Monopolistic Competition, Second Best, and *The Antitrust Paradox*: A Review Article

Richard S. Markovits
University of Texas

MONOPOLISTIC COMPETITION, SECOND BEST, AND *THE ANTITRUST PARADOX:* A REVIEW ARTICLE†

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THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF. By *Robert H. Bork.* New York: Basic Books, Inc. 1978. Pp. xi, 462. $18.

Professor Robert Bork's *Antitrust Paradox*[1] is likely to be an influential book. Bork teaches at a law school (Yale) whose gradu-ates greatly influence American regulatory policy; he enjoys the intellectual respect of the legal academic community; and he is well-connected both with the antitrust bar and (as a former Solic-itor General) with many relevant government personnel. The book is written in a clear, remarkably entertaining style and should be comprehensible to the rapidly increasing number of law students and practitioners who are conversant with economics at the very elementary level it presupposes. Moreover, the book's publication is timely: its appearance coincides with the develop-ment of a consensus in the relevant governmental communities that both antitrust law and its enforcement should be strength-ened — a consensus manifested by the rapid growth of the Anti-trust Division's budget, a rise in judicial hostility to mergers and even to internal corporate growth, and the serious legislative con-sideration of various deconcentration proposals that would sub-stantially increase the effect of antitrust law on the structure of American industry.

In short, *The Antitrust Paradox* is likely to be read at a critical time for American antitrust policy by many strategically placed people who will be able to understand Bork's arguments. Those arguments support five basic propositions: (1) the legisla-ture and judiciary have misunderstood the business functions and economic effects of many of the practices to which the antitrust laws apply; (2) in particular, vertical contracts and mergers, hori-

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1. R. BORK, THE ANTITRUST PARADOX (1978). This book is largely based on a number of articles Professor Bork published between 1956 and 1967. Its completion and publica-tion were delayed for eight years — primarily by Professor Bork's service as Solicitor General of the United States.

zontal mergers, conglomerate mergers, and internal growth are likely to produce far more allocatively desirable "business economies"[2] than the legislature and courts have supposed; (3) oligopolistic, predatory, and retaliatory pricing would rarely be profitable in a world without antitrust; (4) business activities (including mergers) will reduce competition only if they produce a firm with a very high market share in a highly concentrated market; and therefore, (5) allocative efficiency would be increased if business practices and structures were regulated far less stringently, rather than more stringently, as current deconcentration proposals recommend. Although I agree with the first two propositions, I disagree with the third, fourth, and hence the fifth. More particularly, in my opinion, Bork's arguments for these last three propositions are vitiated by their failure to deal adequately both with the product and locational differentiation that define monopolistic competition and with the interdependencies that are emphasized by second best.[3]

This Review discusses those portions of Bork's argument that I believe are undermined by monopolistic competition and second best. I should emphasize at the outset that this focus precludes a balanced picture of *The Antitrust Paradox.* Thus, this Review almost totally ignores the valid core of Bork's essay: (1) his argument that the antitrust laws contain an economic test of legality; (2) his demonstration that partnerships, various vertical practices, horizontal mergers, and even conglomerate mergers can all generate considerable business efficiencies; and (3) his description of the way in which the courts have used various fallacious legal doctrines to condemn practices as anticompetitive without any theoretical or empirical justification. In fact, many academicians who specialize in antitrust will probably feel that the disagreements I will emphasize are less important than our shared position both on the above issues and on the appropriateness of predicting the economic impact of business behavior on the assumption that relevant actors seek to maximize their shareholders' welfare. Nevertheless, this Review's focus can be justified on two grounds. First, my disagreements with Bork are far

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2. Professor Bork uses this expression to cover not only static cost reductions but also product improvements and expansion-inducing (dynamic) efficiencies that increase the profits of the firm in question. *See id.* at 7.

3. I will use the expressions "second best" and "second-best theory" to refer to the body of analysis that focuses on the fact that two imperfections may offset each other and the related conclusion that in an inevitably imperfect world more imperfections may be preferable to fewer.

from inconsequential. They have led me to very different legal and policy answers to almost every question *The Antitrust Paradox* explores. Second, Bork's lucid and lively exposition makes it unnecessary for me to cover once more our common ground. Readers who wish to traverse this territory can want no better guide than *The Antitrust Paradox* itself.

This Review has two parts. The first defines a series of concepts I have developed to illuminate the various monopolistic competition phenomena and second-best interdependencies that Bork and all other traditional antitrust analysts have ignored. The second uses these tools to criticize Bork's discussion of (1) the particular economic test of legality American antitrust laws contain; (2) the appropriate way to predict the allocative efficiency of any business practice; (3) the feasibility of oligopolistic, retaliatory, or predatory behavior; (4) the preconditions for a horizontal merger's reducing competition; (5) the operational definition of monopoly and the actual character of various kinds of allegedly "monopolizing" behavior; (6) the allocative efficiency of various vertical practices; and (7) the competitive impact and allocative efficiency of both conglomerate mergers and the toe-hold merger doctrine.

I. Some Introductory Vocabulary

In this Part, I will define four central sets of concepts. In particular, I will (1) define and distinguish between the effect of a business practice on competition and its impact on allocative efficiency, (2) differentiate several components (such as basic competitive advantages and oligopolistic margins) of the overall gap between price and marginal cost, (3) identify three types of factors that can enable firms to earn supranormal profits on their most profitable projects (distinguish, that is, three types of factors that influence the intensity of what I call quality-or-variety-increasing [QV] investment[4] competition[5]), and (4) define the types of QV investment misallocation antitrust policy can affect.

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4. QV investments are investments that function by changing the demand curve the investor faces. Typical QV investments are investments in additional or superior product variants, additional or superior distributive locations, or additional capacity or inventory (which increase the speed with which the investor can supply his customers at times of peak demand).

5. The phrase "QV investment competition" refers to the process in which firms compete away their supranormal profits by introducing new or additional product variants, distributive outlets, capacity, or inventory.

A. *Increasing Competition vs. Increasing Allocative Efficiency*

Roughly speaking, an event or legal doctrine will be said to increase competition if it creates more dollar gains than dollar losses[6] for the customers of both the firm involved and its product-market rivals (though not necessarily for each individual customer). This result could obtain either because the event or doctrine increases price competition (*i.e.,* lowers the prices such buyers have to pay for a given set of product-distributive variants) or because it increases QV investment competition (*i.e.,* increases the quality or variety of the products and services they are offered). In contrast, an event or legal doctrine will be said to increase allocative efficiency only if on balance it creates more dollar gains than dollar losses for *all* the various parties it affects. Obviously, then, since an event that benefits on balance the customers of both the firm involved and its product-market rivals (henceforth *R*s) may injure on balance the other parties it affects (*e.g.,* stockholders of various injured rivals or buyers of the goods that would have been produced with the resources used to increase the firm's unit output), there is no definitional guarantee that an event that increases competition may not decrease allocative efficiency or vice versa. Nor can one establish this relationship by citing the fact that allocative efficiency will be maximized if competition is everywhere perfect and various other so-called Pareto optimal conditions are met, for that fact has no bearing on the allocative efficiency of increasing competition, other Pareto imperfections, or both. In fact, although, as we shall see, various second-best arguments can be made for the allocative efficiency of pro-price competition policies both in general and in particular circumstances, increases in QV investment competition are far more allocatively suspect in our inevitably imperfect world. Hence, we must recognize the distinction between the allocative efficiency and competitive impact of a business practice or antitrust doctrine.

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6. The beneficiaries' dollar gains should be measured by the number of dollars they would have to be paid to make them as well off as they would be if the merger were executed (assuming that their receipt of the dollars would not affect their welfare indirectly — *e.g.,* by being financed by a tax on individuals who would otherwise have patronized them). The victims' dollar losses should be measured by the number of dollars they would have to lose to make them as bad off as they would be if the merger were executed (assuming that they would not be indirectly affected by the loss in question).

B. *The Components of a Firm's Price-Marginal Cost Gap*

Price theorists have always focused on the aggregate gap between a firm's price and its marginal cost (P-MC). However, in our monopolistically competitive world, in which product and locational differentiation are significant, we cannot analyze the competitive effects and allocative efficiency of business behavior or legal doctrines without distinguishing several components of the P-MC gap. To simplify my exposition, I will discuss only individualized pricing situations, in which sellers set separate prices with each of the buyers for whom they deal.[7] In particular, I will examine the gap between the individualized price actually charged by a best-placed supplier,[8] X, of some particular buyer, Y, and that seller's conventional marginal cost. I will distinguish two major and four minor components of this gap. The two major components of the P-MC gap are divided by the "highest nonoligopolistic price" (HNOP). This is the price that would maximize a best-placed seller's profits in a perfectly informed world if he could not profit from oligopolistic pricing. In other words, a best-placed seller's highest nonoligopolistic price is the highest price he could charge without being profitably undercut by any rival, assuming that the best-placed seller in question could not react to such undercutting.

