

EXCLUSIONARY CONDUCT UNDER THE ANTITRUST LAWS: BALANCING, SACRIFICE, AND REFUSALS TO DEAL

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Important recent antitrust cases involving allegations of monopolization and exclusionary conduct, including the Supreme Court's decision in *Trinko*¹ and lower court decisions in *Microsoft*,² *LePage's*,³ and *Xerox*,⁴ have focused attention on the evolving and uncertain standards regarding

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1. *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004).

2. *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) (en banc).

3. *LePage's Inc. v. 3M Co.*, 324 F.3d 141 (3d Cir. 2003) (en banc), *cert. denied*, 124 S. Ct. 2932 (2004).

4. *CSU, L.L.C. v. Xerox Corp. (In re Independent Serv. Orgs. Antitrust Litig.)*, 203 F.3d 1322 (Fed. Cir. 2000), *cert. denied*, 531 U.S. 1143 (2001).

exclusionary conduct. Because of the *Trinko* case in particular, refusal to deal issues have been especially controversial.

This Article discusses a possible approach to exclusionary conduct, which is sometimes called the “sacrifice test.” Part I describes the problem of exclusionary conduct in general. Part II explains that one’s approach to exclusionary conduct depends to a large extent on whether one views anti-trust as law enforcement or as regulation. Parts III and IV discuss pros and cons of different approaches to exclusionary conduct. Part V discusses refusals to deal in greater detail. It argues that refusals to deal do not warrant special antitrust rules and explains how general principles applicable to exclusionary conduct can be applied to refusals to deal. Part VI sets forth some concluding comments.

I. THE PROBLEM OF EXCLUSIONARY CONDUCT

Broadly speaking, the antitrust laws are concerned with two types of anticompetitive conduct. One is collusion: conduct in which two or more firms agree to reduce rivalry between them in order to enable one or both to exercise market power. The other is exclusion: conduct by a firm or group of firms that weakens rivals or excludes them from the market and can thereby enable the firm or firms engaging in the conduct to gain market power.⁵

Although problems of collusion are not trivial, antitrust law has generally found them much easier to deal with than exclusion problems. There appear to be two reasons for this. First, naked collusion—that is, conduct like price fixing that has no welfare-enhancing properties—is not uncommon⁶ and provides a focal point for the development of a jurisprudence

5. Sections 1 and 2 of the Sherman Act, 15 U.S.C. §§ 1, 2, are directed at these types of anticompetitive conduct. Section 1 prohibits anticompetitive agreements and encompasses both collusion (for example, price fixing by competitors) and exclusionary agreements (for example, exclusive dealing agreements). Section 2 applies to single firm conduct and encompasses only exclusionary conduct. Section 7 of the Clayton Act, 15 U.S.C. § 18, which prohibits anticompetitive mergers, can also be said to encompass both types of anticompetitive conduct.

6. *See generally* Scott D. Hammond, An Overview of Recent Developments in the Antitrust Division’s Criminal Enforcement Program, Address Before the American Bar Association Midwinter Leadership Meeting 5 (Jan. 10, 2005) (noting that, since 1997, over \$2 billion in criminal fines have been imposed by the Justice Department with “well over 90 percent of this total . . . obtained in connection with the prosecution of international cartel activity”), at <http://www.usdoj.gov/atr/public/speeches/207226.pdf>; Scott D. Hammond, A Review of Recent Cases and Developments in the Antitrust Division’s Criminal Enforcement Program, Address Before the 2002 Antitrust Conference: Antitrust Issues in Today’s Economy (Mar. 7, 2002) (discussing recent Justice Department crimi-

dealing with collusion issues. Second, and more important, while some forms of collusion, such as horizontal mergers and joint ventures, can have important procompetitive or efficiency-generating attributes, determining whether collusion is on balance procompetitive or anticompetitive is conceptually straightforward. Although the broad language regarding the rule of reason sometimes obscures this point, the issue in a collusion case is simply whether the collaboration among the competitors is likely to increase or decrease the output of the parties to the agreement. The focus is on the defendants.⁷

Antitrust law has had much more difficulty deciding how to determine whether exclusionary conduct is anticompetitive. Occasionally, antitrust law has confronted naked exclusion, such as fraud on the Patent Office in *Walker Process*⁸ or damaging a rival's property and falsely disparaging the rival in *Conwood*.⁹ These cases are distinctive and easy because they entail conduct that excludes rivals and that has no efficiency or welfare-enhancing properties. These cases, however, are very rare, perhaps because the conduct involved usually also violates other, non-antitrust laws.

In the vast majority of cases, exclusion is a result of conduct that has both efficiency properties and the tendency to exclude rivals. This is true of predatory pricing, exclusive dealing, tying, many types of bundling, and countless other forms of exclusionary conduct.

The challenge in exclusion cases is how the law should treat conduct that has both efficiency benefits and exclusionary harm. The benefits are usually realized at least in part by the defendants, but the exclusionary harm is experienced by rivals and indirectly by consumers. In other words, by contrast to collusion conduct, which reduces the defendants' output, exclusionary conduct reduces the output of the defendant's excluded rivals.

The law has struggled uneasily with exclusion cases because it has not yet embraced a conceptual framework for dealing with these competing considerations. The several recent exclusion cases have provoked a renewal of a long-standing and unsettled debate. Critics of cases like *Trinko*, in which the defendant prevailed, complain that the legal principles apparently embraced by the Supreme Court will have too many false nega-

nal convictions for price-fixing, bid rigging, and international cartels), at <http://www.usdoj.gov/atr/public/speeches/10862.pdf>.

7. To be sure, collusion cases assessed under the rule of reason require proof of market power; and that requires an examination of the market, not just of the defendants. But the market power requirement is a separate element of the collusion offense.

