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Predatory Bundling and the Exclusionary Standard

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Predatory Bundling and the Exclusionary Standard

J. Shahar Dillbary*

Abstract

Recent decisions—all relying on a stylized example first provided by the Ortho court—hold that a multi-product seller that uses a bundled discount in a way that excludes an equally or more efficient competitor engages in predatory bundling. According to these decisions, a bundle can be considered "predatory" even when the price of the bundle exceeds its cost. This Article shows that the Ortho court's stylized example and its monopoly leveraging theory are erroneous. This Article further demonstrates that even when a bundle's price excludes more efficient competitors and even when a component in the bundle is priced below cost, and thus sold at a loss, it may still have welfare-enhancing effects. The result is that bundles that fail the discount allocation test, and even bundles that fail the Brooke Group test for predatory pricing, can still be desirable.

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I. Introduction

Mixed bundling, also referred to as a bundled or package discount, occurs when the seller of two or more products offers each product separately at full price and a package thereof at a reduced price.¹ Bundled discounts permeate a variety of markets. Restaurants often offer a choice between an à la carte menu (where each item is priced individually) and a discounted buffet-style or a "value meal;" cable companies offer consumers a discounted package if, in addition to cable, consumers are also willing to purchase internet and phone services; and wireless services are often bundled with cell phones (an example which is examined more closely below).

Despite its ubiquitous nature, however, the legal standard regarding bundling is far from settled.² A number of decisions, chief among them *Ortho Diagnostics Systems, Inc. v. Abbott Laboratories, Inc.*,³ *LePage's*

1. The "discount" itself can take many forms, the most common of which are price reductions, rebates, and coupons. A volume discount can also be considered a bundle of two or more units of the same product. This Article, however, focuses solely on bundles comprised of different products.

2. See, for example, the Solicitor General's amicus brief urging the denial of certiorari in *LePage's*. Brief for the United States as Amicus Curiae at 14, *3M Co. v. LePage's Inc.*, 542 U.S. 953 (2004) (No. 02-1865), 2004 WL 1205191 at *14 ("*There is insufficient experience with bundled discounts to this point to make a firm judgment about the relative prevalence of exclusionary versus procompetitive bundled discounts.*" (emphasis added)); see also *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 908 (9th Cir. 2008) ("[T]here is limited judicial experience with bundled discounts, and academic inquiry into the competitive effects of bundled discounts is only beginning.").

3. See *Ortho Diagnostics Sys., Inc. v. Abbott Labs., Inc.*, 920 F. Supp. 455, 469–70

Inc. v. 3M,⁴ and more recently *Cascade Health Solutions v. PeaceHealth*,⁵ have determined that, in some situations, package discounts can constitute a form of predatory pricing called "predatory bundling." Although each of these decisions offers a different test for predatory bundling, they all agree on one common principle: A multi-product seller that uses a bundled discount in a way that excludes or eliminates an equally or more efficient competitor unambiguously harms consumers and competition.⁶ Accordingly, these decisions (and the Antitrust Modernization Committee Report)⁷ hold that predatory behavior is *not* limited to situations in which the predator prices its bundle below cost (average or marginal); but rather, a seller's bundle can be deemed "predatory" even where the bundle is priced *above* its cost.⁸ This occurs, as the argument goes, when the seller

(S.D.N.Y. 1996) (holding that to show predatory bundling the plaintiff "must prove either that (a) the monopolist has priced below its average variable cost or (b) the defendant's pricing will exclude the plaintiff who is an equally or more efficient producer of the competitive product").

4. See *LePage's Inc. v. 3M*, 324 F.3d 141, 155 (3d Cir. 2003) (holding that "[t]he 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").

5. See *Cascade*, 515 F.3d at 909–10 (holding that "the primary anticompetitive danger posed by a multi-product bundled discount is that such a discount can exclude a rival is who is equally efficient at producing the competitive product simply because the rival does not sell as many products as the bundled discounter").

6. See *id.* at 896 (offering a test that "ensures that the only bundled discounts condemned as exclusionary are those that would exclude an equally efficient producer of the competitive product or products"); *Lepage's*, 324 F.3d at 155 ("The principal anticompetitive effect of bundled rebates . . . 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."); *Ortho*, 920 F. Supp. at 466 ("[O]nly price cutting that threatens equally or more efficient firms is condemned under Section 2."); RICHARD POSNER, *ANTITRUST LAW* 196 (2d ed. 2001) ("Only when the monopoly power is used to discourage equally or more efficient firms and thus perpetuate a monopoly not supported by superior efficiency should the law step in.").

7. ANTITRUST MODERNIZATION COMM'N, REPORT AND RECOMMENDATIONS 99 (2007) [hereinafter ANTITRUST MODERNIZATION COMM'N], available at http://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf.

8. See *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 906 (9th Cir. 2008) (stating that a firm can "use a bundled discount to exclude an equally or more efficient competitor This is true even if the post-discount prices for both the entire bundle and each product in the bundle are above the seller's cost"); *id.* at 907 ("[A]s the [*Ortho*] example above shows, a bundled discounter can exclude rivals who do not sell as great a number of product lines without pricing its products below its cost to produce them. Thus, a bundled discounter can achieve exclusion without sacrificing any short-run profits."); *LePage's*, 324 F.3d at 155 (holding that above-cost bundles can be anticompetitive if, when

excludes more efficient competitors.⁹

This Article argues that the standard enunciated by the line of cases beginning with the *Ortho* decision is over-inclusive. Further, it challenges the axiom underlying the predation jurisprudence that pricing below cost is unambiguously harmful (if recoupment is possible). In a deviation from the prior literature, this Article argues that even when the bundle's price excludes (defined broadly also to mean blocks) a more efficient competitor, and even when a component in the bundle is priced *below* cost, the bundle may nevertheless have a welfare-enhancing effect.

It should be noted that a strand of literature recognizes that exclusionary bundles can be welfare-enhancing, but this view is limited to bundles which are sold *above* cost.¹⁰ Nalebuff, for example, shows that in situations where the multi-product seller profits from the sale of both products in the bundle (the competitive and the monopolized), the monopolist can use a bundle to take over the competitive product.¹¹ This Article goes even further and proposes that even when the multi-product seller loses money from selling the competitive product in the bundle, it can nevertheless increase its total profits and consumers' welfare. The Article reveals that a multi-product seller may have a legitimate business justification to price the competitive product in the bundle below its incremental cost of production (and thereby exclude equal or more efficient competitors) in order to discriminate between consumers of the monopolized product. As a result, bundles that fail the

offered by a monopolist, they "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"); *Ortho*, 920 F. Supp. at 467–68 (arguing that a company can price all of its products above average variable cost and still drive equally efficient competitors out of the market); see also ANTITRUST MODERNIZATION COMM'N, *supra* note 7, at 99 (noting that "just as above-cost predatory pricing could occur, above-cost predatory bundled discounts could occur" and adopting a version of the discount attribution standard). Throughout the Article I use the term "cost" to refer to incremental cost (average or marginal) without taking a stand as to the preferred measure of cost.

9. *Infra* Part III.

10. See, e.g., Barry J. Nalebuff, *Bundling as a Way to Leverage Monopoly* 13 (Yale Sch. of Mgmt., Working Paper No. ES-36, 2004), available at <http://ssrn.com/abstract=586648> [hereinafter Nalebuff, *Bundling as a Way*] (showing that by *inflating* the price of the competitive product above the market price and discounting the monopolized product the bundler can increase its profits and enhance welfare); Patrick Greenlee et al., *An Antitrust Analysis of Bundled Loyalty Discounts*, 26 INT'L J. INDUS. ORG. 1132, 1132 (2008) (arguing that exclusionary *above cost* bundles may increase or decrease welfare).

11. Nalebuff, *Bundling as a Way*, *supra* note 10, at 23.

discount allocation test, and even bundles that fail the *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*¹² test, can still be socially desirable.¹³

This Article, therefore, revisits the standard for finding predatory bundling and calls for reconsideration of the "discount allocation" test adopted by the *Cascade* court. At the very least this Article calls for the explicit adoption of a "business justification" requirement (whether as part of the plaintiff's affirmative case or his opponent's defense) to allow exclusionary below-cost bundles that enhance total welfare.¹⁴

The remainder of this Article proceeds as follows: Part II reviews the current standard for predatory pricing in the single product context. It shows that if a single-product manufacturer can exclude more efficient competitors, it will unambiguously harm consumers and competition. The intuition is simple; by setting prices below cost, a seller can drive its competitors out of the market. Then, with competition vanquished, the seller may be able to charge supra-competitive prices. As a result, some consumers who purchased the product prior to the predation period will not be able to afford it post-predation. Others will have to pay more to purchase the same product that was available for less prior to the predation period. Focusing on this *exclusionary nature*, the Supreme Court held in *Brooke Group* that selling below cost is "predatory" if the predator can recoup its losses.¹⁵ This well-established Exclusionary Standard is premised on the assumption that in the single product context, excluding more efficient competitors from the market

12. See *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 222–24 (1993) (holding that in order to prove predatory pricing under § 2 of the Sherman Act the plaintiff must show: (1) that the defendant priced its product below cost, and (2) that the alleged predator had "a dangerous probability of recouping its investment in below-cost pricing").

13. Proponents of the exclusionary standard reject above-cost exclusionary, yet welfare-enhancing, bundling because of their ability to allow the multi-product bundler to leverage its monopoly power. See, e.g., Barry Nalebuff, *Exclusionary Bundling*, 50 ANTITRUST BULL. 321, 340 (2005) [hereinafter Nalebuff, *Exclusionary Bundling*] ("[T]he problem is that the [above-cost welfare-enhancing, yet exclusionary] bundle . . . allows a firm to leverage its monopoly from one market to another. A monopolist can exclude a more efficient competitor . . .").

14. This is indeed a true concern as at least one prominent scholar has suggested a per se rule against exclusionary bundles (even if welfare-enhancing). See Nalebuff, *Exclusionary Bundling*, *supra* note 13, at 343 ("When the foreclosure is significant and the monopolist could have reasonably understood the effect of its pricing, I am in favor [of] employing a per se rule against exclusionary bundling.").

15. See *Brooke Grp.*, 509 U.S. at 224 (1993) ("Recoupment is the ultimate object of an unlawful predatory pricing scheme; it is the means by which a predator profits from predation. Without it, predatory pricing produces lower aggregate prices in the market, and consumer welfare is enhanced.").

harms consumers.¹⁶ As demonstrated below, however, this assumption does not hold in the bundling context.

Part III discusses the legal standard for finding predatory bundling. It shows that beginning with the *Ortho* decision, courts, drawing an analogy to the single product market, have equated predatory behavior with exclusionary behavior. This equation led them to adopt the Exclusionary Standard in the multi-product context to distinguish pro-competitive bundles from anti-competitive ones. Interestingly, in all of these decisions, the fact-pattern was the same. The defendant was a multi-product seller that had a monopoly over one product, but was in competition with the plaintiff and others on the sale of a second product.¹⁷ It is not surprising

16. See *id.* at 256 ("When a predator deliberately engages in below-cost pricing targeted at a particular competitor over a sustained period of time, then price cutting raises a credible inference that harm to competition is likely to ensue."); *Ortho Diagnostics Sys., Inc. v. Abbott Labs., Inc.*, 920 F. Supp. 455, 468 (S.D.N.Y. 1996) ("The average variable cost standard serves only one purpose—distinguishing in single product situations (a) pricing that constitutes competition on the merits from (b) pricing that may permit a monopolist or putative monopolist to get rid of its competitors and pave the way for an abuse of market power.").

17. See *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 890–93 (9th Cir. 2003) (stating that the defendant held monopoly power over the tertiary care services market and competed against the plaintiff in the primary-and secondary-acute care hospital services market); *LePage's Inc v. 3M*, 324 F.3d 141, 144–45 (3d Cir. 2003) (stating that the plaintiff argued that the defendant 3M had a monopoly in the transparent tape market and offered rebates to customers who purchased other products in which 3M did not enjoy market power in order to maintain its monopoly power); *Ortho*, 920 F. Supp. at 457–63 (stating that the defendant allegedly held monopoly power in the market for certain blood screening tests and competed against the plaintiff in the market for other blood screening tests); see also U.S. DEP'T OF JUSTICE, COMPETITION AND MONOPOLY: SINGLE-FIRM CONDUCT UNDER SECTION 2 OF THE SHERMAN ACT 96 (2008), available at <http://www.usdoj.gov/atr/public/reports/236681.pdf> [hereinafter DOJ, COMPETITION AND MONOPOLY] (citing the *Ortho* example with approval). COMPETITION AND MONOPOLY, a product of a series of hearings held by the antitrust agencies from June 2006 to May 2007, was withdrawn by the Department of Justice on May 11, 2009. *Id.* In a press release, Christine A. Varney, the Assistant Attorney General in charge of the Department's Antitrust Division, explained that the COMPETITION AND MONOPOLY "report advocated hesitancy in the face of potential abuses by monopoly firms." Press Release, Dep't of Justice, Justice Department Withdraws Report on Antitrust Monopoly Law (May 11, 2009), http://www.justice.gov/atr/public/press_releases/2009/245710.htm (last visited Nov. 14, 2010) [hereinafter DOJ, Justice Department Withdraws] (on file with the Washington and Lee Law Review). She said that implicit in this overly cautious approach is the notion that most unilateral conduct is driven by efficiency and that monopoly markets are generally self-correcting. *Id.* "The recent developments in the marketplace should make it clear that we can no longer rely upon the marketplace alone to ensure that competition and consumers will be protected," Varney added. *Id.*

then that *all* of these decisions rely on the stylized example first provided by the *Ortho* court.¹⁸

Focusing on this stylized example, Part IV shows that absent a more sophisticated story, a multi-product seller who enjoys a monopoly over product *A* but competes with other sellers on product *B*, has *no* incentives to monopolize the competitive market for *B*. Specifically, this Article demonstrates that the *Ortho* example and the monopoly leveraging theory on which it is based is erroneous and its conclusion faulty. Another major flaw in the *Ortho* example is the assumption that all consumers of the monopolized product have the same reservation price. This assumption did not allow the *Ortho* court to consider a situation in which the monopolist uses the bundled discount to discriminate between purchasers.

Part V employs a richer, yet simplified model that relaxes this unrealistic assumption. The model used is related to models proposed by Adams and Yellen,¹⁹ Schmalensee,²⁰ and Carlton and Waldman.²¹ It demonstrates that by offering consumers a bundled discount, the monopolist can cause consumers to reveal their reservation price, thereby allowing it to sell to a segment of the population that otherwise would not buy the monopolized product. The mechanism is simple. By offering a bundled discount and allowing consumers to choose to buy the monopolized product *A*, the competitive product *B* or the package *AB*, the seller creates a mechanism that causes consumers to reveal their preferences and sort themselves into two groups: Those who hold a high reservation price for the monopolized product (high value consumers) and those who do not (low value consumers). With the ability to distinguish between the low and high value consumers, the seller can use the bundle to offer each group a different price and even prevent arbitrage. Specifically, the seller

18. See *infra* note 79 and accompanying text (discussing the example provided in the *Ortho* opinion).

19. See William J. Adams & Janet L. Yellen, *Commodity Bundling and the Burden of Monopoly*, 90 Q.J. ECON. 475, 476 (1976) (showing "that the profitability of commodity bundling can stem from its ability to sort customers into groups with different reservation price characteristics . . . and to extract the consumers surplus").

20. See Richard Schmalensee, *Commodity Bundling by Single-Product Monopolies*, 25 J.L. & ECON. 67, 68 (1982) (showing that a monopolist can use a mixed bundling strategy to profitably discriminate between consumers).

21. See Dennis W. Carlton & Michael Waldman, *Safe Harbors for Quantity Discounts and Bundling* 4–6 (Econ. Analysis Grp., Discussion Paper No. EAG 08-1, 2008), available at <http://ssrn.com/abstract=1089202> (recognizing that "bundling can be efficient and can also be a method of price discrimination" and concluding that "[t]he AMC test ignores [the price discrimination] rationale for bundling and accordingly non-exclusionary profit maximizing pricing can flunk the AMC test").

will offer a lower price on the monopolized product to the lower value consumers while maintaining a higher price for the higher value consumers. As a result, the low-value consumers will be able to purchase a product that, absent bundling, they would not have been able to afford.

