RAISING RIVALS' COSTS: THE PROBLEM OF REMEDIES*

*Willard K. Tom*** *and Gregory F. Wells****

INTRODUCTION

Raising Rivals' Costs ("RRC") has been a useful paradigm for analyzing vertical restraints for almost twenty years. The RRC paradigm has increasingly been used, at least by the federal antitrust agencies, to determine whether a particular vertical restraint has had an anticompetitive effect. An extensive economic literature has developed around this issue. Relatively less attention has been paid, however, to the difficulty of crafting remedies in such a case. The district court's struggle to craft an appropriate remedy in the most prominent RRC case, *United States v. Microsoft*, illustrates the non-obvious nature of the task.

This article will (1) describe why it is difficult to craft remedies in RRC cases, (2) describe some approaches used by courts in past RRC cases, and (3) attempt to extract some lessons from those past cases that courts and regulatory authorities may find useful in designing remedies in future RRC cases.

I. RAISING RIVALS' COSTS—A BRIEF OVERVIEW

The Raising Rivals' Costs paradigm requires (1) that the conduct of the challenged firm "unavoidably and significantly" increase the costs of its competitors and (2) that the raising of rivals' costs enables the excluding firm to raise prices above the competitive level.[1] Under the RRC paradigm,

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** Willard K. Tom is a partner in the Antitrust Practice Group at Morgan Lewis. He served as deputy director of the Bureau of Competition at the Federal Trade Commission and as head of its Office of Policy and Evaluation, as well as counselor to the assistant attorney general in charge of the Antitrust Division of the U.S. Department of Justice. He was also one of the drafters of the DOJ and FTC *Antitrust Guidelines for the Licensing of Intellectual Property*.

*** Gregory F. Wells is an associate at Morgan Lewis. His practice focuses on the full range of antitrust litigation and counseling.

1 Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion*: *Raising Rivals' Costs to Achieve Power over Price*, 96 YALE L.J. 209, 214 (1986).

a monopolist may adopt an anticompetitive strategy, not to drive its competitors out of the market entirely, but instead to make that competitor's production or distribution more costly, thereby creating a price umbrella under which the strategizing firm can raise its prices.[2] In their seminal article on Raising Rivals' Costs, Salop & Krattenmaker illustrate this basic paradigm with four types of behavior that could raise rivals' costs: (1) a bottleneck; (2) "real foreclosure"; (3) the "cartel ringmaster"; and (4) the "Frankenstein Monster."[3]

The first two illustrations are based on the notion of foreclosing supply of an input,[4] thereby increasing its cost. By foreclosing supply using an exclusionary arrangement, the excluding company forces rivals to pay more for the input and therefore raise the price of the downstream product above the otherwise competitive level. This allows the excluding company likewise to raise downstream prices, capturing the price increase as a monopoly profit. In a bottleneck, a purchaser obtains exclusionary rights from all of the lowest cost suppliers. As a result, competitors have to purchase their goods from less efficient suppliers who charge a higher price.[5] Similarly, in a "real foreclosure," a purchaser acquires an exclusionary right over a large enough portion of the supply to drive up the market price for the rest of the supply of the input.

The remaining illustrations involve raising rivals' costs by inducing collusive behavior among the suppliers. In the "cartel ringmaster" case, a firm may agree with multiple suppliers to increase the price of inputs to the ringmaster's rivals.[6] In a "Frankenstein Monster" case, a purchasing firm reaches exclusive agreements with multiple suppliers from a highly concentrated industry.[7] The remaining suppliers then have an incentive to collude among each other and charge monopoly prices to the purchasing firm's rivals.

These examples demonstrate the conditions under which input prices to rivals can be impacted by a dominant firm. Where all rivals are similarly affected, the input price increase may be enough, in itself, to cause downstream prices to consumers to increase. Where only some rivals are affected, the RRC theory depends on showing further that competitive conditions downstream are conducive to a price increase.

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2 *See* Herbert Hovenkamp, *Post-Chicago Antitrust: A Review and Critique*, 2001 COLUM. BUS. L. REV. 257, 320-21 (2001).

3 Krattenmaker & Salop, *supra* note 1, at 234-42.

4 By "input," Krattenmaker & Salop include downstream distribution services. The theory thus applies equally to what was traditionally called "customer foreclosure" as it does to traditional input foreclosure. *See* Krattenmaker & Salop, *supra* note 1, at 224.

5 *See id*. at 235.

6 *Id*. at 238-39.

7 *Id*. at 240-41.

II. NATURE OF THE REMEDIAL PROBLEM

Broadly speaking, the principal goals of antitrust remedies should be to restore the market to the degree of competition it would have enjoyed but for the defendants' wrongful conduct. As the en banc D.C. Circuit wrote in *Microsoft*:

> The Supreme Court has explained that a remedies decree in an antitrust case must seek to "unfetter a market from anticompetitive conduct"[8] to "terminate the illegal monopoly, deny to the defendant the fruits of its statutory violation, and ensure that there remain no practices likely to result in monopolization in the future."[9] In addition, the remedy should deter anticompetitive conduct, adjusting for the fact that much illegal conduct is not detected, and take illegal gains away from the law violators and restore those monies to the victims.[10]

In horizontal cases, such as those dealing with price fixing and market allocation, achieving these goals is fairly easy. The dividing line between anticompetitive and procompetitive conduct is generally clear; hence overdeterrence typically is not a serious issue unless the impact on the company is so draconian that it adversely affects the structure or performance of the market or implicates considerations of due process or other fundamental rights. Criminal sanctions serve the punishment and deterrence function, and treble damages compensate those victimized by the activity. Where injunctive relief is appropriate, a simple "don't collude" injunction is usually clear and enforceable enough to serve the remedial function.

