

Paper Trail: Working Papers and Recent Scholarship

Editor's Note: In this issue we note a recent paper by Patrick Greenlee, David Reitman, and David S. Sibley that argues that bundled loyalty discounts may either increase or reduce consumer welfare and should be viewed as tying arrangements rather than predatory pricing.

Send comments and suggestions for papers to review to: page@law.ufl.edu or jwoodbury@crai.com.

—WILLIAM H. PAGE AND JOHN R. WOODBURY

Recent Papers

Patrick Greenlee, David Reitman, and David S. Sibley, An Antitrust Analysis of Bundled Loyalty Discounts, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=600799

In the last issue, we noted Barry Nalebuff's paper, *Bundling as a Way to Leverage Monopoly*, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=586648. That paper showed that a monopolist can increase profits by offering consumers a bundle of (1) a monopolized product, priced *below* the standalone, profit-maximizing level, and (2) a second, competitively supplied product, priced *above* marginal cost. Nalebuff's argument depends on the envelope theorem, which holds that, if a monopolist is charging the full monopoly price for a product, a small reduction in price will cause only a trivial reduction in monopoly profits but a much larger increase in consumers' surplus and in allocative efficiency. Nalebuff shows that this disparity between the loss to the monopolist and the gain to consumers gives the monopolist an opportunity for profit: the monopolist's reduction in the price of the monopolized good has less effect on its profits than the increase in price of the competitively supplied good. In Nalebuff's model, bundling increases both consumer surplus and social welfare, although Nalebuff suggests that the practice may be anticompetitive in the long run because rival producers of the competitively supplied good are foreclosed.

David Mills of the University of Virginia's Economics Department called our attention to the current paper, a still more recent one, by economists in the Antitrust Division's Economic Analysis Study Group. Greenlee, Reitman, and Sibley (GRS), on assumptions similar to Nalebuff's, offer a model of bundling that suggests that in some circumstances bundling can reduce consumer welfare, while in others it can increase welfare. GRS confirm that in the case discussed by Nalebuff, in which the monopolist (while continuing to offer the monopolized good separately at the preexisting monopoly price) reduces the price of the monopolized good and slightly increases the price of the competitively supplied good, the producer's profit and consumer surplus increase, for essentially the reasons we discussed in the November issue, <http://www.abanet.org/antitrust/source/11-04/Nov04-PaperTrail1129.pdf>. In addition, equally efficient producers of the competitively supplied good are foreclosed. GRS emphasize that these kinds of bundles are not like predatory pricing because there is no sacrifice of short-term profits; instead, they more closely resemble tying arrangements.

GRS go on to show that, in some circumstances, depending upon the relative demand conditions in the market for the monopolized good and the market for the competitively supplied good, a bundle could reduce consumer welfare through monopoly leveraging. In essence, the increase in consumer welfare (and the reduction in profit) attributable to discounting in the price of the monopolized good may be offset by the loss in welfare (and increase in profit) from increasing the price of the competitively supplied good, if demand for the latter good is large relative to demand for the former. For this result to occur, the firm must, when it introduces the bundle, set the standalone price of the monopolized good high enough to deter the consumer from buying it separately and buying the competitively supplied good from a rival. Apparently, this strategy is the same as not offering the monopolized good separately at all—GRS even state that the firm may set the standalone price “arbitrarily high” (while increasing the bundled discount), and that as the price of the monopolized good increases, “the incentive compatibility constraint converges to that of a straight requirements tying problem.”

GRS add that, in their model, “the [Chicago School’s] one monopoly rent theorem does not hold,” presumably because the goods are not used in fixed proportions. Whinston and others have already shown that, when this condition is not present, tying can increase profits and reduce consumer welfare through leverage.¹ GRS distinguish their argument from Whinston’s by noting that their model assumes that demand is downward-sloping, with a positive consumer surplus, and there are constant returns to scale.

GRS also point out that, in their model, consumers are never marginal; only units of demand are marginal. Apparently this condition is an implication of the assumption that there is consumer surplus in the market for the monopolized good at the initial price. GRS suggest that in this case, “a small increase in [the price of the competitively supplied good] does not reduce profits from [the monopolized good] at all” and, because the consumer is not marginal, the net reduction in consumer welfare does not cause the consumer to switch to a rival supplier of the competitively supplied good. If there were no consumer surplus in the market for the monopolized good (for example, because of price discrimination), the one monopoly profit theorem would hold.

The authors observe that their analysis suggests that loyalty discounts on bundles should be treated as tying rather than predation. They criticize the *Ortho* standard,² for example, which condemns bundles only if the revenue from the sale of the competitively supplied good, less the reduction in revenue attributable to the discount on the monopolized good, fails to cover the seller’s cost of producing the competitively supplied good. This standard, which analogizes the bundle to predatory pricing, fails to account for the envelope theorem and consequently would condemn bundles that increase consumer welfare. The authors propose instead that the legality of bundles be determined by comparing the “effective price of the monopoly good in the bundle” after the bundle is introduced, to its price when both goods were priced independently. If the prices are the same, consumer surplus must decline. If the price of the monopoly good in the bundle is lower than its pre-existing monopoly price, compare the standalone price to the pre-existing monopoly price. If the standalone price is the same as the pre-existing monopoly price, the bundle must increase consumer welfare; if it is higher, the bundle must reduce consumer welfare.

¹ See, e.g., Frederick R. Warren-Boulton, *Vertical Control of Markets* 101–05 (1978); Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837 (1990).

² *Ortho Diagnostic Sys., Inc. v. Abbott Labs., Inc.*, 920 F. Supp. 455, 467 (S.D.N.Y. 1996).

GRS argue that the court in *SmithKline*³ reached the correct result under their proposed test, but erred in justifying its result by the *Ortho* test. Unfortunately, the record in *LePage's*⁴ does not reveal the prices necessary to apply the authors' test.⁵ ●

—WHP

³ *SmithKline Corp. v. Eli Lilly & Co.*, 575 F.2d 1056 (3d Cir. 1978).

⁴ *LePage's Inc. v. 3M Co.*, 324 F.3d 141, 156 (3d Cir. 2003).

⁵ We thank John Lopatka for helpful observations in an exchange of e-mails about this paper.