In my vocabulary, the gap between such a firm X's highest nonoligopolistic price and actual price (P-HNOP) is its "oligopolistic margin" (OM). X's oligopolistic margin (and oligopolistic pricing) is "contrived" when he has tried to deter undercutting by threatening to sacrifice his interests in order to punish his rivals' noncooperation by retaliating or by promising to reward his rivals' cooperation by reciprocating (*i.e.*, by foregoing a profitable opportunity to undercut an OM the rival has charged). X's oligopolistic margin (and oligopolistic pricing) is "natural" when he can assume that his rivals will not undercut because they realize that his nonoligopolistic, profit-maximizing response

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7. Sometimes sellers post prices that apply across-the-board to all buyers interested in their products. In the text that follows, such situations will be referred to as across-the-board pricing contexts.

8. A seller X is said to be best-placed to supply a particular buyer Y if he could profit from supplying Y on terms that no one else would find intrinsically profitable to match. Obviously, since different buyers will have different product and locational preferences in our monopolistically competitive world, the fact that X is best-placed to serve some buyer $Y1$ implies little about the likelihood that he will be best-placed to supply other buyers $Y2 \ldots N$.

would make such conduct unprofitable.[9]

I also subdivide the gap between a best-placed seller's marginal cost and his highest nonoligopolistic price. In individualized pricing contexts, this gap reflects (1) the seller's "basic competitive advantage" (BCA) and (2) the contextual costs his closest rival would have to incur to beat his HNOP.

In my terminology, "basic competitive advantage" refers to the short-run position of a seller vis-à-vis a particular buyer he is best-placed to serve. More precisely, a best-placed seller's basic competitive advantage in his relations with his customer equals the amount by which that buyer prefers the best-placed seller's product or distributive variant to the offering of that seller's closest rival for the buyer's patronage, plus the amount by which the short-run conventional marginal costs the best-placed seller has to incur to supply this buyer fall below those of his closest rival for this buyer's patronage—*i.e.,* equals the sum of the best-placed seller's buyer preference advantage and his short-run marginal cost advantage.[10]

The contextual component of a best-placed seller's (*X*'s) P-MC gap reflects costs his closest rival must incur (because of the terms he would have to charge) to beat the best-placed seller's HNOP. Since price discrimination tends to encourage favored customers to engage in arbitrage, disfavored customers to intensify their bargaining, and the government or private parties to bring Robinson-Patman Act suits, rivals who charge their own customers supramarginal-cost prices must incur contextual marginal costs to charge *X*'s customers the discriminatory, low, marginal-cost prices necessary to beat *X*'s HNOP. The contextual component of *X*'s HNOP can also be described as the sum of *X*'s contextual marginal costs and his contextual cost advantage (CCA) over his closest rival. Best-placed sellers normally enjoy such CCAs because their HNOPs are normally less discriminatory than their closest rivals' matching offers. Hence, a best-placed seller's overall competitive advantage (OCA) usually exceeds his BCA (by an amount equal to his CCA).[11]

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9. In my opinion, this distinction between contrived and natural oligopolistic pricing has substantial legal significance. In brief, I believe that contrived oligopolistic pricing violates the Sherman Act while natural oligopolistic pricing does not.

10. Obviously, in individual cases, a best-placed seller's BCA may equal the difference between his product preference advantage and short-run marginal cost disadvantage or vice versa.

11. For an analysis of the across-the-board counterparts for these terms, see Markovits, *Predicting the Competitive Impact of Horizontal Mergers in a Monopolistically Com-*

C. *The Determinants of the Intensity of Quality- or Variety-Increasing Investment Competition*

Economists have generally assumed that the intensity of QV investment competition and price competition depend on identical factors. In fact, however, the determinants of the relationship between price and (conventional) marginal cost, on the one hand, and of the (nominal)[12] rate of return established firms can realize in equilibrium on their most profitable QV investment projects, on the other, differ substantially.[13]

In brief,[14] three sets of factors influence the intensity of QV investment competition. The first set contains the various barriers to entry that would deter the QV investment of the firm that would be the best-placed potential entrant to the "market"[15] at the entry-barring QV investment level. These barriers all deter entry by reducing the supranormal rate of return the potential entrant anticipates realizing after entry to a level below the rate the established firms realized before entry on their most profitable projects. More particularly, the profit-differential barrier to entry (π_D) reflects those factors that would reduce the new entrant's weighted average expected post-entry rate of return below the rate the established firms would expect to realize on their most profitable projects post-entry even if the threat of retaliation could be ignored. The risk barrier to entry (R) refers to those factors that increase the normal rate of return for the best-placed new entrant above its counterpart rate for the established firms on their most successful projects (*e.g.*, product variants or outlets). The scale barrier to entry (S) measures the extent to which

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petitive World: A Non-Market Oriented Proposal and Critique of the Market Definition, Market Share-Market Concentration Approach, 56 TEXAS L. REV. 587, 637-40 (1978) [hereinafter cited as *Horizontal Mergers*].

12. For the meaning and relevance of the word "nominal," see text following note 15 *infra*.

13. In part, such differences reflect the direct effect potential competition has on the intensity of QV investment competition. *See* Markovits, *Potential Competition, Limit Price Theory, and the Legality of Horizontal and Conglomerate Mergers Under the American Antitrust Laws,* 1975 WIS. L. REV. 658 [hereinafter cited as *Limit Price Theory*]. However, in part, they reflect the facts that in individualized pricing markets QV investment moves have more widespread effects than price moves, that in most markets they affect different groups of sellers than price moves, and that in all markets they are less reversible than price moves.

14. For a more complete set of definitions and illustrations, see *Horizontal Mergers, supra* note 11, at 660-73.

15. "Market" is in quotation marks to reflect the fact that none of my legal and policy proposals presuppose the possibility of defining markets in a nonarbitrary way. *See Horizontal Mergers, supra* note 11, at 595-602.

the best-placed potential entrant's entry will reduce everyone's rate of return. The retaliation barrier to entry (L) measures the extent to which the new entrant's expected rate of return over the full life of his investment is reduced by the possibility that his established rivals may retaliate against his entry.

The second set of such factors contains the barriers to expansion that would deter the QV investment of the established firm that would be best-placed to execute a QV investment if QV investment in the relevant market had reached the level it would contain in equilibrium if entry were precluded. Once more, analogous π_D, R, S, and L* barriers to expansion (where the asterisk indicates the hypothetical, entry-precluded assumption) account for the fact that this best-placed expander's expected, post-expansion, nominal supranormal rate of return will be lower than the rate the established firms would expect to realize absent expansion on their most profitable projects.

The third set of such factors relates to the fact that the actual rate of return such a best-placed expander will anticipate realizing on his expansion may differ from the nominal rate of return a conventionally kept set of books would indicate. Thus, to the extent that such an expander realizes that his failure to expand would not induce anyone else to add to his market's QV investment level, his expansion's actual profitability will be reduced by the amount of profits his new project takes from his old (by taking sales away from his original products or outlets or by inducing his rivals to lower their prices). That is, the best-placed expander will face a "monopolistic investment disincentive" (M*)[16] equal to the ratio of such avoidable damages to the size of the envisaged QV investment. (When in the more general case an expander realizes that his expansion will deter someone else from a QV investment that would be more damaging to his pre-existing capital than his own expansion, he will face a monopolistic incentive to expand.) In any case, within this framework, the intensity of QV investment competition (*i.e.*, the rate of return the established firms can realize in equilibrium on their most profitable QV investment projects) will be determined by the lower of $(\pi_D + R + S + L)_N$ at the entry-barring QV investment level and $(\pi_D + R + S + L^*)_E$

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16. In some circumstances, such an expander will realize that although none of his rivals would invest if he did not, some would expand if he makes a QV investment. In such situations, the expander in question is said to face an oligopolistic investment disincentive (0). In order to simplify my exposition, such 0 disincentives will be ignored in the text that follows.