The main challenge in such a case is calculating the amount of damages, and the courts have proved fairly adept in meeting that challenge. Damages are usually calculated by comparing the price charged during the "conspiracy period" with a price calculated in a "but for" world, a world without the alleged conspiracy.[11] The difference between the two prices is the amount of the overcharge. Once the overcharge is calculated, one simply multiplies the overcharge by the quantity sold and trebles the damages. Determining the price in a "but for" world can pose difficulties, but they are usually surmountable. Courts have utilized a number of different approaches including the "yardstick," "before and after," and "market share"

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8 United States v. Microsoft, 253 F.3d 34, 103 (D.C. Cir. 2001) (quoting Ford Motor Co. v. United States, 405 U.S. at 562, 577 (1972).

9 *Id*. at 103 (quoting United States v. United Shoe Mach. Corp., 391 U.S. 244, 250 (1968))*; see also* United States v. Grinnell Corp., 384 U.S. 563, 577 (1966).

10 *See* Robert Pitofsky, *Antitrust at the Turn of the Twenty-First Century: The Matter of Remedies*, 91 Geo. L.J. 169, 170 (2002).

11 *See, e.g.*, Hanover Shoe, Inc. v. United Shoe Mach. Corp., 392 U.S. 481, 489 (1968); Burlington Indus. v. Milliken & Co., 690 F.2d 380, 385 (4th Cir. 1982).

methods.[12] In so doing, courts usually rely on an economic expert's sophisticated statistical analysis of pricing.[13]

By contrast, selecting a remedy in a vertical case is more difficult. For one thing, the procompetitive and anticompetitive effects of a firm's behavior may be difficult to discern. It is well-recognized that antitrust analysis can yield "false positives" or "false negatives."[14] In other words, courts sometimes misidentify procompetitive or competitively neutral behavior as anticompetitive and vice-versa. That risk is greater where the theory of harm is more complex and where models of anticompetitive and procompetitive effects yield very similar observable facts. This makes designing remedies problematic because a court could impose a remedy that either deters future procompetitive conduct in the economy generally (overdeterrence) or that inflicts harm on the specific market that the remedy seeks to improve, for example by depriving defendants or others of economies of scale or scope.[15] In this paper, we will refer to both of these adverse effects as "iatrogenic effects"—i.e., physician-caused disease.

Another reason remedies can be so difficult is that defendants' conduct in an RRC case may have effected permanent and irreversible changes in the market. Exclusionary conduct often derives its power from depriving rivals of economies of scale, such as network effects,[16] at critical junctures, thus preventing the rivals from emerging as competitive threats to challenge a defendant's monopoly. Once the threat has been extinguished, it can be extremely difficult to rekindle.

These two problems—the greater risk of iatrogenic effects and the greater difficulty of ensuring that the remedy is efficacious—affect all of the types of remedies a court might impose: a damages remedy;[17] an injunc-

12 *See, e.g.*, Lehrman v. Gulf Oil Corp., 500 F.2d 659, 667 (5th Cir. 1974).

13 *See In re* Indus. Silicon Antitrust Litig., No. 95-2104, 1998 WL 1031507 (W.D. Pa. Oct. 13, 1998) (discussing admissibility of economic expert's multiple regression analysis to prove damages in price fixing case).

14 *See* Timothy J. Muris, *The FTC and the Law of Monopolization*, 67 ANTITRUST L.J. 693, 701-02 (2000).

15 *See* Willard K. Tom & Chul Pak, *Toward a Flexible Rule of Reason*, 68 ANTITRUST L.J. 391, 399-400 (2000).

16 "Network effects" exist where the value of a product to one purchaser increases with the number of other purchasers of the product. *See* Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93, 94 (1994). The most familiar example is the telephone network, in which the value to a user is zero if no one else is attached to the network, and increases as other users become attached and therefore can be reached. *See id.* Such network effects can be thought of as demand-side economies of scale.

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

tion that proscribes particular conduct;[18] structural modification, including divestiture;[19] and any combination of the three.

A. *Damages Remedies*

Damages have been utilized traditionally to compensate for increased prices attributable to the anticompetitive conduct. Damages remedies are intended to deter future violations and compensate for past ones. As discussed *supra*, a damages remedy could compensate consumers for increased prices as a result of a conspiracy to fix prices or allocate markets under § 1. In RRC cases, whether under § 1 or § 2, a damages remedy would likewise, in theory, be available to return to consumers overcharges due to an illegally acquired or maintained monopoly as compared with prices in the more competitive "but-for" world.

In practice, however, the calculation of such damages in an RRC case is likely to be especially difficult. Quite often, the theory of the case is not that the defendant has *gained* power over price by raising its rivals' costs, but that it has *defended* its power over price against the threat of new entry. For example, consider an RRC hypothetical such that company A currently has market power in the manufacture of good X. A is currently buying widgets, an important input into the manufacture of good X, from supplier S1. Supplier S2 comes along with a new, improved widget that improves the characteristics of good X and makes it more attractive to consumers. Unfortunately for A, S2's widget is completely incompatible with A's manufacturing process, and it would be too expensive for A to change its process. Even more unfortunately for A, S2's widget works perfectly with a new manufacturing process being developed by B, a would-be entrant into good X. Undaunted, A signs an exclusive dealing contract with S2; S2 agrees to sell its widgets exclusively to A, in exchange for a percentage of A's profits on sales of good X, regardless of whether those units of good X use widgets from S1 or S2. As a result, B is unable to enter.[20]

In an ordinary case, courts generally calculate damages by estimating a "but for" price based on the price observed prior to the anticompetitive conduct and then comparing it to the actual price observed in the monopo-

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18 *See* New York v. Microsoft, 224 F. Supp. 2d 76 (D.D.C. 2002).

