at 908.

33 LePage's, Inc. v. 3M, 324 F.3d 141, 159 (3d Cir. 2003).

34 *Cascade Health Solutions*, 515 F.3d at 907.

Using the above-mentioned telecommunications agreements as a lens, this Article contends that the discount attribution test adopted by the Ninth Circuit is unacceptably prone to producing false negatives.[35] This result is likely because the test requires a showing of below-cost pricing on the product facing competition.[36] But in product markets in which average variable costs of production are close to zero, as they are in the mobile wireless market (the "bundled" product in the *LePage's* case),[37] an anticompetitive bundling strategy is essentially immune from liability in all but the most extreme cases involving the deepest of discounts. This is an important and, as this Article will argue, probably unintended consequence of this rule of law— if a firm does not price below cost on its bundle, it does not necessarily follow that the bundle is procompetitive or competition-neutral.[38] Even accepting that antitrust law should prefer false negatives to false positives,[39] there is strong reason to believe that industries prone to false negatives are more common than the court in *Cascade* could have imagined.[40] The main intuition here is that the broad space for discounting—as a result of extremely low costs of production in telecommunica-

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35 A "false negative," or "Type II error," is an underinclusiveness error, and refers to an instance of anticompetitive conduct going undetected. In the context of antitrust law, this would be a judicial finding that no antitrust violation occurred, when in fact the defendant's conduct is actually anticompetitive. On the other hand, a false positive, or "Type I error," is an over-inclusiveness error. In antitrust, this would be represented by a judicial finding that a defendant committed an antitrust violation, when the conduct was not actually anticompetitive. *See* Lynn A. Stout, *Type I Error, Type II Error, and the Private Securities Litigation Reform Act*, 38 ARIZ. L. REV. 711, 711 (1996) (defining and discussing these terms in the context of securities law).

36 *Cascade Health Solutions*, 515 F.3d at 898.

37 Brief for United States as Amicus Curiae at 14, 3M v. LePage's Inc., 542 U.S. 953 (2004) (No. 02-1865).

38 Professor Aaron Edlin has proposed using "consumer betterment" in place of a price-cost test for determining whether low-prices in the single-product scenario are anticompetitive. AARON EDLIN, RESEARCH HANDBOOK ON THE ECONOMICS OF ANTITRUST LAW 39 (Einer El Hauge ed., 2013). Instead of asking whether a challenged practice is likely to exclude an equally or more efficient competitor from the defendant's market, Edlin would ask whether "the challenged practice is likely . . . to exclude . . . a competitor who would provide consumers a better deal than they would get from the monopoly." *Id*.

39 *See* Alan Devlin & Michael Jacobs, *Antitrust Error*, 52 WM. & MARY L. REV. 75, 86 (2010). Devlin and Jacobs present the accepted wisdom: "[m]ore than any other area of civil law, antitrust is error-prone." *Id.* As they explain, faced with such uncertainty in application of the law, antitrust has adopted a decision-theoretic standard that prefers underenforcement to overenforcement. *Id.* As a result, "this principle has significantly influenced the substantive and procedural barriers to recovery created by the courts" and that "[d]octrine has been deliberately crafted to siphon off complaints that bear an unacceptable propensity for false positives." *Id.* This inclination to err on the side of underenforcement has "aligned the U.S. judiciary in large degree with the conservative teachings of the Chicago School." *Id*. at 84. *See also* Thomas A. Lambert, *The Roberts Court and the Limits of Antitrust*, 52 B.C. L. REV. 871 (2011) (arguing that the antitrust decisions of the Roberts Court are consistent with the Chicago School preference for false negatives over false positives).

40 *Cascade Health Solutions*, 515 F.3d at 908.

tions and other industries—raises the prospect that firms may use bundling to deter entry into certain markets by firms that would become as efficient as the existing firms. These observations, in turn, could be applied to future instances of bundled discounting in markets that share structural similarities with those discussed here.[41] Indeed, the discussion will contend that such effects are likely to occur in a non-trivial number of cases, making the concern with under-inclusion more practical than theoretical, and calling into question the decision-theoretical underpinnings of the rule adopted in *Cascade*. Therefore, it is my position that if a legal rule or formulation can be fashioned that does not also tend to affirmatively protect inefficiencies, then the discount attribution test is not a panacea for addressing the competitive harms that may stem from a bundled discount program.

The test's operative mechanism—a cost-based standard[42]— leads to an underinclusive approach to liability that may yield many more false negatives than the Ninth Circuit probably contemplated. Because the *Cascade* price-cost test[43] does not contain a mechanism for addressing the competitive effects of bundled discounts short of excluding an existing and equally efficient competitor, there is good reason to seek out an alternate approach. The work of this Article, however, is not to propose an alternative to the discount attribution test.[44] Instead, the goal here is to demonstrate that any adherence to it must accept that it is best understood as an underinclusive rule of prophylaxis, and not a final solution to the bundling and bundled discounts puzzle. Moreover, the

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41 Michael A. Carrier, *Unraveling the Patent-Antitrust Paradox*, 150 U. PA. L. REV. 761, 815 (2002).

42 *Cascade Health Solutions*, 515 F.3d at 905.

43 *See supra* note 36.

44 Alternative doctrinal solutions have been suggested, although I do not evaluate them here. Professor Thomas Lambert, for example, has proposed a "third way" alternative to *LePage's* and *Cascade*. Under Lambert's approach, an above-cost bundled discount is presumed legal, but the plaintiff would still have the opportunity to prove "certain easily ascertainable facts indicating genuine exclusion of an efficient rival." Lambert, *supra* note 39. This proposed test would require the following showings: there are barriers to entry in the product market in which the plaintiff does not compete as well as the competitive product market; the plaintiff cannot practically coordinate with other producers to produce a competing bundle; and the plaintiff made a good faith effort to become a supplier to the discounter but was rebuffed. *See* Lambert, *supra* note 2, at 1742. While Lambert's approach recognizes that above-cost bundled discounts can be exclusionary, it would not look beyond exclusion of existing rivals. In his work in the area of single-product predatory pricing, Professor Edlin, on the other hand, has proposed incorporating a sensitivity to the opportunities of new and potential entrants who are not yet efficient. *See* Aaron Edlin, *Stopping Above-Cost Predatory Pricing*, 111 YALE L.J. 941, 945 (2002). Edlin's test for exclusionary single-product pricing proposes that, in markets where incumbents "enjoy significant advantages over potential entrants, but another firm enters and provides buyers with a substantial discount, the monopoly should be prevented from responding with substantial price cuts or significant product advancements until the entrant has had a reasonable time to recover its entry costs and become viable." *Id*.

weakness of the price-cost model[45] suggests that jurisdictions implementing new liability rules for bundled discounts should consider the creation of an alternate model.

This Article will point out the ways in which the telecommunications bundle could be used anti-competitively,[46] while still passing muster under the test. In Part I, I describe the new product bundle that forms the basis of the case study I rely upon to draw my conclusions, and in Part II, I outline the contours of the two dominant approaches to addressing the legality of the bundled discounts under the antitrust laws. In Part III, I describe the theory behind the notion that low prices can also be anticompetitive prices. In Part IV, I demonstrate how the *Cascade* test could produce a false negative. Finally, in Part V, I argue that false negatives are actually much more prevalent than proponents of that rule might expect, concluding that the *Cascade* test relies upon a decision-theoretic framework that is ill-suited to evaluating bundled discounts in several critical sectors of our economy.

II. THE QUAD PLAY BUNDLE

In December 2011, Verizon Wireless and several cable companies (the "Cable Defendants")[47] entered into a series of commercial agreements (the "Commercial Agreements") that would allow them to market "quad play" bundles for retail sale.[48] These four-part packages consist of residential voice, video and broadband services, along with wireless mobile telephone service.[49] Residential voice, video and broadband services are commonly offered and purchased in bundles known as "triple plays."[50] Companies that provide each component service themselves typically offer these three-part bundles.[51] But when a company cannot supply each service, it may partner with complemen-

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45 *See* Lambert, *supra* note 2, at 1690; Edlin, *supra* note 44, at 955.

46 Professor Daniel Rubinfeld has written that in the bundling context, "[a]s a general rule, one might view bundled rebates as anticompetitive if they (a) reduce consumers welfare, and (b) do so by impairing rivals' ability to make competitive offers to potential customers." Daniel Rubinfeld, *3M's Bundled Rebates: An Economic Perspective*, 72 U. CHI. L. REV. 243, 251 (2005).

47 The Cable Defendants are Comcast, Time Warner, Cox, and Bright House Networks. Complaint at 1, United States v. Verizon Commc'ns, Inc., No. 12-CV-01354 (D.D.C. Aug. 16, 2012), 2012 WL 3528463.

48 *Id*. at 2.

49 *News Release: Verizon's New 'Quad-Play' Bundle Offers Customers Wireless Calling With Home Phone, TV and Broadband in Money-Saving Combinations*, VERIZON (Oct. 19, 2009), http://commcns.org/1f9M9Pp.

50 Complaint, *supra* note 47, at 6.

51 Competitive Impact Statement at 6, United States v. Verizon Commc'ns, Inc., No. 12-CV-01354 (D.D.C. Aug. 16, 2012), 2012 WL 3868038.

tary providers to offer bundles.[52]

According to the U.S. Department of Justice, Verizon perceives opportunities for growth in the development of integrated wireline-wireless services, but only offers FiOS, its brand of wireline services, in a portion of the country.[53] The Cable Defendants, on the other hand, each have a large customer base and a broad geographic footprint, and are thus attractive partners for providing complementary component services to Verizon Wireless in its attempt to offer a four-part bundle.[54] The sale of a quad play bundle, however, raises the prospect of harm to competition,[55] since several of the Cable Defendants possess monopoly power in certain geographic markets in the United States.[56] This discussion focuses on the particular risk of harm to competition in the wireless market and will refer to that market as the "competitive" market because the discount attribution tests speaks in terms of a "competitive" product market and focuses on the "product facing competition";[57] however, there is substantial debate as to whether the wireless market is actually "competitive" in the traditional sense of the word.[58]

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52 *Id*.

53 Final Judgment at 5, United States v. Verizon Commc'ns, Inc., No. 12-CV-01354 (D.D.C. Aug. 13, 2013).

54 There surely are a host of other competition issues raised by these agreements. For example, the Cable Defendants and Verizon Wireless are competitors in some markets, and may become competitors in the wireless service market; however, these issues are beyond the scope of this discussion. Competitive Impact Statement, *supra* note 51.