Importantly, this Article demonstrates that selling a component of the bundle *below cost, and thus at a loss*, allows the seller to engage in price discrimination which, under certain circumstances, can be welfare-enhancing. Using variants of the *Ortho* example, Part V demonstrates that even when a bundle's price excludes more efficient competitors, and even if one of the products in the bundle is priced *below cost*, the bundle may still have welfare-enhancing effects. A key insight is that a monopolist will be willing to sacrifice profits from sales of the competitive product in the bundle if the profits generated from sales of the monopolized product outweigh the losses. Because it is the competitive product in the bundle that serves as the sorting mechanism allowing the seller to discriminate between consumers of the monopolized product, the monopolist will be willing to sell the competitive product below cost—as long as the benefits from extracting the consumers' surplus from the monopolized product outweigh these losses. Thus, the losses from bundling the competitive product can be viewed as a "premium" that the monopolist incurs in order to price discriminate between consumers. Part V provides a number of examples demonstrating that such below-cost bundles can be a profitable strategy. This Article concludes that in the bundling context, *selling a product below cost can be not only profitable and sustainable, but also welfare enhancing*. Put differently, in the bundling context, exclusionary does not necessarily mean predatory. Part VI provides concluding remarks.

II. Predatory Pricing—The Single Product Setting

The typical case of predatory pricing occurs when a seller prices its products below cost in order to drive its competitors out of the market. Then, after competition has been vanquished, the predator raises its prices to a supra-competitive level.²² The losses and forgone profits during the predation period are considered a form of "investment."²³ By selling its

22. *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312, 318 (2007).

23. *See, e.g., Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 588 (1986) ("Any agreement to price below the competitive level requires conspirators to forgo profits that free competition would offer them. The forgone profits may be considered an investment in the future.").

product below cost, the predator hopes to monopolize the market (i.e., exclude its competitors), recoup the losses incurred during the predation period, and then harvest monopoly profits.

Predatory pricing, however, is speculative in nature and inherently risky. While the loss during the predation period is certain, recoupment is possible only if the predation results in monopoly power.²⁴ Achieving monopoly power, however, is a formidable task. If the predation period is too long or the predator cannot meet the high demand generated by the low (predatory) price, the predator will not be able to eliminate competition.²⁵ Moreover, even if monopoly power is achieved, realizing monopoly profits and recouping the losses from the predation period is unlikely. Once the predator, now the only firm in the market, charges supra-competitive prices, other firms will be drawn back into the market by the high prices and the revived competition will drive the price back down to its original pre-predatory level, thereby frustrating the predator's attempt to recoup. Thus, for predatory pricing to succeed, the predator must not only achieve, but also *maintain* its monopoly power. For these reasons, courts have been very hesitant to find predatory pricing.²⁶ "Predatory pricing schemes are rarely tried, and even more rarely successful."²⁷

24. See *id.* at 589 ("The success of any predatory scheme depends on *maintaining* monopoly power for long enough both to recoup the predator's losses and to harvest some additional gain.").

25. See *id.* at 588–89 (stating that a predator must be able to recoup the losses suffered quickly enough to avoid the entry of new competitors "eager to share in the excess profits"); *id.* at 590 (noting that "[i]f there are too few goods at the artificially low price to satisfy demand, the would-be victims of the [predatory pricing] conspiracy can continue to sell at the 'real' market price, and the conspirators suffer losses to little purpose"); *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 226 (1993) (noting that "where the market is highly diffuse and comparative, or where new entry is easy, or the defendant lacks adequate excess capacity to absorb the market shares of his rivals and cannot quickly create or purchase new capacity—summary disposition of the case is appropriate").

26. See *Matsushita*, 475 U.S. at 588 (noting that "[a] predatory pricing conspiracy is by nature speculative"); *Brooke Grp.*, 509 U.S. at 225–26 (noting that "essential elements of predatory pricing are not easy to establish"); *id.* at 226 (warning that "the costs of an erroneous finding of liability are high"); *id.* at 226–27 (explaining that because "[t]he mechanism by which a firm engages in predatory pricing—lowering prices—is the same mechanism by which a firm stimulates competition," an erroneous finding of liability would "chill the very conduct the antitrust laws are designed to protect." (quoting *Cargill*, 479 U.S. at 122 n.17)).

27. *Weyerhaeuser*, 549 U.S. at 323 (quoting *Brooke Grp.*, 509 U.S. at 226). *But see Cargill v. Monfort of Colo.*, 479 U.S. 104, 121 (1986) (noting that "while firms may engage in the [predatory pricing] practice only infrequently, there is ample evidence suggesting that the practice does occur").

Not only is successful predatory pricing a rarity, but the consequences of an erroneous finding of predatory pricing are severe. Because "[t]he mechanism by which a firm engages in predatory pricing—lowering prices—is the same mechanism by which a firm stimulates competition,"²⁸ erroneous predation findings deter lower prices and harm competition. To separate competitive price-cutting from anticompetitive predatory pricing, courts have focused on the *exclusionary nature* of the behavior in question. Specifically, the Supreme Court held that to establish a predatory pricing claim under Section 2 of the Sherman Act,²⁹ the plaintiff must prove that the defendant priced its product below an appropriate measure of costs and that the defendant had a dangerous probability (or, under the Robinson-Patman Act,³⁰ a reasonable prospect) of recouping its investment.³¹

In the single-product case, the "below-cost" requirement ensures that the predator's conduct is in fact exclusionary. Pricing a widget at \$8, if the cost to manufacture is \$10, will cause a more efficient competitor, who can manufacture the same widget for \$9, to exit the market. This "Exclusionary Standard" has become so widely accepted that today's courts differ only as to the type of "below-cost" measure that they use (marginal or average) to identify predatory pricing.³² As shown below, however, this standard has been wrongly imported to the multi-product context.

28. *Brooke Grp.*, 509 U.S. at 226 (quoting *Cargill*, 479 U.S. at 122 n.17).

29. Section 2 of the Sherman Act makes it illegal to "attempt to monopolize . . . any part of the trade or commerce among the several States, or with foreign nations." 15 U.S.C. § 2 (2006).

30. See Robinson-Patman Act, 15 U.S.C. § 13 (2006) (declaring it unlawful "for any person engaged in commerce . . . either directly or indirectly to discriminate in price between different purchasers of commodities of like grade and quality . . . where the effect of such discrimination may be substantially to lessen competition or tend to create a monopoly"); see also *Brooke Grp.*, 509 U.S. at 222 ("[W]e interpret § 2 of the Sherman Act to condemn predatory pricing when it poses 'a dangerous probability of actual monopolization,' whereas the Robinson-Patman Act requires only that there be a 'reasonable possibility' of substantial injury to competition before its protections are triggered . . .").

31. See *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 222–24 (1993) (stating that first, "a plaintiff seeking to establish competitive injury . . . must prove that the prices complained of are below an appropriate measure of its rival's costs," and second, that "the competitor had a reasonable prospect, or . . . dangerous probability of recouping its investment").

32. See *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 910 (9th Cir. 2008) ("[A] plaintiff can establish a prima facie case of predatory pricing by proving that the defendant's prices were below average variable cost."); *United States v. AMR Corp.*, 335 F.3d 1109, 1115–16 (10th Cir. 2003) ("For predatory pricing cases, especially those involving allegedly predatory production increases, the ideal measure of cost would be marginal cost . . ."); POSNER, *supra* note 6, at 216–20 (discussing the different below-costs measures); Phillip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices*

III. Predatory Bundling—The Multi-Product Setting

The seller of products *A* and *B* may engage in one of three forms of bundling strategies.³³ *Pure bundling* occurs when two products, *A* and *B* are sold only as one package.³⁴ The consumer can purchase the bundle or nothing. Airlines, for example, bundle flights with a beverage service and some pharmaceuticals offer two medicines (which cannot be bought separately) in one drug. Note that these two examples are different. While in both the consumer must purchase the bundle *AB* (to enjoy product *A* or *B* or both), in the drug example the consumer must consume both medicines; whereas, in the airline example the consumer can forgo (decline consuming) one product (the beverage). *Tying* is a situation in which the consumer can purchase product *A* separately, but if she wishes to purchase product *B* (the tied product), she must purchase the package *AB*.³⁵ *Mixed bundling* or a bundled discount—the focus of this Article—is a situation in which the seller offers products *A* and *B* separately and a package *AB* at a discounted price.³⁶ Examples include restaurants that offer à la carte menus as well as value meals, and wireless companies that offer a discount to consumers who purchase cell phones and wireless services.

Producers may offer a bundled discount for a number of reasons, many of which are legitimate. A bundled discount enables the seller to economize on packaging, distribution and marketing costs, enjoy economies of scope, enhance brand loyalty, and avoid double marginalization.³⁷ To the consumer, it offers more options (after all, in a

Under Section 2 of the Sherman Act, 88 HARV. L. REV. 697, 716–18 (1975) (concluding that "marginal-cost pricing is the economically sound division between acceptable, competitive behavior and 'below-cost' predation" but proposing the use average variable cost as a "useful surrogate").

33. For purposes of simplicity in presentation, this Article discusses a seller of two products. However, the model and conclusions below also apply to producers of $n > 2$ products.

34. DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 324 (4th ed. 2005).

35. *Id.* at 321–22.

36. *Id.* at 324.

37. See Brief of Amici Curiae Law Professors in Support of Defendant-Appellant and Cross Appellee PeaceHealth Supporting Reversal of the Verdict Concerning Bundled Discounts, *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883 (2008) (No. 05-3627), LEXSEE 2005 U.S. 9th Cir. Briefs 35627 at *1 [hereinafter Brief of Amici Curiae Law Professors] (noting that "bundled discounts are ubiquitous in our national economy and are almost always procompetitive" and that "care should be taken in framing liability rules for the rare instances where bundled discounts could be anticompetitive"); see also PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES

mixed bundling scenario, the consumer can always buy products *A* and *B* separately) and lower prices. Mixed bundling, however, can have detrimental effects. It may be used by a multi-product seller to impede single-product competitors from entering the market.³⁸ Under certain circumstances, it may even affect incentives to innovate, decreasing them for competitors of the bundler, increasing them for the bundler itself,³⁹ and cause a misallocation of resources.⁴⁰

Another possible detrimental effect of mixed bundling is predatory bundling. In *Ortho*, the products at issue were blood assays used to screen for viruses.⁴¹ The defendant, Abbott Laboratories, was the only company

AND THEIR APPLICATION at 343 (3d ed. 2008) ("Bundling serves a number of pro-competitive or competitively benign purposes, including achievement of scale or scope economies, quality control, and many instances of price discrimination."); Daniel A. Crane, *Mixed Bundling, Profit, Sacrifice, and Consumer Welfare*, 55 EMORY L.J. 423, 430-44 (2006) [hereinafter Crane, *Mixed Bundling*] (reviewing some of the procompetitive and competition-neutral explanations for bundling); Yannis Bakos & Erik Brynjolfsson, *Bundling Information Goods: Pricing, Profits and Efficiency*, MGMT. SCI., Dec. 1999, at 1613 (finding that "bundling very large numbers of unrelated information goods can be surprisingly profitable"). Because it is easier to predict consumers' valuations for the bundle than their valuations for the separate goods, bundling "makes it possible to achieve greater sales, greater economic efficiency, and greater profits per good from a bundle of information goods than can be attained when the same goods are sold separately." *Id.*

38. See Bruce H. Kobayashi, *Does Economics Provide a Reliable Guide to Regulating Commodity Bundling by Firms? A Survey of the Economic Literature*, 1 J. COMP. L. & ECON. 707, 729-35 (2005) [hereinafter Kobayashi, *A Survey of the Economic Literature*] (reviewing the literature on "the strategic use of bundling in a setting where a monopolist in *Y* faces limited actual or potential competition in *X*"); *id.* (concluding that "in general, these models show the circumstances in which bundling can result in the deterrence of entry that would have occurred in the absence of bundling"); Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN L. REV. 253, 283 (2004) [hereinafter Elhauge, *Defining Better Monopolization Standards*] ("Exclusionary conduct might, for example, foreclose enough of the market" and thereby "deter entry, drive rivals out of the market, slow down their growth, or simply leave rivals less efficient than they otherwise would have been"); Yannis Bakos & Erik Brynjolfsson, *Bundling and Competition on the Internet*, MGMT. SCI., Jan. 2000, at 64-65, 75-77 (showing how bundling can create "economics of aggregation" for information goods and analyzing the effects of such bundling strategies on pricing, profitability, and competition); Barry Nalebuff, *Bundling 1* (Yale Sch. of Mgmt., Working Paper No. 99-14, 1999), available at <http://ssrn.com/abstract=185193> ("A company that has market power in two goods, *A* and *B*, can, by bundling them together, make it harder for a rival with only one of these goods to enter the market.").

39. Bakos & Brynjolfsson, *supra* note 38, at 65.

40. See *infra* note 79 (discussing how a bundle may also have a coercive and detrimental effect).

41. *Ortho Diagnostics Sys., Inc. v. Abbott Labs., Inc.*, 920 F. Supp. 455, 458 (S.D.N.Y. 1996).

that manufactured all five of the commonly used tests.⁴² The controversy arose when Abbott offered a bundled discount that included tests in which Abbott enjoyed a monopoly with tests that Abbott sold in competition with Ortho.⁴³ The additional wrinkle was that Abbott set the price of its bundle *above* its cost ($C_A + C_B < P_{AB} < P_A + P_B$).⁴⁴ The issue before the court, therefore, was "whether a firm that enjoys a monopoly on one or more . . . products, but which faces competition on others, can price all of its products *above* average variable cost and yet still drive an equally efficient competitor out of the market."⁴⁵ Based on the stylized example discussed below, the *Ortho* court answered in the affirmative.⁴⁶ Drawing an analogy to the single product market, the court equated exclusionary behavior with predatory behavior.⁴⁷ This equation led the court to conclude that a bundle is predatory if it is exclusionary.⁴⁸ Specifically, the court held that to prove predatory bundling the plaintiff must show that either (1) the defendant priced the package below average variable cost⁴⁹ or (2) that regardless of price (i.e., even if the package was priced above cost), the bundled discount made it unprofitable for an equally efficient plaintiff-manufacturer to produce the competitive product.⁵⁰ Both situations, the court determined, meet the Exclusionary Standard (in both situations the bundler eliminates efficient competitors) and thus equally merit condemnation.⁵¹

42. *Id.* at 459.

43. *Id.* at 457.

44. *Id.* at 469.

45. *Id.* at 467 (emphasis added).

46. *Id.*

47. *See id.* at 466–68 (noting that in the single product context pricing below cost "serves only one purpose"—distinguishing (a) legitimate price cutting from (b) pricing that may enable the seller to drive equally or more efficient competitors out of the market); *id.* (relying on the *Ortho* example to conclude that "a firm that enjoys a monopoly on one or more . . . complimentary products, but which faces competition on others, can price all of its products above average variable cost and yet still drive an equally efficient competitor out of the market").

48. *Id.* at 468–69.

49. The first prong of the *Ortho* test compares the aggregate (average) cost of the bundle to the bundle's price. *Id.* at 469–70. For example, if the average cost to produce the bundle *AB* is \$10, but the bundle is offered at a discounted price of \$8, it should be deemed exclusionary ($P_{AB} < C_{AB}$). This "aggregate discount" rule was explicitly rejected by the *Cascade* court. *See Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 914 (9th Cir. 2008) ("Under a discount aggregation rule, anticompetitive bundled discounting schemes that harm competition may too easily escape liability.").

50. *Ortho Diagnostics Sys., Inc. v. Abbott Labs., Inc.*, 920 F. Supp. 455, 469–70 (S.D.N.Y. 1996).

51. *See id.* at 468–69 n.16 ("In the Court's view, the standard discussed in the text—

The *Ortho* test suffers from a number of limitations.⁵² First, it provides no guidance to the multi-product seller who considers offering an above-cost bundled-discount. Under the second prong of the *Ortho* test, the multi-product seller must determine whether the bundle will make it unprofitable for an equally efficient seller to manufacture the competitive product.⁵³ Thus, the multi-product seller must know its rival's manufacturing costs—highly confidential information that is rarely publicly available. Second, and related, the *Ortho* test encourages wasteful litigation. It requires multiple suits to determine the legality of one bundled discount. To illustrate, assume that a monopolist of product *A* competes with three sellers on the production of product *B*. Assume further that the monopolist can manufacture product *B* at a cost of $C_{MB}=\$10$ per unit, and that the three competing sellers can manufacture the same at a cost of $C_1=\$12$, $C_2=\$11$ and $C_3=\$9$. Unaware of each other's cost, a competitor may sue the monopolist if the latter offers the bundle *AB* at a discounted price ($P_{AB}<P_A+P_B$). Seller 1's suit will be dismissed because it is not as efficient as the monopolist in the production of product *B* ($C_{MB}<C_1$). A similar suit filed by Seller 2 will be dismissed for the same reason. Only Seller 3 would be able to challenge the bundle successfully ($C_{MB}>C_1$).