19 *See, e.g,*, United States v. AT&T Corp., 552 F. Supp. 131 (D.D.C. 1982).

20 *Cf.* Amended Complaint ¶ 24, FTC v. Mylan Labs., Inc., (D.D.C. filed Feb. 8, 1999) (No. 1:98CV03114 (TFH)), *available at* http://www.ftc.gov/os/1999/02/mylanamencmp.htm ("In exchange for this exclusive license which would prevent any Mylan competitor from using FIS's lorazepam API, Mylan offered SST a percentage of Mylan's gross profits on lorazepam tablets. Under this proposal, SST would receive these profits even though Mylan would not purchase from SST any lorazepam API.").

lized market.[21] In this hypothetical, however, the price observed prior to the anticompetitive conduct was the monopoly price. How does one determine a "but for" price that has never existed in the real world, but instead is dependent on changes that *would have* taken place but for the anticompetitive conduct?[22]

Moreover, something more than price is at stake in this hypothetical. B's product X would have been more attractive to consumers in various respects; hence, the harm includes not only the higher prices paid to A by those who would have continued to buy from A had it cut its prices in response to B's entry, but also the loss of innovation represented by S2's superior widget. How does one measure that loss? And even if the court could measure the loss, to whom should it award the compensation? To the extent one seeks to compensate consumers, how does one determine which consumers would have bought from B? To the extent one is satisfied merely with compensating B (effectively ignoring the consumer surplus that would have been created), how does one determine at what price B could have sold its superior good? In this situation, could there be a risk of underdeterrence despite the trebling of damages?

Finally, imagine that, instead of being incompatible with A's process, S2's widget could be used by A with some investment by A in tweaking its process. B, as before, can use S2's widget with no tweaking. A claims the exclusive dealing contract is necessary to protect its investment in tweaking its process. B responds that the defense would be cognizable only if B would otherwise have free-ridden on that investment, which would not happen here because B's process can already use S2's widget. The court sides with B. We now have a risk of a false positive and the accompanying danger of overdeterrence. Suppose A honestly believed that it was protecting against the risk of free-riding—a distinct possibility given that B's process is no doubt a trade secret, not fully knowable to A. A draconian remedy might cause future companies in A's position to avoid entering into exclusive dealing arrangements at all costs, perhaps even if it means forgoing the investment and staying with S1's widgets rather than switching to S2's superior widgets. Future consumers may thereby be deprived of the benefits of product innovation.

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21 Roger G. Blair & William H. Page, *"Speculative" Antitrust Damages*, 70 WASH. L. REV. 423, 427 (1995).

22 *But see* David C. Hjelmfelt & Channing D. Strother, Jr., *Antitrust Damages for Consumer Welfare Loss*, 39 CLEV. ST. L. REV. 505, 510-512 (1991) (arguing that it is not too speculative to calculate consumer welfare loss by estimating fair market price and demand elasticity, as defendants must bear the risk of uncertainty and imprecision in computing damages).

B. *Conduct Remedies*

Conduct remedies involve controlling the anticompetitive behavior. These remedies usually include some form of proscription of the anticompetitive conduct and controls on future conduct. In RRC cases, conduct remedies have been used frequently. For example, the D.C. Circuit overturned the divestiture remedy imposed by Judge Jackson and, on remand, Judge Kollar-Kotelly opted for a conduct remedy.[23] Despite conduct remedies' prominence in day-to-day enforcement, some scholars view unfavorably these remedies.[24] Conduct remedies have been criticized because (1) courts and plaintiffs may not be able to keep up with the multiple forms into which a particular type of anticompetitive conduct may metamorphose; (2) they can do more harm than good when, attempting to forbid all forms that a defendants' anticompetitive conduct may take, an order may end up forbidding procompetitive conduct; and (3) they can require intensive judicial supervision.[25]

These criticisms have particular salience in the vertical context. Unlike price-fixing, bid-rigging, and market division, where identifying the conduct to be forbidden may be fairly straightforward, an order prohibiting actions to raise rivals' costs to acquire or maintain market power is likely either to be too vague to be permissible or to specify only a few of the many ways in which the defendant's goals could be attained.

C. *Structural Remedies*

Many students of antitrust law, especially those in the structuralist school, believed historically that structural remedies, such as divestiture, provide far simpler and more efficient controls on a dominant firm's anticompetitive behavior than conduct remedies.[26] In addition, such remedies can require less judicial oversight.

Nonetheless, divestiture, like conduct remedies, may encounter its own problems. Divestiture remedies can be difficult to carry out. In the case of a monopoly acquired through merger, there will often be some reasonably clear division between the two prior-existing firms where a court could

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23 *See generally* United States v. Microsoft Corp, 231 F. Supp. 2d 144 (D.D.C. 2002).

24 William E. Kovacic*, Designing Antitrust Remedies for Dominant Firm Misconduct*, 31 CONN. L. REV. 1285, 1292-93 (1999); *see also,* Kevin J. O'Connor, *The Divestiture Remedy in Sherman Act §2 Cases,* 13 HARV. J. ON LEGIS. 687, 692-693 (1976).

