

Brantley Versus NBC Universal: Where's the Beef?

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ABSTRACT:

As with other important cases involving firms such as Kodak and Microsoft, the recent Brantley case raises interesting questions concerning appropriate antitrust policy in situations where firms practice a form of tying. Such cases are particularly difficult from an antitrust perspective because tying is pervasive in the economy and in many cases - actually probably most - the tying behavior has an efficiency justification. Even in cases where the justification may not be efficiency, as might occur in some instances where tying enables price discrimination, the practice may have nothing to do with harming competition. So the difficult issue faced by the courts in analyzing tying under the antitrust laws is to prohibit tying which harms competition and welfare without prohibiting tying that has an efficiency justification and thus improves welfare or where tying has a justification that is unrelated to harming competition.

In this short paper we discuss the specific issues raised by the Brantley case. We begin by describing the case in more detail and then discuss the relevant economic theories that have been developed to understand the type of tying behavior practiced in the case. We then discuss appropriate antitrust policy and end with a concluding discussion.

I. INTRODUCTION

Standard behavior in the cable and satellite television industry is to sell multi-channel packages to consumers rather than sell channels individually. In the recently decided *Brantley* case, various programming companies such as NBC Universal and FOX, along with distributors like Time Warner and DIRECTV, were sued in an antitrust class action suit brought by cable and satellite television subscribers. The suit was recently dismissed by the U.S. Court of Appeals for the Ninth Circuit because, it was ruled, the plaintiffs did not allege that competition was hurt but alleged only that the practice caused harm to consumers.

As with other important cases involving firms such as Kodak and Microsoft, this case raises

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occur in some instances where tying enables price discrimination, the practice may have nothing to do with harming competition. So the difficult issue faced by the courts in analyzing tying under the antitrust laws is to prohibit tying which harms competition and welfare without prohibiting tying that has an efficiency justification and thus improves welfare or where tying has a justification that is unrelated to harming competition.

In this short paper we discuss the specific issues raised by the *Brantley* case.² We begin by describing the case in more detail and then discuss the relevant economic theories that have been developed to understand the type of tying behavior practiced in the case. We then discuss appropriate antitrust policy and end with a concluding discussion.

II. THE CASE

Anyone who has cable or satellite television will be familiar with the behavior in this case that was the subject of the complaint, i.e. that the standard cable or satellite television package bundles together a large number of channels. The typical package contains some popular channels like ESPN and TNT but also a large number of channels where viewership is limited and which many customers would probably not order if given the choice. Further, it is typically the case that the cable or satellite company does not also offer individual channels in an unbundled fashion where consumers can pick and choose which channels to order.

At different stages of the case the plaintiffs made two arguments concerning this behavior. One argument, which was the basis for the most recent appeal, is that the bundling behavior reduced consumer welfare by eliminating consumer choice and forcing consumers to purchase

¹ Discussions of efficiency rationales for tying can be found in Dennis W. Carlton & Jeffrey Perloff, *Modern Industrial Organization* (2005); David S. Evans & Michael Salinger, *Why do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law*, 21 *Yale J. Regulation* 37, 37-89 (2004).

² For general discussions of our views of antitrust policies concerning tying see Dennis W. Carlton & Michael Waldman, *How Economics can Improve Antitrust Doctrine Towards Tie-In Sales*, 1 *Competition Pol'y Int'l* 27, 27-40 (2005); Dennis W. Carlton & Michael Waldman, *Tying*, in *Issues In Competition Law And Policy* (2008)

unwanted channels as a condition for purchasing the more popular and desired channels.