55 Moore, *supra* note 12, at 954. Although the quad play would be offered by multiple firms as a cross-seller bundle, analysis of its competitive effects could probably take place under either section 1 or 2, the latter route would potentially be appropriate given that the package would contain one or more monopoly products. Courts will almost certainly analyze a bundling challenge the same way, regardless of the section of the Sherman Act under which the plaintiff brings the suit.

56 The arguments in this Article proceed on the uncontroversial assumption that some Cable Defendants possess monopoly power, or at least substantial market power, in some local markets over voice, video, or broadband. *In re* Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, *Fourteenth Report*, 27 F.C.C.R. 8610, 8627 (July 20, 2012); *see also* SUSAN CRAWFORD, CAPTIVE AUDIENCE: THE TELECOM INDUSTRY & MONOPOLY POWER IN THE NEW GILDED AGE 9 (2013) (describing the existence of monopoly power in numerous geographic areas over numerous services in the telecommunications industry). The Department of Justice also views the relevant markets and market power this way, though it did not pursue monopolization claims in its suit to enjoin the deals. *See* Complaint, *supra* note 47, at 11 ("The Cable Defendants are dominant in many local markets for both video and broadband services."). The Antitrust Division sued under Section 1 of the Sherman Act, pursuing litigation based on nationwide market share figures. *Id*. This approach was surely a more efficient way for the government to remedy the antitrust concerns stemming from the deals and, in fact, the DOJ did not pursue the theory proposed in this Article. Nonetheless, this choice of litigation strategy says little about the viability of the theory of competitive harm via bundling analyzed here.

57 *See infra* note 61.

58 *Compare* Second Amended Complaint, United States v. AT&T, Inc., No. 11-CV-01560 (D.D.C. Sept. 30, 2011) (describing high levels concentration in mobile wireless and

Bundling in competitive markets, of course, ordinarily raises no concern for antitrust.[59] Indeed, there are many pro-competitive or competitive-neutral explanations for why mixed bundling occurs.[60] However, mixed bundling may also be used by dominant firms to protect or maintain a monopoly, or to extend monopoly power into competitive markets.[61] Consequently, there are several ways in which bundling can be harmful to competition.[62] The antitrust concerns raised by the Commercial Agreements, as well as the circuit split described in this Article, provide a good opportunity to re-examine contemporary bundling analysis under the antitrust laws, as there are several reasons to conclude that the four-part bundle to be sold by Verizon Wireless, in partnership with the Cable Defendants, can be used to the detriment of competition in the wireless service market.[63] The remainder of this Article describes two dominant approaches to evaluating bundled discounts and observes several difficulties with the Ninth Circuit's rule (despite it being the more popular approach) by identifying some of the ways that the test may yield false negatives, or instances of anticompetitive conduct going undetected.[64] In addition to having been adopted by the Ninth Circuit, the discount attribution test has been employed in two district court cases in the Second Circuit and was recommended by the bipartisan Antitrust Modernization Commission.[65] Additionally, a group of antitrust

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arguing that the four large providers, who provided more than 90% of service connections nationwide, were "well-positioned to drive competition at both a national and local level"), *with* Gerald R. Faulhaber et al., *Assessing Competition in U.S. Wireless Markets*: *Review of the FCC's Competition Reports*, 64 FED. COMM. L.J. 319, 328–29 (2012) (arguing that indirect evidence of market power derived from market definition analysis is an antiquated approach, and that the wireless industry is actually "effectively competitive").

59 Bruce H. Kobayashi, *Does Economics Provide a Reliable Guide to Regulating Commodity Bundling by Firms? A Survey of the Economic Literature*, 1 J. COMPETITION L. & ECON. 707, 708 (2005).

60 Professor Daniel Crane has catalogued some of the most significant procompetitive and competitively-neutral reasons that firms engage in mixed bundling. He explains that bundling may yield cost efficiencies, including economies of scope and transactions costs savings, and that bundling can be a form of procompetitive price discrimination. Crane, *supra* note 17, at 431-32.

61 Again, this view is not uncontroversial. *See id*. at 427 n.11.

62 *Id.* at 443 (explaining that the two main theories of anticompetitive bundling are forcing rival firms to price unprofitably and creating entry barriers by raising rivals' costs).

63 For the sake of illustration, this discussion focuses on the agreements as they stood before the Department of Justice sued to enjoin the transactions, winning fundamental concessions reflected in a Proposed Final Judgment filed with the D.C. District Court. *See* Competitive Impact Statement, *supra* note 51, at 3–4. It therefore focuses on the bundling-related harms that would have resulted had the government not intervened. The court has approved the settlement; therefore, it will operate as a consent decree. *See* Final Judgment, United States v. Verizon Commc'ns, Inc., No. 12-CV-01354 (D.D.C. Aug. 13, 2013).

64 *See supra* note 35.

65 *See* ANTITRUST MODERNIZATION COMM'N, REPORT & RECOMMENDATION 99 (Apr. 2007). The recommendation stated, *inter alia*, that courts should require a plaintiff to show that "after allocating all discounts and rebates attributable to the entire bundle of products to

law professors urged its adoption as amici curiae in *Cascade* itself.[66]

III. EVALUATING BUNDLED DISCOUNTS: A SPLIT AMONG THE CIRCUITS

This section summarizes the Third Circuit's approach to evaluating bundled discounts, articulated in *LePage's v. 3M*,[67] as well as the Ninth Circuit approach from *Cascade Health Solutions v. PeaceHealth*.[68]

A. The Third Circuit Exclusionary Conduct Approach

In this case, LePage's, a manufacturer of private label transparent tape, alleged that 3M maintained a monopoly in the market for transparent tape by, among other things, a bundled rebate program for large retail stores.[69] The discounts were conditioned on purchasers meeting sales targets in six diverse categories including health care, home care, home improvement, stationery (including transparent tape), retail auto and "leisure time."[70] The number of product categories in which the purchaser met 3M's stated target determined the size of the discount.[71] The court noted that "[i]f a customer failed to meet the target for any one product, its failure would cause it to lose the rebate across the line. This created a substantial incentive for each customer to meet the targets across all product lines to maximize its rebates."[72] In effect, customers who wanted to reap the full rebate amount offered by 3M had to purchase products in numerous categories. However LePage's only competed in the transparent tape market and lost sales when several retail chains shifted their tape purchases to 3M.[73] LePage's alleged that to defeat this shift, it would have to compensate purchasers for the loss of rebates across all of those product lines, and not just the loss of tape-specific rebates, which it could not do based

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the competitive product, the defendant sold the competitive product below its incremental cost for the competitive product."

66 *See* Brief for Amici Curiae Law Professors in Support of Defendant-Appellant and Cross-Appellee PeaceHealth Supporting Reversal of the Verdict Concerning Bundled Discounts at 2, Cascade Health Solutions v. PeaceHealth, 515 F.3d 883 (2007) (No. 05-35627). Professors Crane, Lambert, Morgan, Sokol and Squire argued that "bundled discounts should never be unlawful unless, at a minimum, the seller has charged a below-cost price in the competitive market after discounts given in the non-competitive market are reallocated to the competitive market." *Id*.

67 LePage's, Inc. v. 3M, 324 F.3d 141 (3d Cir. 2003) (en banc).

68 Cascade Health Solutions v. PeaceHealth, 515 F.3d 883, 893 (9th Cir. 2007).

69 *LePage's, Inc.,* 324 F. 3d at 145.

70 *Id*. at 154.

71 *Id*. at 145.

72 *Id*.

73 *Id*.

on its limited product line.[74]

In declining to analogize bundling to predatory pricing,[75] the court observed that bundled rebates might be anticompetitive when offered by a monopolist.[76] The court reasoned that the principal anticompetitive effect of bundled rebates occurs "when offered by a monopolist, [bundled discounts] may foreclose portions of the market to a potential competitor who does not manufacture an equally diverse group of products and who therefore cannot make a comparable offer."[77] The Third Circuit, sitting *en banc*, ultimately affirmed the trial court's judgment in favor of LePage's.[78] The court concluded, "the jury could reasonably find that 3M used its monopoly in transparent tape, backed by its considerable catalog of products, to squeeze out LePage's."[79] The court relied on more familiar principles of Section 2 exclusionary conduct, eschewing a cost-based test.[80] It did not require LePage's to show that it, or a hypothetically equally efficient (as 3M) competitor could not meet the discounts without pricing below cost.[81]

B. The Ninth Circuit Cost-Based Rule

In *Cascade Health Solutions v. PeaceHealth*,[82] PeaceHealth and Cascade's predecessor, McKenzie, was a competitor in the markets for primary and secondary acute-care hospital services.[83] PeaceHealth also provided "tertiary care," which includes more complex services like invasive cardiovascular surgery, with over a 90% market share in certain sub-specialties.[84] McKenzie did not provide tertiary care services.[85] PeaceHealth began to offer bundled service packages to some insurance companies, including large discounts on tertiary services, if the insurer made PeaceHealth its sole preferred provider of all services—primary, secondary and tertiary.[86] McKenzie sued under Section 2, alleging that PeaceHealth engaged in anticompetitive conduct by offering these bundled discounts to the insurance companies. McKenzie argued that Peace-

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74 *Id*. at 174.
75 *Id*. at 155.
76 *Id*.
77 *Id*.
78 *Id*. at 141.
79 *Id*. at 157.
80 *Id*. at 152-54.
81 *See* Gary P. Zanfagna, *LePage's v. 3M: A Reality Check,* ANTITRUST SOURCE (Nov. 2004), *available at* http://commcns.org/KMkzMo.
82 *See generally* Cascade Health Solutions v. PeaceHealth, 515 F.3d 883 (9th Cir. 2007).
83 *Id*. at 892–93.
84 *Id*. at 891.
85 *Id*.
86 *Id*. at 892.