8. *Walker Process Equip. v. Food, Mach. & Chem. Corp.*, 382 U.S. 172 (1966).

9. *Conwood Co. v. U.S. Tobacco Co.*, 290 F.2d 768 (6th Cir. 2002).

tives—too many cases in which conduct that diminishes economic welfare escapes antitrust condemnation.¹⁰ In varying ways, these critics urge an antitrust test that gives more weight to the prospect of long-run monopoly power.

Cases like *Microsoft* and *LePage's*, in which the plaintiffs prevailed, have been criticized on the very different ground that the principles embraced by the courts are likely to lead to too many false positives—to condemning and thus deterring efficient conduct.¹¹ Critics of these and other cases complain that antitrust courts either cannot be counted on to get difficult economic and technical issues right or they have failed to articulate intelligible standards that might give suitable guidance for future conduct.

II. ANTITRUST—REGULATION OR LAW ENFORCEMENT?

Unstated in the debate is an implicit disagreement about the nature of antitrust. Critics on the left, for example, who are concerned about false negatives, focus almost entirely on the desired end state and complain whenever welfare-reducing conduct is permitted.¹² Critics on the right often complain that antitrust is not worth the cost, in part because antitrust has failed, they say, to remedy perceived wrongs effectively and because

10. See, e.g., Andrew I. Gavil, *Exclusionary Distribution Strategies By Dominant Firms: Striking a Better Balance*, 72 ANTITRUST L.J. 3, 36-51 (2004) (arguing that “the price of false negatives, of under-deterrence, in exclusionary conduct cases . . . has been seriously understated”); Marina Lao, *Reclaiming A Role for Intent Evidence in Monopolization Analysis*, 54 AM. U. L. REV. 151, 190-91 (2004) (criticizing the sacrifice test in *Trinko* on the ground that, despite the fact that defendant did not sacrifice short-term profits, its conduct hindered competition); Steven C. Salop & R. Craig Romaine, *Preserving Monopoly: Economic Analysis, Legal Standards, and Microsoft*, 7 GEO. MASON L. REV. 617, 654-55 (1999) (“Permitting the monopolist to exclude rivals may deprive consumers of the lower prices and increased innovation that would have occurred absent the exclusionary conduct.”); Salop & Romaine, *supra*, at 662.

11. See, e.g., Ronald A. Cass & Keith N. Hylton, *Preserving Competition: Economy Analysis, Legal Standards and Microsoft*, 8 GEO. MASON L. REV. 1, 31-32 (1999); Frank Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 6, 15-16 (1984) [Easterbrook, *Limits*]; Frank Easterbrook, *When Does Competition Improve Regulation?*, 52 EMORY L.J. 1297, 1306-07 (2003) [hereinafter Easterbrook, *Competition*]; Kenneth G. Elzinga et al., *United States v. Microsoft: Remedy or Malady?*, 9 GEO. MASON L. REV. 633, 651 (2001) (“In antitrust cases, false positives are serious because less efficient firms will benefit and consumers will be harmed as a result of legal intervention.”).

12. See, e.g., Gavil, *supra* note 10, at 36-40; Lao, *supra* note 10, at 190-91.

antitrust intervention into complicated industries like computers and telecommunications has been problematic.¹³

The debate often appears to gloss over the unstated premises of the participants about the nature of antitrust. Critics on both the left and the right often seem to regard antitrust as in large part a kind of regulation, in which courts should decide cases in order to achieve the right result (that is, the procompetitive market outcome) in the particular case, or in which courts should abstain if that outcome seems beyond their remedial powers.

Antitrust is better and more accurately understood to be a form of law enforcement, not regulation. Antitrust is a form of law enforcement because it depends on courts, not regulators, both for its enforcement and for its doctrinal evolution through a common-law type process. Unlike regulation, antitrust does not specify end states or required market conditions, and it does not entail affirmative commands or require prior government approval as a condition of private conduct.

Accepting the premise of antitrust as law enforcement not only is compelled by its nature, but also is important in order for antitrust to serve its contemporary substantive purposes. Antitrust rests on the premise that a decentralized market is most likely to create incentives for, and to take advantage of multiple sources of, creativity and entrepreneurship, thereby maximizing economic welfare. Antitrust thus presumes that government intervention should, as a general matter, be modest and should be undertaken only when the rules are clear and understandable so that uncertainty about the rules does not inhibit competitive and entrepreneurial forces that antitrust is intended to encourage. Core principles of a law enforcement regime—that law should give clear notice to affected parties so that they will know what is required of them, that legal decisions should turn on tractable factual issues, and that like cases should be treated alike—help make law predictable, thereby further robust conduct by economic actors, and thus promote antitrust objectives.

The idea of antitrust as law enforcement has important implications. First, it means that antitrust law's principal focus should be on identifying conduct that should be prohibited. Issues of remedy are second-order considerations. One would not, for example, suggest a diminished role for laws prohibiting murder on the ground that, once the murder has been committed, there is no good remedy.

13. See, e.g., Frank Easterbrook, *When Is It Worthwhile To Use Courts To Search for Exclusionary Conduct?*, 2003 COLUM. BUS. L. REV. 345, 348-50, 352-54, 357-58. See generally Elzinga et al., *supra* note 11.

Second, the idea of antitrust as law enforcement means that, while antitrust rules should be fashioned with an eye to the competitive consequences of the prohibited and permitted conduct, selection of antitrust rules depends critically on their administrability. Administrability has two basic components. It refers both to the ability of courts and antitrust enforcement agencies to administer the rules after-the-fact and to the ability of businesses to know what conduct is permitted and what is prohibited.