Note that this is an unusual antitrust argument since similar behavior is, in fact, quite common, and in other instances where this behavior is observed there are typically no arguments concerning an antitrust violation. For example, consider a collection of an author's short stories packaged together into a book, where the publisher does not sell any of the short stories individually. If the author's stories vary in quality and popularity as would be expected, then from the standpoint of the first argument, this scenario has basically the same features as the bundling practices of the cable and satellite providers. That is, consumers who are interested only in the higher quality and more popular stories are forced to purchase the less popular stories they have no interest in. Consumers, according to the plaintiffs' argument in *Brantley*, are hurt by the practice and would be better off if the antitrust authorities forced the author and publisher to make the stories individually available, in which case the consumers could pick and choose which stories to purchase. But we know of no one who argues that such behavior by authors and publishers should be of serious concern to the antitrust authorities.³

The court rejected this argument ruling that the alleged behavior does not violate the antitrust laws because no harm to competition was alleged. That is, without ruling on the plaintiffs' theory that the bundling reduced consumer welfare by reducing consumer choice, the court ruled that no violation of the antitrust laws was alleged by the plaintiffs since the complaint included no claim that the practice hurt competition.

At an earlier stage in the litigation, the plaintiffs also made the second argument that the conduct had anticompetitive effects. Specifically, the claim was that the bundling practice had foreclosed independent programmers from entry and successfully competing in the market for channels. The court allowed the case to proceed with this claim but after preliminary discovery the plaintiffs abandoned this claim.

III. THEORY

Determining the appropriate antitrust policy in this case requires understanding what economic theory tells us concerning the welfare effects of this type of tying. There are a number of parts of the tying literature that are potentially relevant. These include bundling to reduce het-

³ In the decision the court acknowledged this type of similarity and seemed concerned about what a decision that the behavior constituted an antitrust violation would imply concerning the legality of analogous behavior in other markets where no one has alleged a violation of the antitrust laws.

Probably the most relevant argument in the tying literature concerning this case is Stigler's argument concerning price discrimination, and subsequent extensions of that argument.

erogeneity in willingness to pay, efficiency rationales for tying and bundling, and anticompetitive rationales for tying and bundling. We look at each one of these next.

A. Bundling Used to Reduce Consumer Heterogeneity

Probably the most relevant argument in the tying literature concerning this case is Stigler's argument concerning price discrimination, and subsequent extensions of that argument.⁴ According to this theory, firms sell bundled products because it decreases heterogeneity across consumers concerning willingness to pay and the reduced heterogeneity increases profitability.

Consider a monopolist that sells two goods, denoted A and B, to two consumers, denoted 1 and 2. Suppose consumer 1 has a willingness to pay equal to \$20 for a unit of A and \$5 for a unit of B, while consumer 2 has a willingness to pay equal to \$11 for A and \$14 for B. Also, to keep the argument simple, assume that the firm has zero costs for producing each good. Suppose initially that the monopolist does not bundle and cannot price discriminate by charging different prices to the two consumers (maybe because of constraints imposed by resale). For each good the monopolist can charge either a low price and sell to both consumers, or charge a high price and only sell to the consumer with a higher willingness to pay for the product. Given the numbers specified for willingness to pay in this example, the monopolist maximizes profits by charging \$11 for A and selling A to both consumers and \$14 for B and only selling B to consumer 2. Further, letting π denote firm profitability, we now have that, in the absence of bundling, $\pi=2(\$11)+\$14=\$36$.

Now suppose the monopolist bundles A and B together instead of selling the products individually. Consumer 1's willingness to pay for the bundle is given by $\$20+\$5=\$25$ while consumer 2's willingness to pay for the bundle is $\$11+\$14=\$25$. So if it bundles it charges \$25 and sells the bundle to both consumers. This yields profits given by $\pi=2(\$25)=\$50>\$36$. Thus, if the monopolist has the option of bundling or not bundling, it chooses to bundle.

Note that in this example bundling allows the firm to perfectly price discriminate because each consumer's willingness to pay for the bundle is the same, so bundling in this case increases social welfare as is standard with perfect price discrimination. Specifically, in this example, social welfare rises with bundling because when products are sold individually, consumer 1 does not purchase product B, which constitutes a deadweight loss, while with bundling each consumer purchases both products. But note further that, in this example, bundling reduces

⁴ George J. Stigler, *United States v. Loew's Inc.: A Note on Block Booking*, 1963 Supreme Court Econ. Rev. 152, 152-157 (1963).

consumer welfare because perfect price discrimination means that the monopolist extracts all the potential surplus from consumers. Specifically, when goods are sold individually consumer 1 receives positive surplus from the consumption of A given by $\$20 - \$11 = \$9$, while with bundling consumer 1's surplus from consuming A equals zero.⁵

The result that bundling results in perfect price discrimination is, of course, not a general result. It arises in our example because the two consumers had identical valuations for the bundle. Without this it could still be the case that bundling is used to reduce differences in willingness to pay, but the result would not be perfect price discrimination. However, to the extent that bundling is used to move towards perfect price discrimination it should be expected that in many, if not most, cases of this sort the practice will increase rather than decrease social welfare.