A different version of the Exclusionary Standard was adopted by the Third Circuit in *LePage's Inc. v. 3M*.⁵⁴ At issue in *LePage's* was a bundled discount that 3M offered consumers which included a product in which 3M enjoyed a monopoly position, as well as other products that LePage's did not manufacture.⁵⁵ LePage's could not offer the same discount simply

pricing that could drive a more efficient competitor from the marketplace—is that which separates legitimate from illegitimate competition.”).

52. See *Cascade*, 515 F.3d at 915–16 (discussing these limitations); see also U.S. FED. TRADE COMM’N AND U.S. DEPT. OF JUST., SHERMAN ACT SECTION 2 JOINT HEARING UNDERSTANDING SINGLE-FIRM BEHAVIOR: LOYALTY DISCOUNTS SESSION 27–37 (Nov. 29, 2006), available at <http://www.ftc.gov/os/sectiontwohearings/docs/transcripts/transcript-11-29-06.pdf> (reporting Professor Lambert’s testimony that the *Ortho* exclusionary standard is “a great rule in theory but . . . a very difficult rule to administer” and one that may be “underdeterrent, because plaintiffs are going to have a hard time winning these cases” and offering a per se rule instead).

53. *Supra* note 50 and accompanying text.

54. See *LePage's Inc. v. 3M*, 324 F.3d 141, 155 (3d Cir. 2003) (holding that “[t]he 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”).

55. Both the plaintiff, LePage's, and the defendant, 3M, competed in the market for transparent tape which included both branded and private label tape (i.e., tape sold under the retailer's name). *Id.* at 144. LePage's quickly became a major seller of private label tape

because it was not a multi-product manufacturer.⁵⁶ In fact, LePage's was not even as efficient as 3M in the provision of the competitive product.⁵⁷ LePage's brought a suit arguing that 3M's use of the bundled discount excluded it from the one market in which both competed.⁵⁸ 3M did not deny that it bundled its monopolized product with other products or that the bundle had an exclusionary effect.⁵⁹ Rather, 3M argued that the bundle was legal because it was never priced below-cost.⁶⁰ In affirming the jury verdict, the Third Circuit held that "a monopolist will be found to violate Section 2 of the Sherman Act if it engaged in exclusionary conduct" without "a valid business justification."⁶¹ It concluded that 3M's bundle was anticompetitive because a "monopolist [like 3M] 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."⁶² 3M's gravamen, according to the court, was the

but it remained a small seller in the entire market of transparent tape, over which 3M, the manufacturer of Scotch tape, enjoyed historically significant market power. *Id.* Unlike LePage's, however, in addition to transparent tape, 3M offered other product lines. These product lines (in which 3M did not possess market power) included healthcare products; home care products; home improvement products; stationery products including transparent tape; retail auto products; and leisure time products. *Id.* at 247. 3M's bundle offered progressively higher discounts (in the form of rebates) when customers increased purchases across 3M's different product lines—discounts LePage's could not offer because it did not sell the same diverse product line as 3M. For a detailed review of the facts in *LePage's*, see Daniel L. Rubinfeld, *3M's Bundled Rebates: An Economic Perspective*, 72 U. CHI. L. REV. 243, 243–52 (2005); Nalebuff, *Exclusionary Bundling*, *supra* note 13, at 358–64.

56. *LePage's*, 324 F.3d at 145, 154–57.

57. LePage's economist testified that LePage's was not as efficient a tape producer as 3M. *See id.* at 175 (Greenburg, J., dissenting) (noting that LePage's argued "that it does not have to show that 3M's package discounts could prevent an equally efficient firm from matching or beating 3M's package discounts").

58. *Id.* at 144–45 (majority opinion).

59. *See id.* at 147 ("LePage's argued that 3M willfully maintained its monopoly in the transparent tape market through exclusionary conduct, primarily by bundling 3M does not argue that it did not engage in this conduct.").

60. *See id.* ("3M argues that its conduct was legal as a matter of law because it never priced its transparent tape below its cost."); *id.* ("When asked whether its theory is that because no one contended that 3M sold below its cost, that is 'the end of the story,' its counsel responded, 'with the exception of the inconsequential express contract, absolutely.'"); *id.* at 155 (noting that 3M's central premise was that "it is not unlawful to lower one's prices so long as they remain above cost").

61. *Id.* at 152; *see also id.* at 164 ("[A] business justification is valid if it relates directly or indirectly to the enhancement of consumer welfare.").

62. *Id.* at 155.

linking of a product in which the seller had a monopoly with products on which it faced competition.⁶³

The *LePage's* standard was widely criticized by the Antitrust Modernization Commission (AMC)—a bipartisan committee created by Congress to examine the need to revise antitrust laws.⁶⁴ As the AMC noted, the main problem with the *LePage's* test is that it does not investigate whether a bundled discount is pro-competitive.⁶⁵ Instead it simply declares that all bundled discounts offered by a monopolist are anticompetitive with respect to competitors who do not manufacture an equally diverse line of products.⁶⁶ Moreover, under *LePage's* per-se like test, the jury may conclude from the market structure alone that a bundle is "anti-competitive" even if the plaintiff was not as efficient as the defendant-bundler. Put differently, the *LePage's* test may in fact protect a less efficient competitor (as *LePage's* admitted to be).⁶⁷

The legality of a bundled discount was discussed more recently by the Ninth Circuit. In *Cascade Health Solutions v. PeaceHealth*,⁶⁸ the defendant and plaintiff were the only providers of hospital care in Lane County, Oregon.⁶⁹ Defendant held a monopoly over the provision of tertiary health care services, but competed with the plaintiff in primary and secondary acute care hospital services.⁷⁰ At issue was defendant's bundled discount

63. *Id.* at 156.

64. The AMC was created by the Antitrust Modernization Commission Act of 2002. See Antitrust Modernization Commission Act of 2002, Pub. L. No. 107-273, §§ 11051–60, 116 Stat. 1758, 1856–59 (2002) (authorizing the creation of the AMC).

65. ANTITRUST MODERNIZATION COMM'N, *supra* note 7, at 97.

66. *Id.*

67. *Supra* note 55 and accompanying text. The AMC proposed the following three-part test to determine whether a bundled discount is in violation of the antitrust laws:

To prove a violation of Section 2, a plaintiff should be required to show each one of the following elements . . . : (1) after allocating all discounts and rebates attributable to the entire bundle of products to the competitive product, the defendant sold the competitive product below its incremental cost for the competitive product; (2) the defendant is likely to recoup these short-term losses; and (3) the bundled discount or rebate program has had or is likely to have an adverse effect on competition.

ANTITRUST MODERNIZATION COMM'N, *supra* note 7, at 99.

68. See *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 903 (9th Cir. 2008) (holding that "the exclusionary conduct element of a claim arising under § 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").

69. *Id.* at 891.

70. *Id.*

that offered insurers that made the defendant their sole preferred provider for all services—primary, secondary, and tertiary—a package the plaintiff could not compete with.⁷¹ The district court based its jury instruction on the Third Circuit's en banc decision in *LePage's*.⁷² The instructions did not require the jury to consider whether the defendant priced the bundle below-cost. Instead, the district court instructed the jury that a bundled discount is anti-competitive if, when offered by a monopolist, it forecloses the market to a competitor who does not provide the same diverse product line (and thus cannot make a comparable offer).⁷³ The Ninth Circuit agreed with *LePage's* basic assertion that "the primary anticompetitive danger posed by a multi-product bundled discount is that . . . [it] can exclude a rival who is equally efficient."⁷⁴ Yet, it declined to adopt *LePage's* test. Market structure analysis, the court noted, cannot provide guidance as to whether a bundle reduces or increases consumer welfare—a primary goal of antitrust law in the eyes of the court.⁷⁵ It thus adopted a below-cost measure. A bundled discount, the court held, cannot be deemed "exclusionary" unless the bundle is priced below an appropriate measure of the defendant's cost.⁷⁶ Under *Cascade's* so called "discount attribution" test (and the AMC test), the court attributes the bundle's discount to the competitive product.⁷⁷ If the effective price of the competitive product is below the bundler's cost to produce it, the bundle is considered exclusionary. The court explained that "this requirement ensures that the only bundled discounts condemned as exclusionary are those that would exclude an equally efficient producer of the competitive product or products."⁷⁸

Part IV explains how this test is applied. It also proves that in adopting the "discount attribution" standard, the *Cascade* court relied on a stylized example and a monopoly-leveraging theory that Part IV proves to be wrong. Part V.B shows that the *Cascade*-AMC test is also over-inclusive, thus creating a substantial risk of false positives (mistakenly condemning pro-competitive conducts). If applied strictly, it will subject welfare-enhancing bundling schemes to unnecessary and costly scrutiny.

71. *Id.* at 892.

72. *Id.* at 897.

73. *Id.* at 909.

74. *Id.*

75. *Id.* at 899, 913–14.

76. *Id.* at 903.

77. *Id.* at 906.

78. *Id.* at 909.

Moreover, this Article questions the very premise on which *Cascade*, *LePage's* and *Ortho* rely. It argues that, in the bundling context, excluding a more efficient competitor can be welfare-enhancing and thus may not merit condemnation.

IV. The Ortho-AMC-Cascade Fallacy

A. The Ortho-Cascade Example

As noted above, recent decisions have held that bundling can be considered predatory even if the seller has sold its products above cost (marginal or average). Specifically, these decisions argue that a firm which enjoys a monopoly over one product, but also manufactures and competes in the market of another product, may be able to drive more efficient competitors from the market by offering bundled discounts. To show how an above-cost bundle can exclude equally or more efficient competitors, the *Ortho* and *Cascade* courts provided the following numerical example.⁷⁹ Assume that a seller enjoys a monopoly over the production of conditioners but competes with other sellers in the shampoo market. The monopolist's cost to manufacture shampoo and conditioner is \$1.50 and \$2.50 respectively. Competitors are more efficient than the monopolist in the production of shampoo. They can manufacture the same unit of shampoo at a cost of \$1.25. The market price for shampoos and conditioners is \$3 and

79. See *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 888, 896–97 (9th Cir. 2008) (citing the *Ortho* example to prove that a multi-product monopolist, regardless of whether it engages in below cost pricing, can use bundled discounts to exclude equally efficient competitors who do not offer as great a number of product lines); *Ortho Diagnostic Sys. v. Abbott Labs.*, 920 F. Supp. 455, 467 (S.D.N.Y. 1996) (providing the example cited in the following cases); see also *Virgin Atl. Airways Ltd. v. British Airways PLC*, 257 F.3d 256, 272–73 (2d Cir. 2001) (citing *Ortho* to suggest that Section 2 recognizes a claim against predatory bundling if it excludes an equally or more efficient competitor); *Meijer, Inc. v. Abbott Labs.*, 544 F. Supp. 2d 995, 1001 (N.D. Cal. 2008) (citing the *Ortho* example to show that "a bundled discounter can exclude rivals who do not sell as great a number of product lines without pricing its products below its cost to produce them"); *Ramallo Bros. Printing v. El Dia, Inc.*, 392 F. Supp. 2d 118, 138 (D.P.R. 2005) (citing *Ortho* to support its holding that a plaintiff must prove that the defendant's bundled discount makes it impossible for the plaintiff to compete); DOJ, COMPETITION AND MONOPOLY, *supra* note 17, at 96 (citing the *Ortho* example with approval); Brief of Amici Curiae Law Professors, *supra* note 37, at 9–10 (noting that the much-cited and discussed example from *Ortho* illustrates how a bundled discount could be used to exclude an equally efficient competitor); Thomas Lambert, *Evaluating Bundled Discounts*, 89 MINN. L. REV. 1688, 1696 (2005) (discussing the *Ortho* example with approval).

\$5 respectively, and each consumer is assumed to need both products.⁸⁰ In addition, the monopolist offers a bundled discount to consumers who purchase both a shampoo and a conditioner. Assume further that consumers who purchase both products from the monopolist will pay only \$5.25 (\$2.25 for a shampoo instead of \$3 and \$3 for the conditioner instead of \$5). Put differently, the bundle represents a discount of \$2.75 (8–5.25). The Monopolist’s and competitors’ incremental costs and the market prices are summarized in Table 1 below.

Table 1: Summary of the Conditioner and Shampoo Market Data

	Monopolist’s Average Cost	Competitor’s Average Cost	Market Price
Conditioner (Monopolized Market)	\$2.50	N/A	\$5.00
Shampoo (Competitive Market)	\$1.50	\$1.25	\$3.00
The Bundle	\$4.00		\$5.25

The bundle’s price of \$5.25 is above the monopolist’s total cost of \$4 (2.5+1.5) and it yields a profit of \$1.25 (5.25–4). According to the *Ortho* analysis, the *above-cost bundle* will drive the more efficient competitors out of the shampoo market.⁸¹ The argument is that when offered the choice between (a) buying a conditioner and a shampoo separately for \$8 (5+3), or (b) purchasing the same in a bundle for \$5.25, a consumer will of course prefer the bundle. The result is that competitors that can manufacture the shampoo at a lower cost (\$1.25 compared to the monopolist cost of \$1.50) will be excluded from the market. To compete in the shampoo market, a competitor must sell its shampoo at a price of \$0.25, in which case the consumer would be indifferent between (a) purchasing a shampoo for \$0.25 and a conditioner for \$5, and (b) purchasing the bundle for \$5.25. The competitors, however, cannot offer the shampoo for \$0.25 because such a price is below their cost (\$1.25). The result is that the monopolist is able to exclude more efficient competitors.

The bundle will also be declared illegal under the *Cascade* and AMC tests.⁸² Under the "discount attribution" test, "the full amount of the discounts given by the defendant on the bundle are allocated to the

80. *Ortho*, 920 F. Supp. at 467.

81. *Id.*

82. See *Cascade*, 515 F.3d at 906 ("This standard makes the defendant’s bundled discounts legal unless the discounts have the potential to exclude a *hypothetical* equally efficient producer of the competitive product.").

competitive product or products."⁸³ "If the resulting price of the competitive product or products is below the defendant's incremental cost to produce them, the trier of fact may find that the bundled discount is exclusionary for the purpose of § 2."⁸⁴ Applying the *Cascade* test to the example, the court will subtract the entire discount on the package, \$2.75 (8–5.25), from the separate per unit price of the competitive product, shampoo, \$3. The resulting effective price of shampoo is thus \$0.25 (3–2.75), which is below the monopolist's incremental cost of producing shampoo (\$1.50). Because the monopolist's effective price of the shampoo (\$0.25) is below cost (\$1.50), the bundle is considered to be exclusionary (it excludes those who can manufacture shampoo at \$1.25) and, hence, predatory.

B. The Exclusionary Standard Re-Examined

The *Cascade-Ortho* (and AMC) argument is unpersuasive to say the least. In fact, you may note that the monopolist is actually losing money if it chooses to bundle. The monopolist can enjoy a markup of \$4—\$2.50 (5–2.50) for the conditioner and \$1.50 (3–1.50) for the shampoo—if it sells both products separately, but it can only profit \$1.25 (5.25–4) from selling the bundle. Of course, if the monopolist competes with others in the market for shampoos, the consumer may purchase the shampoo from other competitors. But even in such a case, even if the monopolist sells only the monopolized product (the conditioner), it will enjoy a profit of \$2.50 (5–2.50), which is still well-above its profit from selling the bundle (\$1.25).

Thus the *Cascade* court's claim that "a bundled discount can achieve exclusion *without* sacrificing short-run profits" is erroneous.⁸⁵ The court's own example proves this statement false. A bundle will yield a profit of only \$1.25, whereas the unbundled products will yield a profit of at least \$2.50 (if it sells only the conditioner), and at most \$4 (if it sells the conditioner and the shampoo). Thus, the bundled discount results in both short-term and long-term profit losses.