The principal function of an antitrust rule in a law enforcement regime is to create appropriate incentives for the avoidance of welfare-reducing conduct. Creation of such incentives requires articulation of rules with which businesses can comply without excessive transaction costs or uncertainty. To this end, sound antitrust rules will identify factors that are both likely to have welfare-reducing or anticompetitive consequences and that firms in real time can recognize and use as guideposts to inform their conduct. In other words, while the law in a regulatory regime might focus on desirable and undesirable conduct and require the former while prohibiting the latter, the law in a law enforcement regime needs to temper its enthusiasm for theoretical precision with an appropriate accommodation for the practical limitations upon firms that must comply with the law and courts and agencies that must enforce it.

As a crude analogy, the law has posted speed limits on roads, not because welfare is always reduced by those who drive faster or never enhanced by those who drive more slowly, but because a simple, posted speed limit is easier to administer fairly *ex post*, because it gives more useful guidance to drivers in real time (*ex ante*) and because it identifies readily recognizable types of conduct that are likely to create an unreasonable hazard.¹⁴ Much of the discussion that follows emphasizes the important constraints on antitrust law that arise from its law enforcement character.

III. PROBLEMS WITH BALANCING TESTS FOR IDENTIFYING EXCLUSIONARY CONDUCT

As a matter of pure theory, the problem of exclusion in antitrust is not obscure. Although most exclusionary conduct has some efficiency benefits, determining whether the conduct is on balance anticompetitive is straightforward: Calculate the magnitude of the benefits—increased consumer welfare from lower prices or improved quality, and perhaps increased total welfare from cost savings—and calculate the amount of welfare loss attributable to the exclusion of rivals—reduced consumer surplus

14. *See generally* FTC v. Superior Court Trial Lawyers Ass'n, 493 U.S. 411, 433-34 (1990).

or perhaps the deadweight loss attributable to market power maintained or created by the conduct. If the latter is greater than the former, the conduct is anticompetitive.¹⁵

Here is how such a balancing test might work.¹⁶ Suppose that the defendant builds a better mousetrap, that consumers prefer the mousetrap and buy it in large quantities, and that, as a result, the defendant's rivals exit the business. Thereafter, the defendant uses its resulting monopoly power to increase price by a large amount. Suppose further that the price increase endures because the rivals and other potential entrants know that the defendant could profitably undersell them with its more valuable mousetrap, and they therefore do not enter. Depending on the magnitude of the quality improvement offered by the defendant's mousetrap and the length of time before the price increase, compared to the magnitude and duration of the monopoly price increase, the development and marketing of the better mousetrap might be found to reduce economic welfare and therefore to be anticompetitive.

One could come up with examples that seem to be more sympathetic to the antitrust plaintiff, perhaps examples that involve conduct that does not just increase the attractiveness of the defendant's products or reduce its costs but also raise its rivals' costs. Suppose, for example, that development of the better mousetrap requires the defendant to have an assured and regular supply of a critical input and that the contracts entered into by the defendant to obtain that supply have the effect of making it harder for the defendant's rivals (who are producing a less valuable mousetrap) to obtain access to needed supplies of the input. To make plaintiff's case even more attractive, assume that a number of the rivals' customers are perfectly content with the lower value, lower cost mousetrap offered by the rivals but are now disadvantaged by the fact that the rivals' costs and thus their prices have been increased as a result of the defendant's better mousetrap and the related supply agreements. In principle, antitrust law could weigh the benefits to consumers from the new and better mousetrap (or the contracts necessary to its development) against the harms to rivals' consumers resulting from their increased costs.

If economic actors and legal fact finders were omniscient, such balancing tests would make good sense. Courts and agencies could readily identify anticompetitive conduct, and firms in real time would be able to pre-

15. See generally *Nat'l Collegiate Athletic Ass'n v. Bd. of Regents*, 468 U.S. 85 (1984).

16. See generally *Salop & Romaine*, *supra* note 10, at 31-36, 42-48.

dict whether the possibly long-run competitive harms would outweigh the efficiency benefits and, thus, to avoid anticompetitive conduct.

The problem, however, is that neither economic actors nor law enforcement entities are omniscient. Given real world limitations, market-wide balancing tests that seek to assess the benefits and competitive harms of exclusionary conduct are intractable for courts and antitrust agencies, and even more so for firms trying to decide in real time what conduct is permitted and what is prohibited. Prospective defendants cannot be expected to know in real time, *ex ante*, whether their efficiency-generating conduct will cause disproportionate harm to their rivals or consumers because, in order to know that, the defendants would have to know more than they can be expected to know about consumer demand, their rivals' costs and prospects for innovation and for mitigation of harm, future entry conditions, and the like. From the perspective of the defendants, therefore, a balancing test would likely either be ignored, impose excessive transaction costs (a kind of tax on entrepreneurship), or result in excessive caution. There is little reason to expect that a balancing test would create optimal *ex ante* incentives for marketplace behavior.

A balancing test might also create perverse incentives for the defendant's rivals. Exclusionary conduct can reduce welfare only to the extent that it weakens or excludes rivals. The likelihood that, and extent to which, exclusionary conduct will weaken or exclude rivals often depends a great deal on how the rival responds to the conduct—on whether he responds creatively, efficiently, and effectively in the marketplace. But if the determination over whether a defendant's conduct is anticompetitive depends in large part on the impact of the conduct on the defendant's rivals and their customers, the incentive of the rivals to respond to suspected exclusionary conduct by aggressive and creative marketplace conduct of their own will be diminished. This is because effective marketplace responses might weaken the rivals' antitrust claims. In effect, the net cost of such responses would be increased, and expected net returns from such conduct would be reduced. This theoretical concern, however, is unlikely to be of practical importance, except perhaps in unusual circumstances.