25 *See, e.g.*, Kovacic, *supra* note 23, at 1293.

26 *Id*. (discussing *United States v. United Shoe Mach. Corp*., where a conduct remedy failed to reduce monopolist's market power and eventually required divestiture).

make a "clean cut" and divide the unitary firm into two or more firms without harming the new firms' competitive abilities. In the case of a monopoly that was legally acquired but later illegally maintained, however, such dividing lines may be unclear, if they exist at all. Perhaps for this reason, divestiture outside the merger context has been rare. They have principally been advocated where a pattern of prior anticompetitive conduct makes compliance with conduct remedies unlikely.[27]

III. REMEDIES IN PAST RAISING RIVALS' COSTS CASES

A. United States v. Terminal Railroad

One of the earliest RRC cases was *United States v. Terminal Railroad Association*, where a group of railroads brought St. Louis's rail terminal facilities under common control and discriminated against competitors in the use of those assets to gain a competitive advantage.[28] In so doing, the controlling companies essentially raised their rivals' costs because the rivals faced a choice between using the favored facilities at the higher, discriminatory cost or avoiding these facilities by using much higher-cost substitutes.[29] The Supreme Court held that the controlling companies monopolized these "essential facilities" and, rejecting the government's request that the Terminal Railroad Association be dissolved,[30] ordered that any existing or future railroad companies be given non-discriminatory access to those assets.[31]

The remedy in *Terminal Railroad* was somewhat easier to craft than in the typical case, because the facilities in question provided services to multiple joint venture owners. The terms on which the services were provided to those owners was thus reasonably transparent, unlike the terms on which a single owner deals with a wholly owned subsidiary. Thus, ordering the joint venture to provide non-discriminatory access to non-owners would not involve the court in complex, regulatory issues of valuation. Moreover, because the Terminal Railroad Association acquired pre-existing facilities, the questions of what investments, and particularly what risks, the original owners had borne, and how they should be compensated for those invest-

27 *See* E. Thomas Sullivan, *The Jurisprudence of Antitrust Divestiture: The Path Less Traveled*, 86 MINN. L. REV. 565, 597-98 (2002).

28 *See* United States v. Terminal R.R. Ass'n, 224 U.S. 383, 391-92 (1912).

29 *See id.* at 391-93.

30 *Id*. at 409-10.

31 *Id.* at 410-12.

ments and risks, were considerably less difficult than usual. Therefore, to the extent that there were significant economies of scope in continuing to operate the facilities as a single unit, the choice between dissolution, as requested by the government, and compulsory access was a relatively simple one.

B. Standard Oil v. United States

A paradigmatic example of the "Cartel Ringmaster" form of Raising Rivals' Costs occurred in *Standard Oil Co. of New Jersey v. United States*.[32] Oil production occurs at three stages: crude production, refining, and transportation. Standard Oil acquired more than a 90% share in the refining market by purchasing and controlling numerous independent refiners.[33]

Standard Oil's large market share in refining did not, however, allow it to exercise power over the price of refined oil because there were numerous other firms in the market and entry was easy.[34] By contrast, transportation of refined oil had only three firms and significant barriers to entry. Such industries are frequently conducive to cartelization, but each railroad's low marginal costs and excess capacity had thwarted several previous attempts to collude to raise price.[35]

Standard Oil was able to use its substantial market share in oil refining to set up and effectively police a cartel among the three railroads that transported refined oil.[36] Standard Oil and the railroads agreed to predetermined market shares for each of the three railroads and fixed transportation fees, including discriminatory fees to other refiners.[37] Standard Oil was able to police this cartel because, if one firm attempted to cheat the cartel by lowering prices to the other refiners, Standard Oil could retaliate by moving its own shipments among the railroads to maintain the predetermined market shares. The discriminatory transportation rates created higher costs for independent refiners, which discouraged entry aimed at challenging Standard

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32 221 U.S. 1 (1911).

33 In response to a previous decree that attempted to break up the Standard Oil monopoly, the company divested its assets into numerous subsidiary corporations that purported to be independent, but actually were controlled by Standard Oil. *Id*. at 38-40. These subsidiary corporations were later merged into the Standard Oil of New Jersey conglomerate.

34 *See* Elizabeth Grantiz & Benjamin Klein, *Monopolization by "Raising Rivals' Costs": The* Standard Oil *Case*, 39 J.L. & ECON. 1, 23-24 (1996).

35 *Id*. at 24.

36 *Id*.

37 *Id*. at 25.

Oil's monopoly.[38] The railroads shared with Standard Oil the overcharges that resulted from their cartel; indeed, this was the only monopoly profit that it earned from this scheme.[39]

In a case brought by the United States, the Supreme Court upheld a divestiture remedy whereby Standard Oil was required to divest its assets back into the subsidiary corporations and was prohibited further from exercising control over those corporations, while the subsidiaries were prohibited from paying any dividends to Standard Oil. The Court noted that this severe remedy was justified because Standard Oil illegally acquired monopoly power:

> It may be conceded that ordinarily where it was found that the acts had been done in violation of the [Sherman Act], adequate measure of relief would result from restraining the doing of such acts in the future. But in a case like this, where the condition which has been brought about in violation of the statute, in and of itself is not only a continued attempt to monopolize, but also a monopolization, the duty to enforce the statute requires the application of broader and more controlling remedies.[40]

In sum, the Court found that divestiture was the appropriate remedy where the illegal acts created a monopolistic market structure that would not be dissipated simply by enjoining similar acts in the future.