Health had "coerced" insurers into purchasing primary and secondary services from PeaceHealth based on its monopoly power in tertiary care.[87]

The Ninth Circuit vacated the judgment and remanded the case so that the trial court could instruct the jury on a new cost-based rule announced by the court:

> To prove that a bundled discount was exclusionary or predatory for the purposes of a monopolization or attempted monopolization claim under § 2 of the Sherman Act, the plaintiff must establish that, after allocating the discount given by the defendant on the entire bundle of products to the competitive product or products, the defendant sold the competitive product or products below its average variable cost of producing them.[88]

The court held that the "exclusionary conduct element of a claim arising under Section 2 of the Sherman Act cannot be satisfied by reference to bundled discounts unless the discounts result in prices that are below an appropriate measure of the defendant's costs."[89] It adopted a "discount attribution" standard under which the "full amount of the discounts given by the defendant on the bundle are allocated to the competitive product or products."[90] Under this standard, if the "resulting price of the competitive product . . . is below the defendant's incremental cost to produce them, the trier of fact may infer the bundle is exclusionary," for the purposes of Section 2.[91] According to the court, this standard would only condemn those bundles that have the potential to exclude a "hypothetical equally efficient producer of the competitive product."[92]

The Ninth Circuit, in adopting this rule with an above-cost safe harbor, recalled that the Supreme Court had "forcefully suggested" that prices above some measure of incremental cost should not be condemned under the antitrust laws.[93] This view stemmed from a fear of chilling legitimate price-cutting.[94] The court therefore extended the predatory pricing rule announced in the Supreme Court's decision in *Brooke Group Ltd v. Brown & Williamson Tobacco*

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[87] *Id*. at 893.

[88] *Id*. at 910.

[89] *Id*. at 903.

[90] *Id*. at 906.

[91] *Id*.

[92] *Id*. It should also be noted that the requirement of below-cost pricing is best understood as a necessary, but not sufficient, condition for finding a bundle to be exclusionary under this test; if a firm's bundle "fails" the test, it is presumably still given an opportunity to offer an efficiency justification. Professor Lambert, for example advocates for certain additional showings. These would include a requirement that the complaining rival show first that barriers to entry in other product markets prevented it from expanding its scope to offer a competing bundle, and that it could not have collaborated with sellers of products within those other product markets to offer a competitive cross-seller bundle. *See* Lambert, *supra* note 2, at 1745.

[93] *Cascade Health Solutions*, 515 F.3d at 901.

[94] *Id*.

Corp.,[95] an opinion that has been highly resonant in judicial and scholarly attempts to arrive at a satisfactory bundling analysis.[96] The Ninth Circuit felt bound to the rule that "a plaintiff seeking to establish competitive injury resulting from a rival's low prices must prove that the prices complained of are below an appropriate measure of its rival's costs."[97] It continued, recalling that "the Court [in *Brooke Group*] went on to emphasize that '[l]ow prices benefit consumers regardless of how those prices are set, and so long as they are above predatory levels, they do not threaten competition.'"[98] It once again noted that the Court in *Brooke Group* stated a general rule: "the exclusionary effect of prices above a relevant measure of cost either reflects the lower cost structure of the alleged predator, and so represents competition on the merits, or is beyond the practical ability of a judicial tribunal to control without courting intolerable risks of chilling legitimate price-cutting."[99] Thus, it is clear that the Ninth Circuit resolved to adopt a bundling analysis modeled after the Supreme Court's predatory pricing doctrine. It was influenced by the Supreme Court's reasoning that low prices are the essence of competition on the merits, and that a more nuanced rule would threaten to chill this usually precompetitive conduct.[100]

IV. LOW-PRICING AND ANTICOMPETITIVE HARM

At the outset, it is crucial to keep in mind that low pricing is the very conduct that antitrust aims to promote.[101] Many commentators—perhaps most fa-

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95 Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 209-11 (1993).

96 The Ninth Circuit also cited the work of the Antitrust Modernization Commission, which reasoned that its proposed test would "as a whole, bring the law on bundled discounting in line with the Supreme Court's decision in *Brooke Group*." *Cascade Health Solutions*, 515 F.3d at 900 (internal citations omitted).

97 *Id*. at 901 (quoting Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 222 (1993)).

98 *Id*. at 901.

99 *Id*.

100 The Ninth Circuit Court elaborated:

> In *Weyerhaeuser,* Justice Thomas, writing for the Court, reminded us that, in *Brooke Group,* the Court had cautioned that "the costs of erroneous findings of predatory-pricing liability were quite high because [t]he mechanism by which a firm engages in predatory pricing—lowering prices—is the same mechanism by which a firm stimulates competition, and therefore, mistaken findings of liability would chill the very conduct the antitrust laws are designed to protect."

Id. at 903 (alteration in original) (quoting Weyerhauser Co. v. Ross-Simmons Hardwood Lumber Co., Inc., 549 U.S. 312, 320 (2007)).

101 Harm to competition may result even where a dominant firm's course of conduct initially involves price-cutting. Upon taking the helm as Assistant Attorney General for Antitrust, Christine reminded the antitrust community of this in withdrawing the "Section 2

mously, Robert Bork[102]—have forcefully argued that harm to competition through low-pricing is so unlikely, and that the risks of discouraging low prices by condemning low-prices are so unbearable that the law should never concern itself with the possibility that a dominant firm could cause competitive harm through prices that are "too low."[103]

Indeed, the Chicago School[104] vision that low-price predation is so difficult so as to be non-existent, and therefore, no concern of antitrust is thoroughly ingrained in the contemporary case law.[105] This view underlies the requirement of below-cost pricing found in both *Brooke Group* and *Cascade*, and pervades contemporary antitrust law.[106] Commentators who have urged the adoption of

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Report," which constituted the DOJ's enforcement policy for single-firm conduct. *See* Christine Varney, Remarks As Prepared for the Center for American Progress on the Vigorous Antitrust Enforcement in This Challenging Era 7 (May 11, 2009), *available at* http://commcns.org/1dYHhfT; *see also* U.S. DEP'T OF JUSTICE, COMPETITION & MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT 91 (Sept. 2008), *available at* http://www.usdoj.gov/atr/ public/reports/236681.pdf. She expressed concerns with liability rules and enforcement policies that focus heavily on short-term competition while giving scant attention to longer-term welfare effects of dominant firm conduct. *Id*. Notably, she stated that "extreme hesitancy" in addressing potential abuses by monopoly firms "goes too far in evaluating the importance of preserving possible efficiencies and understates the importance of redressing exclusionary and predatory acts that result in harm to competition, distort markets, and increase barriers to entry. *Id*. The ultimate result is that consumers are harmed through higher prices, reduced product variety, and slower innovation." *Id*. She advocated a "back to basics" approach to evaluating single-firm conduct on the belief that "an excessive concern for risk of over-deterrence" was unwise. *Id*.

102 Dylan Matthews, *Antitrust Was Defined by Robert Bork. I Cannot Overstate His Influence*, WASH. POST (Dec. 20, 2012), http://commcns.org/1bkRbDX.

103 BORK, *supra* note 16, at 154 ("It seems unwise, therefore, to construct rules about a phenomenon [price predation] that probably does not exist or which, should it exist in very rare cases, the courts would have grave difficulty distinguishing from competitive price behavior. It is almost certain that attempts to apply such rules would do much more harm than good.").

104 *See generally* HERBERT HOVENKAMP, THE ANTITRUST ENTERPRISE: THEORY & EXECUTION 31 (2005) (noting that the Chicago School of antitrust analysis has been characterized as a "pro-market" and "largely anti-interventionist vision of antitrust" based upon neoclassical economics and the view that "in the long run markets tend to correct their own imperfections"); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925 (1979) (describing the "Chicago School" of antitrust analysis and contrasting it with the "Harvard School").

105 *See* Christopher Fallie, *Antitrust Consensus Shifting As Courts Weigh Impact of Monopolists and Predators,* FORBES (May 10, 2013), http://commcns.org/1eVZ2dH.

106 *See, e.g.,* Matushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 589 (1986) ("[T]here is a consensus among commentators that predatory pricing schemes are rarely tried, and even more rarely successful."); Weyerhauser Co. v. Ross-Simmons Hardwood Lumber Co., Inc., 549 U.S. 312, 323 (2007) (in the context of predatory bidding, the Court repeated that the actions taken as part of a scheme of predation are "often the very essence of competition" and that a failed predatory scheme may benefit consumers through lower prices) (citations omitted); Pacific Bell Telephone Co. v. LinkLine Commc'ns, 555 U.S. 438, 451 (2009) ("To avoid chilling aggressive price competition, we have carefully limited

rules meant to protect low prices,[107] and courts that have adopted such rules,[108] surely have given careful consideration to the possibility that instances of anticompetitive conduct may go undetected. It is undoubtedly good policy to protect low-pricing with strong rules designed to protect the incentive to discount, and to treat complaints that prices are "too low" in a fairly restrictive manner. This policy, however, may appropriately be called into question when the risk of false negatives greatly rises, and the associated fear of deterring pro-competitive price-cutting by imposing a more inclusive liability rule falls. A firm's attempt to shield itself with entry barriers to eliminate latent competitive threats via bundling, for example, is quite likely to be safe from liability under the discount attribution test in many industries, notably telecommunications industries.[109] That there are entire industries where conventional Chicago School low-pricing rules yield lots of false negatives[110] may undermine, or at least call into question, the efficacy of rules that rest on a preference for false negatives over false positives and have been crafted so as to allow low-pricing even where a particular instance may be anticompetitive. At the very least, it raises concerns that the discount attribution test is not an effective mechanism for accurately condemning anticompetitive bundled discounts because of its special vulnerability to underinclusiveness in many industries.

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the circumstances under which plaintiffs can state a Sherman Act claim by alleging that prices are too low."). *See also* Daniel A. Crane & D. Daniel Sokol, *The Antitrust-Busters with Gavels*, WALL ST. J. (Apr. 26, 2013), http://commcns.org/1hnSTJ6. In their op-ed, Professors Crane and Sokol noted that, in contrast to the perverse law of pricing conduct that pervaded the 1960s which tended to protect inefficient competitors, "[b]eginning in the 1980s, the Supreme Court began to recognize that aggressive price-cutting is exactly the sort of behavior that antitrust law should encourage, because it helps consumers" and to that end, "the justices [have] made clear that any antitrust claim predicated on the argument that a firm excluded its rival through low prices would require proof that the defendant engaged in predatory, below-cost pricing." They criticized the result in ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254 (3d Cir. 2012), where the Third Circuit Court of Appeals affirmed a jury's liability determination in a case where a company alleged that its competitor had excluded it through market-share rebates, though without requiring any showing of below-cost pricing. They urged the Supreme Court to review the case, and to "reaffirm that above-cost discounting cannot be the basis of an antitrust challenge." *Id*. The Court ultimately denied *certiorari* in the case. ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254 (3d Cir. 2012), *cert. denied*, 133 S. Ct. 2025 (2013).