Some commentators, most famously Judge Easterbrook, have noted these and other problems of market-wide balancing tests and have drawn a pessimistic inference.¹⁷ They urge a much more modest role for antitrust based largely on a concern about the costs of false positives. Broadly

17. See, e.g., Easterbrook, *Limits*, *supra* note 11; Easterbrook, *Competition*, *supra* note 11; see also David McGowan, *Between Logic and Experience: Error Costs and United States v. Microsoft Corp.*, 20 BERKELEY TECH. L.J. 1185, 1188-89 (2005).

speaking, these costs include both specific costs that these critics have found in what they regard as misguided antitrust intervention in particular cases and general costs resulting from what they fear to be overdeterrence of aggressive, innovative conduct. These critics urge a far more limited role for antitrust, at least in the context of exclusion offenses.¹⁸

There is, however, an alternative to both the confidence implied by market-wide balancing tests and the extreme skepticism suggested by these critics. It is a middle ground that rests on the premise that antitrust is about law enforcement and that the principal criterion by which antitrust rules should be judged is how well the rules deter welfare-reducing conduct without reducing welfare-enhancing conduct.

IV. THE SACRIFICE TEST: A PRACTICABLE SOLUTION

The middle ground alternative is often called “the sacrifice test,” although the terminology can be misleading because it connotes a short-term sacrifice in search of a long-term, anticompetitive payoff.¹⁹ As will be seen, properly understood, the sacrifice test discussed here does not require any such temporal dimension.

Instead of balancing market-wide costs and benefits of the conduct at issue, the sacrifice test asks a different question, one that—like the question asked by antitrust law in determining whether collaborative conduct is anticompetitive collusion—focuses on the defendants. Specifically, the sacrifice test asks whether the allegedly anticompetitive conduct would be profitable for the defendant and would make good business sense even if it did not exclude rivals and thereby create or preserve market power for the defendant. If so, the conduct is lawful. If not—if the conduct would be unprofitable but for the exclusion of rivals and the resulting market power—it is anticompetitive.²⁰

Although words like “profitable” and “business sense” can have more than one meaning, the sacrifice test rests on particular meanings of those terms and is not ambiguous. Specifically, the sacrifice test, or at least the version suggested here, compares the benefits and costs of the conduct in

18. See, e.g., Easterbrook, *Limits*, *supra* note 11, at 3, 6, 9-10, 13, 15-16; McGowan, *supra* note 17, at 1188-89.

19. See, e.g., Einer Elhauge, *Defining Better Monopolization Standards*, 56 STAN. L. REV. 253, 292-93 (2003).

20. Conduct that fails the sacrifice test is deemed to be anticompetitive for antitrust purposes, but it might not be unlawful. The exclusion offenses require, in addition to proof of anticompetitive conduct, proof that the conduct enabled the defendant to gain or maintain market power that it would otherwise not have.

question to the defendants as follows. The costs of the conduct are the incremental or avoidable costs incurred by the defendant as a result of the conduct, including opportunity costs. In other words, they include the costs that the defendant would not incur but for the conduct. The benefits of the conduct are variable cost savings realized by the defendant as a result of the conduct, revenues from additional units of goods or services sold by the defendant as a result of the conduct, increased revenues attributable to quality improvements, and the resulting increase in demand for the defendant's goods or services. Benefits do not include the ability to charge higher prices or to shift the variable cost curve downward (because, for example, of a diminished need to provide customer services) as a result of the exclusion of rivals.

A. Benefits of the Sacrifice Test

As a general principle for assessing exclusionary conduct, the sacrifice test has several benefits.²¹ First, conduct will fail the sacrifice test only if it generates incremental costs for the defendant that exceed the incremental revenues or cost savings that the conduct creates for the defendant. In other words, the sacrifice test condemns only conduct that reduces welfare in a static sense. It does not condemn conduct that enhances welfare in a static sense on the ground that it might lead to a long-run increase in market power and a resulting welfare reduction. The sacrifice test thus presents far less risk of false positives than do market-wide balancing tests.

Second, the sacrifice test embodies a somewhat Schumpeterian intuition that courts and commentators have repeatedly expressed—the idea that firms are entitled to reap the fruits of their “skill, foresight and industry,”²² even if those fruits include market power, and the corresponding idea that antitrust condemns only conduct that is not “competition on the merits.”²³ This kind of rhetoric directs attention, not to market-wide effects, but to the nature of the defendant's conduct. As will be seen in the discussion below of refusals to deal, this rhetoric also has important implications for dynamic efficiency.

21. Many of the remaining points summarized in this section are addressed at greater length in A. Douglas Melamed, *Exclusive Dealing Agreements and Other Exclusionary Conduct—Are There Unifying Principles?*, 73 ANTITRUST L.J. (forthcoming 2005) (manuscript, on file with author).

22. *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945).

23. 3 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 651c (2d ed. 2002); see also *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 458 (1993).

Third, by condemning only conduct that makes no sense apart from exclusion and resulting market power, the sacrifice test ensures that the antitrust laws condemn only conduct from which an anticompetitive intent can unambiguously be inferred. The test does not condemn conduct that makes good sense, regardless of resulting market power, simply on the ground that it also has the effect of creating market power.

Fourth, and most important, the sacrifice test provides simple and meaningful guidance to firms to enable them to know how to avoid antitrust liability without steering clear of procompetitive conduct. If antitrust law explicitly embraced the sacrifice test for exclusionary conduct, firms would be able to comply with the law simply by determining whether their contemplated conduct would make good business sense even if the conduct did not increase their market power.