Both the *Cascade* and *Ortho* courts fail to explain why a rational monopolist, whose sole concern is rent-seeking and wealth maximization, would choose to bundle when bundling is clearly a losing strategy. One explanation is that such a behavior is reasonable when there are high

83. *Id.*

84. *Id.* (emphasis added).

85. *Id.* at 897 (emphasis added).

barriers to entry. After all, if entry into the market is difficult, the monopolist can increase prices once its competitors are excluded from the market and extract more (or, under certain conditions, the entire) consumer surplus without fearing that the high prices would attract new entrants. An alternative explanation is that even if the shampoo market has low barriers to entry (in which case an increase in the price of shampoo would attract competitors), bundling can still be a successful exclusionary strategy if the monopolist offers the bundle each time it faces competition. In the latter case, potential competitors—aware of the monopolist's repeating behavior—would be deterred from entering the market of shampoo ex-ante, thus allowing the monopolist to extend its monopoly power.

Yet one important puzzle still remains. If consumers must use shampoo and conditioners in conjunction, then the monopolist can extract the entire consumer surplus by simply setting the right price for the monopolized product: The conditioner. For example, if the consumer is willing to pay (WTP) a total of \$12 for a shampoo and a conditioner, the monopolist can simply offer its conditioner for \$10.75 and enjoy a profit of \$8.25 ($10.75 - 2.5$). The consumer would then be able to purchase shampoo at a price of \$1.25 from the efficient sellers. If, on the other hand, the monopolist is able to take over the shampoo and conditioner markets, the monopolist would charge the consumer \$12, incur a cost of \$4, and enjoy a profit of only \$8. Put differently, the monopolist has no interest in monopolizing the shampoo market even if monopolization is feasible. To show the weakness of the *Cascade-Ortho* example, even if forced or offered a chance to "legally" monopolize the shampoo market, a rational monopolist would refuse and in fact challenge such a decision.

It should be noted that the argument advanced in this section is *not* that "monopoly leveraging" is infeasible—it is feasible.⁸⁶ Rather, the argument

86. In fact, the example in Part V.B.1 can be viewed as a form of monopoly leveraging. See *infra* Part V.B.1 (showing that an exclusionary below-cost bundle can allow a multi-product seller to increase its profits and enhance total welfare). Leveraging theories, it should be noted, have been subject to much debate. Celebrated proponents of the one monopoly profit theory include Aaron Director and Edward H. Levi. See Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 NW. U. L. REV. 281, 281–82, 289–90 (1957) (criticizing the automatic application of antitrust laws to situations which may not require legal intervention and noting that "[t]he economic teaching gives little support to the idea that the abuses create or extend monopoly"); see also ROBERT H. BORK, *THE ANTITRUST PARADOX* 373–81 (1978) (positing that under the one monopoly theory, the monopolist cannot leverage its advantage into another market). Recent scholarship has challenged the single monopoly profit as being premised on simplistic assumptions which the *Ortho* example seems to satisfy. *Supra* note 82. For a discussion of possible viable anticompetitive effects of bundling and situations that may give rise to "Post Chicago School

made here is that the *Cascade-Ortho* example fails to prove the one point it purports to demonstrate: That above cost bundling is exclusionary and anticompetitive. Indeed, without a more sophisticated story (absent in the *Ortho-Cascade* example) there is only one monopoly profit to realize and the monopolist does not need, nor can it use, a bundle to realize more than that profit.⁸⁷

The *Ortho*, *LePage's* and *Cascade* decisions fail to offer a reasonable explanation for a monopolist's decision to use a bundle in order to extend its monopoly power to other markets. The example they rely upon proves their own arguments wrong: Even if bundled discounts can be used to exclude a more efficient competitor, it still remains unclear why a rational monopolist would do so. Moreover, as will be shown below, the legal standards enunciated by these decisions may find a behavior predatory, and thus illegal, even when such behavior is clearly pro-competitive. The examples provided in Part V.B

of Thought" leveraging theories, see Einer Elhauge, *Tying, Bundled Discounts and the Death of the Single Monopoly Profit Theory*, 123 HARV. L. REV. 397, 403–04 (2009) [hereinafter Elhauge, *Tying*] (showing that the single monopoly profit theory is valid only when certain assumptions hold); see also Brief for Professor Nalebuff et al. as Amici Curiae Supporting Respondents at 26–28, *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 545 U.S. 1127 (2005) (No. 04-1329), 2005 WL 2427646, at *2–4, *10–19 (criticizing the "Chicago School" of economic theory and arguing that "use of a tied sales contract can help protect the existing monopolist from entry or can help the monopolist gain a second monopoly in the tied sales good"); Nalebuff, *Bundling as a Way*, *supra* note 10, at 2, 18 (showing how bundling can enable leveraging, but noting that under certain conditions "leverage does not lead to higher profits"); Barry J. Nalebuff, *Bundling as an Entry Barrier*, 119 Q. J. ECON. 159, 159 (2004) (showing that a multi-product seller that enjoys market power in two goods can bundle them together to make it harder for single-product manufacturers to enter the market without reducing the products' prices); David Evans & Michael Salinger, *Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law*, 22 YALE J. ON REG. 37, 39–40 (2005) (noting that "[t]he Chicago School claimed to debunk the leverage hypothesis with 'the single-monopoly-profit theorem'" but acknowledging that the post-Chicago authors identified situations in which the theorem does not hold); Elhauge, *Defining Better Monopolization Standards*, *supra* note 38, at 320 (discussing situations in which bundling can have exclusionary effects); Eric Rasmusen, Mark Ramseyer & John S. Wiley, *Naked Exclusion*, 81 AMER. ECON. REV. 1137, 1144 (1991) (concluding that under certain circumstances "exclusionary agreements can enable an incumbent monopolist to exclude its rivals cheaply"); Louis Kaplow, *Extension of Monopoly Power Through Leverage*, 85 COLUM. L. REV. 515, 515 (1985) (discussing the monopoly leverage debate and arguing that monopoly extension is possible).

87. In fact, the *Cascade-Ortho* example seems to meet the conditions of single monopoly profits discussed by Elhauge. Elhauge, *Tying*, *supra* note 86, at 404; Nalebuff, *Bundling as a Way*, *supra* note 10, at 10–12, 18. Note also that although the monopolist can merge, or cause a more efficient seller to "merge" with it, such a merger will not help the monopolist when more efficient sellers can still enter the market.

demonstrate that a behavior that increases output and enhances total welfare may be declared illegal.

V. Predatory Bundling Can Enhance Welfare

A. A Bundled Discount and Price Discrimination

If a seller loses money by bundling a product over which it enjoys a monopoly with a product in which it faces competition (as the *Cascade-Ortho* fallacy demonstrates), why would a monopolist ever bundle? This section seeks to answer this question. It shows that the monopolist can use a bundle to discriminate between high-value and low-value consumers of the monopolized product.⁸⁸

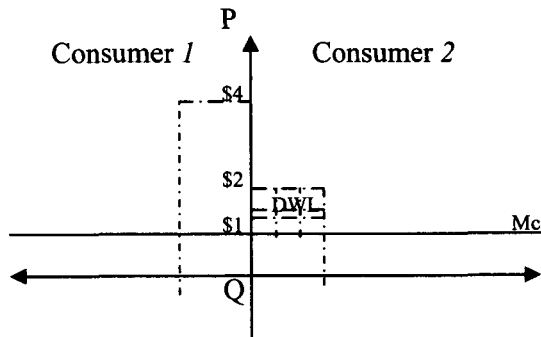
The monopolist can extract the entire consumer surplus if it sets the price of its product at the level of the consumers' reservation price. The following example is illustrative. Assume that the marginal cost to manufacture product *A* is \$1 and that there are two consumers. Consumer 1 is willing to pay \$4 for the widget, whereas Consumer 2 is only willing to pay \$2. If the monopolist knows each consumer's reservation price (and arbitrage is impossible) it would charge the high value consumer \$4 and the low value consumer \$2, realizing a profit of \$4 (6-2). Such "perfect" (often referred to as "first degree") price discrimination, however, is often infeasible. The monopolist cannot price discriminate between different consumers simply because it cannot distinguish between the different types of consumers. The seller often knows that there are two types of consumers (the high value and the low value), but is unable to identify the reservation price of each. A computer manufacturer, for example, knows that a business consumer is willing to pay more than a home-user, but it may not be able to tell whether a specific consumer is a home- or business-user. In the example above, the monopolist does not know whether a specific buyer resembles Consumer 1 or Consumer 2. The monopolist has thus two options: It can either (1) set a price of \$2 in which case it would sell two units (one to each consumer) and make a profit of \$2 (2+2-1-1); or (2) it can set a price of \$4 in which case it would sell only one unit to Consumer

88. Of course there are other reasons to bundle, some of which may result in anticompetitive effects. See, e.g., *supra* notes 11, 13, 79 and accompanying text (discussing some of the detrimental consequences that can result from bundling). Moreover, it is important to note that price discrimination can be welfare enhancing, reducing or neutral. *Infra* note 97 and accompanying text.

1 and make a profit of \$3 (4–1). Faced with these options, the monopolist's decision is quite easy. To maximize its profit the monopolist would only sell one unit to Consumer 1 at a price of \$4.

Excluding Consumer 2 from the market for product *A* represents a loss to society, often referred to as a deadweight loss (DWL). Consumer 2, who is willing to purchase product *A*, if offered at the \$1 marginal cost of production, will not be willing to purchase it at the monopoly price of \$4. To the monopolist, the DWL in Figure 1 (below) represents a loss of opportunity. It is a forgone surplus that the monopoly cannot harvest simply because it cannot distinguish between Consumer 1 and Consumer 2.

Figure 1: The Monopolist's Dilemma Where Price Discrimination is Impossible



Of course if the monopolist enjoys a monopoly in *two* products, the DWL can be even greater because some consumers may be excluded from both markets. The multi-product monopolist, however, enjoys (at least) one advantage over the single-product monopolist: *It can recapture some or all of the DWL by using a bundle.* Assume that a seller enjoys a monopoly in products *A* and *B* and that the marginal cost of production and the consumers' reservation price are as described in Table 2:

Table 2: Consumers' Reservation Price for Products *A* and *B* and the Bundle *AB*

	Marginal Cost	Consumer 1	Consumer 2
Product <i>A</i>	\$1	\$4	\$2
Product <i>B</i>	\$2	\$3	\$5
Bundle <i>AB</i>	\$3	\$7	\$7

If the multi-product monopolist offers each product separately, it will sell product *A* for \$4 and product *B* for \$5.⁸⁹ Under this pricing scheme, Consumer 1 will purchase one unit of product *A*, Consumer 2 will purchase one unit of product *B*, and the monopolist will make a profit of \$6 (4-1 + 5-2). Compared to full competition, monopoly pricing creates a DWL of \$2 (2-1 + 3-2). In full competition, sellers will offer their product at the marginal cost of production and make no profits. Consumer 1 would enjoy a surplus of \$3 (4-1) from purchasing product *A*, and a surplus of \$1 (3-2) from purchasing product *B*. Consumer 2 would enjoy a surplus of \$1 (2-1) from purchasing product *A*, and a surplus of \$3 (5-2) from purchasing product *B*. A competitive market would have therefore yielded a total surplus of \$8, \$2 more than monopoly pricing.

Instead of selling products *A* and *B* separately, the multi-product monopolist could increase its profits if it offered consumers the bundle *AB* at a discounted price of \$7 (representing a \$2 (4+5-7) discount). Both Consumer 1 and Consumer 2 would purchase the bundle because their reservation price would be equal to the cost of the bundle, allowing the seller to realize a profit of \$8 (14-6). The interesting result is that pure bundling (offering product *AB* together) can enable the monopolist to harvest the \$2 DWL that individual monopoly-pricing created. In fact, in our example, pure bundling yields the same output level and total welfare that a competitive market would yield. In both situations, four units would be produced (two units of product *A* and two units of product *B*) and total surplus would be the same, \$8. Pure bundling in this example, therefore, is a desirable strategy. It is a market mechanism that, in some situations, can remedy the very "unavoidable" ills of monopoly pricing.

Table 3: Comparison of Monopoly Pricing to Pure Bundling and Competition

	Output A	Output B	C1's Surplus	C2's Surplus	Ms' Profit	Total Welfare
Competition	2	2	4	4	0	8
Monopoly	1	1	0	0	6	6
Pure Bundling	2	2	0	0	8	8

89. If the monopolist sells product *A* for \$2, it will sell two units and make a profit of \$2 (2+2-1-1). However, if the monopolist sets the price for product *A* at \$4, it will sell only one unit but will profit \$3 (4-1). Similarly, if the monopolist sets the price for product *B* at \$3, it will sell two units but only make a profit of \$2 (3+3-2-2), compared to a profit of \$3 if it charges \$5 (5-2).

Selling the bundle *AB* is more profitable than selling each product separately (\$8 as opposed to \$6) because the bundle enables the seller to discriminate between consumers. Each consumer pays a different price for the products in the bundle. Consumer 1 is paying \$4 for product *A* and \$3 for product *B*, while Consumer 2 pays \$2 for product *A* and \$5 for product *B*. It is only the aggregate price of the bundle (\$7) which is the same. Thus, although the monopolist charges each consumer the same price for the same bundle, each consumer is paying a different price for its components.

The bundle *AB* increases the monopolist's profits. By price-discriminating between the two consumers, the seller is able to harvest the DWL that would have occurred absent price discrimination. From the economist's standpoint, the bundle is "efficient" because it enhances total welfare and increases output (from two units to four units).⁹⁰

Figures 2(a) and 2(b) (below) build on the Adams and Yellen model and provide a graphical representation of these pricing schemes and their implications.⁹¹ On the axes are the reservation prices of the consumers. For example, points C1 and C2 represent Consumer 1 and 2 respectively. If the monopolist charges \$4 for product *A* and \$5 for product *B*, consumers could be divided into 4 groups. Consumers located in quadrant I in Figure 2(a) would purchase only product *A* because they value product *A* more than \$4, but they value product *B* less than \$5. Consumers in quadrant IV would purchase only product *B*. Consumers in quadrant III would not

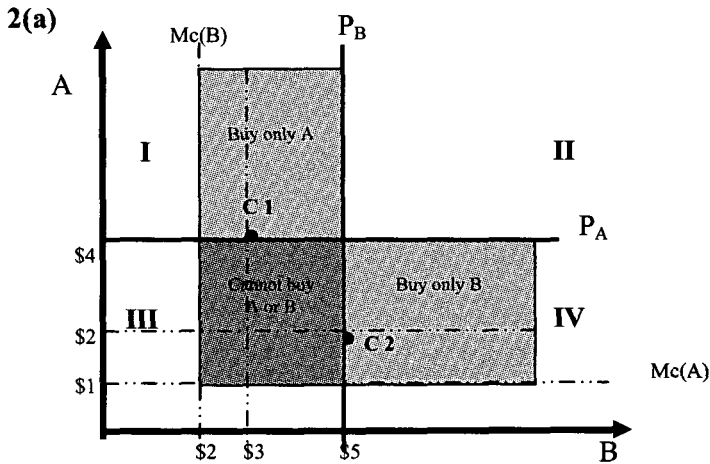
90. However, whether the goal of antitrust laws is to increase total welfare or focus solely (or mainly) on consumer welfare is subject to debate. See ROBERT H. BORK, *THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF* 72–74 (1978) (arguing that the appropriate goal of antitrust law is the maximization of total welfare); Gabriel Feldman, *The Misuse of the Less Restrictive Alternative Inquiry in Rule of Reason Analysis*, 58 AM. U. L. REV. 561, 574 n.66 (2009) ("The only real consensus is that there is no consensus regarding the definition of competition and the goals of antitrust law."); Herbert Hovenkamp, *Distributive Justice and the Antitrust Laws*, 51 GEO. WASH. L. REV. 1, 28–30 (1982) (discussing the various alternative policy goals for antitrust law and concluding that total welfare is the appropriate goal). *But see* Thomas O. Bennett, *Substantial Lessening of Competition—The Section 7 Standard*, 2005 COLUM. BUS. L. REV. 293, 295–96 (2005) (noting that "one critical development during the last thirty years of antitrust enforcement has been the consensus that antitrust should focus on consumer welfare"); Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 50 HASTINGS L.J. 871, 876 (1999) (arguing that "antitrust laws embody a strong preference for consumers over firms with market power").