The example analyzed above illustrates Stigler's initial argument that bundling can be used to increase profits by reducing differences in willingness to pay when there is a negative correlation in valuations. A negative correlation in valuations means that, as in our example, the consumer or consumers with a higher willingness to pay for one product have a lower willingness to pay for the other product. But subsequent papers in this literature make it clear that the negative correlation in valuations is, in fact, not required for bundling to improve profitability in these types of cases.⁶

We think that this argument, originally due to Stigler, likely captures an important element of why bundling is so heavily used by cable television and satellite television providers. Consider a market with a monopoly cable service that has eleven channels - ESPN and channels which we call 1 through 10. Suppose further that there are 1000 consumers in this market and ESPN is popular with all the consumers - each of the 1000 consumers has a willingness to pay equal to \$15 for ESPN. Each of the other channels is popular with only a small subset of consumers. Specifically, consumers 1 through 100 like channel 1, consumers 101 through 200 like channel 2, etc. We assume that each consumer has a willingness to pay equal to \$12 for

⁵ Price discrimination, whether achieved through bundling or otherwise, generally has an ambiguous effect on both social and consumer welfare. See, for example, Dennis W. Carlton & Jeffrey M. Perloff, *Modern Industrial Organization*, Ch. 9 (2005).

⁶ See, for example, Richard Schmalensee, *Gaussian Demand and Commodity Bundling*, 57 *J. Business* S211, S211-S230 (1984); Preston McAfee, John McMillan, & Michael D. Whinston, *Multiproduct Monopoly, Commodity Bundling, and Correlation of Values*, 93 *Quarterly J. Econ.* 371, 371-383 (1989); Yannis Bakos & Erik Brynjolfsson, *Bundling Information Goods: Pricing, Profits and Efficiency*, 45 *Management Science* 1613, 1613-1630 (1999).

the non-ESPN channel he or she likes, while willingness to pay equals \$1 for each of the other channels (which we refer to as the “least-liked channels”). Also, just as in our original example, assume there are no costs to the cable provider of selling channels to consumers.

Suppose initially that the seller does not bundle. Then it will sell ESPN to all consumers at a price of \$15, while each of the other channels will be offered at a price of \$12, but each of these other liked channels will only be purchased by the consumers with willingness to pay for the channel equal to \$12. Monopoly profitability in this case is given by $\pi = 1000(\$15) + 10(100(\$12)) = \$15,000 + \$12,000 = \$27,000$. Now suppose, instead, that the monopolist bundles all the channels together into a single multi-channel package. Each consumer’s willingness to pay for the bundle equals $\$15 + \$12 + 9(\$1) = \36 , i.e., willingness to pay for the bundle equals the value of ESPN plus the value of the other channel liked by the consumer plus the value of the remaining 9 channels. This behavior yields profitability given by $\pi = 1000(\$36) = \$36,000 > \$27,000$. So the monopolist increases his profits by bundling and social welfare also increases because each consumer now also receives the least-liked channels, each of which is associated with a small but positive social surplus. In other words, there is nothing concerning the cable situation of a few popular channels and many less popular ones that stops Stigler’s insight from applying.

As in our initial example, in this example all consumers have the same willingness to pay for the bundle so bundling results in perfect price discrimination which means, as just pointed out, social welfare rises. In contrast to the original example, however, bundling here does not decrease consumer welfare. In the original example one of the consumers had positive surplus when products were sold individually, so when the monopolist used bundling to perfectly price discriminate the result was that consumer welfare fell. In contrast, in this example consumers receive no surplus when products are sold individually, so bundling - which again results in perfect price discrimination - increases social welfare and leaves consumer welfare unchanged.