C. Aspen Skiing Co. v. Aspen Highlands Skiing Corp.

Plaintiff, which operated one of four ski mountains in Aspen, sued its sole rival for pulling out of a cooperative effort to offer an "All Aspen" ski pass.[41] Originally, the firms split revenues from the joint ticket's sales based on the relative use of the pass by consumers at the respective mountains. The defendant pulled out of the venture when the Plaintiff refused to accept a lower, fixed percentage of the revenues from the pass.

Plaintiff claimed that the refusal to deal allowed the defendant to illegally maintain its monopoly on the skiing market in Aspen.[42] Because multi-mountain access was highly valued by customers, who ascribed a high value to variety, defendant's refusal to grant access (even at full retail price) degraded significantly plaintiff's product.[43] Plaintiff's attempts to compete—including offering a package which included passes for its

38 *Id*.

39 *Id*. at 24-27.

40 *Standard Oil*, 221 U.S. at 77 (citations omitted).

41 Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

42 *Id*. at 595.

43 *Id*. at 596.

mountain and daily passes for the other mountains run by defendant—failed and its market share fell precipitously.[44] The district court awarded plaintiff $7.5 million and also issued an injunction requiring the parties to offer jointly a 4-area, 6-out-of-7-day coupon pass.[45] The Supreme Court eventually upheld the liability finding and remedy because the defendant could not offer a procompetitive justification for refusing to deal with plaintiff.[46] In this case, the valuation issue was avoided, at least in the short term, by the fact that plaintiff and defendant had a prior course of dealing that the court's remedy simply restored. Not factored into the court's calculus, however, was that by imposing a remedy so dependent upon the parties' prior course of dealing, the court may have created a strong incentive for parties in defendant's position not to cooperate with rivals in the first place, for fear of being prohibited from disentangling later.

D. *Microsoft*

In 1998, the United States, along with a group of states, alleged that Microsoft (1) brokered unlawful exclusive dealing arrangements, (2) unlawfully tied Internet Explorer to Windows 95 and Windows 98, (3) unlawfully maintained its monopoly in the personal computer operating system market, and (4) unlawfully attempted to monopolize the internet browser market.[47] The district court found Microsoft liable on all claims except for the § 1 exclusive dealing claim and imposed a structural remedy, whereby Microsoft would be split into two separate companies, an operating system company and an applications company.[48] The D.C. Circuit affirmed with respect to the § 2 monopoly maintenance claims, reversed the liability finding on attempted monopolization, remanded the tying claim for further proceedings, and vacated the district court's imposition of the structural remedy, remanding (to a new district judge) for an evidentiary hearing on remedy.[49] Plaintiffs subsequently abandoned their tying claims.

On remand, as in the original consideration of remedy, there were four basic approaches that the court could take: (1) a structural remedy that would create directly competition in personal computer operating systems (i.e., create multiple operating system companies, or "Baby Bills," as urged by some *amici*); (2) a structural remedy that would attempt to recreate directly the threat to Microsoft's monopoly in personal computer operating

44 *Id*.
45 *Id.* at 598 n.23.
46 *Id*. at 608-609.
47 *See* United States v. Microsoft Corp., 253 F.3d 34, 47 (D.C. Cir. 2001).
48 *Id.* at 48.
49 *Id*. at 46.

systems that Netscape and Java had posed by spinning off from Microsoft itself an applications company powerful enough to sponsor operating system rivals; (3) a "must carry" remedy that would attempt to recreate the threat to Microsoft's monopoly without structural relief by ensuring the ubiquitous distribution of platform software that would pose a competitive threat comparable to Netscape and Java before Microsoft's exclusionary conduct; or (4) a conduct remedy that would ensure that *if* another threat comparable to Netscape and Java arose during the life of the decree, Microsoft would be unable to use the same tactics it had used against Netscape and Java.

Aside from a handful of *amici*, there was little support for the first type of structural remedy, and the original Justice Department team did not seek it in its original remedy proposal. Not only might it be difficult to prove that, but for Microsoft's violation, such competition would have existed, but such a remedy posed the risk that the operating system standard would become fragmented. Such fragmentation would deprive users of the benefits of network externalities and leave them to cope with multiple, incompatible operating systems. Moreover, such a remedy ran the risk of being unnecessarily punitive, in the sense that it might have inflicted harm on Microsoft shareholders beyond that which was necessary to remedy the violation. As with any high-fixed-cost, low-marginal-cost product, most of the costs are in creating the product in the first place, not in creating additional units of the product. If, through horizontal divestiture, multiple entities were given the right to sell the product, they might compete price down towards marginal cost, substantially reducing or eliminating the rents that are the reward for developing the product in the first place.

Instead, the original Justice Department team sought a vertical divestiture, breaking Microsoft into an operating system company and an applications company.[50] Microsoft Office would, in this vision, take the place of Netscape and Java in posing a threat to the operating system monopoly—not by serving as an alternative platform to which applications developers would write, as had Netscape and Java, but by sponsoring and strengthening alternative platforms. Such sponsorship and strengthening would occur because the most powerful applications developer—the Microsoft applications company—would have an incentive to port its applications to such platforms rather than an incentive to hobble rival platforms. Judge Jackson granted the Justice Department its proposed remedy, but upon remand all parties, including the Justice Department, abandoned this proposal.