91. See Adams & Yellen, *supra* note 19, at 477 (extending George J. Stigler, *United States v. Loew's Inc.: A Note on Block-Booking*, 1963 SUP. CT. REV. 152 (1963)). See generally Kobayashi, *A Survey of the Economic Literature*, *supra* note 38 (surveying economic literature on commodity bundling).

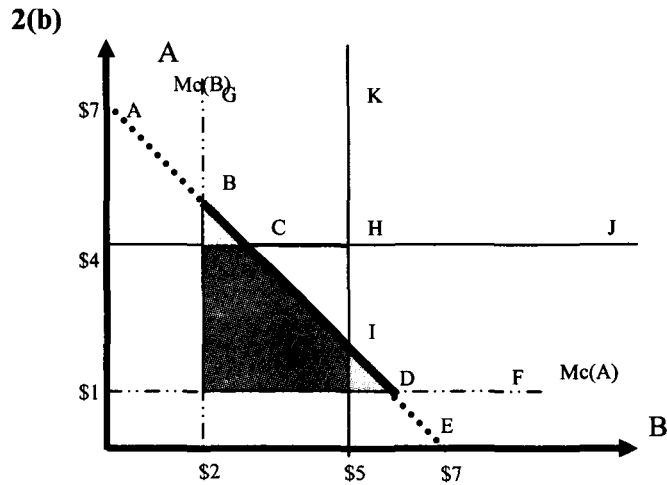
purchase any of the products (their reservation price is lower than the monopoly prices charged for *A* and *B*); and consumers in quadrant II would purchase both products.

Compared to full competition, monopoly pricing creates a DWL: Consumers in quadrant III, those who value products *A* and *B* more than the marginal cost to manufacture these products, will not purchase either Product *A* or Product *B* at supra-competitive prices (denoted by the area in dark gray). In addition, consumers in quadrants I and IV who value products *B* and *A* (respectively) more than their cost would have to reduce their consumption (denoted by the area in light gray). If the monopolist offers the bundle *AB*, however, consumers located on the right of the line *BD* would be able to purchase the bundle.⁹² This means that consumers located in the area *CHI*, those who would not purchase Product *A* or Product *B* at monopoly prices (they are located in area III), as well as those consumers who would purchase only one product (e.g., consumers located in the area *GBCHK* in quadrant I and those located in area *JHIDF* in quadrant IV) would be able to purchase both if the monopolist offered the bundle *AB*.

Figures 2(a)–(b): Monopoly Pricing v. Pure Bundling



92. In some circumstances, mixed bundling can be even more profitable to the multi-product seller than pure bundling. Because this Article focuses on mixed bundling in the competitive setting, the discussion on mixed bundling is deferred until *infra* Part V.B.



The bundle in our example therefore has a welfare-enhancing effect. It enables the monopolist to capture more of the consumers' surplus and thus reduce some of the DWL created by monopoly pricing.⁹³

B. The Exclusionary Effect of Bundled Discounts

In the previous section, the multi-product seller enjoyed a monopoly in both products. The monopolist used a *pure bundling* strategy, offering consumers products A and B in a package only. Consumers who wanted to purchase only one of the products had to purchase both. Focusing on this form of bundling as a mechanism to price discriminate, the prior literature has argued that bundling is very similar to tying.⁹⁴ The model set forth

93. Note that the bundle may also have a coercive and detrimental effect. Assume for example that Consumer 3 is willing to pay \$6 for product A and \$1 for product B. If the seller decides to sell each product separately, it will sell two units of product A at \$4 and one unit of product B at \$5, allowing it to realize a profit of \$9. If instead it offers only the bundle AB at the discounted price of \$7, it will sell three bundles and realize a profit of \$12 ($7 \times 3 - 3 \times 3$). The increase in output (from three units of A and one unit of product B to three units of A and three units of B), however, is inefficient for two reasons. First, it coerced Consumer 3 who was not interested in purchasing product B—not even at the marginal cost of production—to purchase it as part of the bundle. In this aspect, the bundle is similar to the coercive effect of tying. Second, and related, because Consumer 3 values product B less than the cost to produce that unit, the bundle leads to an inefficient allocation of resources. Although this Article recognizes that bundling can lead to inefficiencies, it focuses on the benefits that bundling can confer to producers and society at large. Graphically, bundles offered to consumers on the dotted part of the line AE represent inefficient bundles.

94. See POSNER, *supra* note 6, at 235 ("Bundling is analytically similar to tying.");

below, however, focuses on *mixed bundling* and is fundamentally different. Unlike pure bundling, a mixed bundling strategy does not aggregate consumer values across products. Instead, consumers must choose whether to purchase product *A*, product *B*, or both at a discount. It is this consumer choice, absent in tying and pure bundling practices, that enables the seller to sort consumers and discriminate between high value and low value consumers of a specific product in the bundle. As the examples below demonstrate, a multi-product seller may have a legitimate business justification for offering an exclusionary bundle or pricing a product in the bundle below-cost, if that product enables the seller to discriminate between consumers and extract additional surplus.

To show this, this section extends the analysis to a setting in which the multi-product seller enjoys a monopoly only in one product, *A*, but *competes* with others for the second product, *B*. It shows that the multi-product seller will often have a legitimate business reason to manufacture the competitive product, *A*, (or purchase it from other manufacturers) and bundle it together with the monopolized product, *B*, even when such behavior has an exclusionary effect, and even when the bundle is below a measure of cost.

This Article is related to models proposed by Nalebuff and Greenlee in that it analyzes a multi-product seller that enjoys a monopoly in one market and competes in another on the sale of the second product.⁹⁵ Also, like Nalebuff and Greenlee, it shows that exclusionary bundles can be desirable.⁹⁶ The model, however, differs from the prior literature in a number of important aspects. First, Nalebuff's and Greenlee's models are premised on the assumption that neither product can be priced below-cost.⁹⁷

Crane, *Mixed Bundling*, *supra* note 37, at 427 ("Bundled discounting is similar in many ways to the 'tying' of two separate products.").

95. See generally Nalebuff, *Bundling as a Way*, *supra* note 10; Greenlee et al., *supra* note 10.

96. *Id.*

97. See Nalebuff, *Bundling as a Way*, *supra* note 10, at 13 (laying out Nalebuff's first assumption that "[t]he result relies only on the assumption that the monopolist would like to charge more than *c* for the competitive good"); Greenlee et al., *supra* note 10, at 1135-36 (discussing a model in which a multi-product seller offers the competitive product in the bundle above its marginal cost); see also Kobayashi, *A Survey of the Economic Literature*, *supra* note 38, at 730 (noting that Nalebuff's and Greenlee's articles "show that a bundling discount can lead to foreclosure of [the single product competitors]" and that "the exclusion does not require the monopolist to price below cost or to sacrifice profits in order to carry out the exclusion"). For this reason, the model in this paper is also different than that of R. Preston McAfee, John McMillan & Michael D. Whinston. See R. Preston McAfee, John McMillan & Michael D. Whinston, *Multiproduct Monopoly, Commodity Bundling, and*

Nalebuff shows that a bundler can increase its profits by pricing the monopolized product above-cost but below monopoly price, while at the same time increasing the price of the competitive product.⁹⁸ The model advanced in this Article relaxes Nalebuff's assumption. It shows that the seller can increase its profits (from the sale of the monopolized product) and consumers' welfare by pricing the competitive product below-cost.

Second, in Professor Nalebuff's model "the source of the gain is neither extraction of consumer surplus nor price discrimination."⁹⁹ Indeed

Correlation of Values, 104 Q.J. ECON. 371, 373–74 (1989) (investigating "the conditions under which bundling is an optimal strategy in the Adams and Yellen model"). In discussing McAfee's model, Nalebuff notes that "if $P_b=c$, the incremental sales would be at a loss and there is no advantage to bundling. Nalebuff, *Bundling as a Way*, *supra* note 10, at 6–7 (emphasis added). McAfee shows the general advantage of bundled pricing for all cases *except* where B [the competitive product] is sold in a competitive market. McAfee, McMillan & Whinston, *supra*, at 374. In two recent articles Herbert Hovenkamp and Erik Hovenkamp also concluded that certain above-cost bundles, while exclusionary, can be welfare enhancing. See Herbert Hovenkamp & Erik Hovenkamp, *Exclusionary Bundled Discount and the Antitrust Modernization Commission*, 53 ANTITRUST BULL. 517, 527 (2008) [hereinafter Hovenkamp & Hovenkamp, *Exclusionary Bundled Discount*] (concluding that "the attribution test . . . is unreliable and yields false positives in the presence of joint costs or economies of scope"); Herbert Hovenkamp & Erik Hovenkamp, *Complex Bundled Discounts and Antitrust Policy*, 57 BUFF. L. REV. 1227, 1255 (2009) [hereinafter Hovenkamp & Hovenkamp, *Complex Bundled Discounts*] (focusing on complex bundles and noting that the Discount Attribution test "produces very severe false positives and should be regarded as nothing more than a starting point for analysis").

98. Assuming the price for the monopolized product X is m and the price for the competitive price of product Y is c , the monopolist in Nalebuff's model can maximize profits by selling product A at a discount of $(m - e)$ and product B at a premium of $(c + l)$. Nalebuff, *Bundling as a Way*, *supra* note 10, at 11.

99. See *id.* at 4 (devising a model in which "the source of the gain is neither the extraction of consumer surplus nor price discrimination"); see also Nalebuff, *Exclusionary Bundling*, *supra* note 13, at 341 (noting that "while bundling for the purposes of price discrimination is an interesting theoretical possibility, it may be of limited relevance to the bundling cases seen in the courts"). Kobayashi's *A Survey of the Economic Literature* provides the following example (based on Nalebuff, *Exclusionary Bundling*, *supra* note 13, at 339) to show the effect of such a bundle:

Suppose a representative individual's demand for Y is given by $Q_Y = 100 - p_Y$, and the demand for X is inelastic at 20. Under these conditions, the monopolist that did not bundle . . . would price Y at 50 and sell 50 units. X is sold at [marginal] cost [assumed to be \$10/unit] in a competitive market. If Y is produced at zero marginal costs, total profits are $50 \times 50 = 2500$. Now suppose that the monopolist lowered the price of Y to 49 only to those who also purchased their 20 units of X at 11. At this price, profits from Y fall by 1 to 2499 (49×51). By taking the lower price on Y , the representative demander saves 50 (1 on the 50 units he would have purchased at the monopoly price). In addition, he gains the surplus associated with the 51st unit. He pays 20 more for the 20 units of X . In total, he is better off by at least 30. The monopolist is also better off. He gives up 1 when he lowers the price of Y , but now makes an additional

Nalebuff downplays the importance of bundling as a price discrimination device.¹⁰⁰ This Article, however, builds on the literature of bundling as a discriminatory mechanism. A key insight is that the multi-product seller can use bundling as a sorting mechanism to recapture some of the DWL caused by monopoly pricing and increase its profits from the monopolized product. Specifically, this section uses four stylized examples to show that by making a choice between purchasing the monopolized product *A*, the competitive product *B* or the bundle *AB*, the consumer reveals its reservation price regarding the monopolized product and enables the monopolist to price discriminate between low value and high value consumers.¹⁰¹

To be sure, the argument advanced in this Article is not that bundling can only be used to discriminate between consumers or that bundling (or price discrimination for that matter) is always pro-competitive (they are not).¹⁰² Instead, this Article argues that under certain circumstances,

20 on sales of *X* at the higher price.

Kobayashi, *A Survey of the Economic Literature*, *supra* note 38, at 730 n.66.

100. See Nalebuff, *Bundling as a Way*, *supra* note 10, at 4, 7 (devising a model in which "[e]ssentially all consumers are attracted to this . . . bundle" and in which "the source of the gain is neither the extraction of consumer surplus nor price discrimination"); see also Nalebuff, *Exclusionary Bundling*, *supra* note 13, at 341 (noting that "while bundling for the purpose of price discrimination is an interesting theoretical possibility, it may be of limited relevance to the bundling cases seen in the courts").

101. Unlike some of the literature on price discrimination, this Article's model does not focus on situations where the bundler enjoys a monopoly in multiple product markets or where the seller offers a pure bundle. Nor does it focus on bundles that aggregate consumer values across products. See Nalebuff, *Bundling as an Entry Barrier*, *supra* note 86, at 160 ("The literature on bundling as a price discrimination tool emphasizes that it works best when the bundled goods have a negative correlation in value. This is when bundling most reduces the dispersion in valuation and allows a monopolist to capture the lion's share of the consumer surplus."); see also George J. Stigler, *United States v. Loew's Inc.: A Note on Block-Booking*, 1963 SUP. CT. REV. 152, 153 (1963) (showing how a seller that enjoys a monopoly in two products can extract the consumer surplus using a bundling strategy that requires the buyer to purchase both products to enjoy either). Rather, this Article shows that mixed bundling can be an effective strategy to discriminate between consumers of a monopolized product. In fact, this strategy can be so effective, that the seller may offer the bundle even if it "loses" money from selling the competitive component of the bundle.

102. It is well known that the effects of imperfect (second or third degree) price discrimination are ambiguous and often welfare-decreasing. See, e.g., Brief for Professor Nalebuff et al. as Amici Curiae, *supra* note 86, at *2-4, *10-19 (reviewing the literature and arguing that the effects of price discrimination are ambiguous); Michael L. Katz, *The Welfare Effects of Third-Degree Price Discrimination in Intermediate Good Markets*, 77 AM. ECON. REV. 154, 155 (1987) (arguing that third degree price discrimination may either increase or decrease welfare); Richard A. Posner, *Vertical Restraints and Antitrust Policy*, 72 U. CHI. L. REV. 229, 235-36 (2005) (arguing that the effects of price discrimination are

bundling can be a particularly strong strategy for allowing the seller to price discriminate among its consumers, avoid arbitrage, reduce the harm of monopoly pricing and enhance total welfare—even when the bundle is exclusionary or below-cost.

This is illustrated by the examples below. Each of the examples is similar to the one given by the *Ortho* court in that each discusses two different product markets, one monopolized by a single firm and another in which firms compete. It is different in that it relaxes the assumption that the multi-product faces only one type of consumer. Instead, this Article shows that when different types of consumers are present, a below-cost bundle, regardless of its potential exclusionary effects, can be used as a means to increase profits from the monopolized product, while at the same time, enhancing total welfare.

1. Example 1: Exclusionary Bundles Can Increase Welfare

To receive wireless telephone services, consumers must buy hardware (a cell phone) and also subscribe for service. Wireless telephone service providers often enjoy a monopoly (or some degree of monopoly power) over certain geographic areas. The monopoly can be complete (e.g., where only one company offers services) or partial (e.g., where one company enjoys a dominant position because it is the only one that provides complete coverage). Unlike the wireless market, however, consumers can purchase cell phones from a large number of manufacturers or from their wireless provider.¹⁰³ A common practice by service providers is to offer a bundled discount to consumers who commit to a two-year period.¹⁰⁴ The bundle allows the consumer to receive the service at the regular rate, but the cell

welfare-decreasing, or ambiguous); Kathleen Carroll & Dennis Coates, *Teaching Price Discrimination: Some Clarification*, 66 S. ECON. J. 466, 471–76 (1999) (noting that "the efficiency effects depend on the type of price discrimination practiced by the firm" and that in second degree and third degree price discrimination the welfare effects are ambiguous and depend, among other things, on whether output increases).

103. See, e.g., *Cell Phones & Devices*, AT&T, <http://www.wireless.att.com/cell-phone-service/cell-phones/index.jsp> (last visited Nov. 14, 2010) (listing numerous phones from various manufacturers available for sale on the AT&T website) (on file with the Washington and Lee Law Review).

104. See, e.g., *id.* (offering a bundled discount to purchasers of the Sony Ericsson W580i Walkman®, which includes the following features: 2.0 MP camera, Video recording and playback, Stereo Bluetooth®, MP3s, streaming radio, FM Radio, fitness applications and speakerphone). A different bundled discount is offered to purchasers of the very basic Pantech C150. *Id.*

phone is often offered at a discounted price and, in some situations, given away for free.¹⁰⁵ Why would the service provider offer such a bundle? Is it legal? After all, the discounted bundle can exclude cell phone manufacturers from the market. The example below seeks to provide one possible explanation. It shows that even when bundles are exclusionary and priced below-cost, they can nevertheless be beneficial.