+ M* at the entry-precluded, expansion-barring QV investment level, where N and E respectively stand for the relevant best-placed potential entrant and expander.[17]

D. *Three Types of QV Investment Misallocation*

Until recently, economists who analyze the optimality of the set of goods the economy produces rarely considered the possibility that an inefficient set of product or distributive *types* might be produced. In fact, except when so-called public goods[18] were involved, such economists considered only "relative unit output" (RUO) misallocation — the possibility that the economy might produce too many units of some goods and too few units of other goods that were still in production. Recently, however, economists have asked whether imperfections in price competition (and other Pareto imperfections) may cause the economy to produce the wrong set of product or distributive types even when public good problems do not arise. In fact, three types of such QV investment misallocation can be distinguished: intra-industry QV investment misallocation, inter-industry QV investment misallocation, and quantity-vs.-QV investment misallocation. In brief, intra-industry QV investment misallocation is present where a transaction-costless transfer of resources could increase allocative efficiency by changing the set of product or distributive variants some industry produced without changing the amount of QV investment it contained. Inter-industry QV investment misallocation is present where such transfer could increase allocative efficiency by increasing the QV investment (product variants, distributive variants, capacity, or inventory) in some industries

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17. Where $(\pi_D + R + S + L)_N$ is less than $(\pi_D + R + S + L^*)_E + M^*$ at the entry-preventing level, the entry-preventing level of QV investment is determinative because it is higher than the entry-precluded, expansion-barring QV investment level — *i.e.*, because the presence of potential competition will preclude the established firms from taking advantage of the ability they would otherwise have to restrict their own QV investments. On the other hand, where $(\pi_D + R + S + L^*)_E + M^*$ is less than $(\pi_D + R + S + L)_N$, at the entry-preventing level, the entry-precluded, expansion-barring QV investment level will be determinative because it is higher than the entry-barring QV investment level — *i.e.*, because the established firms' inability to restrict their QV investments will preclude them from taking advantage of the opportunities the existing barriers to entry present.

18. Although the term "public goods" has been used in other ways as well, I believe it is most usefully employed to refer to products whose marginal costs would be less than their average total cost at the output at which their demand and marginal cost curves would interesect if the other Pareto optimal conditions were fulfilled. Public goods cause problems in an otherwise Pareto optimal world because, if they are priced at their marginal cost, they will not be produced, while if they are priced at their average total cost, they will be underproduced.

and decreasing it in others. Finally, quantity-vs.-QV investment misallocation is present where such a transfer could increase allocative efficiency by causing the economy to produce more physical units of a less diversified, less conveniently distributed, less quickly delivered set of products (or vice versa) — *i.e.,* by producing a situation in which fewer (more) resources are allocated to QV investment uses and more (fewer) to uses that increase unit output.

This section has developed a series of concepts that I will now use to analyze Bork's position on most of the issues he addresses. Obviously, such a conceptual structure is never "right" or "wrong." Its value depends solely on its ability to facilitate the identification and solution of the problems it is used to analyze. I hope that the analysis that follows will enable me to carry the burden of proof that any proponent of a new vocabulary should be made to bear.

For the reader's convenience, the abbreviations used in this Review are here summarized.

BCA	Basic Competitive Advantage
BPA	Buyer Preference Advantage
CCA	Contextual Cost Advantage
CMC	Contextual Marginal Cost
ΔBS–	The reduction in buyer surplus generated by a particular marginal increase in a product's price
ΔSS+	The increase in seller surplus generated by a particular marginal increase in a product's price
ΔTS–	The reduction in transaction surplus generated by a particular marginal increase in a product's price
HNOP	Highest Nonoligopolistic Price
L	Retaliation Barrier (to entry or expansion)
M*	Monopolistic Investment Disincentive
MC	Marginal Cost
MLC	Marginal Allocative Cost
MLV	Marginal Allocative Value
OM	Oligopolistic Margin
OMC	Overall Marginal Cost
P	Price
QV	Quality-or-Variety-Increasing (investment)

R   Risk Barrier (to entry or expansion)
RUO   Relative Unit Output (misallocation)
S   Scale Barrier (to entry or expansion)
TSM   Transaction-Surplus-Maximizing (output)
π_D Profit-Differential Barrier (to entry or expansion)

II. MONOPOLISTIC COMPETITION, SECOND BEST, AND BORK'S LEGAL AND POLICY CONCLUSIONS

A. *The American Antitrust Laws' Particular Economic Test of Legality*

As I have already suggested, Bork argues persuasively that the American antitrust laws contain an economic test of legality. This section will analyze his more specific contention that since "the only legitimate goal of American antitrust law is the maximization of consumer welfare," the statutes must be presumed to use words like "competition" as "terms of art" that should be operationally defined in terms of "consumer welfare" — *i.e.*, that acts should be held to decrease competition or constitute monopolization or agreements in restraint of trade only if they decrease "consumer welfare." More precisely, since Bork uses "consumer welfare" itself as a term of art, equivalent to the applied welfare economist's phrase "allocative efficiency,"[19] this section will focus on the contention that acts should be held to violate the antitrust laws only if they create more dollar losses than gains.

I have two basic objections to Professor Bork's discussion of the antitrust laws' economic test of legality. The first goes to the substance of his contention that the antitrust laws were intended to foster allocative efficiency. Although I am persuaded by Professor Bork's arguments that the history, language, and structure[20] of the antitrust laws preclude construing the statutes to achieve various noneconomic (primarily political and social) goals, this

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19. Except for one lapse in which he equates increases in consumer welfare with an increase in *utility*, Bork specifies that any act that creates more dollar gains than losses increases "consumer welfare." R. BORK, *supra* note 1, at 297.

20. I am less persuaded by the argument Professor Bork derives from his assumption about the appropriate role for a judiciary to play in a democratic society — largely because I believe that at least in theory judges can balance competing considerations of significantly different character without reference to their own personal values. I should note that Professor Bork has taken this position against balancing in other contexts as well. *See, e.g.,* Bork, *Neutral Principles and Some First Amendment Problems,* 47 IND. L.J. 1 (1971).

conclusion does not imply that the laws were devised to promote allocative efficiency. Roughly speaking, I believe that the purpose of the American antitrust laws is to protect buyers from being injured by behavior undertaken- by sellers with the "intent" (Sherman Act)[21] or the effect (Clayton Act)[22] of reducing competition, in the sense of reducing the attractiveness of the offers against which the actors and sometimes their product-market rivals must compete when best-placed. As we shall see, this premise would lead to quite different legal tests from Bork's. Second, however, even if the American antitrust laws contained an allocative efficiency test, Bork's use of the phrase "consumer welfare" would distort this test. Although Bork's "consumer welfare" test is dollar-oriented and is not solely concerned with the position of the relevant actor's customers, "consumer welfare" has unjustified emotive force for those interested in the distribution of income, a force Bork could have avoided by calling his test an allocative efficiency test of legality. This description would also have facilitated his discussion of those vertical practices which clearly would injure the buyers they affect even if they were as allocatively efficient as he supposes.

Let me proceed, then, to describe the tests I believe the Sherman and Clayton Acts prescribe. In my opinion, the Sherman Act condemns conduct whose profitability was expected to depend on its tendency to reduce the attractiveness of offers against which the accused parties compete. For example, price-fixing agreements, horizontal mergers, and individual or joint acts of retaliation or predation would violate the Act if their participants would not have expected[23] to find them profitable but for their tendency to reduce the attractiveness of a rival's offer by inducing him to make less attractive bids or by eliminating him as an independent force in the marketplace.[24] Correlatively, a practice that

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21. Ch. 647, 26 Stat. 209 (1890) (as amended, 15 U.S.C. §§ 1-7 (1976)).

22. Ch. 323, 38 Stat. 730 (1914) (as amended, 15 U.S.C. §§ 12-27 (1976)).

23. Although this test is subjective, the relevant intent would probably be demonstrated most often through objective evidence.

24. More specifically, I would argue that § 1 should be interpreted to prohibit agreements whose profitability depended on their reducing the attractiveness of the offers their participants give to each other's customers while § 2 should be interpreted to prohibit single-firm or multi-firm conduct whose profitability depends on its reducing the attractiveness of the offers one or more innocent parties make to the customers of the accused. On this account, a price-fixing agreement would violate § 1, predatory or retaliatory behavior would violate § 2, and a horizontal merger could violate either § 1 (if its profitability depended on its reducing the competition the merger partners gave each other) and/or § 2 (if its profitability depended on its reducing the competition remaining rivals gave the merger partners).

reduced the attractiveness of rival offers would not violate the Sherman Act if its profitability were not expected to depend on its reducing the attractiveness of rival offers — if it were "ancillary" in this sense to some legitimate business purposes such as achieving what Bork calls "business efficiencies" or enabling a seller to take better advantage of a given demand-marginal cost position. In brief, this interpretation fits better with the language, criminal provisions, and tort antecedents of the Sherman Act and with the scheme of American regulatory policy, which recognizes the legitimacy of securing profitable positions by increasing efficiency and capitalizing on such positions by exploiting the resulting demand-marginal cost combination. Compared with Bork's, this interpretation has three further advantages: (1) it defines "ancillary" better than Bork's "primary effect" test;[25] (2) it explains why behavior that clearly injures the actor's customers (by removing consumer surplus) does not violate the Sherman Act despite its tendency to reduce consumer welfare in the most obvious literal sense; and (3) it accounts for: (a) the fact that the legality of an act that is anti-competitive in my sense could not be established by a demonstration that it would not misallocate resources in our worse-than-second-best world and (b) the fact that a misallocative act would not be said to violate the Sherman Act if its profitability did not depend on any tendency it had to reduce the attractiveness of the offers against which the actor had to compete (or, a fortiori, if it had no such tendency).