Courts as well as firms would find the focused inquiry of the sacrifice test easier to apply than the more open-ended inquiry suggested by market-wide balancing. Indeed, even courts that have not explicitly embraced the sacrifice test appear to have sought means of avoiding market-wide balancing. The *Microsoft* case for example, which famously articulated a four step test culminating in balancing, did not actually engage in market-wide balancing.²⁴ To the contrary, when it came to deciding the case on the facts before it, the court did what antitrust courts usually do: it deemed anticompetitive only those aspects of the defendant's conduct that seemed to make no business sense except as a means of excluding rivals.²⁵

B. Criticisms of the Sacrifice Test

In spite of these benefits, the sacrifice test has been criticized by numerous commentators who are concerned that it will result in false negatives. Commentators have also suggested other, less substantial criticisms of the sacrifice test. The most important of these criticisms are addressed below.

1. False Negatives

The most basic criticism is that the sacrifice test will have false negatives, in the sense that it does not condemn all conduct that might reduce welfare overall.²⁶ Proponents of this criticism complain that the sacrifice

24. *United States v. Microsoft Corp.*, 253 F.3d 34, 59 (D.C. Cir. 2001) (en banc).

25. Courts typically get to this conclusion by defining the conduct at issue narrowly, and either rejecting the proffered efficiencies on the facts or accepting the efficiencies but finding that the conduct at issue was not necessary to achieve them.

26. *See, e.g.*, Elhauge, *supra* note 19, at 255, 268-72, 280-82 (criticizing sacrifice test on ground that exclusionary conduct need not require sacrifice); Gavil, *supra* note 10,

test does not weigh, against the efficiencies or profitability of the conduct for the defendant, the costs of the conduct to defendant's rivals or the costs to consumers if the conduct proves to be so successful in the marketplace that it creates market power for the defendant.

The premise of this criticism is correct. The sacrifice test does not purport to condemn all conduct that might create market power or reduce economic welfare. Rather, the test rests on the judgment that market-wide balancing tests, which in theory could condemn all welfare-reducing conduct, will in practice prove to be an inferior legal standard because of their greater difficulty in administration and their perverse incentive effects. Whether the costs of false negatives from the sacrifice test exceed the costs of false positives, increased administration costs and increased uncertainty from market-wide balancing are ultimately an empirical question. The choice between balancing tests and the sacrifice test is one of legal policy.

2. *Predatory Pricing*

Some have suggested that, while the sacrifice test appears to be a generalization of principles regarding predatory pricing, it is inconsistent with predatory pricing law.²⁷ The idea is that selling below a profit-maximizing price but above cost is not regarded as anticompetitive conduct as a matter of predatory pricing law, even though the conduct involves a profit sacrifice and makes sense only as a means of excluding rivals and facilitating recoupment through the resulting market power.

Although this criticism finds some support in the verbal formulation of the sacrifice test, there is little substance to it. Predatory pricing rules are consistent with the sacrifice test in the following three respects.

First, the sacrifice test condemns only conduct that is inefficient in a static sense, and low prices are not inefficient as long as they are above cost. To the contrary, as compared to a profit-maximizing price, a lower but above cost price increases output and consumer welfare and reduces deadweight loss.

Second, the sacrifice test is intended to give meaningful guidance to courts and firms so that they can identify anticompetitive conduct. Cost-based predatory pricing rules serve this same purpose, but rules that pro-

at 56-58 (arguing that the "principal flaw of a sacrifice test is its assumption that 'predation' is never of concern to the antitrust laws if it is costless," thus ignoring the numerous examples of exclusionary conduct that "involved either little or no sacrifice to profit").

27. See, e.g., AARON S. EDLIN & JOSEPH FARRELL, *THE AMERICAN AIRLINES CASE: A CHANCE TO CLARIFY PREDATION POLICY* (Competition Policy Ctr., Paper CPC02-033, 2002), available at <http://repositories.cdlib.org/iber/cpc/CPC02-033>.

hibited above-cost pricing would not because they would turn on the elusive question of what is the profit-maximizing price. That question is elusive for courts in hindsight, and even more so for firms in real time, because the profit-maximizing price depends in large part on the response of competitors to any particular pricing strategy.

Third, the sacrifice test compares revenues with costs. The divergence in pricing cases between the profit-maximizing price and the level at which price becomes below cost is attributable to revenues from inframarginal purchases that the defendant gives up in order to gain the additional unit sales sought by the lower price. The foregone revenues from inframarginal purchases resulting from prices that are above cost but below profit-maximizing levels are not ordinarily regarded as a cost because they reflect only a wealth transfer from producers to consumers and do not require the use or consumption of any economic resources. Such foregone revenues are thus not associated with a reduction in static welfare, and they can therefore properly be disregarded in applying the sacrifice test.

3. *False Positives*

Professor Salop has hypothesized a situation in which the sacrifice test might result in a false positive.²⁸ He imagines a defendant whose innovation reduces its own costs but would so readily be copied by rivals that it would not ordinarily be profitable for the defendant to implement the innovation. But, Salop supposes, if implementing the innovation breaks an industry standard, it might impose partially offsetting cost increases on the rivals, give the defendant a competitive advantage, and thereby be profitable. Salop reasons that, under these circumstances, the innovation is profitable only because it handicaps rivals and enables the defendant to exercise market power. The innovation would thus fail the sacrifice test, even though it enhances welfare.

This criticism seems farfetched. First, if the innovation is easily emulated, it is not proprietary, and the defendant is likely to fear that others will adopt the innovation and get a first-mover advantage if the defendant does not do so. Therefore, the but-for world against which to determine whether the innovation would be profitable for the defendant without exclusion is probably not the status quo ante, but rather some world in which the defendant would be at a competitive disadvantage if it did not implement the innovation.

28. See Steven C. Salop, Section 2 Paradigms and the Flawed Profit-Sacrifice Standard 32-33 (Mar. 4, 2005) (unpublished manuscript, on file with author). A draft of Professor Salop's paper was also presented at the same AALS antitrust panel in which a prior draft of this Article was presented.