Various industry participants thereupon urged on both the Justice Department and the states a "must carry" remedy. In this conception, absent structural relief, the best way to recreate the type of threat Netscape and

50 *See* United States v. Microsoft Corp., 97 F. Supp. 2d 59, 62-63 (D.D.C. 2000).

Java had posed would be to force Microsoft to distribute third-party platform software along with its Windows operating system software, thus ensuring the ubiquitous distribution of such platform software. According to its proponents, such ubiquitous distribution would have occurred naturally in the case of Netscape and Java, had it not been for Microsoft's wrongful conduct to prevent those platforms from becoming established.[51] And, in turn, ubiquitous distribution is a precondition to applications developers devoting sufficient effort to writing applications based upon such platforms to erode the applications barrier to entry protecting Microsoft's monopoly.

The Justice Department and some, but not all, of the states rejected the "must carry" proposal and instead opted for an injunction prohibiting Microsoft from using the types of tactics it had used against Netscape and Java.[52] In other words, if and when new competitive threats to Microsoft's monopoly ever arose again, Microsoft would be unable to use the exclusionary and retaliatory tactics it was found to have used to squelch the last such threat. Other states continued to litigate, seeking a must-carry remedy, but after an evidentiary hearing, the new district judge, Judge Colleen Kollar-Kotelly, rejected the litigating states' position and issued a prohibitory injunction along the lines sought by the Justice Department.[53] As of this writing, an appeal by one of the states is pending.

By contrast, in a private action by Sun Microsystems, a different district court entered a 'must-carry" preliminary injunction against Microsoft, under which Microsoft would be required to distribute Sun's Java middleware program with all copies of Windows sold.[54] The district court held that, absent the "must-carry" provision, the market for middleware products might well "tip" in favor of Microsoft's .NET proprietary middleware program and away from Sun's competing Java product. Although such tipping was not necessarily imminent or even inevitable, if it occurred, it would be difficult or even impossible to provide an adequate remedy after a full trial. Such a scenario might occur even if Sun were able to distribute Java over the Internet or through other channels.[55]

Microsoft appealed, however, and the Fourth Circuit reversed.[56] According to the Fourth Circuit, the district court's failure to find that the tipping of the market in favor of Microsoft's .NET proprietary middleware

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51 *See In re* Microsoft Corp. Antitrust Litig., 237 F. Supp. 2d 639, 646 (D. Md. 2002), *rev'd,* 333 F.3d 517 (4th Cir. 2003).

52 *See* United States v. Microsoft Corp., Revised Proposed Final Judgment and Competitive Impact Statement, 66 Fed. Reg. 59542, 59465 (November 28, 2001).

53 *See* New York v. Microsoft, 224 F. Supp. 2d 76, 77 (D.D.C. 2002).

54 *See In re* Microsoft, 237 F. Supp. 2d at 656-57.

55 *Id*. at 648-53.

56 *In re* Microsoft, 333 F.3d 517 (4th Cir. 2003).

was imminent necessarily meant that the standard for a preliminary injunction was not satisfied.[57]

IV. LESSONS FOR FUTURE RAISING RIVALS' COST CASES

Because the types of conduct that might give rise to a finding of liability under an RRC framework are quite diverse, and because the two problems of inefficacy and iatrogenic effects pull in opposite directions, it is difficult to generalize about how to surmount the heightened remedial challenges of RRC cases. We therefore limit ourselves to extracting some lessons from past RRC cases and to articulating those lessons in the form of aphorisms.

A. *Stay with First Principles, Not Easy Labels*

As noted above, the first principle in a monopolization case is that the remedy should "unfetter [the] market," "terminate the illegal monopoly, deny to the defendant the fruits of its statutory violation, and ensure that there remain no practices likely to result in monopolization in the future."[58] Where that principle conflicts with lesser slogans, the principle should prevail.

A case in point is the treatment of structural relief on remand in the *Microsoft* case. The litigating states had proposed the auction of Microsoft Office. The district court rejected this proposal, in large part, because the proposed remedy used a mechanism of action different from that of the violation:

> The divestiture provisions serve to directly benefit non-Microsoft operating systems, in particular Linux and Apple. It is well recognized that the theory of liability in this case concerns Microsoft's response to cross-platform applications, not operating systems, that displayed the potential to offer platform services such that their popularity would greatly simplify the porting of applications en masse from operating system to operating system.[59] To offer a remedy which directly benefits other operating systems ignores the direction and impact of Microsoft's anticompetitive behavior and advances a theory of competition discounted during the liability phase of this case.[60]

In other words, the court endeavored to tailor the remedy to the violation, not to the harm caused by the violation. Because RRC causes its harm

57 *Id.* at 527-30.

58 United States v. Microsoft Corp., 253 F.3d 34, 103 (D.C. Cir. 2001).

59 *See id.*

60 New York v. Microsoft, 224 F. Supp. 2d 76, 185 (D.D.C. 2002).

in indirect ways, however, and because it may result in structural changes that are difficult to reverse, following a slogan of "tailoring the remedy to the violation" may not achieve the ultimate goal of undoing the competitive harm.

As a further reason for rejecting the auction of Microsoft Office, the district court relied on the (correct) characterization of such an auction as a "structural remedy."[61] Following the D.C. Circuit's lead, it then went on to suggest that if the anticompetitive conduct had not led to Microsoft's monopoly position, such divestiture would be inappropriate. Implicitly, therefore, the court lumped all structural remedies together as devices to *break up* a monopoly—for example, a monopoly unlawfully achieved through acquisition or other acts of monopolization, or one that would not have persisted but for unlawful acts of monopoly maintenance.