Admittedly, since the Clayton Act speaks of the effects of behavior rather than the intent of the relevant actors, the Sherman Act test should not be applied in Clayton Act litigation. In particular, with two possible exceptions, behavior covered by the Clayton Act should be said to violate its terms if and only if it reduces competition in the sense of reducing on balance the attractiveness of the offers against which best-placed suppliers must compete (including both the actor in question and his product-market rivals). On this interpretation, a horizontal merger would violate the Clayton Act if it reduced the attractiveness of the offers made by non-best-placed suppliers even if its profitability did not depend on any such consequence. Indeed, on this interpretation, the Clayton Act might even condemn a horizontal merger that did not reduce the attractiveness of the rival

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25. *See* R. Bork, *supra* note 1, at 136, 334.

offers the parties to the merger faced — *e.g.*, if the merger reduced the attractiveness of the offers the merger partners made to their rivals' customers or the merger partners' rivals made to each other's customers. The two exceptions I would read into this Clayton Act test are difficult to reconcile with the language of the statute. However, if the antitrust laws were devised to protect buyers from direct injury by illegitimate business behavior, a court might be authorized to condemn only those acts that do injure the relevant buyers by reducing the attractiveness of rival offers. In addition, one might (more problematically) argue that, given the legitimacy of obtaining a natural monopoly under American law,[26] the Clayton Act does not condemn practices that do injure buyers by reducing the attractiveness of the offers against which best-placed suppliers must compete if those practices do so by creating allocative efficiencies that induce inferior rivals to exit.

Economically literate lawyers rarely distinguish between the legality of a practice or act under the American antitrust laws and the desirability of a policy prohibiting the behavior in question (which they usually equate with the allocative efficiency of the policy concerned). Bork's discussion of the antitrust laws' tests of legality fits this surprising pattern. Although I am persuaded that the antitrust laws contain an economic test of legality, they should not be interpreted to condemn those acts and only those acts that it would be allocatively efficient to condemn. At least in part, my disagreement with Bork reflects my opinion that in our worse-than-second-best world, courts that seek to increase allocative efficiency often must condemn acts that are not anti-competitive and allow acts that are. Although I would probably support legislation to increase the allocative efficiency of the anti-trust laws, the courts are not authorized to interpret the law to achieve that goal. I suspect Bork would agree with this contention if he were persuaded that the connection between the allocative efficiency of prohibiting a particular practice and its competitive impact is as weak as I suppose. In any case, the tests I have proposed are both more forthright than Bork's "consumer welfare" test and more compatible with the language, historical antecedents, criminal provisions, and statutory environment of the American antitrust laws.

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26. That legitimacy is made manifest by the patent laws, the "superior skill, foresight, and industry defense" to Sherman Act prosecutions, and the judicial practice of arguing that condemned practices serve no legitimate business purpose.

B. *Predicting the Allocative Efficiency of Any Business Practice*

This section will explore the relevance of monopolistic competition and second best both for Professor Bork's analysis of the allocative efficiency of various business practices and for the appropriate way to analyze the allocative efficiency of alternative antitrust doctrines. In particular, this section (1) explains how supracompetitive prices distort resource allocation, (2) analyzes the two premises on which Bork bases his allocative efficiency predictions, (3) shows why — as Bork contends — second best probably would preclude the development of an allocative efficiency rationale for pro-competitive policies if — as Bork assumes — antitrust law could not affect the amount of resources allocated to producing quality and variety in different industries and in the economy as a whole, and (4) explains why second best does not preclude the development of an allocative efficiency rationale for antitrust law in a monopolistically competitive world, in which the set of product types the economy produces can be affected by antitrust policy — *i.e.*, examines whether and the extent to which the supracompetitive prices that individually can cause RUO misallocation, inter-industry QV investment misallocation, and quantity-vs.-QV investment misallocation will compound or offset each other in relation to each of these types of misallocation.

1. *The Misallocative Tendency of Supracompetitive Pricing*

Ceteris paribus, X's supracompetitive pricing will distort resource allocation by artificially reducing the private cost Y must incur to purchase the resources producer X would otherwise have used to produce his marginal unit of output below the allocative cost of Y's removing the resources from X (the allocative value of the foregone marginal unit of X's product X). Roughly speaking, the private and allocative cost of Y's bidding resources away from X diverge because of three relationships: (1) the private cost to Y of inputs (M) will depend on their marginal revenue product for X (the product of their marginal physical product in terms of X and the average marginal revenue X receives for the goods in question — $MRP_M = (MPP_{MX}) (MR_X)$); (2) the allocative cost to Y of using these resources will equal their marginal allocative product in X's hands (the allocative value of the sacrificed units of X = $MLP'_{MX} = MPP_{MX} (MLV_X) = MPP_X(P_X)$

since the marginal allocative value of X will normally[27] equal P_X); and (3) P_X will exceed MR_X whenever X's price is supracompetitive (unless X engages in perfect price discrimination down to the price level in question). Obviously, other things being equal, from the perspective of allocative efficiency, this divergence between the private and allocative cost of Y's bidding resources away from X will distort all of Y's choices that affect his purchases of resources that X would otherwise use. Thus, since the marginal cost to Y of producing marginal units of his product with X's resources will be less than the allocative cost of his doing so, X's supracompetitive pricing will tend, *ceteris paribus,* to cause Y to produce too many units of his product. Similarly, since the cost to Y of using X's resources to create a new QV investment or to take advantage of such an investment by producing units of the new product will be less than the allocative cost of his doing so, X's supracompetitive pricing will tend, *ceteris paribus,* to induce Y to introduce too many product variants or to operate too many outlets. Finally, since the private savings Y can achieve by discovering a new cost-reducing production technique that will free additional resources for uses by X will be less than the allocative savings he thereby achieves, X's supracompetitive pricing may tend, *ceteris paribus,* to induce Y to do too little production-process research; conversely, since the private cost to Y of taking resources from X to do such research will be less than the allocative cost of his doing so, X's supracompetitive pricing may also tend, *ceteris paribus,* to induce Y to do too much research. Having seen how supracompetitive pricing can misallocate resources, we can analyze Bork's method for predicting the allocative efficiency of any business conduct or antitrust doctrine.

2. *Bork's Two Predictive Premises*

Bork's allocative efficiency analysis has two premises: (1) any tendency a practice may have to decrease (increase) the unit output of a given product will almost always worsen (improve) relative unit output (RUO) allocation, and (2) privately profitable changes in a seller's product-service package will generally also be allocatively efficient. The first of these premises is incorrect, and the second ignores the most important issues raised

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27. The marginal allocative value of any given product is equal to its actual dollar value to its actual consumer plus any external benefits or minus any external costs his consumption of this good generates. Hence, $MLV_X = P_X$ if the relevant buyer is a non-monopsonistic consumer sovereign and his consumption of X does not generate any externalities.

by the ability of antitrust policy to affect the set of product types offered by the economy.

Bork recognizes that the general theory of second best at least calls the first premise into question. He responds to second best in three ways.[28] First, he dismisses the theory's relevance by arguing that the present antitrust laws do not authorize the courts to consider second best. Although I agree with this contention, it does not justify Bork's ignoring the theory's implications, since much of his book makes an ultimate policy case for antitrust regulation. Second, Bork tries to justify ignoring second best by arguing that the theory does not in itself indicate the probability that an anti-competitive event will improve resource allocation. Indeed, Bork says second best demonstrates only the possibility of such a result. Although the basic theory of second best obviously cannot by itself generate probabilities for specific cases, it is more useful than Bork seems willing to concede: in particular, basic second-best theory demonstrates that, unless one can devise an argument to the contrary, reductions in competition (or in Pareto imperfections in general) must be considered as likely to decrease as to increase RUO allocation (or resource misallocation in general). Fortunately, as I have argued elsewhere[29] and will suggest below, one can develop operational arguments that indicate when anti-competitive events will be likely to misallocate resources in our worse-than-second-best world. Third, Bork tries to handle second best by asserting that second-best arguments require one to make "judgments in gross" and "call for the end of antitrust policy."[30] Neither response is adequate. The first is irrelevant. As Bork himself often repeats, the cost and inaccessibility of relevant data mean that economic policy decisions must usually be based on judgments in gross. The second is both incorrect and irrelevant. It is incorrect because, as we shall see, even in our worse-than-second-best world various allocative arguments can be devised to support a general policy favoring price competition (and further arguments can be devised to support such policies in — roughly speaking — atypically monopolistic industries).