107 *See* Daniel Fisher, *Robert Bork, The Man Who Redefined Antitrust, Is Dead At 85,* FORBES (Dec. 19, 2012), http://commcns.org/1jqDxrh.

108 *See, e.g.,* A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc., 881 F.2d 1396, 1403 (7th Cir. 1989) (noting that a firm that increases production in a stagnant market only decreases prices, which benefits consumers and is the opposite of a monopoly).

109 *See infra* Part IV for an in-depth discussion.

110 *See* Jonathan B. Baker, *Predatory Pricing After* Brooke Group*: An Economic Perspective*, 62 ANTITRUST L. J. 585, 591 (1994) (noting that post-Chicago school economics recognizes that "false negatives" can occur in industries where the price-cutter lowers its prices to a level below the competitor, but still above its own average cost).

To say that articulating a one-size-fits all definition of anticompetitive conduct is difficult would be an understatement.[111] This is especially true in the context of pricing conduct, where the most straightforward method of price competition—cost-cutting—may also be a very effective mechanism to exclude existing competitors and potential entrants.[112] Indeed, the primary battleground in the law of pricing conduct revolves around the dispute over whether low-pricing can ever be anticompetitive if it does not result in a below-cost price on a product facing competition, and if so, whether this should be declared illegal in any circumstances.[113] The position taken here is that some industries merit greater concern for false negatives, and that the law rightly concerns itself with addressing anticompetitive low-pricing. Dominant firms may erect[114] entry barriers without even coming close to pricing below their own costs, which is required under the contemporary law on predation as well as by the discount attribution test for bundled discounts.[115] Strategic entry deterrence can indeed be anticompetitive even where it involves price-cutting, and this strategy is especially potent where entry barriers are high and the product markets involved have extremely low marginal costs.[116]

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111 *See, e.g.*, Eleanor M. Fox, *What is Harm to Competition? Exclusionary Practices and Anticompetitive Effect*, 70 ANTITRUST L.J. 371 (2002) (providing a historical overview of U.S. antitrust law and its inherent tensions).

112 Pac. Bell Tel. Co. v. Linkline Commc'ns., Inc., 555 U.S. 438, 451 (2009) ("[C]utting prices in order to increase business is often the very essence of competition.") (quoting Matshushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 594 (1986)).

113 The scholarship in this field certainly indicates that this issue is paramount in the minds of prominent commentators. *Compare, e.g.,* Edlin, *supra* note 44, at 941-42 (arguing that "there is no compelling reason to restrict predation cases to below-cost pricing, as above-cost pricing can also hurt consumers by limiting competition") *with* Elhauge, *Why Above-Cost Price Cuts to Drive Out Entrants Are Not Predatory—and the Implications for Defining Costs and Market Power*, 112 YALE L.J. 681, 684, 686 (2003) (opposing Edlin's view).

114 References in this Article to "erecting" entry barriers refers to what Professor Steven Salop has called "strategic" creation of new barriers to entry, which may be distinguished from "innocent" entry barriers. According to Salop, innocent barriers are unintentionally erected as a side effect of innocent profit maximization. By contrast, a strategic barrier is purposely erected to reduce the possibility of entry. Steven C. Salop, *Strategic Entry Deterrence*, 69 AM. ECON. REV. 335 (1979). Although "innocent" entry barriers are not purposely created by incumbents in order to stifle entry, they nonetheless may present a favorable structural characteristic of the market that can make strategic entry deterrence more effective for incumbent firms.

115 GEORGE J. STIGLER, THE ORGANIZATION OF INDUSTRY 67 (1968) (a barrier to entry is "a condition that imposes higher long-run costs of production on a new entrant than are borne by the firms already in the market").

116 Interpreting the holding in the Microsoft antitrust litigation, Professor Eleanor Fox summarized "anticompetitive" conduct as follows: "Conduct that intentionally, significantly, and without business justification excludes a potential competitor from outlets (even though not in the relevant market), where access to those outlets is a necessary though not sufficient condition to waging a challenge to a monopolist and fear of the challenge prompts

Price-cutting in these industries, in turn, can be used strategically to eliminate competitive checks and ultimately be price-raising. Professor Aaron Edlin, in his seminal paper arguing that above-cost predation is of real concern to antitrust, contended that "a firm that preserves its monopoly by charging low prices only when its rivals make the mistake of entering the market, and only until they exit, denies consumers the benefits from competition on the merits."[117] Similarly, Professor Thomas Krattenmaker and Steven Salop have observed that "potential competition [may] provide[] a competitive check on established firms distinct from the check that established firms exert on each other."[118] Further, if price-cutting is "sharp-shooting,"[119]—targeted at particular anticompetitive threats rather than an efficient attempt to maximize profits — the case for finding a given bundled discounting scheme to be anticompetitive is bolstered.[120] While prices may decrease today under a bundled deal, this does not mean that consumers will ultimately benefit and may only reflect a retrenchment of established firms. The Ninth Circuit reasoned that its test would protect competition, not competitors, by only condemning bundled discounts that would exclude an equally-efficient producer of the competitive product.[121] However, the structure of certain industries supports expanding the class of anticompetitive practices reprehended liability rules from exclusion of equally-efficient rivals to include marginalization of new entrants from the market.[122]

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the conduct, is 'anticompetitive.'" Fox, *supra* note 111, at 390, 391. Fox also argued that this was not the only test for exclusionary conduct, but that it is "*one* test in fact applied by courts to conduct that significantly forecloses competition on the merits and is not efficiency justified." *Id*.

117 Edlin, *supra* note 44, at 966.

118 Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE L.J. 209, 246 (1986).

119 This term is most often used in airline predation, where dominant airlines deliberately incur losses in markets where their dominance is threatened. *See* Chris Sagers, *"Rarely Tried and . . . Rarely Successful": Theoretically Impossible Price Predation Among the Airlines*, 74 J. AIR. L. & COMM. 919, 924 (2009) (quoting *Aviation Competition Hearing: Before the Subcomm. On Aviation, S. Comm. on Commerce, Science, and Transportation*, 105th Cong. 1067 (1998)) ("[A]n incumbent . . . that is deliberately accepting financial losses selectively in the markets where it is subject to competitive challenge [ ] [is] engaging in . . . discriminatory sharp-shooting" and is engaged in predation.) (internal citations omitted).

120 In these ways, the Article relies in large part on the *Aspen* definition of anticompetitive exclusionary conduct. *See* Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 605 (1985).

121 *See* Cascade Health Solutions v. PeaceHealth, 515 F.3d 883, 910-11 (9th Cir. 2007).

122 This is not to suggest that adherents to rules of per se legality for above-cost pricing fail to recognize that above-cost pricing can be anticompetitive. The implication here is that market structures, which are prevalent in the economy may be of such a character that anticompetitive low-pricing is much easier to carry out given certain structural characteristics. As a result, the short shrift given to the possibility of false negatives supports altering the rules to capture practices that are not usually thought to threaten competition.

Harm to competition does not arise solely when a competitor is sidelined by a predatory scheme, but also results from exclusion of new companies[123] from a market, a result that can be accomplished using above-cost bundled discounts.[124] What a strict price-cost test lacks, therefore, is the ability to address bundled discount programs that amount to anticompetitive[125] strategic entry deterrence strategies.[126] These strategies may deprive consumers of the salient effects of new entry, even by firms who are not yet as efficient as the incumbents. In other words, there is good reason to consider the effects that new entrants—even less efficient ones—will have on consumer welfare. As Edlin has put it, "[i]nefficient rivals often provide important competition, or at least could provide important competition if competition law limited their exclusion." [127] There is also a strong argument to be made that the *Cascade* court's reliance on *Brooke Group* was faulty in the first instance. The direct and immediate benefit that consumers gain from single-product price-cutting provided the concern for false positives, which largely drove the outcome in *Brooke Group*, but these concerns may not be present in the bundling context.[128]

Critics of the decision in *LePage's* generally express dismay that the Third Circuit did not require a showing of below-cost pricing, but instead, employed an approach that could wind up protecting inefficient competitors and discouraging aggressive discounting by dominant firms.[129] However, opponents of

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[123] *See, e.g.*, United States v. Microsoft Corp., 253 F.3d 34, 54 (explaining that "[n]othing in § 2 of the Sherman Act limits its prohibition to actions taken against threats that are already well-developed enough to serve as present substitutes").

[124] *See, e.g.,* Jamie L. Weber, *Backing Bundled Discounts After* Brooke Group*: Analyzing the Debate Over the Legality of Above-Cost Bundled Discounts*, 94 IOWA L. REV. 775, 789 (2009) (noting that in addition to using a bundled discount as a predatory tool to exclude an existing equally-efficient rival, firms can also harm competition by using a bundled discount to exclude new firms from entering the market).

[125] In this article, the term "predatory" is reserved for below-cost bundling.

[126] *See* Salop, *supra* note 114, at 533.

[127] EDLIN, *supra* note 38, at 164.

[128] *See, e.g.*, Rubin, *supra* note 27, at 5 ("Whether a particular instance of bundling does or does not create consumer surplus in a particular case would depend on the circumstances. Not so with predatory pricing, in which *every penny* of lower prices during the 'pre recoupment' phase inures to the benefit of consumers.") (emphasis in original).