Second, it is hard to see how the defendant avoids bearing at least some of the costs of the broken industry standard. His implementation of the innovation would presumably be able to break the industry standard only if the defendant is a party to important industry complementarities. In that event, the defendant would be a beneficiary of the complementarities and would likely incur costs when the standard is broken. In other words, it is unlikely that the defendant could get much of a competitive advantage from breaking a standard.

Third, if the innovation results in a real asymmetry in costs, as posited by Salop, the defendant's best course would likely be to drive the now higher-cost rivals out of business and then raise price. In that event, there is probably no consumer welfare gain; and condemning the innovation is probably not a false positive.

4. *Costless Exclusion*

Some commentators have suggested that the sacrifice test fails to condemn exclusion that is not costly to the defendant, such as fraud on the Patent Office or damaging a rival's products.²⁹ These critics reason that the sacrifice test requires identification of costs incurred by the defendant (the "sacrifice") and that there are no or virtually no costs in these kinds of cases.

This criticism seems mistaken in three respects. First, the sacrifice test focuses principally, not on the defendant's costs, but on the source of the benefit to the defendant from the conduct. Conduct like damaging a rival's property benefits the defendant only by weakening or excluding rivals. Such conduct would thus fail the sacrifice test.

Second, the purpose of the sacrifice test is to address the difficult issue of exclusion that arises whenever conduct both has efficiency benefits and tends to exclude rivals. Conduct that has no efficiency benefits, which is sometimes called "naked exclusion," can be condemned as anticompetitive conduct without need for the sacrifice test, market-wide balancing, or any other elaborate inquiry.

Third, almost all conduct entails some costs, even if only the relatively modest costs incurred in order to plan, execute, and presumably attempt to conceal tortious conduct. If those costs would make no sense for the de-

29. See, e.g., Susan A. Creighton, Cheap Exclusion, Address at the Charles River Associates 9th Annual Conference (Feb. 8, 2005) (unpublished manuscript, on file with author); Salop, *supra* note 28, at 32-33.

fendant but for the exclusion of rivals, they would both entail a literal “sacrifice” and fail the sacrifice test.³⁰

5. *Administrability*

Professor Salop also argues that the sacrifice test is often difficult to implement properly.³¹ He has suggested various ways in which conduct that simultaneously confers benefits upon the defendant and increases rivals’ costs could pose difficult challenges for a court or a firm applying the sacrifice test because it would require estimation of the profitability of the conduct in the counterfactual hypothetical world in which the rivals’ costs were not increased. This criticism does not apply to conduct like price reductions or product changes that exclude rivals by reducing demand for their products, rather than by increasing their costs.³²

While it is true that application of the sacrifice test can be difficult in cases involving simultaneous benefits for the defendant and cost increases for rivals, the sacrifice test is still easier to apply than a market-wide balancing test in at least the vast majority of such cases. This is especially likely in cases involving improvements to the quality of the defendant’s goods or services. In these cases, market-wide balancing requires analyzing the same hypothetical presented by the sacrifice test—determination of what the price of the improved product would be if the rivals’ costs were not increased. Moreover, market-wide balancing requires an additional and very difficult inquiry into the magnitude of the welfare impact caused by the resulting exclusion of rivals; that inquiry is not required by the sacrifice test.³³

In cases in which the benefit to the defendant involves only cost savings and not improvements to the quality of its goods or services, the relative advantage of the sacrifice test over market-wide balancing is less. But market-wide balancing is likely to be inferior even in these cases. In these

30. The only exceptions are cases involving fraud on the patent office or other forms of theft. The reward to the defendant in those cases might be ownership of the wrongfully obtained property, regardless whether it gives the defendant market power. It is noteworthy in this respect, however, that in *Walker Process Equipment, Inc. v. Food, Machine & Chemical Corp.*, 382 U.S. 172 (1966), the antitrust violation was seeking to exercise market power by enforcing the wrongfully obtained patent, not the fraudulent conduct—the theft—itsself.

31. See Salop, *supra* note 28, at 31.

32. Conduct that reduces demand for rivals’ products could, by reducing their output below efficient scale, increase their average variable costs. But this reflects simply a movement along the rivals’ cost curves. Conduct that raises rivals’ cost differs in that it shifts rivals’ cost curves upward.

33. See Melamed, *supra* note 21 (manuscript at 27-30).

cases, the sacrifice test requires determining whether the conduct is likely to be profitable even if rivals are not excluded. By contrast, market-wide balancing would require firms wishing to obey the law to undertake the always difficult task of estimating the effect of the conduct on their rivals' costs and the overall effect on consumer or total welfare of both the cost increases for rivals and the cost savings for the defendant.

V. APPLYING THE SACRIFICE TEST TO REFUSALS TO DEAL

In addition to these general criticisms, application of the sacrifice test to unilateral refusals to deal has been the subject of particular controversy. A refusal to deal is a refusal by the defendant to sell its property to, or share its property with, a rival.

A refusal to deal can, of course, cause the costs of the rival that wanted to deal with the defendant to be higher than if the defendant did not refuse to deal. But refusal to deal cases are best regarded not as a kind of raising rivals' cost case, but as a distinct kind of potentially anticompetitive conduct. As will be seen, the economic and analytical issues of refusal to deal cases differ from those in other raising rivals' costs cases. Moreover, those other cases involve conduct (such as exclusive dealing) that makes rivals' costs higher than they would be if the defendant had not acted at all. Refusal to deal cases, by contrast, are cases in which the rival wants the defendant to act so that the rivals' costs will be lower than if the defendant does not act. Refusal to deal cases are best thought of as lowering rivals' cost cases, not raising rivals' cost cases. This is an area about which there has been much confusion, and it warrants more extended discussion.