For simplicity, assume a local market with one wireless company, WireCo, which enjoys a monopoly over phone services but competes with others in the market for cell phones. In this market, there are two types of consumers, each requiring the same service but a different type of cell phone. Hip Consumers (HipC) require multimedia capabilities and other sophisticated options, such as a pedometer and other fitness applications, whereas Regular Consumers (RegC) require only basic wireless telephone functions. There are only two types of cell phones, BlueBerries and Vanillas. The BlueBerries are advanced devices that meet the needs of the HipC. The Vanillas are simple, basic devices that satisfy the RegC. Assume further that the incremental cost¹⁰⁶ of the cell phones and wireless service, their market price, and the consumers' reservation prices (for a two-year program) are as described in Table 4. Also note that there are only two consumers, the RegC and the HipC (each representing her group).

Table 4: Summary of Consumers' WTP, Sellers' Costs, and Market Prices¹⁰⁷

	HipC WTP	RegC WTP	WireCo's Avr. Cost	Competitors' Avr. Cost	Market Price
Service	55	40	30	N/A	WTP
BlueBerries	60	22	60	60	60
Vanillas	5	22	20	18	20

105. *Id.* (offering numerous significantly discounted or free cell phones when purchased along with a two-year service contract).

106. Following the *Ortho* and *Cascade* decisions, the examples below use average variable cost as a proxy for marginal cost. *Ortho Diagnostics Sys., Inc. v. Abbott Labs., Inc.*, 920 F. Supp. 455, 466–67 (S.D.N.Y. 1996); *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 909–10 (9th Cir. 2007). For a discussion as to the appropriate cost measure for predatory pricing, see *supra* note 35 and accompanying text.

107. Because consumers must purchase both a cell phone and service (whether in a bundle or separately), the values in the table represent the consumers' willingness to pay for cell phones and service, assuming consumers can purchase both (and zero otherwise). The model assumes that the market for product B (the cell phone in Examples 1 and 2) is competitive but not necessarily in full competition.

If price discrimination were feasible, WireCo could maximize its profits. Charging the HipC \$55 and the RegC \$40 would allow WireCo to realize a profit of \$35 ($55+40-30-30$). WireCo, however, cannot distinguish between the two consumers because they both buy the *same* service. Thus, to maximize its profits, WireCo must choose between one of two options: It can either offer its services for \$55 in which case it can realize a profit of \$25 ($55-30$); or it can offer its service for \$40 and make a profit of only \$20 ($40+40-30-30$). WireCo would of course set the price for its services at \$55. As a result, the RegC would not be able to buy services and therefore would be excluded from both markets (without the ability to purchase wireless service, the RegC would not purchase a cell phone).

A bundled discount can enable the seller to price discriminate between consumers. The mechanism is simple: The consumer receives the choice to purchase products *A* and *B* at full price or to purchase a package that includes product *A* and product *B* at a discount. Product *B* is usually such that only a specific type of consumer would buy it (and arbitrage is impossible). *By making a choice, the consumer reveals its preferences and thus enables the seller to extract more profit.* In our example, WireCo will offer consumers the following options: (a) wireless services for \$55; or (b) a package that includes wireless services and a Vanilla phone for \$62, representing a discount of \$13 ($55+20-62$). In addition, the consumer would also be able to purchase from WireCo and other cell phone manufacturers a BlueBerry for \$60 and a Vanilla for \$20.

A simple investigation shows that the bundle is Pareto-superior. The HipC, who requires multimedia capabilities, will continue to buy service for her BlueBerry for \$55.¹⁰⁸ The RegC, on the other hand, will now be able to purchase the bundle because the cost of the bundle (\$62) is equal to her reservation price. Vanilla manufacturers are not worse off (they could not sell any Vanilla phones to the RegC in the specific geographic market before the bundle was offered) and WireCo is clearly better off. Its profits increase by \$12 (WireCo charges the RegC \$62 for a bundle that costs \$50). Total output will double and total welfare will increase by \$12. The bundle is clearly efficient, but is it legal? Can the bundle be successfully

108. The HipC will not pay \$62 for a bundle she only values at \$60. Note that arbitrage in this example is impossible. The HipC cannot purchase the discounted bundle (which includes the Vanilla and service), resell the Vanilla, and use the (cheap) service together with a BlueBerry. The reason is that the service is only provided to the cell phone device registered with WireCo. This assumption is relaxed in Example 3, which demonstrates that a multi-product seller can use the bundle itself to prevent arbitrage.

challenged on the grounds that it excludes a more efficient competitor from the Vanilla market? Under the *Cascade* test:

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.¹⁰⁹

In applying the *Cascade* test to the example, we must subtract the entire \$13 discount from the \$20 separate-per-unit price of the competitive price of Vanilla cell phones. The result is \$7, meaning that in order to compete with the bundle, competitors must offer Vanilla phones at a price of \$7. In such a case, the RegC would be indifferent between (a) purchasing the Vanilla cell phone for \$7 and the service for \$55 separately; and (b) purchasing a bundle of both for \$62. Competitors, however, would not be able to offer a Vanilla for \$7 because it costs them \$18 to manufacture one unit. The Vanilla's effective price (\$7) is also below WireCo's cost (\$20). The result is that Vanilla manufacturers would be excluded (or blocked) from the local market in which WireCo enjoys a monopoly over services. Absent a business justification defense, this exclusionary effect is considered predatory and thus illegal.¹¹⁰ WireCo's bundle excludes more efficient competitors from the market (competitors can manufacture a Vanilla at a cost of \$18, \$2 less than WireCo) and enables WireCo to "leverage" its monopoly power over the service market to the Vanilla market.

The *Cascade* (or "discount attribution") test is premised on the assumption that "the primary anticompetitive danger posed by a multi-product bundled discount is that such a discount can exclude a rival who is equally efficient at producing the competitive product simply because the rival does not sell as many products as the bundled discounter."¹¹¹ But as shown above, excluding competitors—even more efficient ones—can be welfare enhancing. Unlike predatory pricing in the single product context, exclusionary bundles—those targeted by the *Cascade* decision—can be beneficial. Importantly, the *Cascade* court did not adopt the position

109. *Cascade*, 515 F.3d at 910.

110. Provided that "the other elements of a specific intent to monopolize and dangerous probability of success are satisfied." *Id.* at 903 n.13.

111. *Id.* at 909.

advocated by many commentators that even after satisfying the discount allocation test the plaintiff must show that the discount was not only exclusionary but also one that cannot be justified by efficiencies or other business justifications.¹¹² While the *Cascade* court may not have been required to directly decide the issue, a number of its statements suggest that if the other elements of § 2¹¹³ are satisfied, bundles that fail the discount attribution test—that is, bundles that exclude more efficient competitors—will be condemned as illegal.¹¹⁴

Note that "monopolizing" the Vanilla market generated additional profits for WireCo. Absent bundling, WireCo would offer its services for \$55 and would realize a profit of only \$25 (55–30). Had it been able to discriminate fully between its consumers, WireCo could have gained a profit of \$35. The bundle, on the other hand, allowed WireCo to earn \$37: \$35 from the services and \$2 from the Vanilla.¹¹⁵ WireCo's conduct, however, was based on a *legitimate* business justification. This justification was not to push manufacturers out of the Vanilla market, to monopolize

112. See *infra* notes 134–39 and accompanying text (expressing concerns that a strict application of the *Cascade* standard may cause welfare enhancing bundles to be deemed illegal and calling, at the very least, for the explicit adoption of a business justification defense).

113. See Sherman Antitrust Act § 2, 15 U.S.C. § 2 (2006) (making it illegal to "monopolize [or] attempt to monopolize . . . any part of the trade or commerce among the several States, or with foreign nations").

114. *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 906 (9th Cir. 2007) ("This standard makes the defendant's bundled discounts legal unless the discounts have the potential to exclude a *hypothetical* equally efficient producer of the competitive product."). The Court stated:

Thus, a plaintiff who challenges a package discount as anticompetitive must prove that, when the full amount of the discounts given by the defendant is allocated to the competitive product or products, the resulting price of the competitive product or products is below the defendant's incremental cost to produce them. This requirement ensures that the only bundled discounts condemned as exclusionary are those that would exclude an equally efficient producer of the competitive product or products.

Id. at 909. The court went on to hold that in order to prove that a bundled discount is an anticompetitive violation under § 2, "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." *Id.* at 910. Moreover, although the *Cascade* court referred twice to the "legitimate business justification" element, once in describing the *LePage's* standard and again when relying on *Areeda* and *Hovenkamp* to reject the *Ortho* standard, it failed to include that business justification element as part of its test. *Id.* at 898, 907.

115. This includes \$25 from selling services to the HipC (55–30) and \$12 from selling the bundle to the RegC (40+22–30–20).

that market, or to realize the extra \$2 from selling Vanilla phones. Instead, it was to increase profits (which it did) by discriminating between consumers in order to realize more profits on its *monopolized* product, the services. The bundle allowed WireCo to keep selling the monopolized product (wireless services) at the high price of \$55 to the HipC, while at the same time offering the exact same service to the RegC for only \$40 (in the eyes of the RegC, the service was sold at a price of \$40 and the phone at \$22). Indeed, as the next example demonstrates, even when a monopolist *loses* money from bundling a competitive product, bundling may nevertheless be profitable if the benefit from extracting the consumers' surplus from the monopolized product outweighs the loss from bundling a competitive product. Moreover, as shown above, the bundle not only increased WireCo's profit, but it also increased total welfare and output. To summarize, a bundled discount that fails the *Cascade* standard can be not only output-enhancing but can also avoid some of the very ills that result from the multi-product power over the monopolized product.

But does WireCo really need to offer a bundle in order to engage in price discrimination? One may argue that there are *simpler* and *cheaper* ways to discriminate between consumers. A service provider, for example, can learn about a consumer by checking the serial number of the consumer's phone (a number the consumer must provide in order to receive service). In our example, WireCo could offer a different price for its services according to the device the consumer owns. It could charge one price for BlueBerry enthusiasts and a different price for Vanilla owners. Wireless companies, however, do not do so. AT&T, for example, offers the *same* service package to all users regardless of the device they own.¹¹⁶ Why does AT&T (or WireCo in our example) not price discriminate consumers according to the cell phone they own? One reason is that price discrimination using a serial number (albeit technologically feasible) is too costly. Such an explicit and direct method can simply be bad for public relations and is likely to upset consumers. The following anecdotal example is illustrative. In September 2000, Amazon.com was accused of offering the same DVDs to different customers at discounts of thirty to forty percent.¹¹⁷ According to news reports, "Amazon said it was a random

116. With one exception: BlackBerry and iPhone users must pay an additional fee for a "data package." See Interview with AT&T's Online Live Agent and AT&T Website (July 28, 2008) (displaying an online chat inquiring into the different discounts and service packages offered based on phone model and serial number).

117. See Declan McCullagh, *Should Amazon.com Be Able to Charge You More Than Someone Else?*, CNET NEWS BLOG (May 4, 2007, 9:41 AM), <http://news.cnet.com/8301->

price test, but after criticism, it decided to refund the difference to anyone paying the higher price and pledged not to do it again."¹¹⁸ As Amazon learned, upsetting consumers can be very costly. This is especially the case when a firm (such as WireCo) enjoys a monopoly over one geographic market but faces fierce competition in others. Although the monopolist's consumers might end up purchasing its services in the monopolized area, in markets where WireCo competes with other service providers, consumers may "punish" the monopolist by choosing to use other providers. For example, in the New York area where WireCo may compete with AT&T, T-Mobile, and Verizon, consumers aware of WireCo's behavior in the monopolized market would prefer to purchase Verizon's services.¹¹⁹

It is important to note that this Article does *not* argue that price discrimination is the only reason to bundle. Indeed, there can be many reasons for bundling, some of which are mentioned above. It only argues that price discrimination, under certain circumstances, can be an important and a legitimate justification for which courts should pay attention when applying the *Cascade* test.

2. Example 2: Predatory (Below-Cost) Bundles Can Enhance Welfare

In the example above, the bundle enabled WireCo to increase its profits from both phone (\$2) and service (\$35) sales. It is also possible to show that even "classic" predatory pricing behavior—*selling a product below its actual cost, and thus at a loss—can be not only profitable and sustainable but also pro-competitive and welfare-enhancing as well.* To illustrate, assume that the service and hardware market are the same as the

10784_3-9715959-7.html?hhTest=1 (last visited Nov. 14, 2010) (arguing that while some worry about the harmful effects of price discrimination, a law prohibiting it is not necessary) (on file with the Washington and Lee Law Review).

118. *Id.*

119. A quick survey of AT&T's website implies that AT&T engages in price discrimination by bundling services and phones in the method described above. On July 28, 2008, AT&T offered a refurbished Sony Ericsson W580i Walkman® for \$19.99, representing a discount of \$230 from its \$249.99 retail price. *See Cell Phones & Devices*, AT&T, <http://www.wireless.att.com/cell-phone-service/cell-phones/cell-phones.jsp>? (last visited Nov. 14, 2010) (listing AT&T's online selection of cell phones and devices) (on file with Washington and Lee Law Review). A Pantech C150, a less sophisticated phone valued at a retail price of 199.99, was offered for "free." *Id.* Both "deals" were conditioned on a two-year service contract. *Id.* AT&T offers the same service packages to all phone owners regardless of phone type. *Id.* The discounts above are offered only on the "cell phone" component of the package. *Id.*

previous example, except that WireCo’s cost of manufacturing a Vanilla is \$24. Remember that the Vanilla manufacturers offer their product nationwide at a price of \$20 a unit. Table 5 below summarizes the market conditions.

Table 5: Summary of Consumers’ WTP, Sellers’ Costs, and Market Prices

	HipC WTP	RegC WTP	WireCo’s Avr. Cost	Competitors’ Avr. Cost	Market Price
Service	55	40	30	N/A	WTP
BlueBerries	60	22	60	60	60
Vanillas	5	22	24	18	20

As discussed above, if price discrimination is infeasible (because it is impossible to distinguish between consumers), WireCo will charge \$55 for wireless services and RegC would be excluded from the market.¹²⁰ Although selling a Vanilla is *not* profitable to WireCo (WireCo’s manufacturing cost of \$24 is higher than the market price of \$20 and the consumers’ WTP of \$22), bundling a Vanilla with its services is feasible, sustainable, and profitable. Consumers would be able to buy the following products and services: (a) a Vanilla at \$20; (b) a Blueberry at \$60; and (c) services at \$55. In addition, WireCo would also offer a bundle that includes a Vanilla and services for \$62 (a \$13 discount: 55+20–62). Once again, the bundle would be socially desirable. The HipC would continue to purchase the same service at the same price of \$55 and would not be worse off. The RegC, on the other hand, would clearly be better off. She would be able to purchase a phone and service for her reservation price of \$62 (\$22 for the phone and \$40 for the service), something she could not do before the "predatory bundle" was offered. As a result, bundling would allow WireCo to increase its profits by selling its services to the HipC for a profit of \$25 (55–30), while and at the same time selling the bundle to the RegC for a profit of \$8 (62–30–24).

WireCo sells a Vanilla *below* its cost. The Vanilla is offered on the market for \$20 but it costs WireCo \$24 to manufacture (or buy¹²¹) a unit. In the eyes of the consumer who buys the bundle for \$62, the service component in the bundle costs \$40 and the Vanilla component \$22. This means that WireCo is losing \$2 from selling a Vanilla (22–24) but profits \$10 from selling services (40–30). Selling Vanillas, however, is profitable

120. *Supra* notes 108–09 and accompanying text.