[129] The Antitrust Modernization Commission lamented that the decision "offers no clear standards by which firms can assess whether their bundled rebates are likely to pass antitrust muster." ANTITRUST MODERNIZATION COMM'N, REP. & RECOMMENDATION 94 (2007); *see also* Elai Katz, *Market-Share Discounts Scrutinized by Third Circuit*, 248 N.Y. L.J. 120, 212 (2012) ("The Third Circuit remains a vexing jurisdiction for dominant firms that discount aggressively. The 2003 en banc opinion of the court in LePage's v. 3M…left an inexact standard for bundled discounts."). *But see* Rubin*, supra* note 27, at 8 ("[T]he *LePage's* decision was not 'standardless,' as the AMC and others have portrayed it. *LePage's* demonstrated that the *Aspen* rule could provide reasonably good guidance to juries and judges charged with evaluating the lawfulness of bundling and other exclusionary pricing strate-

LePage's, while correct that the decision may actually harm consumers in the long run, should take pause in relying on a strict cost-based rule. This is because there is great potential for dominant firms to use above-cost bundled discounts to exclude new competitors from their markets, by offering bundled discount programs in ways that do not constitute "competition on the merits."[130] A rule insulating all anticompetitive bundling so long as it is above-cost,[131] in turn, poses a threat to competition that may not easily be appreciated. Concluding that a firm's low prices may actually be a part of an anticompetitive strategy to shut out new firms is also likely to be at odds with intuition. But once it is recognized that cost-based rules are prophylactic in nature, and are concerned with the chilling effects of false positives on incentives to cut price, reliance on such a rule becomes less attractive in many circumstances.[132] In attempting to decrease the incidence of these Type I errors and the social cost associated with them, a rule of above-cost legality provides courts with a blunt tool, and not a scalpel, for assessing competitive effects. Being left with such an imprecise rule has significant consequences in industries like telecommunications, where fixed costs are extremely high and variable costs extremely low, since the accuracy of a price-cost test crumbles when applied in such markets. As the following illustration based on the Quad Play shows,[133] it would do well to replace the *Cascade* rule with one that that would allow a plaintiff to prove harm to competition even where a bundling firm prices above cost.

V. USING THE QUAD PLAY AS AN ANTICOMPETITIVE DEVICE WITHOUT OFFENDING THE LAW

The preceding section argued that above-cost discounted prices can indeed be anticompetitive.[134] There, I took the position that a rule of above-cost legal-

gies.").

130 *See* Edlin, *supra* note 44, at 952 (explaining that predatory pricing arises when a firm charges abnormally low prices in order to drive rivals from the market, which do not reflect competition on the merits).

131 *See id.* at 941-42 (arguing that "above-cost predation" may be more plausible and prevalent that below-cost predation).

132 This is not to imply that the potential for underinclusiveness is totally lost on critics of *LePage's*. Indeed, many who favor prophylactic, cost-based rules do so because they believe the risk of false positives under an alternative rule outweighs the risk of false negatives under a rule of above-cost legality. However, what this Article does suggest is that the incidence of false negatives is much greater than proponents of *Cascade Health Solutions* or *Brooke Group* probably imagine. The example of the quad play bundle provides one example. For others, see Part VI, *infra*.

133 *See infra* Part IV.

134 *See supra* Part III.

ity is merely a prophylactic rule.[135] This section now posits a situation where a quad play bundle is sold in an anticompetitive way, yet in a way that would not offend the discount attribution test. The exercise illustrates a "false negative" (i.e., a type II error).[136] It uses hypothetical numerical price values to illustrate the possibility of this particular outcome. Of course, it is important to distinguish bundled discounts that constitute vigorous, pro-competitive price competition from those that are anticompetitive. As Robert Bork memorably stated, we must distinguish "exclusion through efficiency from exclusion by means unrelated to efficiency."[137] Generally understood, this concern is reflected in the below-cost pricing requirement contained in both the *Brooke Group* and *Cascade* tests.[138] That is, courts have decided, as a matter of policy, that a law permitting challenges to above-cost pricing would present inappropriate risks of over-inclusion (i.e., false positives) and as a result, would deter aggressive price competition to the detriment of consumers.[139] As provided for in *Brooke Group*, the law on predation has reflected a preference for false negatives over false positives, on the theory that this arrangement is better for consumers.[140] In order to show that the theory underlying the decision to strike this balance may actually be misconceived, this section concludes by briefly describing the prevalence of markets with high fixed costs and extremely low average variable costs; the kinds of markets where the incidence of false negatives is likely to be a great deal higher than the *Brooke Group* or *Cascade* courts could have imagined.

A. A Hypothetical Application of the Discount Attribution Test

Assume that one of the Cable Defendants offers all three "triple play" components for $50 each per month, and that Verizon Wireless offers standard wireless service for $50 per month. Sold individually (i.e., unbundled), these products would cost a consumer $200 per month. As a four-part quad play bundle, suppose that Verizon Wireless would reduce the package price from $200 to $154. The total discount on the bundle is now $46 per month. Attributing that discount entirely to the competitive wireless product yields an effective price of $4.00 per month. Lastly, assume that Verizon's average variable cost for wireless phone service is close to zero, perhaps $3.00 per month. Un-

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135 *See id.*

136 Stout, *supra* note 35 (defining and discussing these terms in the context of securities law).

137 BORK, *supra* note 16, at 39.

138 Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 210 (1993); Cascade Health Solutions v. PeaceHealth, 515 F.3d 883, 906 (9th Cir. 2008).

139 *Cascade Health Solutions*, 515 F.3d at 908-09.

140 *Id.*

der these circumstances, the competitive product in the bundle is being offered above its average variable cost of production. Accordingly, a single-product rival of Verizon Wireless's lawsuit would be dismissed in a jurisdiction using the discount attribution test.[141] Due to the low average variable costs on the competitive product, any bundled discount up to $47.01 would be legal.[142] However, as the next section will discuss,[143] Verizon could harm competition in wireless service without employing a discount quite so large.

The hypothetical application of the discount attribution test above shows that an equally efficient single-product competitor of Verizon Wireless would not be excluded from the wireless market under the given conditions. Since it too could provide wireless service at $3.00 per month or less, it would not be forced to price below cost in order to meet a bundled discount yielding an effective price of $4.00 per month for wireless service. But the chief problem is that the discount attribution test does not account for anticompetitive entry-limitation strategies,[144] and is solely concerned that a less-inclusive prophylactic rule would protect an inefficient existing competitor.[145] It does not account for the fact that in certain industries like telecommunications, high fixed costs already pose a high barrier to entry, and because average variable costs of production for wireless service are only a few dollars per month (or a few cents per minute),[146] showing below-cost pricing on the competitive product in the bundle would be nearly impossible in the mine run of cases in this industry. Bundled discounts, while involving some "pro-competitive" short-term price-cutting, may also allow a dominant firm to put a new entrant out of business if the new firm cannot reach minimum efficient scale, let alone recover its fixed costs.[147] Or it may allow the dominant firm to convince a potential entrant to stay out of the market altogether. As these prospects indicate, above-cost pric-

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141 To survive a motion to dismiss, it would have to allege that the Cox-Verizon bundle was offering a discount of $47.01 under the posited price and cost values.

142 In other words, any discount up to that level would still yield a price on wireless that is above the average variable cost on that component of the bundle, when the full discount on the bundle is attributed only to that product.

143 *See infra* Part IV.B.

144 *See* Salop, *supra* note 114, at 79.

145 DEP'T OF JUSTICE, BUNDLED DISCOUNTS AND SINGLE PRODUCT LOYALTY DISCOUNTS, at 99-100, http://commcns.org/1aN0BeN.

146 Although I refer to "marginal costs" at various points in this Article, the *Cascade* test uses average variable cost to determine whether or not a discount is "below cost" or not. The conclusions drawn here should not change based on which measure of cost is used, as marginal cost and average variable cost are similar in the industries discussed. The operative intuition for the purposes of this Article are that in certain industries, wireless mobile services being the example used here, the increase in cost that is incurred from serving an additional customer is negligible for an efficient wireless network. Average variable cost is often used to approximate marginal cost, since marginal cost is difficult to measure. Areeda & Turner, *supra* note 10, at 716.

147 *See generally* Krattenmaker & Salop, *supra* note 118, at 214.

ing does not necessarily indicate pro-competitive, or competitively-neutral conduct. The Court in *Brooke Group* itself acknowledged that above-cost pricing, though henceforth not to be deemed illegal, could still be anticompetitive.[148] It stated that above-cost pricing "either reflects the lower cost structure of the alleged predator *or is beyond the practical ability of a judicial tribunal to control* without courting intolerable risks of chilling legitimate price-cutting."[149] It is quite clear that the Court understood that above-cost pricing can still be anticompetitive, and that it opted for an above-cost safe harbor based on concerns for false positives and institutional competence.[150] The Court did not abandon the notion that above-cost pricing schemes can be exclusionary and anticompetitive.[151]

The above-cost safe harbor contained in the discount attribution test creates—and indeed may invite—the ability to market the quad play to limit entry into the market for wireless service for anticompetitive reasons.[152] The discount attribution test requires a showing of below-cost pricing, but that will be very difficult to prove in many cases, even where the net effect of the bundling strategy is to reduce consumer welfare.[153] Average variable costs, the measure of cost relied upon by the test, is calculated by dividing variable cost by output.[154] Wireless mobile service operators like Verizon Wireless experience tremendous economies of scale in production with average variable costs near zero.[155] The discount attribution test thus gives bundling firms a lot of leeway in which to discount a bundle without permitting a finding of liability because discounts on the non-competitive products are allocated to a competitive product with very low average variable costs.[156] This broad space for discounting

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148 Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993).

149 *Id*. (emphasis added).

150 *See id*. at 227.

151 *Id*. at 224.

152 *See id.* at 209 (holding that any simple price cut in the single-product context, resulting in a price exceeding the seller's cost, is immune from antitrust liability); *see also supra* Part I.

153 Jonathan B. Jacobson, *A Note on Loyalty Discounts,* THE ANTITRUST SOURCE 7, June 2010, http://commcns.org/1hPbrTm.

154 ROBERT PINDYCK & DANIEL RUBINFELD, MICROECONOMICS 237 (8th ed. 2013); *see also Unilateral Conduct Workbook Chapter 4: Predatory Pricing Analysis*, INT'L COMPETITION NETWORK, UNILATERAL CONDUCT WORKING GRP., 25 (Apr. 2012), *available at* http://commcns.org/1atbTHx [hereinafter ICN Report].

155 *See, e.g.*, Max Schanzenbach, *Network Effects and Antitrust Law: Predation, Affirmative Defenses and the Case of U.S. v. Microsoft*, STAN. TECH. L. REV. 4, 15 (2002) (observing that many networks have declining marginal costs with near zero average variable costs).