Now we change the example just slightly to show that it is possible that bundling in this type of setting can even increase consumer welfare. Suppose everything is the same as before except that there is some heterogeneity concerning willingness to pay for the least-liked channels. Specifically, within each consumer group of 100 individuals there are 10 consumers whose willingness to pay for the least-liked channels is \$2 rather than \$1. If the monopolist does not bundle, then pricing is exactly like it was before. That is, ESPN is sold to all consumers at a price of \$15, while each of the other channels is sold at a price of \$12 but only to consumers with willingness to pay for the channel equal to \$12. As before, this yields profitability for the monopolist given by $\pi = \$27,000$.

Now consider bundling. Within each consumer group 90 individuals have a valuation

on the bundle equal to $\$15 + \$12 + 9(\$1) = \36 just like before, while 10 individuals have a valuation on the bundle equal to $\$15 + \$12 + 9(\$2) = \45 . Since the proportion of individuals in the population with the higher willingness to pay for the bundle is small, optimal bundling behavior consists of the monopolist setting the bundle price equal to $\$36$ and selling the bundle to everyone. So just like before, bundling yields profitability given by $\pi = 1000(\$36) = \$36,000 > \$27,000$. In other words, we again have the monopolist increasing profitability by bundling.

Social welfare rose because under bundling, but not under individual pricing, consumers purchased their least-liked channels, which was efficient.

Although this example is the same as the previous one in terms of pricing and profits for both selling the products individually and bundling, it is nevertheless the case that the welfare implications of the two examples are different. In the previous example bundling resulted in perfect price discrimination, which means it raised social welfare. Social welfare rose because under bundling, but not under individual pricing, consumers purchased their least-liked channels, which was efficient. In the new example, bundling does not result in perfect price discrimination because the consumers with the higher valuations for their least-liked channels are left with some surplus. But, just as in the previous example, in the new example bundling raises social welfare because consumers purchase their least-liked products.

More important is the distinction between the two examples in terms of the effect of bundling on consumer welfare. In the previous example bundling did not change consumer welfare - under both individual product selling and bundling, consumers were left with no surplus. In contrast, in the new example bundling actually improves consumer welfare. In this example when the firm sells individual channels each consumer purchases ESPN and the consumer's other liked channel, and prices are equal to willingness to pay. So consumers receive no surplus. When the monopolist bundles, then consumers purchase all the channels so social welfare clearly rises. But it is also the case that the price of the bundle reflects willingness to pay for the bundle for those consumers with a lower willingness to pay. So the consumers with a higher willingness to pay for the bundle receive positive surplus.

The point of our last example is not that bundling used to reduce variability in willingness to pay must increase consumer welfare. We think that whether or not this is the case will depend on the facts of the particular situation. Rather, our point is that there is no reason to believe that this type of bundling will necessarily decrease consumer welfare, which seems to be the position taken by the plaintiffs in the *Brantley* case. Further, even if it were possible to estimate whether bundling would raise or lower consumer welfare, we would not favor intervention in cases where analysis of the facts suggested that consumer welfare would decrease.

The reason is that such calculations are fraught with error. Further, given the widespread use of price discrimination in a typical market economy, we think it is infeasible and likely to cause significant inefficiencies to attempt to ban price discrimination, generally, or the one particular form achieved through bundling. Note that our argument here contradicts a position recently taken by Einer Elhague concerning bundling used for price discrimination where he incorrectly uses a result of Schmalensee to argue that price discrimination of this sort typically reduces consumer welfare.^{7,8}

Finally, notice that nothing in these examples involve any element of competition.