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28. *See* R. BORK, *supra* note 1, at 113-14.

29. *See* Markovits, *A Basic Structure for Microeconomic Policy Analysis in Our Worse-Than-Second-Best World: A Proposal and Critique of the Chicago Approach to the Study of Law and Economics*, 1975 WIS. L. REV. 950 [hereinafter cited as *Second Best*]; Markovits, *The Causes and Policy Significance of Pareto Resource Misallocation: A Checklist for Micro-Economic Policy Analysis*, 28 STAN. L. REV. 1 (1975) [hereinafter cited as *Checklist*].

30. R. BORK, *supra* note 1, at 114.

It is irrelevant because one cannot ignore an argument simply because its implications are devastating.

Unfortunately, although I do not think that second best destroys the case for pro-price competition policies, it does destroy Bork's initial premise that any conduct that decreases (increases) the relevant actor's unit output will increase (decrease) RUO misallocation (or can reasonably be assumed to do so). Diagram 1 illustrates my analysis. It contains three curves. MC_X indicates the private marginal cost the producer of product X must incur to produce successive units of his product. MLV_X indicates the marginal allocative value of X — the actual dollar value of successive units of X to their actual consumers plus or minus any external benefits or costs generated by their consumption of units of X. Our discussion will make the neutral assumption that $MLV_X = DD_X$, the demand curve for X — which indicates the price for which successive units of X could be sold. Finally, Diagram 1 also contains a marginal allocative cost curve for X (MLC_X), which indicates the allocative value of the units of those goods Y that would be produced if the marginal unit of X were not. By definition, X's optimal output will be determined by the intersection of $MLV_X = DD_X$ and MLC_X while X's competitive output (the output — OA — that will result if X's price equals its marginal cost — AE) will be determined by the intersection of $MLV_X = DD_X$ and MC_X. Therefore, X's optimal output will coincide with its competitive output if MLC_X equals MC_X. Thus, so long as X's initial price is not below its marginal cost, the assumption that MLC_X equals MC_X will assure Bork's conclusion that any event that reduces output will increase RUO misallocation. For example, if MLC_X equalled MC_X, an event that reduced X's output from OB to OC (by raising its price from BF to CG) would cause an additional FIJG in resource misallocation. But unfortunately, as we have seen, where the resources used to produce X would otherwise be used to produce some other good Y whose price exceeds its marginal cost, MLC_X will exceed MC_X. Correlatively, X's allocatively optimal output (which is determined by the intersection of MLC_X and MLV_X) will be lower than the output at which MC_X and DD_X intersect — OD in Diagram 1. Obviously, given this fact, an event that reduces X's output below the level at which MCx and DD_X intersect may improve, not worsen RUO allocation by bringing X's output closer to its allocatively optimal level. Thus, in Diagram 1, an event that reduces X's output by raising its price from BF to CG would improve RUO allocation by MLFG. In general, an event

that reduces X's output by raising X's price will not increase RUO misallocation unless it increases the absolute difference between the P/MC ratios of X and Y.[31] Clearly, then, so long as we look at material goods and services rather than leisure, there is no general reason to believe that unit-output-reducing events will increase the gap between the relevant product's actual and optimal outputs (that price-increasing events in X will increase the gap between X's and Y's P/MC ratios). Hence, Bork's premise that a unit-output-decreasing event will increase RUO misallocation must be rejected in our worse-than-second-best world.
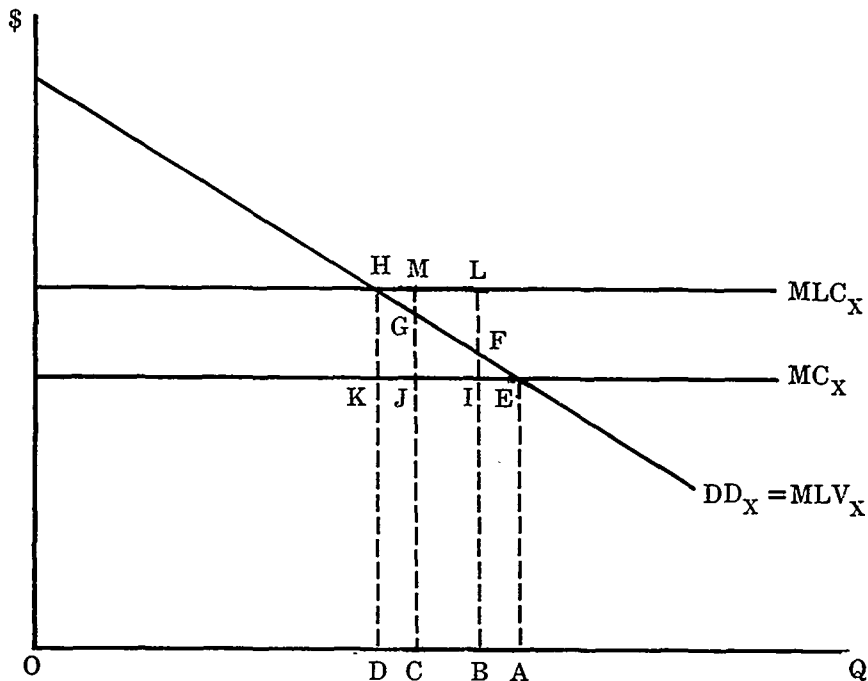

DIAGRAM 1

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31. At least, this result occurs if we assume that the total amount of RUO misallocation between X and Y increases with the amount by which such allocation would be improved by the production of one additional unit of the under-produced good (the marginal misallocation between X and Y). Thus, if we assume that X is under-produced and that all Pareto imperfections other than imperfect competition can be ignored, this marginal misallocation will equal $MLV_X - MLC_X = MLV_X - MRT_{Y/X}(MLV_Y) = P_X - (MC_X/MC_Y) P_Y = MC_X (P_X/MC_X - P_Y/MC_Y)$. Since most of the events with which we are concerned will not affect MC_X (which appears to be constant in most industries over significant variations in output), the effect of an event on the marginal RUO misallocation between X and Y will generally depend on its impact on the absolute difference between their P/MC ratios. (A more sophisticated analysis would have to reflect the P/MC ratios and relative importance of X's and Y's complements.)

Let us turn now to Bork's second premise — that it will be allocatively efficient for a firm to introduce any product type it finds profitable. There are three problems with this premise. First, even if, like Bork, we focus on a firm's decision to produce one product variant rather than another, and even if we assume that the new product type is no more expensive than its predecessor, a privately profitable product shift may be allocatively inefficient. Such a shift might misallocate resources — *i.e.*, might cause intra-industry QV investment misallocation — if the production or consumption of the new product generates more externalities, if its sale generates less consumer surplus, or if it is produced with resources that would otherwise be used to increase the unit output of goods that are priced more monopolistically than the goods˜that were produced with the resources released from the production of its predecessor. Admittedly, however, given the cost of obtaining the relevant data, the absence of any systemic bias favoring the substitution of such new products, and the low probability that such differences in externalities, consumer sovereignty, or factor market competitors would cause such misallocation, Bork's presumption probably makes good policy sense in the situation described.

Unfortunately, the second problem with Bork's presumption is far more serious. If the new product variant costs more to produce than its predecessor, there probably is a systemic bias favoring its introduction — *i.e.*, a systemic tendency to misallocate resources by substituting more expensive for less expensive product variants. In brief, this follows from our conclusion that the private cost of the additional resources used to produce the more expensive variant will be less than their allocative cost to the extent that they are withdrawn from the production of goods whose prices exceed their marginal costs. Although one can debate the practicability of using the antitrust laws (or tax laws) to prevent such misallocation, Bork's presumption is, in this context, problematic.

Third, and finally, I am positive that Bork's presumption should not be applied to situations in which sellers are introducing additional product variants, capacity, or distributive outlets rather than substituting new ones for old. In fact, Bork — like virtually all economists — never asks whether antitrust affects the extent to which our economy generates quantity-vs.-QV investment misallocation and inter-industry QV investment misallocation. As I have argued elsewhere in some detail and will suggest in a moment, these two types of misallocation are probably

both more substantial and more remediable than the kinds of relative unit output (RUO) misallocations on which Bork and virtually all other contemporary economists focus. At a minimum, the distortions that produce such misallocations would make me suspect that an additional product variant would probably be misallocative even if privately profitable — particularly if (speaking roughly) the new variant competed primarily against products with atypically high P/MC ratios.