156 ICN Report, *supra* note 154, at 26-27. International Competition Network Working Group on Unilateral Conduct has considered the implications of using various cost measures in fashioning a framework for predatory pricing more generally. With regard to using average variable cost as the standard for a cost-based rule, it concluded the following: "[A] cost

raises the leeway for firms to use bundling to deter entry into the wireless market by firms that would become as efficient as the existing firms.[157] Anticompetitive strategies may be immune from scrutiny under the discount attribution test because it relies only on a price-cost standard.[158]

B. Bundled Discounts and Anticompetitive Entry Deterrence in the Market for Mobile Wireless

Recall Bork's admonition that the law should not interfere with efficient conduct that may also happen to "exclude."[159] Professor Susan Crawford has recently offered some observations on the market structure in wireless mobile service that buttresses the a priori conclusion that bundled discounts in this industry would best be labeled as anticompetitive and exclusionary, rather efficient (but also exclusionary).[160] According to Crawford, there is "no serious competition" in mobile, which is dominated by four large carriers who are able to set prices and earn margins of roughly 40 percent. Further, Crawford observes that, "barriers to entry for any new national player are insurmountable."[161] According to the Federal Communications Commission (FCC), "[s]ervice provider entry and exit decisions are primarily determined by the height of structural entry barriers and expected post-entry market profitability ."[162] Likewise, there are two primary ways in which a bundled discount on the quad play could be used to deter entry into the wireless market: (1) by creating a multi-tiered entry problem and (2) by facilitating a limit pricing strategy.[163] These two anticompetitive strategies go to the heart of a new wireless firm's entry decision. Furthermore, a bundled discount program designed to insulate incumbent firms with entry barriers is of heightened competitive concern in the wireless market, as opposed to other markets where the conditions are ripe for

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measure from the lower end of the scale (e.g., average variable cost) may yield an enforcement standard that is more lenient, which . . .could produce more type II errors, or 'false negatives,' (i.e., result in anticompetitive conduct going undetected." *Id*.

157 *Id*.

158 Thomas A. Lambert, *Weyerhauser and the Search for Antitrust's Holy Grail*, CATO SUP. CT. REV. 277, 304 (2007) (Professor Lambert has identified the two primary ways in which equally-efficient rival tests are prone to producing false negatives: they do not condemn practices that prevent rivals from becoming as efficient as the defendant, and they may permit exclusion of the only competition a dominant firm is likely to face if that competition is less efficient than the dominant firm).

159 *See infra* note 137.

160 *See* CRAWFORD, *supra* note 56, at 158.

161 *Id*.

162 *In re* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, *Fifteenth Report*, WT Docket No. 10-133, ¶ 59 (June 27, 2011), *available at* http://commcns.org/1hPbLBz [hereinafter Fifteenth Wireless Competition Report].

163 Rubinfield, *supra* note 46, at 257-58, 261.

strategic entry deterrence.[164] This market is already highly concentrated[165] and entry barriers are already extremely high,[166] making attempts to exclude newcomers even more effective in their potential to harm consumers.

One might argue that selling products close to cost is the paradigm of procompetitive, welfare-enhancing conduct. Indeed, purchasers of a four-part bundle would certainly be thrilled to receive wireless service almost free-of-charge. But what this argument, as well as the discount attribution test, leave unaddressed is the ability to use steep discounts on an ad hoc basis to limit entry into the wireless market (e.g., by offering retail discounts only when new wireless firms are actively readying to enter the market).[167] Because it only asks if the competitive product is sold below cost if all discounts are allocated to it, the test would not prohibit strategic discounting designed to shelter Verizon Wireless from future competition.[168] With respect to the case of the quad play, the test is a poor fit for analyzing bundled discounts in a market that is already characterized by high concentration and multiple substantial barriers to entry.[169] But more broadly, the test's core concern with protecting efficient conduct by dominant firms obscures the importance of reprehending acts that raise new barriers to entry.[170] Raising barriers removes competitive checks that ordinarily spur innovation and reduction of prices across the board.[171]

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164 As noted above, although wireless mobile has been deemed the "competitive market" for the purposes of applying the discount attribution test, it may or may not be "competitive" in the conventional sense. *See supra*, note 59 and accompanying text.

165 See David Cline, *Consumer Choice: Is There an App for That?***,** 10 J. TELECOMM. & HIGH TECH. L. 147, 148-49 (2012) (noting that four firms dominate the wireless market, resulting in a Herfindahl-Hirshman Index ranging from 2000-6000, and that the DOJ Antitrust Division views concentration over 1800 as raising significant competitive concerns); *see also* T. Randolph Beard et al., *A Policy Framework for Spectrum Allocation in Mobile Wireless Communications*, 63 FED. COMM. L.J. 639, 647 (2011) ("The potential for concentration in the wireless sector is especially acute due to the barrier to entry posed by the limited availability of spectrum.") (internal quotations omitted).

166 According to the FCC, the primary barriers to entry in the wireless industry are: "(1) the cost of acquiring spectrum licenses or spectrum leases; (2) network coverage costs such as site acquisition and preparation costs, site construction and leasing costs, network equipment costs, backhaul transportation costs, and other potential interconnection and roaming costs; (3) the costs of offering customers a portfolio of attractive wireless devices; and (4) the costs of marketing an distributing wireless services and devices." Fifteenth Wireless Competition Report, *supra* note 162, ¶ 60.

167 Mark S. Popofsky, Section 2, Safe Harbors, and The Rule Of Reason, 15 GEO. MASON L. REV. 1265, 1290 (2008).

168 *Id*.

169 *See* CRAWFORD, *supra* note 56, at 158 (discussing high barriers to entry); Cline, *supra* note 165, at 148-49 (noting that four firms dominate the wireless market, resulting in a Herfindahl-Hirshman Index ranging from 2000-6000, and that the DOJ Antitrust Division views concentration over 1800 as raising significant competitive concerns).

170 Popofsky, *supra* note 167, at 1290.

171 Daniel E. Lazaroff, *Entry Barriers and Contemporary Antitrust Litigation*, 7 U.C. DAVIS BUS. L.J. 1, 26 (2006).

1. Multi-tiered Entry Problems

Daniel Crane explains the multi-tiered entry problem as a strategy that "raises a rivals' costs by forcing it to enter two or more markets simultaneously in order to be able to meet the incumbent's contingent discounts."[172] Assuming that most consumers desire all four products in a quad play bundle, a new wireless entrant would not only need to attempt entry into the wireless market, but would also need to attempt multi-tiered entry into voice, video and broadband markets in order to make consumers indifferent as to which firm they purchase wireless service from.[173] Erecting this sort of entry barrier would be likely to deter entry even by a hopeful wireless firm that could provide the service as efficiently as Verizon Wireless.[174] But the multi-tiered entry barrier posed in this scenario is even more severe. It is exacerbated by the difficulty of entering into the markets for voice, video and broadband, which would be necessary for a rival wireless firm to offer its own four-part bundle.[175] That is, entry barriers are already high in the markets for video service and broadband Internet service.[176] While bundling as a general matter increases barriers to entry, the prob-

172 Crane, *supra* note 17, at 446.

173 A firm faced with the prospect of multi-tiered entry could certainly partner up with a provider of complementary products in order to offer its own competing bundle. Interestingly, the facts of the Quad play case provide insight into how a firm like Verizon Wireless, which wants to sell a four-part bundle pursuant to a cross-seller arrangement with various cable companies, can also foreclose this avenue of competition. Specifically, the DOJ notes that the Cable Defendants have a national market share for incumbent cable companies of greater than 50% in these product markets and each has market power in numerous local markets for broadband and video. As far as the DOJ is concerned, the "unlimited duration" of the wireless exclusivity is anticompetitive because the ability to sell wireless services "in combination with video or broadband services" may become an important component of wireless competition, and the unlimited exclusivity would unreasonably foreclose competing wireless firms from offering integrated bundles with "the most significant providers of video and broadband services." Similarly, it would harm the ability of rival wireless carriers to "provide constituent parts of those bundles." *See* Competitive Impact Statement, *supra* note 34, at 8-22. However, a full elaboration on the competitive effects resulting from cross-seller bundling is beyond the scope of this Article.

174 See Rubinfield, *supra* note 46, at 257 ("A bundled rebate program could also increase entry barriers by creating a two-level entry problem, forcing new entrants to enter a second (or third) market in order to compete for the monopoly profits in its initial market. Such a strategy could arguably be successful even if the monopolist did not price below its own cost.") (internal citation omitted).

175 Rubinfield, *supra* note 46, at 257.

176 *See generally* Konstantinos K. Stylianou, *An Innovation-Centric Approach of Telecommunications Infrastructure Regulation*, 16 VA. J.L. & TECH. 221, 241 (noting large sunk costs, high entry barriers and network effects in the telecommunications industry); *see also* Allen P. Grunes & Maurice E. Stucke, *Antitrust Review of the AT&T/T-Mobile Transaction*, 64 FED. COMM. L.J. 47, 55 ("The inputs necessary to enter [into the market for mobile wireless telecommunications] include spectrum, towers, network equipment, and backhaul facili-

lem is worsened where all or most of the packaged products come from markets with substantial existing barriers.[177]

A hypothetical will serve to more fully illustrate the anticompetitive nature of bundling of this sort. Suppose that the discount offered by Verizon Wireless was so large that the incremental payment that customers had to make in order to add wireless service to the traditional "triple play" was less than it would cost a potential entrant to enter the wireless market. Suppose also that the potential entrant was actually more efficient than Verizon at providing wireless service, and that entry into voice, video and broadband would provide it with no efficiencies. On these assumptions, a large discount of the sort posited in Part IV on the four-part bundle could deny the more efficient potential entrant the scale it would need to compete in the wireless market.[178] Of course, a firm that already competes in the voice, video, or broadband markets may have an easier time contesting the wireless market, as its existing operations could serve to mitigate the difficulty of multi-tiered entry. But relying solely on existing telecommunications firms to contest these markets only serves to bring the entry problems described above into sharper relief.