A. Conflicting Views

Numerous conflicting views have been expressed about the treatment of refusals to deal. The Solicitor General suggested in his amicus brief in the *Trinko* case that the sacrifice test is especially well suited to refusal to deal cases.³⁴ The Federal Circuit in the *Xerox* case suggested that there ought never be a duty to deal in patents, evidently because it believed that any such duty would prevent inventors from getting sufficient rewards for their inventions.³⁵ Professor Elhauge has suggested that refusals to deal

34. See Brief for the United States and the Federal Trade Commission at 14-17, *Verizon Communications, Inc. v. Law Office of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004) (No. 02-682).

35. See *CSU, L.L.C. v. Xerox Corp. (In re Independent Serv. Orgs. Antitrust Litig.)*, 203 F.3d 1322 (Fed. Cir. 2000), *cert. denied*, 531 U.S. 1143 (2001).

are the great loophole in the sacrifice test. As he describes it, as long as rivals offer to pay more than the defendant's incremental cost of dealing, the rivals will be entitled under the sacrifice test to share the fruits of the defendant's commercial success.³⁶ By contrast, Professor Salop argues that the sacrifice test is not well specified and might entitle the defendant to refuse to deal at prices on which dealing would increase welfare.³⁷

None of these views seems compelling. The suggestion that the sacrifice test is especially well suited to refusal to deal cases might make sense from a property rights perspective in which special rules are sought for a firm's refusal to share its property with rivals. But it does not make sense as a matter of antitrust policy.³⁸ From the perspective of the defendant, all conduct (other than a refusal to deal) that passes the sacrifice test increases static efficiency. As will be seen, however, a refusal to deal at a price that exceeds the incremental cost of dealing can both reduce static efficiency and pass the sacrifice test. In addition, refusal to deal cases often raise difficult questions about the terms on which dealing might be required. Thus, far from being especially suited for the sacrifice test, refusals to deal involve unique complications.

B. Application of the Sacrifice Test to Refusals to Deal

The fallacies of the three other criticisms can be seen by explaining how the sacrifice test is properly applied to unilateral refusals to deal.³⁹ The key is to think of a refusal to deal as a make-or-buy decision.

Assume the defendant is a monopoly supplier of widgets and makes end products—call them “gidgets”—for which widgets are a necessary input. He sells the gidgets for \$100. He also sells widgets in a competitive market for other uses for \$25. A plaintiff, call him “Trinko,” concludes that he can manufacture gidgets at a cost of less than \$75 (say, \$65) plus the cost of the widgets. So, he buys widgets for \$25, makes gidgets, and

36. See Elhauge, *supra* note 19, at 275-76.

37. See Salop, *supra* note 28, at 39-45.

38. The Supreme Court's decision in *United States v. Colgate & Co.*, 250 U.S. 300 (1919), is sometimes said to establish a property right to refuse to deal. But the Court actually said that the antitrust laws “do[] not restrict the long recognized right of trader or manufacturer . . . freely to exercise his own independent discretion as to the parties with which he will deal” only “[i]n the absence of any purpose to create or maintain a monopoly.” *Id.* at 307. The Court thus made clear that any such property right is tempered by antitrust policy.

39. The Federal Circuit's decision in *CSU, L.L.P. v. Xerox Corp.* is analyzed more extensively in A. Douglas Melamed & Ali M. Stoepelwerth, *The CSU Case: Facts, Formalism and the Intersection of Antitrust and Intellectual Property Law*, 10 GEO. MASON L. REV. 407 (2002).

sells them for \$90. Consumers are better off. The defendant reacts by refusing to sell to Trinko and banning transshipping from his other widget customers. The refusal to deal plainly reduces consumer welfare in a static sense. Prices would be lower and output greater if Trinko could buy widgets at \$25 and sell gidgets for \$90.

It might be suggested that, in these circumstances, antitrust law requires the defendant to sell widgets to Trinko at \$25. But antitrust law rejects that conclusion as a general matter because the law permits firms to enjoy the fruits of their “skill, foresight and industry,” including market power, in order to preserve ex ante incentives for innovation and entrepreneurship.⁴⁰ If the defendant had never sold widgets for \$25, antitrust law would plainly not require him to sell widgets at that price to Trinko, even if Trinko were able to demonstrate that \$25 exceeded the incremental costs incurred by defendant in selling widgets to Trinko. Otherwise, firms would rarely, if ever, be able to charge monopoly prices because would-be rivals would routinely be able to buy at a price at or above incremental cost and resell, in competition with the supplier, at less than a monopoly price.

The fact that the defendant has sold to others at \$25 should not change this result. To be sure, defendant’s decision to sell widgets for \$25 in a different market does give the court a basis to know that \$25 is a remunerative price.⁴¹ But it says little about whether welfare is, on balance, enhanced by requiring the defendant to sell at that price in the gidget market, in which the widget might be worth far more.

This does not mean that there are no antitrust limits on the defendant’s ability to refuse to sell widgets to Trinko. Instead, the sacrifice test thinks of defendant as having made a make-or-buy decision regarding the other—non-widget—inputs needed for the gidget. If the defendant is more efficient with respect to these inputs than Trinko, he will likely refuse to deal because self-manufacture is the optimal way to make gidgets. That decision is efficient and should be permitted by the antitrust laws, even though it would enable the defendant to charge a monopoly price for the gidgets.

40. *See, e.g., Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) (noting that the rewards of monopoly create incentives to invest and “induce[] risk taking that produces innovation and economic growth”).

41. Without benchmarks offered by prior dealing, however, the court might be unable to determine the price at which dealing should be required or even whether dealing should be required. *See generally id.* at 408 (stating that courts are “ill-suited” as a general matter to determine “the proper price, quantity and other terms of dealing”).