121. Assuming that WireCo purchases the product on the market for \$20 and incurs additional costs (such as transportation and handling) of \$4.

because WireCo's total profits increase by \$8 (10–2).¹²² Put differently, WireCo is "paying" (or "investing," or "sacrificing") a premium of \$2 to enable a price discrimination activity that yields an additional profit of \$10. Consequently, because the bundle enables more users (the RegC) to buy phones and services and thus increase output and total welfare, the "predatory" behavior is both profitable and welfare-enhancing. A quick survey of AT&T's website reveals bundling below-cost. Although the cost to manufacture a cell phone is clearly positive, AT&T offers discounted bundles in which some of the cell phones are offered for "free"—clearly below any measure of cost.¹²³

The bundle is socially desirable but it is exclusionary. It flunks the Exclusionary Standard enunciated by *Cascade*, *Ortho*, and the AMC if strictly applied (for the reasons discussed in Example 1) and may thus be declared as predatory.¹²⁴ In fact, the discounted package could be said to be predatory without even resorting to *any* bundling analysis. As Professor Crane notes:

In some cases, a multiproduct discount may result in below-cost pricing in one or more of the covered markets without any need to resort to complicated discount-reallocation accounting. If the marginal cost of items X, Y, and Z is \$8, their pre-bundled price was \$10, and the bundled offer is a 30% discount on each item if they are bought together, then the price of each item *may* be below its marginal cost. Ordinary predatory pricing rules could be applied to the package discount. The same *could* obtain if only one item in the bundle was below its cost after the bundled offer. *May* and *could* are italicized because the bundled discount may have arisen from transactional or cost savings from selling in the package.¹²⁵

122. In the eyes of other producers (and under the "discount allocation" test) the effective price of Vanillas is \$7, well below the cost of efficient competitors. *See Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 906 n.14 (9th Cir. 2007) (noting the alternative names for the standard announced in *Cascade*, including "discount attribution" test and "discount reallocation" test). Because the bundle represents a discount of \$13 (55+20–62), in order to compete with WireCo, manufacturers would have to offer their Vanillas at \$7 (20–13), making consumers indifferent to (i) purchasing the bundle for \$62; or (ii) purchasing services separately for \$55 and Vanillas for \$7.

123. *See supra* note 32 (noting the different views as to the appropriate below cost measure).

124. *See supra* Part III (discussing predatory bundling in the multi-product setting).

125. Crane, *Mixed Bundling*, *supra* note 37, at 473–74. Professor Crane warns "that further caution is warranted when the package discount results in a nominal below-cost price of a single item but revenues from other products continue to cover their costs," and noting that "[i]f the seller is using the package discount to play behavioral games or exploit client agency costs, it might hope that the presentation of one very low price in the package would

In the example above, however, the competitive product in the bundle, the Vanilla, is priced below-cost, not because of "transactional or cost savings from selling in the package."¹²⁶ Rather, selling the competitive product, even if at a loss, allows the bundler to discriminate between consumers and thereby increase its profits. The bundle, one which increases consumers' and total welfare, may thus be considered predatory under the *Brooke Group* test for predatory pricing.¹²⁷

3. Example 3: Bundling Can Prevent Arbitrage

Price discrimination may be the wish of every monopolist, but it is not always feasible. Many times, consumers can engage in arbitrage. To be able to price discriminate between consumers, the monopolist must make sure that the consumer with the high WTP will not purchase the discounted bundle, dispose the second product and just consume the monopolized product. In some industries, as is the case with wireless service providers (where service is given to a specific phone identified by a unique ID), a monopolist can avoid arbitrage through the use of technology. In many industries, however, arbitrage is still possible. A monopolist may use bundled discounts to overcome this problem.

The following example is illustrative. Assume that an airline has a monopoly over a specific route (e.g., from Birmingham, AL (BHM) to Chicago, IL (ORD)) and that next to each airport there are two-star hotels that only serve passengers. The airline services two types of consumers (each representing a different group of customers): A business consumer (BizC) and a nonbusiness consumer (NBC). The BizC values the airline ticket more than the NBC, while the NBC values a night at a two-star hotel more than the BizC. Assume further that the consumers' WTP, the manufacturers' costs and the market prices for airline tickets and hotel services are as described below.

help to stimulate demand." *Id.* at 474.

126. *Id.*

127. See *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 222–24 (1993) (stating that in order to prove predatory pricing the plaintiff must show: (1) that the defendant priced its product below cost, and (2) that the alleged predator had "a dangerous probability of recouping its investment in below-cost pricing").

Table 6: Summary of Consumers' WTP, Sellers' Costs and Market Prices

	BizC WTP	NBC WTP	Airline AVC	Competing Hotels AVC	Market Price
Airline (BHM-ORD)	100	70	50	N/A	WTP
Two-Star Hotel	25	80	60	59	60

The airline can maximize its profits by charging each consumer a different price. By charging the BizC \$100 and the NBC \$70, the airline would realize a profit of \$70 ($100+70-50-50$). Price discrimination, however, is often infeasible. Even if the airline could distinguish between the two types of consumers (a daunting task in and of itself), arbitrage would still frustrate any attempt to price discriminate. The NBC who is offered the cheaper price (\$70) could purchase the ticket at a discounted price and then resell it to the high-value consumer (the BizC in our example) below the monopolist's price (\$100). Moreover, the high-value consumer could easily disguise herself as a low-value consumer. When asked whether she is purchasing a ticket for business, she could simply say: "No."

If price discrimination is infeasible, the airline must decide between charging consumers \$100 or charging them \$70. If the airline charges \$70 for a ticket, it will sell two tickets (one to each consumer) and make a profit of only \$40 ($70+70-50-50$); but if the airline charges \$100, it will sell only one ticket (to the BizC) and realize a profit of \$50 ($100-50$). Because selling a ticket at \$100 is more profitable (\$50 compared to \$40), the NBC, although willing to pay \$20 more than the cost of the flight, will not be able to fly from Birmingham to Chicago.

A bundled discount can help the monopolist achieve the two conditions necessary for price discrimination. It enables the airline to (1) distinguish between the different consumers and (2) avoid arbitrage. The mechanism is simple: The airline will offer the consumer the option of purchasing (a) a ticket for \$100; or (b) a bundle of a ticket and a stay at a local two-star hotel at \$128.99. For simplicity, assume that in order for the airline to offer the bundle, it must first acquire (or enter into an agreement with) a hotel that incurs a cost of \$60 per night. In addition, consumers would be able to make reservations directly with any two-star hotel for \$60 a night (the market price for similar hotel services).

The NBC, facing the option of (a) buying a ticket for \$100 and making a reservation at a two-star hotel for \$60 (a total expense of \$160), or (b) buying a bundle of both for \$128.99, will of course choose the latter.

The bundle allows the NBC to purchase a ticket she could not have purchased absent the bundle and even enjoy a surplus of \$21.01 (150–128.99). At the same time, bundling enables the airline-monopolist to realize a profit of \$68.99 (100+128.99–50–50–60), \$18.99 (or thirty-eight percent) more compared to a situation in which it does not bundle. This is because the bundle offers the low-value consumer a deal which is below the consumer's reservation price, while at the same time offering a higher price to the high-value consumer. *The bundle also frustrates any attempt for arbitrage* because the BizC in our example has no incentive to purchase the bundle. She would purchase a ticket for \$100 and decline to purchase at \$128.99, a bundle she values for \$125.

The bundled discount is socially desirable, but is it legal? Under a strict application of the *Cascade* test, it is *not*.¹²⁸ Under this test, the discount given by the bundler is allocated to the competitive product.¹²⁹ If the resulting price of the competitive product is below the bundler's average (incremental) cost of production, then the bundled discount is exclusionary for the purpose of § 2. Applying this test to the example, we need to subtract the entire discount of \$31.01 (the difference between the aggregate full price of the products, \$160, and the bundle's price, \$128.99) from the market price of hotel services, \$60. The result is \$28.99 (60–31.01), which is below the airline's average cost of supplying the hotel services (\$60). Thus, a court strictly applying the *Cascade* standard would hold that the airline's bundle—one which increases total welfare and output—excludes more efficient hotels which offer similar services (at \$59) but are not "affiliated" with the airline and is thus predatory.

The *Cascade* test is right in its conclusion that the effective price (in the eyes of competitors at least) of the hotel service component in the bundle is \$28.99. Indeed, to make a customer indifferent to purchasing the bundle or purchasing each of its components separately, the competing hotels must offer their services at \$28.99. The *Cascade* test is also correct to conclude that this price is below the airline's average cost and that it excludes equally or more efficient competitors (other hotels that can provide accommodations at the same or lower price). Yet the airline's behavior should not be considered "predatory." The airline is not trying to leverage its monopoly to the hotel services market. It is simply trying (successfully) to maximize its profit on the monopolized product—the airline ticket—by price discriminating between high-value and low-value

128. *Supra* notes 82–84 and accompanying text.

129. *Supra* note 109 and accompanying text.

consumers. Under the Exclusionary Standard, by selling hotel services at the effective price of \$28.99, the airline is selling below cost and is incurring a loss of \$31.01 (28.99–60). But this is merely a small sacrifice that enables the airline to harvest a \$50 (100–50) profit from the low-value consumer of the monopolized product, and a net profit of \$18.99 (50–31.01). The result is that, in the bundling context, even when the bundler excludes (by either causing sellers to exit the market for the competitive product or by blocking entry to that market) a more efficient competitor, the bundle can be welfare-enhancing, and if so, should not be condemned as predatory.

4. Example 4: Unrelated Products

The *Ortho* example focused on complements (shampoo and conditioners)¹³⁰ and so did Examples 1–3 above. In these examples, consumers were offered the option to buy cell phones with wireless services, and hotel services with airline tickets. The results of the model, however, are not limited to complements. The following example (a variant of Example 1) is illustrative. Assume that a multi-product seller enjoys a monopoly over one product, *A*, but competes with others on the sale of a second product, *B*. Assume further that competitors in the *B* market are more efficient (they can manufacture *B* for less) and that there are three types of consumers. The consumers' reservation prices, the market prices and the manufacturing incremental costs are described below.

Table 7: Summary of Consumers' WTP, Sellers' Incremental Costs and Market Prices

	C1	C2	C3	Multi-Product Seller AVC	Competitors AVC	Market Price
<i>A</i>	55	40	0	30	N/A	WTP
<i>B</i>	2	22	22	20	18	20
Bundle	57	62	22	50	N/A	57.99

As in Example 1, if the multi-product seller cannot discriminate between consumers, it will charge \$55 for product *A* and realize a profit of \$25 (55–30). The result will be that Type 2 consumers would be excluded from the *A* market (they will not pay \$55 for a product they value at \$40).

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

Note that pure bundling (selling *A* and *B* only as part of the package *AB*) would be a losing strategy. If the pure bundle is offered at \$62 (to extract Type 2 consumers' surplus) no one will purchase the bundle. Type 1 and Type 3 consumers would not pay \$62 for a bundle they value at \$57 and \$22 respectively. Type 2 consumers would not purchase the bundle because the bundle's price is equal to their reservation price and would leave them without any surplus. They would rather purchase product *B* for \$20 and enjoy a surplus of \$2 (22–20). A pure bundle at a price of \$59.99 would also be a losing strategy. Type 2 consumers would purchase the bundle (Type 1 and 3 consumers wouldn't), but the multi-product seller would only realize a profit of \$9.99 (59.99–50). Between monopoly-pricing (selling product *A* for \$55) that yields \$25 in profits and a pure bundle that yields a profit of \$9.99, the multi-product seller would stick to monopoly-pricing.

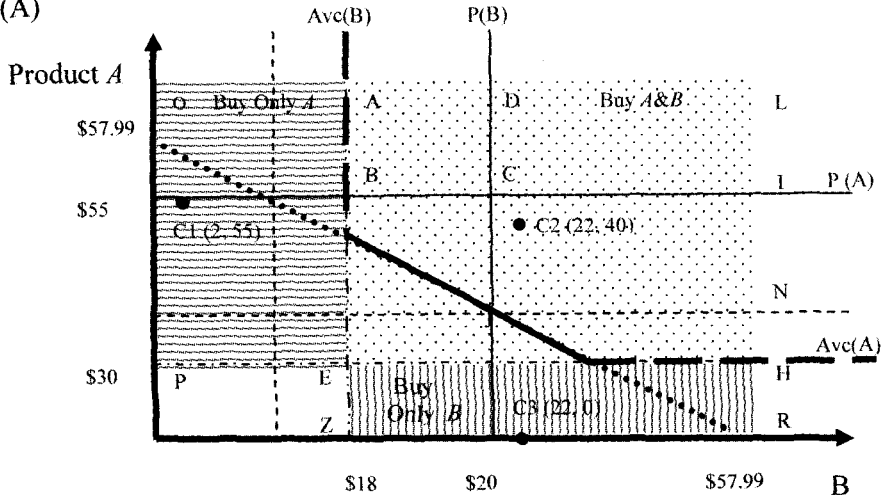
A mixed bundling strategy, however, can allow the multi-product seller to reduce and recapture some of the DWL caused by the monopoly pricing and even some of the DWL caused by the supra-competitive prices charged in product *B*'s market. The multi-product seller will continue offering product *A* for \$55 and product *B* for \$20. In addition, it will offer the bundle *AB* for \$57.99.¹³¹

Type 1 consumers will keep purchasing product *A* for \$55 and will not be affected by the bundle at all. Type 2 consumers who could not purchase product *A* because of the monopoly pricing will purchase the bundle *AB* for \$57.99 and enjoy a surplus of \$4.01 (62–57.99). The multi-product seller will also increase its profits by \$7.99 (57.99–50) from \$25 to \$32.99 (due to the sale of the bundle to Type 2 consumers).

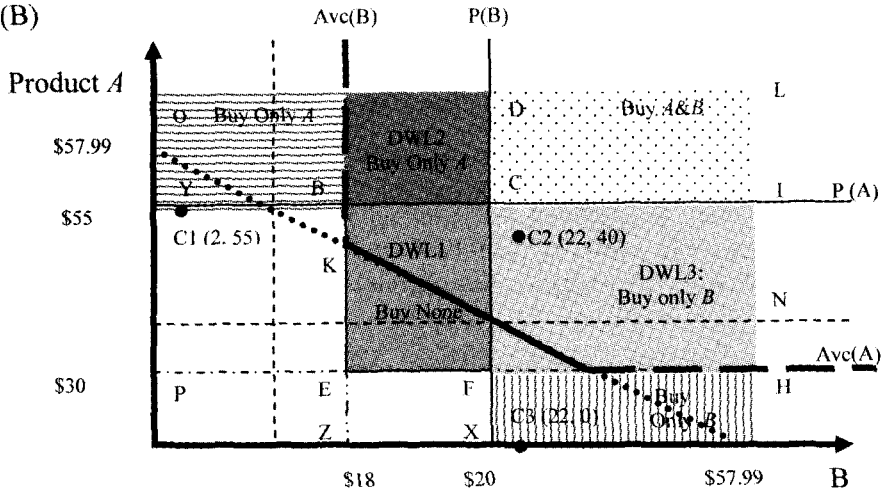
131. The multi-product seller will not be able to offer the bundle *AB* for \$59.99 because such a price may result in a price war. If the seller offers the bundle for \$59.99, Type 2 consumers will enjoy a surplus of \$2.01 (62–59.99) from purchasing the bundle. Competitors who manufacture product *B* will then reduce the price for *B* to \$19.98 (it costs them only \$18 to manufacture product *B*), which will allow Type 2 consumers to enjoy a surplus of \$2.02 (22–19.98). Faced with the option of (i) purchasing the bundle *AB* from the multi-product seller for \$59.99 and enjoying a surplus of \$2.01, or (ii) just purchasing product *B* and enjoying a surplus of \$2.02, the consumer will prefer the latter. As a result, the multi-product seller will reduce the price of the bundle to \$59.97. Competitors in the *B* market will then reduce the price of product *B* even further. This price war will continue until the price for product *B* is reduced to \$18. The multi-product seller will then offer the bundle at a price of \$57.99, which will allow Type 2 consumers to enjoy a \$4.01 (62–57.99) surplus. Product *B* competitors will not reduce the price further (below \$18) because it costs them \$18 to manufacture product *B*. With Type 2 consumers out of reach (due to the exclusionary bundle), product *B* competitors—focusing on Type 3 consumers—will raise the price back up to \$20.