2. Limit Pricing

Using bundling to deter entry by way of limit pricing is similar to the strategy described in the prior paragraph,[179] but does not depend on raising rivals' costs. Instead, it is a pricing strategy designed to convince potential entrants of the unprofitability of entering the market.[180] The basic idea is that "an established firm may be able to influence, through its current pricing policy alone, other firms' perceptions of the profitability of entering the firm's markets, and that the firm may thus set its prices below their short run maximizing levels in order to deter entry."[181] This tactic could be employed when it looks as though

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ties. We doubt there can be a serious claim that entry is easy."); Richard Whitt, *Evolving Broadband Policy: Taking Adaptive Steps to Foster Optimal Internet Platforms*, 17 COMMLAW CONSPECTUS 417, 488 ("Broadband networks. . . exhibit significant economies of scale and scope, require access to patents, rights of way, and spectrum, and exhibit network externalities. In particular, costs generated from installing networks, establishing billing and support systems, and acquiring customers constitute substantial barriers to entry.").

177 J. Shahar Dillbary, *Predatory Bundling and the Exclusionary Standard*, 67 WASH. & LEE L. REV. 1231, 1250-51 (2010).

178 This hypothetical is adapted from one that Professor Rubinfeld used in his paper on bundled rebates. *See* Rubinfield, *supra* note 46, at 258.

179 *See supra* Part IV.B.1.

180 Dillbary, *supra* note 177, at 1250-51.

181 Paul Milgrom & John Roberts, *Limit Pricing and Entry Under Incomplete Information: An Equilibrium Analysis*, 50 ECONOMETRICA 443, 443 (1982) (internal citation omitted).

there is potential entry by a new wireless firm.[182] Under incomplete information about the incumbent firm's actual costs, a large but above-cost bundled discount would likely cause the potential entrant to conclude that entry is unwise and decide against it.[183] In other words, in a market like wireless service, where firms face large sunk costs, a bundled discount arrangement that brings expected profits practically down to marginal cost, as posited above, would likely undermine the incentive to enter by signaling to a potential entrant that the likelihood of a reasonable return on investment is slim. Even more, when used in a targeted fashion,[184] limit pricing of this sort could convince a potential entrant that it would not even cover its fixed costs, let alone make a profit.[185] The Solicitor General's Office, writing as amicus curiae for the United States in *LePage*'s, also suggested that the act of bundling is distinct from low prices that result and, consequently, low-pricing through bundling may have a greater potential to harm competition than single-product price cuts.[186] However, the literature does not contain an in-depth analysis of how and whether limit pricing via bundled discounts poses a greater potential for anticompetitive harm than limit pricing via single-product price-cutting.[187]

Nevertheless, as in the multi-tiered entry scenario, it is in this type of situation that low-pricing could actually have an anticompetitive effect, contrary to the usual intuition that lower prices are unquestionably good for consumers and must denote pro-competitive conduct. By excluding potential entrants who do not have the opportunity to achieve as equal efficiency as the dominant firm, limit pricing is a tactic that strategically employs low prices to keep new competitors out of the market.[188] It does not do so by offering a superior prod-

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182 Dillbary, *supra* note 177, at 1250-51.

183 Milgrom & Roberts, *supra* note 181, at 443.

184 *See* Sagers, supra note 119, at 924.

185 *See Unilateral Conduct Workbook Chapter 4: Predatory Pricing Analysis*, *supra* note 154, at 24 ("Note that the AVC [average variable cost] benchmark is in general not able to capture a concern that the alleged predator may be deterring entry or expansion (as opposed to inducing exit). This is because, if the competitor has not yet entered the market . . .it would not enter . . .unless price were projected to be sufficiently above AVC to allow it to recoup the additional (sunk) fixed costs of entry. In this case, a standard based on AVC may be seen to result in underenforcement, as an 'equally efficient competitor' may not be able to enter or to expand even if the dominant firm priced (somewhat) above AVC."). *See also* Crane, *supra* note 17, at 447 ("In a market characterized by high sunk costs, a mixed bundling scheme might deter entry by a new firm that concluded that the profitability margins available under the mixed bundling scheme would not allow an adequate return on its investment.").

186 Amicus Curiae Br. At 12-13, 3M, Inc. v. LePage's 324 F.3d 141 (3d Cir. 2003) (en banc), *cert. denied*, 542 U.S. 953 (2004).

187 *See, e.g.*, Dillbary, *supra* note 177, at 1250-51 (discussing bundle discounts that may be beneficial); Rubinfield, *supra* note 46, at 258 (discussing bundles rebates); Crane, *supra* note 17, at 446 (discussing bundle discounts).

188 Paul Milgrom & John Roberts, *Limit Pricing and Entry Under Incomplete Informa-*

uct that new entrants are unable to match (i.e., "competition on the merits"), but by convincing them to stay out altogether by exploiting monopoly power in related markets. Indeed, the effectiveness of this entry-limitation strategy would be enhanced in the wireless market because the high sunk costs[189] in the telecommunications sector would more quickly lead a firm to decide against entry when faced with a signal that the entry investment is not worth making.

VI. FALSE NEGATIVES ARE MORE COMMON THAN BROOKE GROUP OR CASCADE IMAGINED: CALLING INTO QUESTION THE DECISION-THEORETIC APPROACH TO BUNDLED DISCOUNTS

The prior section discussed some of the particular ways in which above-cost bundled discounts might be employed in anticompetitive ways while surviving the strictures of the discount attribution test.[190] Normatively, this sort of observation should not ordinarily matter all that much; merely demonstrating that a given legal framework is sometimes underinclusive is of no great moment. However, as this section will attempt to demonstrate, the prevalence of false negatives under the discount attribution test is much higher than its proponents might imagine and, as a result, the *Cascade* court's implicit reliance on decision theory[191] is not as defensible as it might initially seem.

A. The Prevalence of Industries Prone to False Negatives

This Article has thus far argued that high fixed costs in bundling product markets, coupled with very low marginal costs in bundling product markets is

tion: An Equilibrium Analysis, 50 ECONOMETRICA 443, 443 (1982) (internal citation omitted) (The dominate firm influences "other firms' perceptions of the profitability of entering the firm's markets, and . . . set[s] its prices [low] in order to deter entry.").

189 Grunes & Stucke, *supra* note 176, at 54-55 (citing In the Matter of Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, 25 F.C.C.R. 11407, 11495, Chart 6 (2010)) (discussing the types of sunk costs necessary to enter the mobile wireless network).

190 *See supra* Part IV.B.

191 *See* Cascade Health Solutions v. PeaceHealth, 502 F.3d 895, 918-19 (9th Cir. 2007), *opinion amended and superseded*, 515 F.3d 883 (9th Cir. 2008) ("[Notwithstanding] aware[ness] that liability under the discount attribution standard has the potential to sweep . . . broadly, . . . limited judicial experience [counsels for such standard because it will] allow these difficult issues to further percolate in the lower courts . . . [and it is the preferable option p]ending further judicial and academic inquiry into the prevalence of anticompetitive bundled discounts."). *See also* Devlin & Jacobs, *supra* note 39, at 82-83 ("[W]hen courts lack enough information to determine whether particular business conduct will promote consumer welfare, harm it, or leave it undisturbed . . . courts and agencies are forced to formulate doctrine in the dark . . . [and generally] have done so by employing the decision theory [which] . . . often suggests a preference for . . . false negatives.").

a combination which yields a particular vulnerability to false negatives under the discount attribution test.[192] The example of the quad play bundle has been used to illustrate, on a more practical level, precisely how this kind of error might play out in reality. The reason this observation matters for antitrust is that there is strong evidence that these Type II errors arise in a non-trivial number of cases.[193] Indeed, there is good reason to believe that there is an entire sector of the economy whose structure is wholly inapposite to the application of the discount attribution test, because the requirement of below-cost pricing effectively shields any above-cost bundled discount, even where it is anticompetitive in effect.[194] Of course, occasional instances of underinclusiveness are not of great concern, but the concern for under-enforcement should grow when the prevalence of Type II errors grows. The so-called "New Economy," presents such a case.[195] The New Economy has been defined to include "computers, software programs, Internet-based goods and services, [and] biotechnology,"[196] and is generally "characterized by large initial investments ('fixed costs') and low costs to reproduce individual items ('variable costs').[197] Software firms, to take one particular example, have high fixed costs,[198] and near zero marginal costs.[199] Professor Michael Carrier has concluded that these

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192 *See supra* Part IV.B.

193 *See* discussion *supra* notes 162-64.

194 *See, e.g.*, Schanzenbach, *supra* note 155, at 71 (describing network industries as "declining cost industries" that can easily "justify a low price by pointing to low marginal costs or the claim (probably true) that costs will decline or that value will increase as they expand supply.").

195 *See* Sunny Woan, *Antitrust in Wonderland: Regulating Markets of Innovation*, 27 TEMP. J. SCI. TECH. & ENVTL. L. 53 (2008).

196 Woan, *supra* note 195, at 56. Woan also points out that "[t]raditional product markets generally experience the opposite: the model of perfect competition is characterized by low fixed costs and higher variable costs." *Id*. at 62. She further notes that there are other industries, besides those in the New Economy, that are characterized by high fixed costs and low variable costs. *Id*. at 62, n.96 (citing Robert Pitofsky, Chairman, Fed. Trade Comm'n, *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, Prepared Remarks Before the Antitrust, Technology and Intellectual Property Conference at the Berkeley Center for Law and Technology (Mar. 2, 2001)). *See also* Marleina Paz, *Almost But Not Quite: The Past, Present, and Potential Future of Horizontal Merger Enforcement*, 45 LOYOLA L.A. L. REV. 1053, 1095 (2012) ("Another trait of technology-based industries is that there are initial high fixed costs and subsequent low variable costs related to creating new products for consumers . . . After these high fixed costs are incurred, companies experience low variable costs because reproducing the good or service is much cheaper than the initial investment.") (citations omitted).

197 Robert Pitofsky, Chairman, Fed. Trade Comm'n, *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, Prepared Remarks Before the Antitrust, Technology and Intellectual Property Conference at the Berkeley Center for Law and Technology (Mar. 2, 2001).

198 Schanzenbach, *supra* note 155, at 8.

199 *See id.* (noting that software products generally have low marginal costs); Steven D. Houck, *Injury to Competition/Consumers in High Tech Cases*, 75 ST. JOHNS L. REV. 593,

firms "usually have high fixed costs, because of significant R&D investments or the need to invest in networks, but low marginal costs, because the cost of producing an additional unit is insignificant."[200] In these ways, the New Economy is structurally similar to the telecommunications industry. There is good reason to believe that the application of the discount attribution test to bundled discounts in the New Economy would produce similar results to the hypothetical result in the case of the quad play.[201] Accurately evaluating bundled discounts in these industries will likely run into the same problems as those identified in the case of the quad play bundle.