B. Efficiency

A second part of the tying literature that is potentially relevant for understanding the *Brantley* case is the literature that focuses on efficiency rationales for tying. There are a number of efficiency-based arguments for tying and we think probably the most relevant argument for this case is the one from Kenney & Klein concerning search and sorting costs.⁹

The Kenney & Klein argument is that bundling is used to reduce search and sorting costs when units vary in quality. The main real world example that Kenney & Klein put forward to illustrate their argument was De Beers' practices in the diamond market. As described by Kenney & Klein, De Beers sold diamonds in bags containing a number of diamonds and employed a take-it-or-leave-it strategy, i.e., a buyer was offered a single bag at a single price and, if the offer was declined, the buyer was not offered an alternative nor was he invited back to be a buyer in the future.¹⁰ The Kenney & Klein argument is that this practice reduced the seller's costs because De Beers did not have to individually grade each diamond, and it also reduced buyers' search costs.

This argument potentially applies to the bundling of television channels. If channels are

⁷ Einer Elhague, *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theory*, Harvard L. Rev. 397, 397-481 (2009); Schmalensee, *supra* note 6, at S229.

⁸ Schmalensee shows that bundling typically reduces consumer welfare in settings characterized by symmetry of demands across products. But in many real world examples of bundling, demands are not symmetric across products, and therefore Schmalensee's results do not necessarily apply in those situations. For example, in the *Brantley* case and in our cable television examples above, some channels were quite popular with most consumers while popularity for other channels was quite limited.

⁹ See Roy W. Kenney & Benjamin Klein, *The Economics of Block Booking*, 26 J. Law & Econ. 497, 497-540 (1983).

¹⁰ We do not know whether De Beers still employs these practices.

sold individually, then the cable or satellite provider needs to estimate willingness to pay for each channel individually and this is likely much more costly than estimating willingness to pay for a single bundle (or a menu consisting of a small number of bundles). Additionally, consumers need to potentially investigate the quality of each individual channel when channels are sold individually before deciding what to purchase. So, from a search cost standpoint, it is very likely that becoming informed requires much less effort when products are bundled and consumers need to identify the quality of only a single bundle, or small menu of bundles, rather than the quality of each individual channel.

C. Anticompetitive Arguments

The other part of the theoretical literature on tying that is potentially relevant to understanding the *Brantley* case is the part focused on how tying is used to harm competition and extend market power. That is, even though the argument made by the plaintiffs in the final stage of the case did not include an allegation that bundling was used to hurt competition, it is worth considering whether, in the abstract, it is plausible that this type of bundling could be an anticompetitive practice.

The Chicago School argument is that tying or bundling will not be used to hurt competition because a monopolist in one market can extract all the potential surplus from a complementary market through the pricing of the monopoly product, so there is no reason to tie in order to harm rivals and extend a monopoly position.¹¹ But a number of more recent papers show that there are various circumstances in which the Chicago School argument breaks down and tying can be used to harm competition.¹²

For example, in his important 1990 paper (which is reproduced in this issue), Michael

¹¹ See Aaron Director & Edward Levi, *Law and the Future: Trade Regulation*, 51 Northwestern Univ. L. Rev. 281, 281-296 (1956); Ward S. Bowman, *Tying Arrangements and the Leverage Problem*, 67 YALE L. REV. 19, 19-36 (1957); Richard A. Posner, *Antitrust Law, An Economic Perspective* (1976); Robert H. Bork, *The Antitrust Paradox: A Policy At War With Itself* (1978).

¹² See Michael D. Whinston, *Tying, Foreclosure and Exclusion*, 80 American Econ. Rev. 837, 837-859 (1990); Jay Pil Choi & Christodoulos Stefanadis, *Tying Investment and the Dynamic Leverage Theory*, 32 Rand 52, 52-71 (2001); Dennis W. Carlton & Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33 Rand 194, 194-220 (2002); Barry Nalebuff, *Bundling as an Entry Barrier*, 119 Quarterly J. Econ. 159, 159-187 (2004). See also Dennis W. Carlton & Michael Waldman, *Upgrades, Switching Costs and the Leverage Theory of Tying*, 122 Econ. J. 675, 675-706 (2012).

The important point to note is that there is a difference between the behavior in Brantley and the bulk of the tying literature described above concerning tying used for anticompetitive purposes.