Figures 3(A)–(C): The Welfare Effects from Mixed Bundling

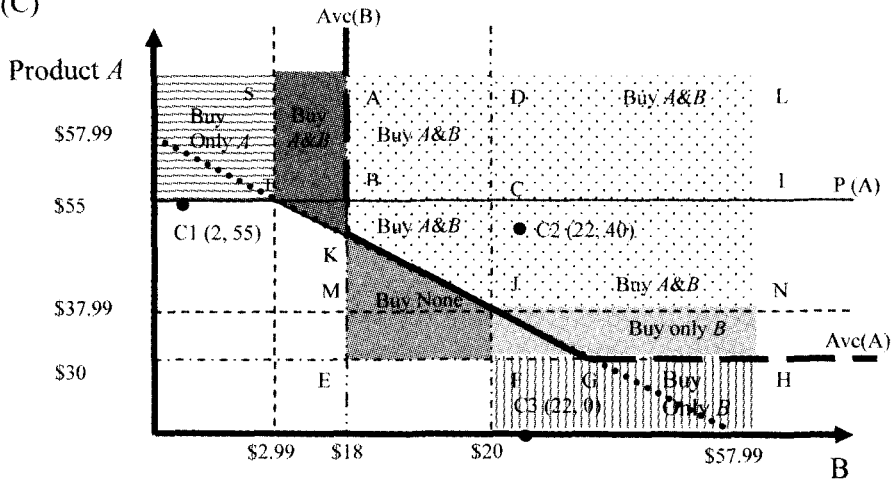
3(A)



3(B)



3(C)



Once again, the bundle is welfare-enhancing but it is exclusionary with regard to Type 2 consumers. These consumers will not purchase product *B* from the more efficient competitors, but will instead prefer to purchase the bundle *AB* from the less efficient multi-product seller. Type 3 consumers—those who are only interested in purchasing the competitive product *B*, however—will still be able to purchase product *B* from the competitors or the multi-product seller. In fact, the more efficient competitors will be able to exclude the multi-product seller from selling product *B* to Type 3 consumers if they offer product *B* for \$19.99 (below the multi-product seller’s cost to produce product *B*).

Graphically, the implications from offering a bundled discount are represented in Figure 3 (above). In a fully competitive market, described in Figure 3(A), consumers located in the (dotted) area AEHL (who value both products more than their cost of production) would be able to purchase both products. Consumers located in the area AEPO (marked by horizontal lines) would purchase only product *A*, and those located in area EZRH (marked by vertical lines) would purchase only product *B*. Products *A* and *B* are not priced, however, at the competitive level. Because both products are priced above their cost of production there is some DWL some of which is shown in Figure 3(B). Consumers located in the area denoted as DWL1 who could purchase both products will not be able to purchase any of the products. Consumers located in the area denoted as DWL2 will only be able to purchase product *A* and those located in the area denoted as DWL3 will only be able to purchase product *B*. In addition, consumers located in

the area BYPE (who could purchase product *A*) and consumers located in the area EZFX (who could purchase product *B*) will purchase neither good.

The bundle reduces some of the DWL caused by the monopoly pricing and even some of the DWL caused by the supra-competitive prices charged for product *B*. Specifically, consumers who value the bundle at \$57.99 (those located on the line KJ and outward) will be able to purchase both. The increase in welfare is shown in Figure 3(C) by a transformation of some of the gray DWL areas in Figure 3(B) to the white-dotted areas.¹³² Specifically, consumers located in the area ABCD (DWL2) who could only purchase product *A*, those located in the area CINJ (part of DWL3) who could only purchase product *B*, and consumers located in the area BKJC (part of DWL1) who could not purchase any of the products, will be able to purchase both.¹³³

VI. Conclusion

As one of the leading treatises notes:

The theory of anticompetitive discounting is in much the same position as the theory of predatory pricing was in the 1970s: No shortage of

132. Formally, there are two conditions that must be satisfied for the consumer to buy a bundle. First, the consumer must value the bundle more than the cost of the bundle. Second, the consumer will not purchase the bundle if purchasing a single product would leave her with more surplus. Denoting WTP_A and WTP_B as the consumer willingness to pay for each product, and P_M , P_C and P_B as the price of the monopolized good, the competitive product and the bundle respectively, these conditions can be reformulated as follows: (1) $WTP_M + WTP_C \geq P_B$; and (2) $WTP_M + WTP_C - P_B \geq WTP_M - P_M$ (or $WTP_C \geq P_B - P_M$) and $WTP_M + WTP_C - P_B \geq WTP_C - P_C$ (or $WTP_M \geq P_B - P_C$).

133. Note that the bundle may also create some DWL. In a competitive market, consumers who are located in the area ABKTS in Figure 3(C) will not (and should not) purchase product *B* because they value product *B* less than its cost. The bundle, however, may lead to inefficiency if consumers have reservation prices that would locate them in this area. For example, in a competitive market, a consumer located in the area ASTB who values product *A* at \$60 and product *B* at \$10 will purchase only product *A* and enjoy a surplus of \$30 (60-30). With monopoly pricing and absent mixed bundling she will still be able to consume product *A* although her surplus would decrease from \$30 to \$5 (60-55). But if the seller offers the bundle *AB* at a discounted price of \$57.99, the consumer will purchase both products in order to enjoy a surplus of \$12.01 (60+10-57.99), more than twice the surplus absent bundling. A consumer who values product *A* at \$50 and *B* at \$17 (located in the area TBK) would be able to purchase product *A* in a fully competitive market but not product *B* (recall that the cost of products *A* and *B* are \$30 and \$18, respectively). If the seller charges \$55 for product *A* she will not be able to purchase either product. But she will purchase a bundle of both if the seller offers a bundled discount of \$57.99 and enjoy a surplus of \$9.01 (50+17-57.99). Purchasing product *A* reduces the DWL from monopoly pricing but it creates inefficiency in the production of product *B*.

theories, but a frightening inability of courts to assess them. It is one thing to develop a theory showing that a particular practice can be anticompetitive. It is quite another to show that this theory explains a particular practice without producing an unacceptably high number of false positives.¹³⁴

The *Cascade* court was aware of the fact that its test may sweep too broadly. In fact, it invited the legal academy to investigate this very issue.¹³⁵ This Article accepts the invitation. It argues that the Exclusionary Standard adopted by *Cascade* and the AMC creates a real concern that output and welfare-enhancing bundles will be declared illegal,¹³⁶ and that its strict application will harm consumers. It will subject certain socially desirable bundling schemes to unnecessary and costly scrutiny. Under *Cascade* (and the AMC):

[T]o 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...cost of producing them.¹³⁷

Pricing "below cost" is considered predatory because it excludes equal or more efficient competitors from the market, thereby harming competition and consumers.¹³⁸

But while true in the single-product case, this Article argues that this assumption does *not* always hold in the multi-product context. A multi-product seller may have a legitimate economic incentive to bundle a

134. AREEDA & HOVENKAMP, *supra* note 37, at 306.

135. *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 908 (9th Cir. 2007).

136. A similar concern was raised by Commissioners Carlton and Garza:

Commissioners Carlton and Garza join this recommendation, but are concerned that the first screen in the three-part test would still require many pricing schemes where exclusion is not at issue to receive further scrutiny under the second and third parts of the test. Bundled discounts that do not pass the first screen in the Commission's proposed test can be used to price discriminate with no exclusionary effect on competition. Failure to recognize that price discrimination is a motive for mixed bundling implies that the incremental revenue is not correctly calculated by the Commission's proposal. Commissioner Carlton elaborates on these points in his separate statement.

ANTITRUST MODERNIZATION COMM'N, *supra* note 7, at 99.

137. *Cascade*, 515 F.3d at 910.

138. *See id.* at 909 (noting that the below cost "requirement ensures that the *only* bundled discounts condemned as exclusionary are those that would exclude an equally efficient producer of the competitive product or products" (emphasis added)).

monopolized product with a competitive product. In fact, this economic incentive may be so strong that the multi-product seller may offer the bundle at a substantial discount and even "below cost." Such bundled discounts may indeed exclude more efficient competitors, either because competitors cannot match the discount offered or simply because they cannot offer the same diverse line of products. Yet, this Article shows that the benefits from the "below-cost-exclusionary" bundle can outweigh the cost of excluding competitors.

By offering a bundled discount, the bundler may be able to discriminate between groups of consumers holding different reservation prices, and even use the bundle to prevent arbitrage. Under the conditions discussed above, the discounted bundle may mitigate the main harm of the monopoly: Reduced output and deadweight loss. In fact, it may even reduce inefficiencies in the competitive product market. This is because the competitive product in the bundle serves as a self-sorting mechanism that enables the bundler to sell the monopolized product to consumers who would purchase the product had it been offered in a competitive market, but cannot and will not purchase it absent the bundle. This increase in welfare can more than offset the exclusionary effect and may even be Pareto-superior.

This Article recognizes that bundling (pure or mixed) may have anticompetitive or detrimental effects.¹³⁹ But it warns against a strict application of the *Cascade* test under which a monopolist that excludes an equal or more efficient competitor harms competition and should therefore be liable under Section 2 of the Sherman Act. Instead, it argues that in the multi-product context, exclusionary behavior and even pricing a product in the bundle below-cost can be welfare-enhancing. Therefore, if not wrong, the *Cascade*-AMC standard is, at the very least, overbroad.¹⁴⁰ It creates a real concern that courts applying the *Cascade*-AMC test will declare illegal below-cost (thus exclusionary) yet welfare-desirable bundles. This will especially be the case if, when applying the test, courts fail to consider legitimate business justifications (whether as part of the plaintiff's prima

139. *Supra* notes 94, 134.

140. *See Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 908 (9th Cir. 2007) ("Liability under the discount attribution standard has the potential to sweep more broadly than under the aggregate discount rule or the *Ortho* standard. However, there is limited judicial experience with bundled discounts, and academic inquiry into the competitive effects of bundled discounts is only beginning."); *see also* Lambert, *supra* note 79, at 1730-43 (criticizing the test and offering an alternative approach).

facie case or as an affirmative defense).¹⁴¹ How big is the concern and whether the Exclusionary Standard will produce "an unacceptable high number of false positives" (condemning desirable bundles) should be the subject of future empirical testing. But courts and policy makers should be aware that in the context of bundling, exclusionary does not necessarily mean predatory. Rather, "predatory bundling," that is, offering a bundle that excludes a more efficient competitor and even a bundle in which a product is priced below-cost, can be not only sustainable and profitable but also welfare-enhancing.

The possibility that courts may apply the Exclusionary Standard in a *per se* manner was not ignored by Commissioner Carlton (although absent in the AMC report).¹⁴² In a separate statement, Commissioner Carlton warned

141. See also Frank Easterbrook, *The Chicago School and Exclusionary Conduct*, HARV. J. L. & PUB. POL'Y 439, 445 (2009) ("Only if the gains from the successful suits exceed the losses from the false positives can we say that litigation about exclusionary practices has been a success."). Easterbrook explains that "judges and enforcers must be wary of claims that take the form: 'Here is a model in which bad results *can* happen; let's use the legal system to find out *whether* they happen.' That approach assumes away the costs of false positives." *Id.*

142. ANTITRUST MODERNIZATION COMM'N, *supra* note 7, at 94–100, 399; see also *Virgin Atl. Airways Ltd. v. British Airways PLC*, 69 F. Supp. 2d 571, 580 n.8 (S.D.N.Y. 1999), *aff'd*, 257 F.3d 256 (2d Cir. 2001) (citing *Ortho* as holding "that there would be an antitrust violation if the competitive product in the bundle were sold for a price below average variable cost after the discounts on the monopoly items in the bundle were subtracted from the price of that competitive product"); Hovenkamp & Hovenkamp, *Exclusionary Bundled Discount*, *supra* note 97, at 519 (noting that the Discount Attribution test "has the potential to sweep far too broadly, particularly if it becomes a *de facto* prima facie test of illegality"); *id.* at 519 (concluding that in "[*Cascade*] the Ninth Circuit appeared to assume that any bundled discount that flunks the attribution test is at least presumptively anticompetitive"); Hovenkamp & Hovenkamp, *Complex Bundled Discounts*, *supra* note 97, at 25 (noting that the Discount Attribution test "produces very severe false positives and should be regarded as nothing more than a starting point for analysis"). In 2006–2007 the United States Department of Justice (DOJ) and the Federal Trade Commission (FTC) held joint hearings to study issues relating to § 2 enforcement including bundling. See Press Release, Dep't of Justice, Justice Department Issues Report on Antitrust Monopoly Law (Sept. 8, 2008), available at http://www.justice.gov/atr/public/press_releases/2008/236975.pdf (announcing the report). The report, published on September 8, 2008, adopted the *Cascade*-AMC's Discount Allocation test as a safe harbor (in situations where bundle-to-bundle competition is impossible) and warned against a "presumption of anticompetitive conduct." DOJ, COMPETITION AND MONOPOLY, *supra* note 17, at 101–02. The report was rejected, however, by the FTC. See FEDERAL TRADE COMMISSION, STATEMENT OF COMMISSIONERS HARBOUR, LEIBOWITZ AND ROSCH ON THE ISSUANCE OF THE SECTION 2 REPORT BY THE DEPARTMENT OF JUSTICE 1 (2008), available at <http://ftc.gov/os/2008/09/080908section2stmt.pdf> (providing the Commissioners' statements). In a separate statement, Commissioners Harbour, Leibowitz, and Rosch noted that the DOJ's report, if adopted, would lead to "radically weakened enforcement" and criticized the DOJ's interpretation of Section 2 jurisprudence noting that "the final Report's descriptions and

against such application. If the discount attribution test "is adopted by courts," warned Commissioner Carlton, "they must understand that a defense for the pricing based on legitimate business reasons unrelated to predation should be allowed so there should not be a presumption (as there is in the A-T price-marginal cost test) that failing the first prong should suggest that something odd is occurring."¹⁴³ Interestingly, although previous formulations of the Exclusionary Standard included a "legitimate business justification" defense,¹⁴⁴ this element is absent in the *Cascade* test and it remains to be seen if such a defense will be available to future defendants.

conclusions respecting how Section 2 is and should be enforced cannot be said to represent the consensus, or even the prevailing . . . view . . ." *Id.* Specifically, the Commissioners rejected the DOJ's safe harbor proposal and professed that the "Commission stands ready to fill any Sherman Act enforcement void that might be created if the [DOJ] actually implements [the Report]." *Id.* at 7, 11. The report was finally withdrawn by the DOJ on May 11, 2009. *See* DOJ, Justice Department Withdraws, *supra* note 17 (detailing the withdrawal); *see also* Greenlee et al., *supra* note 10, at 1149 (warning that the *Ortho* test "should be used with care"). *But see* Nalebuff, *Exclusionary Bundling*, *supra* note 13, at 343 (arguing in favor of "a per se rule against exclusionary bundling" when "the foreclosure is significant and the monopolist could have reasonably understood the effect of its pricing").

143. ANTITRUST MODERNIZATION COMM'N, *supra* note 7, at 399.

144. *See* AREEDA & HOVENKAMP, *supra* note 37, at 323 ("A requirement that the bundling practice be sufficiently severe so as to exclude an equally efficient single-product rival, and without an adequate business justification, seems to strike about the right balance between permitting aggressive pricing while prohibiting conduct that can only be characterized as anticompetitive."); *see also* POSNER, *supra* note 6, at 194–95 (proposing that "the plaintiff must prove that the challenged practice is likely . . . to exclude from the market an equally or more efficient competitor", rebuttable by a defendant "proving that although it is a monopolist and the challenged practice exclusionary, the practice is, on balance, efficient"). *But see* Lambert, *supra* note 79, at 1736–37 (criticizing the test and showing that it may condemn *above-cost* exclusionary yet desirable bundles). Although the *Cascade* court relied on Areeda and Hovenkamp in deciding to reject the *Ortho* test, it did not adopt the "legitimate business justification" element that Areeda and Hovenkamp offered, and it is questionable whether this element (whether as part of the plaintiff's prima facie case or the defendant's defense) exists under *Cascade*. *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 906–07 (9th Cir. 2008). The omission to discuss relevant business justifications may indicate the court's disapproval, but it may also be the result of the court's focus on the plaintiff's burden. After oral arguments, the *Cascade* court issued an order inviting amici curiae to submit briefs addressing the issue of whether a *plaintiff* who seeks to establish predatory bundling "must prove that the defendant's prices were below an appropriate measure of the defendant's costs." *Id.* at 899 n.9. Because the focus was on the plaintiff's burden, if considered by the court (the issue was not raised by the amici curiae in the context of § 2) to be a defense—it may explain why the business justification element was absent. In any case, the question remains open. *See* Brief of Amici Curiae Law Professors, *supra* note 37, at 5, 7 n.8 (arguing that plaintiffs "challenging a bundled discount scheme should be required to show at a minimum, that the competitive products in the bundle were priced below cost" and noting that "Amici do not discuss those further showings" plaintiffs may need to show if the bundle fails the *Cascade* test).

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