B. Decision Theory in Pricing Conduct Cases

Simply put, decision theory is "the branch of microeconomics concerned with optimal choice in the presence of uncertainty."[202] Devlin and Jacobs note that, "error is uniquely prevalent in this field because antitrust is routinely called upon to deliver answers to unsolvable problems."[203] In antitrust, as this Article has pointed out, the modern law reflects a decided preference for false negatives over false positives.[204] This is explicit in decisions such as *Matsushita*[205] and *Brooke Group*,[206] as well as the Ninth Circuit's decision in *Cascade*.[207] This approach, in the context of evaluating pricing conduct, also operationalized Bork's insight that "predatory pricing schemes are rarely tried, and even more rarely successful."[208] Thus, the modern preference for false negatives over false positives is based upon a combination of factors: false positives

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601 (2001) (noting that marginal costs in intellectual property industries often approach zero). *See also* United States v. Microsoft Corp., 253 F.3d 34, 79 (D.C. Cir. 2001) (reciting Microsoft's counsel's admission at oral argument that Java and Navigator's "marginal costs [were] essentially zero").

200 Carrier, *supra* note 41, at 815.

201 *See, e.g.*, Schanzenbach, *supra* note 155, at 69-71 (explaining how "declining cost industries" can easily "justify a low price by pointing to low marginal costs"); Paz, *supra* note 196, at 1095 (explaining that once the "high fixed costs are incurred, companies experience low variable costs because reproducing the good or service is much cheaper than the initial investment") (citations omitted)).

202 Devlin & Jacobs, *supra* note 39, at 83.

203 *Id*. at 79.

204 *See, e.g., id*.

205 *See* Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp., 475 U.S. 574, 588-91, 593-95 (1986).

206 *See* Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 220-24 (1993).

207 *See* Cascade Health Solutions v. PeaceHealth, 502 F.3d 895, 911, 918-19 (9th Cir. 2007), *opinion amended and superseded*, 515 F.3d 883 (9th Cir. 2008).

208 Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp., 475 U.S. 574, 590-91 (1986) (citing ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF, 149-55 (1978)).

chill vigorous price competition and anticompetitive harm through low-pricing is extremely rare,[209] in addition to other factors not considered here.[210]

As the prior sub-section argued, the rub in the decision-theoretic approach is that false negatives are not as rare or even uncommon as the approach assumes them to be, or at least as the court in *Cascade* thought them to be. As a result, the use of conventional decision theory in evaluating bundled discounts is less justified than the Ninth Circuit would have it.[211] Since the use of this theory is at least in part driven by the notion that competitive harm from low-pricing is relatively uncommon,[212] a finding that this is actually *common* undermines the justification for using it in this context. Moreover, there is no indication in the Ninth Circuit's decision that the court considered the possibility that its rule of above-cost legality would produce these types of errors.[213] Perhaps counsel

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209 Michael Salinger's analysis of *Matshusita*'s legacy provides a helpful distillation of the concerns that undergird the modern law's approach to uncertainty in adjudicating pricing conduct. Michael Salinger, 38 LOY. U. CHI. L.J. 475, 477 (2007). He points to several important statements in that decision, including: "predator pricing schemes are rarely tried, and even more rarely successful" and "mistaken inferences in cases such as this one are especially costly, because they chill the very conduct the antitrust laws are designed to protect." *Id*. (quoting Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp., 475 U.S. 574, 594 (1986)).

210 *See, e.g.,* Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 2-3 (1984). Easterbrook's argument was that the market will correct erroneous condemnation of a given business practice produces a larger social cost than erroneous acceptance of an anticompetitive business practice. For example, he argued that, "judicial errors that tolerate baleful practices are self-correcting, while erroneous condemnations are not." *Id*. at 3.

211 Jonathan Rubin has argued against using decision theory in the context of bundled discounts, but for different reasons than those proposed here. Rubin, *supra* note 27, at 5-6. Rather than examining the efficacy of the approach in certain markets, as is the method used here, Rubin argues that that the differences between bundled discounts and single-product predatory pricing are such that the use of decision theory is not justified in the former case. *Id*. For example, Rubin argues:

> Bundling lacks the short-term consumer benefit of lower prices or higher bids and does not impart an *unambiguous* short-run benefit. Whether a particular instance of bundling does or does not create consumer surplus in a particular case would depend on the circumstances. Not so with predatory pricing, in which *every penny* of lower prices during the "pre recoupment" phase inures to the benefit of consumers. As a result, a decision-theoretic, cost-based rule may be justified for predatory pricing, where the risk of a false positive arguably overwhelms the costs of making a correct decision. Decision-theoretic liability rules, however, are not appropriate for bundling, or other exclusionary strategies.

Id. (emphasis in original).

212 *See, e.g., Matsushita Elec. Indus. Co., Ltd*., 475 U.S. at 588-91, 593-95; Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 220-24 (1993); Cascade Health Solutions v. PeaceHealth, 502 F.3d 895, 911 (9th Cir. 2007), *opinion amended and superseded*, 515 F.3d 883 (9th Cir. 2008) (quoting Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993)).

213 The *Cascade* court "rejected . . . the notion that above-cost prices . . . [ever] inflict injury to competition under the antitrust laws." *Cascade Health Solutions*, 502 F.3d at 911, *opinion amended and superseded*, 515 F.3d 883 (9th Cir. 2008) (quoting Brooke Grp. Ltd.

never brought it to the court's attention that the rule would operate in such a way in certain (i.e., high technology, New Economy, communications, etc.) markets because the case involved litigation between hospitals.[214] Carrying the argument to its logical extreme, one commentator has argued that, "a cost-based rule allows high technology firms to evade predatory pricing liability entirely, because the marginal cost of producing most intellectual property is zero."[215] In other words, the law's bias for false negatives has left a wide loophole for firms in certain industries to use strategic pricing in ways that existing rules, based on application of decision theory, are not equipped to address. This problem suggests that the law ought to start giving increased solicitude to concerns that low-pricing is being employed anticompetitively in industries categorized by the structural features described in the last sub-section.[216]

VII. CONCLUSION

This simple illustration of the prospective antitrust concerns raised by the quad play bundle reveals that the Ninth Circuit's "discount attribution" test suffers from substantial weaknesses. These flaws come to the fore in the case of the quad play bundle. This discussion has shown that the Commercial Agreements between Verizon Wireless and the Cable Defendants would allow the quad play to be marketed in ways that would be anticompetitive yet still legal under a cost-based rule of per se legality for above-cost bundled dis-

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v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 223 (1993)). The court mentions only the risks of false positives, stating that the Supreme Court has "cautioned [it] that 'the costs of erroneous findings of predatory-pricing liability were quite high [if above-cost is used] because [t]he mechanism . . . is the same mechanism by which a firm stimulates competition." *Id.* at 913 (quoting Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., Inc., 549 U.S. 312, 319 (2007)) (last alteration in original).

214 For example, a review of Plaintiff McKenzie–Willamette Hospital's complaint, trial memorandum, and response to renewed motion for judgment as a matter of law reveals no mention that false negatives occur in bundled discount situations. *See, e.g.*, Complaint of Plaintiff McKenzie–Willamette Hospital, 502 F.3d 895 (9th Cir. 2007) (No. 02-6032-TC); Plaintiff McKenzie-Willamette Hospital's Trial Memorandum, 502 F.3d 895 (9th Cir. 2007) (No. 02-6032-HA); Plaintiff McKenzie-Willamette Hospital's Response to Renewed Motion for Judgment as a Matter of Law, 502 F.3d 895 (9th Cir. 2007) (No. 02-6032-HA).

215 Thomas Piraino, Jr. has distilled this insight in the context of pure predatory pricing through the following assertion: "[A] cost-based rule allows high technology firms to evade predatory pricing liability entirely, because the marginal cost of producing most intellectual property is zero." Thomas A. Piraino, Jr., *A Proposed Antitrust Approach to High Technology Competition*, 44 WM. & MARY L. REV. 65, 126 (2002) (citing Patrick Bolton et al., *Predatory Pricing: Strategic Theory and Legal Policy,* 88 GEO. L.J. 2239, 2285 (2000)).

216 Of course, there is the possibility that this could undermine a uniform approach to evaluating the legality of bundled discounts across the economy. It remains to be seen whether this concern can be adequately addressed by the modification or adaptation of existing approaches.

counts. The Ninth Circuit's discount attribution test incorporates *Brooke Group*-based fears of not only chilling pro-competitive price-cutting due to false positives, but also concerns over limited judicial ability to evaluate bundling practices. The result is that anticompetitive bundles are likely to escape scrutiny given certain market characteristics: very high fixed costs in bundling products and very low average variable costs on bundled products.

In this Article, I have tried to make the case that the incidence of false negatives under a discount attribution test for bundled discounts is likely to be much higher than the theory underlying the test assumes. To that end, I have used a real-world example to illustrate how a Type II error would be likely to occur, and have argued that industries prone to Type II errors are much more prevalent in our economy than *Cascade* (and *Brooke Group*) thought. These conclusions indicate that the value of an above-cost safe harbor for bundled discounts should be questioned, since the justification for this rule derives in large part from the notion that false negatives are so unlikely so as not to be worth antitrust law's notice. At the very least, should be accepted with a caveat. If the Supreme Court ultimately endorses the discount attribution test for evaluating bundled discounts, this would not mean that the Court sees all above-cost bundled discounts as pro-competitive or competitively-neutral. This much is clear from existing case law, which apparently acknowledges the theoretical possibility of competitive harm where there is no below-cost pricing. The adoption of the rule would likely represent a judgment that it is better that some anticompetitive bundling go undetected, than that pro-competitive bundling be deterred in the first instance for fear of a wrongfully-awarded treble damages award; this would reflect an extension of the decision-theoretic approach that pervades modern antitrust law into the realm of bundled discounting practices. However, the approach leads to rules that may be much more underinclusive than their proponents imagine. There may be entire industries, notably the telecommunications and New Economy sectors, where anticompetitive bundling is almost entirely immune from liability even where bundled discounts are anti-competitively used. This Article has tried to identify reasons that the discount attribution test is far from accurate in many cases, and has explained the difficulties that follow where liability rules for bundled discounts rely upon a decision-theoretic approach which is not be justified in several large and important sectors of the economy.