But, if Trinko is more efficient, the defendant would ordinarily maximize his profits, not by making gadgets himself, but by in effect buying the other (non-widget) inputs from Trinko. He might literally buy the other inputs from Trinko pursuant to some kind of contractual arrangement. Often, however, it will be more efficient for the parties to structure the transaction in a different form; instead of buying the other inputs, the defendant would sell his widgets to Trinko and let Trinko make the gadgets.

If he chose this option, the defendant would sell the widgets to Trinko at a monopoly price. There is no reason to expect the monopoly price for widgets when used for gadgets to be the \$25 that the monopolist charges when he sells the widgets used for other purposes in a competitive market. Indeed, in this example, assuming that the monopoly price of gadgets is \$100, the monopoly price of widgets used for gadgets is \$35.⁴² Antitrust law permits the defendant to charge such a monopoly price for the widget (or, in the example described in the preceding paragraph, for the gadget) in order to provide appropriate ex ante incentives both for the development of the widget and for optimal make-or-buy decisions regarding manufacture of gadgets.

Suppose, however, that the defendant passes up this more efficient and profitable alternative in order to gain market power through exclusion of Trinko—perhaps by monopolizing gadget manufacturing and thereby raising the entry barriers protecting his widget monopoly by making two-level entry necessary.⁴³ In that event, the refusal would entail choosing a less efficient means of making gadgets in order to gain market power.⁴⁴ The refusal would thus be anticompetitive because it would be unprofitable and would make no business sense, except as a means of creating or maintaining market power.

42. To avoid a double marginalization problem that would arise if Trinko became the monopoly supplier of gadgets, the defendant would probably hope to find multiple efficient gadget manufacturers. Failing that, the transactions between the defendant and Trinko would likely become more complicated. This Article ignores these complications because they are not material to the antitrust issue addressed here.

43. This would be a rational strategy only if, among other things, an entrant could not expect to achieve efficient scale in the manufacture of widgets if he were able to sell the widgets only in the competitive market for uses other than in the manufacture of gadgets.

44. For a discussion of the several kinds of circumstances in which a monopolist might have an incentive to pass up the most efficient source of complements, see Joseph Farrell & Philip J. Weiser, *Modularity, Vertical Integration, and Other Access Policies: Towards a Conveyance of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85, 105-19 (2003).

The sacrifice test is, therefore, coherent and readily applicable to refusal to deal cases. It permits firms to earn monopoly profits from their assets and thus adequately preserves ex ante incentives. Furthermore, it both prohibits inefficient refusals to deal and provides a sound, principled basis for rejecting claims of those who seek access to others' property where such dealing is not efficient in the sense described above.

VI. CONCLUSION

The sacrifice test as a sensible middle ground between the more interventionist market-wide balancing tests and the less interventionist approach urged by those who are concerned about the uncertainties, false positives, and perverse incentives that such tests can generate. The sacrifice test is easier for both courts to administer ex post and firms to comply with ex ante than market-wide balancing tests and promises more effective antitrust deterrence of welfare-reducing conduct than more laissez-faire approaches.

The relative superiority of the sacrifice test varies depending on the type of conduct at issue. Naked exclusion—conduct that excludes rivals and has no efficiency benefits—can be readily condemned without any complicated balancing or sacrifice test. In most instances, such conduct in any event would violate the sacrifice test because its only reward would be the resulting market power.

The sacrifice test is unambiguously superior to market-wide balancing in all cases in which the conduct does not raise rivals' costs, but rather excludes rivals only by reducing the defendant's prices or costs and/or increasing the value of his goods or services. In these cases, balancing tests require calculation of the welfare costs caused by the defendant's conduct in a subsequent "recoupment" period, after the rivals have exited or been weakened. That calculation is likely to be beyond the capability of courts, and it is certainly beyond the capability of firms trying to decide ex ante whether their contemplated conduct is permissible. Any balancing test that requires such a calculation fails to give adequate guidance to firms.⁴⁵

Balancing tests could be streamlined in raising rivals' costs cases to avoid some of these problems by ignoring the long-run or dynamic welfare costs of market power and, instead, calculating only the overall static welfare effects of the conduct in light of its benefits to the defendant and

45. I have elsewhere called such balancing tests "dynamic market-wide balancing." See Melamed, *supra* note 21 (manuscript at 8-9).

its harm to rivals.⁴⁶ But while the calculation required by such static balancing would be less daunting than that required for dynamic balancing, it is still likely in most cases to be much more difficult for the defendant than that required by the sacrifice test. This is because the calculation would require the defendant to estimate the impact of the conduct, both on himself and his customers and also on his rivals and their customers. Moreover, such a test would not completely eliminate the false negatives from the sacrifice test, and adoption of such a test would entail two additional costs: the costs of complicating antitrust jurisprudence by having a special rule for raising rivals' costs cases; and the cost imposed on firms that would be required, simply in order to know what legal rule applies to their conduct, to determine whether the conduct will materially increase their rivals' costs.

In refusal to deal cases, a balancing test would have the additional complication of requiring calculation of the costs to innovation incentives and dynamic efficiency of a duty to deal under the circumstances. A test that required such a calculation would plainly not be administrable by courts or firms. The sacrifice test avoids this complication by incorporating the ordinary antitrust presumption that the dynamic benefits of encouraging innovation outweigh the costs of permitting firms to charge monopoly prices for their lawfully obtained monopolies.

The sacrifice test can provide a sound unifying antitrust principle for analyzing all exclusionary conduct that has efficiency benefits. The sacrifice test is superior to balancing tests for at least most kinds of exclusionary conduct, and it can avoid most of the false positives and uncertainties that motivate those who argue that antitrust cannot constructively deal with problems of exclusion.

46. I have called such abbreviated tests "static market-wide balancing." *See id.* (manuscript at 12-13).