The district court did not consider that, unlike the usual structural remedy, the proposal to force a sale of Microsoft Office was not designed to break up the monopoly at all but instead to simulate the competitive conditions that would have existed but for the illegal acts, namely, conditions under which Microsoft's monopoly was *threatened*. Accordingly, the proposed auction of Microsoft Office would have left intentionally both the operating system monopoly and the Microsoft Office monopoly intact. Doing so would have enabled Microsoft to reap the benefits of any lawfully acquired monopoly position, but would position Microsoft Office in the same relationship in which Netscape and Java would have been positioned absent Microsoft's bad acts. Thus, by focusing on the rule of thumb that structural remedies are usually used to break up an unlawfully acquired monopoly, the district court avoided the more fundamental questions: (1) would the proposed remedy likely succeed in creating the degree of competitive threat posed by Netscape and Java in the "but-for" world; (2) would the proposed remedy harm competition, for example by depriving the market of the economies of scope realized by the combined firm; and (3) were there any other remedies that would achieve the same remedial benefit with less harm either to competition or to Microsoft?

B. *Temper the* Story Parchment *Principle Where Appropriate*

In *Story Parchment Co. v. Paterson Parchment Paper Co.*,[62] the Supreme Court established the principle that as between the wrongdoer and the victim, the risk of uncertainty as to the proper amount of damages

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61 *Id*. at 186.

62 282 U.S. 555 (1931).

should lie with the wrongdoer.[63] In the injunctive context, too, the public interest and the balance of the equities would seem ordinarily to require that any error be in the direction of redressing a proven antitrust violation even at the cost of perhaps unnecessary harm to the wrongdoer.

Particularly in an RRC case, however, this principle must be tempered in some cases. As noted above, the risk of iatrogenic effects is particularly great in RRC cases because of the potential difficulty of distinguishing pro-competitive from anticompetitive conduct. Thus, the equities being weighed are not those of the defendant against the public interest, but of the public interest against itself.

In a case such as *Aspen Skiing*,[64] for example, the benefits and harms of the remedy can be quite difficult to sort out. Because of doubts that the courts would take the dramatic step of ordering access and determining the appropriate terms of such access had the parties never been in a relationship to begin with, the case led counselors to suggest that the risks to a party in defendant's position increase significantly if it enters into a relationship with another party (such as the plaintiff in that case) and later changes its mind and wishes to back out. Consequently, the remedy in *Aspen Skiing* may have become a disincentive to the formation of efficient joint ventures and other contractual relationships in the future. Since the case's premise was that a four-mountain pass was more valuable to consumers than a one-mountain or three-mountain pass, a disincentive to the type of arrangement that permitted the offering of a four-mountain pass would appear to be harmful to consumers. We are not suggesting that the remedy in that case was necessarily wrong, simply that the factors to be weighed may be more complex than they first appear. In other words, careful, fact-specific attention to possible unintended consequences should be in order before a *Story Parchment*-like principle is applied to injunctive relief in an RRC case.

C. *Remedies Should Ordinarily Be Forward-Looking*

As noted above, while compensation and deterrence are also important, a primary goal of an antitrust remedy should be to restore competitive conditions in the affected market**.** This is necessarily a forward-looking exercise. Because it is forward-looking, it must take into account the evolution of the market between the time the violation occurred and the time the remedy is being entered, as well as the likely future course of the market.

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63 *Id.* at 563; *see also* J. Truett Payne Co. v. Chrysler Motors Corp., 451 U.S. 557, 558 (1981); Zenith Radio Corp. v. Hazeltine Research, Inc., 395 U.S. 100, 123-24 (1969); Bigelow v. RKO Radio Pictures, Inc., 327 U.S. 251, 264 (1946).

64 Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585 (1985).

A case in point is the treatment of handheld devices in *New York v. Microsoft*. Plaintiffs argued that the potential substitution of handheld devices for personal computers posed a threat to Microsoft's operating system monopoly—in effect, that if Microsoft were restrained from interfering with the evolution of the market, handheld devices would become a constraint on the pricing of PC operating systems, and therefore would be in the same market with those systems.[65] The court rejected this argument because "[p]laintiffs have not offered evidence which shows that Microsoft's share of *the market for Intel-compatible PC operating systems* will simultaneously decline."[66] In other words, because the market at the time of the violation—the set of products that could at that time constrain Microsoft's behavior—was "Intel-compatible PC operating systems," the court did not even consider the possibility that the future effects of the misconduct would be felt in a different market. An instructive contrast may be found in the court of appeals' affirmance of the liability finding that middleware was not in the same market for purposes of constraining Microsoft's conduct,[67] but was nonetheless a threat to Microsoft's monopoly because it might well exert a constraining effect on Microsoft in the future if not strangled in its infancy.[68]

D. *Remedies Must Take into Account the Nature of the Markets in Question*

It is probably a truism with all antitrust remedies that the remedy should take into account the nature of the markets in question. This truism is all the more important, however, in RRC cases for the same two reasons we have discussed throughout: without taking into account the peculiar characteristics of a particular market, it is easy to do harm, and it is hard to make the remedy effective. The two dangers are typically obverse sides of the same coin: either depriving defendant of economies of scope or scale or failing to ensure that the entity that is to restore the lost competition will have access to the appropriate economies of scope or scale. In general, the courts and agencies have done a reasonable job of avoiding these twin dangers, but there have been some notable exceptions.