In short, neither of the two premises on which Bork bases his allocative efficiency predictions is satisfactory. The first is simply incorrect, and the second is both incorrect and too restricted in its coverage.

3. *Antitrust, Second Best, and RUO Misallocation*

As I have already suggested, Bork appears to fear that on my interpretation second best would preclude an allocative efficiency rationale for antitrust. I suspect Bork's fears would be justified if, as he implicitly assumes, antitrust could not improve top-level allocation by changing the amount of product variety, distributive variety, and speed of service various industries and the economy as a whole offer.

To see why, let us analyze the ability of an anti-price-fixing statute to improve RUO allocation. Since, as we have seen, an individual price fix in X will worsen inter-industry RUO allocation only if it increases the difference between P_X/MC_X and its weighted average counterpart for X's competitor Y, there is no particular reason to suppose that a universal prohibition of price fixing would improve inter-industry RUO allocation. Moreover, it may not even be possible to devise a more selective price-fixing statute that would improve inter-industry RUO allocation. Admittedly, since the average P/MC ratio of the distant competitors of any product probably equals the average P/MC ratio in the economy, one might argue for prohibitions of price fixing by firms with higher-than-average P/MC ratios by pointing out such a rule's tendency to improve RUO allocation among distant competitors. However, I doubt that many resources flow between such distant competitors. Moreover, although the RUO resource flows among moderately close competitors are clearly much larger, I doubt that they support the kind of crudely selective policy now under consideration. Thus, if — as I assume — products that are often well-placed to obtain the patronage of the same buyers tend

to have similar P/MC ratios,[32] prohibitions of price fixing by firms
with higher-than-average P/MC ratios would not be likely to im-
prove RUO allocation by increasing the deterred price fixers' unit
outputs and decreasing their moderately close competitors' (by
reducing the former's P/MC ratios to levels that are closer to the
latters'). Hence, I doubt that one could develop a strong alloca-
tive case for this kind of crudely selective price-fixing prohibition
if such a policy could not affect the set of product types produced.

Nor could one make a strong RUO allocation case for more
refined, selective policies that prohibited price fixing by firms
whose P/MC ratios are higher than their moderately close com-
petitors'. At least, this conclusion is implied by my assumption
that close competitors tend to have similar P/MC ratios. This
assumption is critical because it suggests both (1) that there is
not much RUO misallocation among moderately close competi-
tors in the first place and (2) that refined and costly data would
be needed to determine whether a given prohibition would be
likely to reduce the absolute difference between the relevant
P/MC ratios. Accordingly, if antitrust could increase allocative
efficiency only by improving inter-industry RUO allocation, one
would be hard put to establish an allocative rationale for prohibi-
tions of price fixing. In second-best language, this conclusion
would be attributed to the fact that the major Pareto imperfec-
tions that are relevant for the analysis of RUO misallocation (the
economy's various supracompetitive prices) are offseting and
my assumption that the offsets in question are relatively perfect.

Admittedly, even if antitrust could not improve resource al-
location by changing the set of products produced, one might still
base an allocative rationale for price-fixing prohibitions on their
tendency (1) to reduce the undercutting and retaliation that can
cause intra-industry RUO allocation, (2) to improve labor-leisure
allocation, (3) to redistribute income in a more allocatively effi-
cient direction, (4) to decrease present-vs.-future consumption
misallocation, (5) to reduce the kind of production-optimum
misallocation caused by underinvestment in production-process
research, and perhaps (6) to reduce total transaction costs.

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32. There are several reasons to believe in such a correlation: (1) since goods that are
competitive will tend to be differentiated to similar degrees, buyers who favor them may
tend to have similar preferences for them over their closest competitor (so that their
producers enjoy similar BCAs); (2) since goods that are competitive will tend to be distrib-
uted in similar fashions, their industries may be similarly "concentrated" (so that their
producers are similarly placed to contrive oligopolistic margins). Although obvious
counterexamples can be posed (oil and coal), I do believe that such a correlation exists.

However, I doubt the prospects for justifying price-fixing statutes in this way.[33]

Obviously, this analysis also speaks to antitrust's ability to improve resource allocation by prohibiting anti-competitive mergers. In fact, our previous conclusions apply with but one qualification: since even anti-competitive mergers may reduce the merger partners' fixed and marginal costs, the prospects for an allocative rationale for horizontal mergers are weaker than those for price-fixing prohibitions.[34]

In short, since MC does not equal MLC in our worse-than-second-best world, the prospects for developing an allocative rationale for various kinds of pro-price-competition policies would not be good if such regulations could not affect the amount of resources devoted to increasing quality and variety in various industries and in the economy as a whole. Although this conclusion is consistent with Bork's horizontal-merger policy recom-

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33. For a discussion of all these points, see *Checklist, supra* note 29.

34. Since Professor Bork bases his conclusions about the desirability of prohibiting horizontal mergers on Oliver Williamson's welfare trade-off analysis of a price-increasing, cost-reducing horizontal merger, it may be useful to illustrate the relevance of second best by examining its significance for the Williamson analysis. *See* R. BORK, *supra* note 1, at 107-10 (summarizing Williamson, *Economies as an Antitrust Defense: The Welfare Tradeoff,* 58 AM. ECON. REV. 18 (1968)). Diagram A has been devised to illustrate our analysis of the kind of event on which Williamson focused: a horizontal merger in industry X that raised the price of X from AG to BH and reduced its output from OA to OB (and thereby increased the output of some competitive good Y) while decreasing the marginal cost of producing X from MC_1 to MC_2 (from OD to OC). According to Williamson, the allocative efficiency of such a horizontal merger will depend on whether the misallocation he associates with the reduction in X's output and increase in Y's is outweighed by the allocative efficiencies he associates with the reduced private cost of producing X. At least if we focus on the supracompetitive character of most goods' prices, second best will cut against antitrust intervention in Williamson's calculus both by reducing the RUO misallocation such an output-reducing merger is likely to produce and by increasing the allocative value of the private cost reductions it effectuates. Thus, since Williamson assumes that MLC = MC, he argues that the merger portrayed in Diagram A would cause HGMK in RUO misallocation if it did not generate any efficiencies. As we have seen, however, since MLC will exceed MC where P_Y exceeds MC_Y, the merger-induced reduction in X's output from OA to OB may not have such a negative impact on RUO allocation. In fact, on the assumptions manifest in Diagram A's construction of $MLC_1 > MC_1$, the lost units of X's output would actually have been associated with RUO misallocation of JIGH pre-merger — *i.e.* the merger-induced reduction in X's input will improve RUO allocation by JIGH. Moreover, second best also suggests that Williamson has underestimated the allocative value of the cost reductions generated by such mergers. Once more, Williamson's results are distorted by his assumption that MC equals MLC. In fact, however, as we have seen, where P_Y exceeds MC_Y, a given private cost reduction that enables X to free some resources for use by Y will generate an even larger allocative gain — *i.e.*, MLC_1 will exceed MLC_2 by more than MC_1 exceeds MC_2. Thus, in Diagram A, $MLC_1 - MLC_2 = OF -$ OE exceeds $MC_1 - MC_2 = OD - OC -$ *i.e.*, the allocative savings, FJRE, that the merger will generate exceed the private savings, DKLC.

mendation, it does undercut his strong support of anti-price-fixing legislation. In fact, however, as we shall now see, in our monopolistically competitive world in which the amount of product differentiation, distributive differentiation, and speed of service can be affected by antitrust policies, it is possible to develop an allocative rationale for selective or indeed even universal pro-price-competition policies by focusing on their ability to influence the amount of QV investment in various industries and the economy as a whole.