Whinston shows that in a class of settings the Chicago School argument holds when the monopolist's primary good is essential, but that tying of a complementary good may be used for anticompetitive purposes when the primary good is not essential. The term essential here means that all uses of the complementary good re-

quire the primary good. The basic logic for why the Chicago School argument breaks down when the primary good is not essential is that, if there are economies of scale in the production of the complementary good, tying can stop complementary good rivals from achieving scale. In turn, the result can be increased market power for the monopolist in the sale of the complementary good for uses that do not require the primary good.

In our 2002 paper we investigate a related argument in which a primary good monopolist ties a complementary good - not to increase market power in the sale of the complementary good, but rather to preserve its monopoly position in the primary good market. In this model the firm has a monopoly position in the primary market today but faces potential entry in the primary market next period. We show that, if there are network externalities or the rival faces complementary good entry costs, then tying can be profitable for the monopolist because it stops complementary good entry, which, in turn, also stops the rival from entering the primary market.

The question regarding *Brantley* is whether the type of tying in the case is subject to the Chicago School argument or whether the Chicago School argument does not apply and, as a result, it is plausible that the tying hurts competition. The important point to note is that there is a difference between the behavior in *Brantley* and the bulk of the tying literature described above concerning tying used for anticompetitive purposes. In most of this literature the tying firm sells and produces multiple products, in one of which it has a monopoly position, and the issue is whether the firm can use tying to either extend or preserve its market power. But this situation is different than the facts in the *Brantley* case. In that case cable television and satellite television providers bundle channels mostly produced by other firms.

This difference means that the Whinston argument as to when tying can create an anti-

competitive effect does not apply and so this rationale seems unlikely to be driving tying in this industry. In the Whinston argument the tying is used to increase the tying firm's market power in selling the complementary good in other markets. But in many, if not most, cases the cable and satellite television providers are bundling channels purchased from content providers rather than channels produced by the cable and satellite firms, so increasing the market power of the channels in other markets does not seem to be the likely justification for the bundling.

Alternatively, another possibility is that the Carlton & Waldman argument for when tying can be anticompetitive applies. As discussed, in that argument a monopolist of a primary good ties a complementary good to preserve its market power in the primary good market. But in that argument, when the monopolist ties the complementary good the result is that it stops entry into the complementary market, which then results in no entry into the primary market. But it does not seem that a lack of channels is serving to reduce entry of additional cable or satellite television providers into this industry, so the Carlton & Waldman argument also does not seem to be a reasonable explanation for bundling in this industry.

In summary, although there are a number of theories concerning how tying and bundling can be an anticompetitive practice, we do not see any that match the facts of the case. In other words, based on the current state of the economic theory of tying, the bundling behavior in the *Brantley* case does not raise competitive issues.

IV. APPROPRIATE ANTITRUST POLICY

One final question regarding *Brantley* is whether the case was decided correctly from the standpoint of the antitrust laws. We think the answer is an obvious yes. The antitrust laws bar behavior that harms competition rather than behavior that hurts consumer welfare in the absence of harm to competition. There was no allegation (in the final stage of the case) or evidence put forth (at any stage of the case) concerning harm to competition. Also, existing theories on tying/bundling used to foreclose competition are not consistent with the facts of this case. So we think it is clear cut as a matter of economics that the courts correctly decided that there was no antitrust violation.

V. CONCLUSION

There are many reasons why firms might bundle or tie. In the *Brantley* case firms in the cable and satellite television industry bundled channels. The aspect of the behavior focused on by the plaintiffs was that less popular channels were bundled with popular channels so, in a sense, consumers were “forced” to purchase channels they did not want. The relevant questions are: (i) was the behavior a violation of the antitrust laws; and (ii) does the behavior reduce consumer and/or social welfare in which case one might entertain the possibility that the behavior should be discouraged (and then the question is how).

The answer to the first question is clear. There is no evidence and no theory that would indicate that competition was harmed. So there was no antitrust violation. We think the answer to the second question is almost as clear cut. The most plausible justifications for the behavior are efficiency and price discrimination and neither possibility suggests an unambiguous reduction in social or consumer welfare. Moreover, as explained earlier, we think it is unwise to ban price discrimination generally or in the particular case of bundling. So we see no convincing argument for why the behavior should be discouraged.