An example of a court appropriately avoiding damage to defendants' economies of scope or scale is *Terminal Railroad*, discussed above.[69] De-

65 New York v. Microsoft, 224 F. Supp. 2d 76, 131 (D.D.C. 2002).
66 *Id.* (emphasis added).
67 United States v. Microsoft Corp., 253 F.3d 34, 53 (D.C. Cir. 2001).
68 *Id.* at 60-62, 64-66, 67-74.
69 *See supra* Part IV.A.

fendants had, through acquisition, consolidated all of the terminal facilities necessary for railroads to cross the Mississippi River at St. Louis.[70] The government had sought divestiture, but the Supreme Court instead required the joint venture to provide non-discriminatory access to non-owners.[71] The Court thus preserved the significant economies of scope and scale in continuing to operate the facilities as a single unit.

Another, more modern example was the FTC's case against Intel.[72] The FTC's complaint charged that Intel used its monopoly position to prevent other companies from enforcing their patent rights. In particular, the complaint alleged that in response to patent infringement litigation and/or refusals to license patents to Intel on the terms it sought, Intel ceased to provide advance technical information and pre-release products needed by those companies to produce personal computers and workstations built with Intel microprocessors.[73] The FTC argued that if Intel could prevent competitors from using the patent system, the competitors would lose their incentive to innovate, and Intel would lose the incentive to compete against such innovations.[74] Intel countered that, among other things, the microprocessor industry was characterized by a patent minefield; so many different rights are necessary to make a single microprocessor that the negotiation of rights on a case-by-case basis was impractical and prohibitively costly.[75] Thus, allowing Intel to use its own valuable intellectual property as a bargaining chip in cross-licensing negotiations serves the procompetitive purpose of making it possible to assemble the broad portfolio of complementary rights (analogous to an economy of scope) necessary to create new and innovative products at lower cost.[76]

Ultimately, the FTC and Intel reached a compromise; Intel would have the right to withhold technical information and pre-release products from any party that sought to enjoin Intel's sales of its microprocessors, but could not use such tactics in response to a suit only for damages.[77] Other innovators could use the court system to seek non-zero rewards from Intel for their innovations, but could not prevent Intel from marketing a product

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70 *See* United States v. Terminal R.R. Ass'n, 224 U.S. 383, 391-92 (1912).

71 *Id*. at 410-12.

72 Decision and Order, *Intel Corp*., Dkt. No. 9288 (F.T.C. August 6, 1999), *available at* http://www.ftc.gov/os/1999/08/intel.do.htm.

73 Complaint ¶¶ 13, 19, 29, 35, *Intel Corp*., Dkt. No. 9288 (F.T.C., filed June 8, 1998), *available at* http://www.ftc.gov/os/1998/06/intelcmp.pdf.

74 Complaint Counsel's Pretrial Brief at 42-46, *Intel Corp*., Dkt. No. 9288 (F.T.C., filed February 25, 1999), *available at* http://www.ftc.gov/alj/D9288/990225ccpb.pdf.

75 Intel Corporation's Trial Brief at 41-42, *Intel Corp*., Dkt. No. 9288 (F.T.C., filed February 25, 1999), *available at* http://www.ftc.gov/alj/D9288/intelbrief.pdf.

76 *Id.*

77 *See* Intel Decision and Order, *supra* note 67.

despite the extremely large number of complementary intellectual property rights required for such a product.[78]

By contrast, one could argue that the court on remand in *New York v. Microsoft* took exactly the wrong lesson from the nature of the market. Because the markets for personal computers and their operating systems are characterized by rapid change, the court concluded that the remedy should be substantially shorter than the typical remedy. "Imposing a remedy in this case is not unlike trying to shoe a galloping horse," the court observed.[79] If one probes more deeply, however, one sees that the rapid change in the industry takes place against a background of powerful network effects. Rapid change in such a context means a high premium on backward compatibility and an even higher premium on expectations of future compatibility. The result is that a dominant position can be challenged only rarely, when a confluence of forces permit an alternative platform to arise offering sufficient ubiquity to cause users to believe that the alternative platform will achieve the critical mass of users and developers necessary to achieve a level of compatibility among those users and developers comparable to that of the dominant firm.

Since such threats arise only rarely (apparently, only once in the more than a decade that Microsoft has been dominant in operating systems), effective remedial choices are limited. The court could create competition—or at least conditions conducive to competition, such as platform ubiquity—through brute force, such as a structural remedy or a "must-carry" provision. If the court refuses to do so, however, it is left with injunctive provisions that have a chance of working only if and when new competitive threats to Microsoft's monopoly ever arose again—a condition that might not happen for a long time. To have a reasonable chance of being in effect the next time such a threat arose, an injunction against the exclusionary and retaliatory tactics Microsoft was found to have used to squelch the last such threat would have to be of longer than ordinary duration. In this case, therefore, the court's efforts to take into account the nature of the market in question by shortening its decree are likely to have the perverse consequence of eviscerating an already weak decree altogether.

CONCLUSION

It is difficult to craft remedies in cases pursued under an RRC theory. Far more than in horizontal cases, enforcers and courts run the risk of either doing more harm than good, or doing no good at all. Only by paying very

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78 *Id*.

79 New York v. Microsoft, 224 F. Supp. 2d 76, 184 (D.D.C. 2002).

close attention to the ultimate goal of restoring competition in the affected market and by understanding fully the dynamic of competition in that market will enforcers and courts stand a reasonable chance of crafting remedies that are both effective and not harmful.