4. *Second Best, Pro-Price-Competition Policies, and QV Investment Misallocation*

This section will explain why it should be possible to devise pro-price-competition policies that will increase allocative
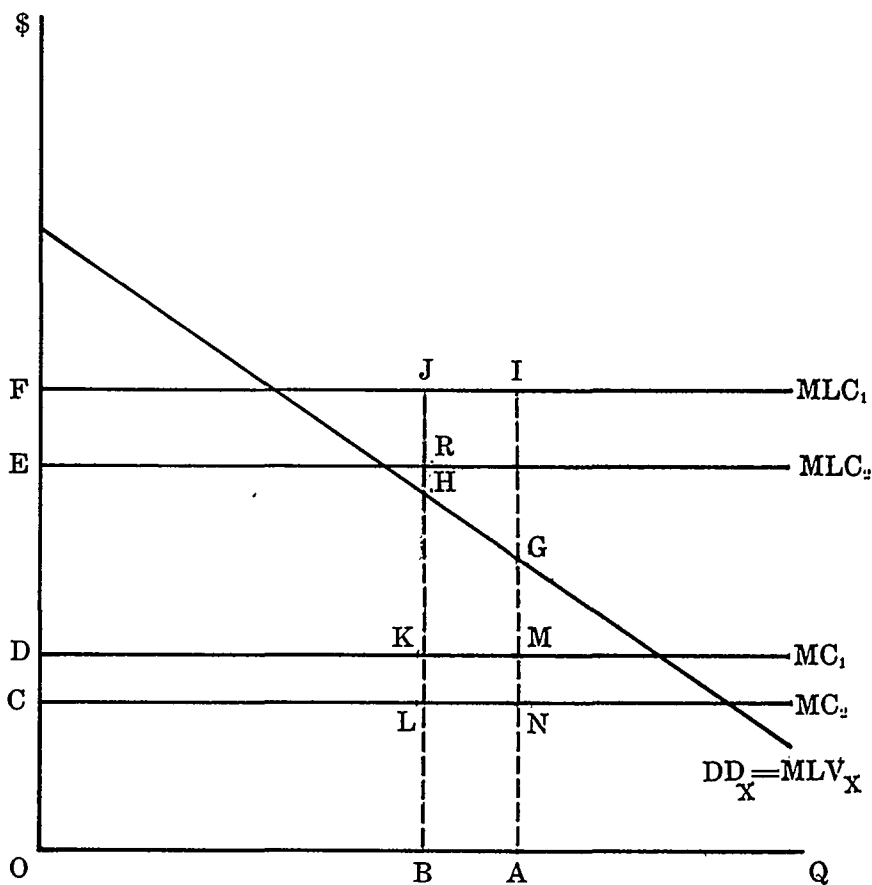

DIAGRAM A

efficiency by affecting the amount of resources allocated to various QV investment uses both in particular sections of the economy and in the economy as a whole. It will begin by analyzing why second best does not preclude such grand conclusions where QV investment misallocation is concerned. As we saw, second best is particularly damaging to the RUO case for antitrust interventions because where such misallocation is concerned the relevant imperfections in price competition not only are offsetting but probably tend to be quite perfectly offsetting. As we shall see, however, the imperfections in price competition that are relevant for inter-industry QV investment misallocation are far less perfectly offsetting than their counterparts for RUO allocation (among moderately close competitors) while the imperfections in price competition that are relevant for quantity-vs.-QV investment misallocation are actually compounding.

Let us examine each of these relationships in turn. Obviously the imperfections in price competition that are relevant for RUO misallocation are those that relate to the two products—say X and Y—between which consumers choose. As we have seen, these imperfections will have offsetting effects in relation to RUO misallocation. Thus, since Y's supracompetitive price reduces X's optimal output below the volume at which $DD_x = MC_x$ by raising MLC_x above MC_x, it will offset what would otherwise be the tendency of X's supracompetitive price to cause X to be under-produced. Moreover, as we saw, since most unit-output flows probably take place between close competitors and since close competitors probably tend to have similar P/MC ratios, the offsets will probably often be close to perfect.

By way of contrast, although the effects of the supracompetitive prices that are relevant for inter-industry QV investment misallocation are offsetting, they are not likely to be so perfectly offsetting. The supracompetitive prices that are relevant for inter-industry QV investment misallocation (say between industries X and A) are the prices that would be charged by the product market rivals $X1 \ldots N$ and $A1 \ldots N$ of the marginal QV investors (X^* and A^*) in the two industries. This relationship reflects the fact that X^* and A^* either will take or can be treated as if they will take the resources they use to produce their new products from those rivals whose former customers their new products will obtain. Thus, since X^* will take most of his customers from $X1 \ldots N$, $X1 \ldots N$'s supracompetitive prices will artificially inflate the profits X^* can make through using this QV investment in X, rather than abandoning it, by artificially deflat-

ing the private cost to X^* of the unit-output-increasing resources he must combine with his QV investment to produce units of his variant X^*. On the other hand, since by assumption the cost to X^* of creating his QV investment will equal the profits A^* could realize by using his QV investment (the value of the alternative QV investment to A^*), the same argument implies that $A1$ . . . N's supracompetitive prices will artificially deflate X^*'s incentive to make a QV investment by artificially inflating the profits A^* can make by using his alternative QV investment (by artificially deflating the cost to A^* of the unit-output-producing resources he would combine with his QV investment). Hence, like their RUO counterparts, the supracompetitive prices that are relevant for inter-industry QV investment misallocation will also tend to produce offsetting distortions. However, the offsets in question are likely to be far less perfect in this QV investment context. In part, this conclusion reflects the fact that X^* and A^* are far less likely to be close competitors than X and Y — that inter-industry QV investment flows are not likely to take place between close competitors, who tend to have similar P/MC ratios. To see why, note that although an event that increases the unit output of steel (*e.g.*, a reduction in steel's price) is likely to reduce the unit output of its close competitor aluminum, an event that increases QV investment (capacity) in steel (*e.g.*, a price increase in steel) is likely to increase QV investment in aluminum as well (since an increase in steel's price will tend to increase profits in the aluminum industry). In part, however, this conclusion reflects the fact that the net affect of $X1$ . . . N's and $A1$ . . . N's supracompetitive prices on X^*'s QV investment decision will depend not only on the respective P/MC ratios but also on the effective tax rate applied to business earnings in the two industries and the sales to QV investment ratios for X^* and A^*.[35] This conclusion also reflects the fact that inter-industry QV investment allocations can be caused by a large number of other factors that distort individually the profits any given industry's marginal QV

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35. If we ignore externalities, factor taxes, and other market imperfections, the distortions affecting the use of the marginal QV investment in industry X, (DU/QV_X), are equal to $[1\text{-}T][([P\text{-}MC]/P)(P\dot{Q}/QV)\text{-}CS/QV\text{-}(M+O)\Delta I/QV]\text{-}T(LV/QV)$ where T stands for the effective tax rate applied to the profits generated by the marginal QV investment in X, (P - MC)/P stands for the average (P - MC)/P ratio of those goods that lose sales to the new product (roughly the ratio in industry X), PQ stands for X's marginal QV investor's sales (price times quantity), QV stands for the size of his QV investment, CS stands for the consumer surplus the sale of his new product will generate, (M + 0) ΔI: stands for the monopolistic or oligopolistic investment disincentives facing X's marginal QV investor, and LV stands for the allocative value of the marginal QV investment in X. For a fuller discussion, see *Second Best, supra* note 29, at 1015-29.

investors would realize by using his QV investment. Obviously, these results imply that inter-industry QV investment may be both more substantial and more detectable than its RUO counterpart. In particular, since marginal QV investors in industry X will probably withdraw resources from QV investment uses in many industries that have average distortions, industry X will tend to have relatively too much (little) QV investment if the rate of return its marginal QV investors can realize by using their completed QV investments is artificially inflated more (less) than its weighted-average counterpart in the economy as a whole. Although this conclusion does not provide a rationale for a universal pro-price-competition policy, it does support a crudely selective policy of increasing price competition in industries in which the profitability of using a QV investment is artificially inflated to a greater-than-average extent (in which DU/QV is greater than average).

Moreover, the supracompetitive prices that are relevant for quantity-vs.-QV investment misallocation actually produce compounding effects. The prices that are relevant in this context are those charged by the product market rivals $X1 \ldots N$ of the marginal QV investor X^* and those charged by X^*'s factor-market rival B (whose unit output will be reduced if X^* creates his QV investment). As we have seen, $X1 \ldots N$'s supracompetitive prices will tend to induce X^* to make a QV investment by artificially inflating the profits he can make by using his completed QV investment (*e.g.*, by producing units of his newly designed and promoted product) while B's supracompetitive price will tend to induce X^* to create a QV investment (to design and promote a new product) by artificially reducing the cost he has to incur to do so (by reducing the private cost of X^*'s bidding the necessary resources away from B below the allocative cost of his doing so). Since, then, all the relevant supracompetitive prices artificially inflate the profitability of using resources to create QV investments, our analysis implies both (1) that too much of the economy's resources are allocated to QV investments and (2) that pro-price-competition policies will virtually always increase allocative efficiency by reducing the resources allocated to QV investment.

In short, in my opinion, Bork's failure to deal with monopolistic competition has caused him to ignore the best allocative arguments for universal or crudely selective pro-price-competition policies in our worse-than-second-best world. But though I do believe that antitrust policies can be justified in

terms of their effects on QV investment, this rationale leads to somewhat nontraditional policy conclusions. For example, the preceding analysis implies (1) that the desirability of a given intervention will increase with DU/QV rather than with P/MC and (2) that pro-QV-investment competition policies may be allocatively undesirable since they will always exacerbate quantity-vs.-QV investment allocation by increasing QV investment and will normally worsen inter-industry QV investment allocation as well (since they will tend to apply primarily in industries in which DU/QV is higher than average). However, although one might also support such a policy for purely distributive reasons, I am convinced that a well-designed antitrust policy can be justified by its impact on allocative efficiency in our worse-than-second-best world.

C. *Predatory and Oligopolistic Pricing*

This section will analyze Bork's conclusions about the importance of predatory and oligopolistic pricing. Bork argues that predatory and oligopolistic pricing would be unprofitable even if they were not illegal; I believe that both are far more profitable than Bork suggests. At least in part, our disagreement derives from my rejection of two assumptions Bork has implicitly adopted: (1) the pre-monopolistic competition assumption that all firms that are well-placed to obtain the patronage of any buyer will be equally well-placed to obtain his patronage and (2) the assumption that any seller who wishes to engage in predatory price-cutting or to react to his rivals' responses to his oligopolistic price must do so across the board — *i.e.*, by changing the price he charges all the customers with whom he deals.[36]

In predatory pricing, a seller X lowers his prices sufficiently to force a rival victim V to exit in circumstances in which the relevant price reductions would not have been profitable but for their tendency to drive V out of business. Bork stresses that predatory price wars are at least in part wars of attrition won by the last firm to use all its reserves. Since Bork assumes that each firm's reserves will be proportionate to its market share, he concludes that the successful predator must inflict proportionately more losses on his victim (relative to their respective sizes) than

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36. Professor Bork does not realize the extent to which his conclusions would be altered in an individualized pricing world if nonmarginal cost pricing were introduced. *See* R. BORK, *supra* note 1, at 149.

on himself. Realistically assuming that the predator will tend to be larger than its victim, Bork shows that under certain conditions, predation will not be profitable because the predator will bear proportionately more costs than his smaller victim.[37] Bork's argument presumes that the predator must reduce his prices across the board and that his rivals' prices would equal their marginal costs in the absence of predation — *i.e.*, that the predator's victims would enjoy neither BCAs nor OMs (on their marginal sales) in the absence of predation. Unfortunately, when these conditions are not fulfilled, large predators can often inflict the necessary harm on their victims at an absolutely lower and not just a proportionately lower cost to themselves. To see why, suppose (1) X can lower his price selectively to his victim's (V's) customers and (2) V enjoys significant BCAs. In this case, X can take away each of V's customers whom X is second-best-placed to serve at a direct cost[38] of one cent[39] while X can take away those of V's customers for whom he is not V's closest rival at a cost of one cent plus the amount by which X is worse-than-second-best placed.[40] On the other hand, the harm X can inflict on V for stealing one of V's customers equals the BCA V enjoyed in his relations with that customer.[41]

Thus, a seller who is often one of the best-placed competitors of a rival who enjoys significant competitive advantages may be able to deprive his victim of substantial and critical[42] profits rela-

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37. *See id.* at 147-55.

38. I will ignore the contextual costs of various pricing strategies throughout this section.

39. Assume, for example, that there are no contextual costs, that V's and X's marginal costs are both one dollar, and that V enjoys a buyer preference advantage of ten cents in relation to the relevant customer Y. If X is V's closest rival, he will be able to steal Y with a price that is eleven cents below X's HNOP of $1.10 — *i.e.*, with a 99¢ price that is one cent below his own marginal costs.

40. Thus, if in the above example Z was V's closest competitor, X also had one dollar cost, but V had a twelve cent buyer preference advantage over X, then X could not steal Y without offering him a price of 97¢ (thirteen cents below V's HNOP and three cents below X's own marginal cost).

41. In our example, this is the ten cent profit V would have realized at his HNOP. The above analysis assumes that V is not charging oligopolistic prices.

42. I should note that the fact that the victim enjoys large BCAs (so that the predator's harm inflicted to cost incurred ratio will be relatively high for some levels of harm inflicted) does not imply that the predator will have to inflict a great deal of harm to drive his victim V out in the long run. *Ceteris paribus,* victims will exit if they realize subnormal returns on their operations. Thus, if V expects predation to continue indefinitely, the critical amount of profits will be the amount of supranormal profits he realized pre-predation: obviously, the sum of a number of large BCAs may still not constitute a large amount of supranormal profits on V's investment. I should also note that the speed with which such a V will exit will also depend on how soon he will have to renew his plant and

tively cheaply.[43] Hence, predatory pricing may be profitable, at least where (1) the presence of the predator's victim substantially reduces the predator's profits[44] and either (2) the victim is better placed to operate in the market than any potential competitor would be to enter the market or any other established firm would be to expand its QV investments[45] or (3) the victim is substantially more harmful to the predator than his replacement seems likely to be.[46]

Bork also believes that oligopolistic pricing will not take place without overt collusion and that overt collusion among oligopolists frequently breaks down.[47] Accordingly, although favoring vigorous attacks on price fixes when they are discovered, he denies that deconcentration policies or highly restrictive merger rules can be justified by their effect on oligopolistic pricing. Although these positions are consistent with his analysis of the cost of predation,[48] Bork bases them primarily on (1) various inadequacies he sees in traditional oligopolistic price theory, (2) the absence of empirical evidence supporting the view that traditional oligopolies practice oligopolistic pricing, and (3) various types of empirical evidence gleaned from antitrust cases. Neither Bork's arguments nor his conclusion are persuasive to me; natural, tacitly contrived, and overtly contrived oligopolistic pricing are all greater problems than Professor Bork supposes.

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equipment and how much he can realize by selling to alternative users. (Obviously, however, X will not benefit if V sells out to someone who will simply duplicate V's operations.)

43. *I.e.*, the seller will tend to have a harm to cost ratio for effective retaliation that is far above one. Obviously, the predator will minimize the cost of his retaliation by stealing those customers in relation to whom this harm to cost ratio is highest.

44. *E.g.*, where the victim was often the predator's closest competitor by a substantial amount.

45. *I.e.*, the victim's QV investment will not be replaced: since in our monopolistically competitive world, a new entrant or expanding established firm may not be able to recreate or match the established victim's managerial team, product reputation, or distributive system, ease of entry will not always be "symmetrical with ease of exit," as Bork supposes. R. BORK, *supra* note 1, at 153.

46. Admittedly, Professor Bork's skepticism about the significance of predatory pricing largely reflects the paucity of documented cases of such behavior and his doubts about the feasibility of distinguishing predatory behavior from legitimate aggressive price competition. *See id.* at 154-55.

47. *See id.* at 181.

48. Which implies that oligopolistic pricers who had to rely on retaliation to secure their rival's cooperation would have to incur prohibitive costs to do so.

Bork's theoretical attack on oligopoly theory focuses on its prediction that oligopolists will substitute a high rate of product differentiation for price competition.[49] Bork argues that "[i]deally, from the oligopolists' point of view, products should be identical"[50] and that "[c]onventional oligopoly theory ought to predict a lessening of product competition, just as it predicts a lessening of price competition.[51] He then attacks such a re-formed oligopoly theory by pointing out that it cannot account for the substantial product rivalry often found in oligopolistic markets. However, maximizing oligopolists would not produce identical products, and product rivalry (QV investment competition) might well coexist with oligopolistic pricing. Thus, although product standardization may facilitate oligopolistic pricing, it will probably not be ideal from the oligopolists' perspective, since where consumers value diversity, standardization will reduce the profits the oligopolists' price cooperation can generate. Moreover, product rivalry (QV investment competition) may be intense where oligopolistic pricing is being practiced, since the presence of effective potential competitors may prevent the established firms from restricting QV investment in their markets without eliminating their incentives or ability to secure oligopolistic margins.[52] Hence, oligopolistic price theory would not be disconfirmed by active product and locational rivalry in conventional oligopolistic markets — *i.e.*, in concentrated markets, in which relatively few sellers have very high market shares. As we shall see, a more sophisticated oligopolistic price theory — one taking monopolistic competition into account — would not in any case suggest a strong or highly significant cross-market correlation between the incidence of oligopolistic pricing and the concentration of traditionally defined markets.

Obviously, this last conclusion also undercuts any possible significance of the failure of the various rate of return versus concentration studies to produce consistent, strong correlations. Such concentration rate of return studies would have no significance even if oligopolistic price theory did suggest such a correlation between market price structure and oligopolistic margins, for, in our monopolistic competitive world, rates of return will

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49. *Id.* at 187.

50. *Id.* at 188.

51. *Id.* at 187.

52. For a fuller discussion of the differences between the determinants of price and QV investment competition, see *Horizontal Mergers, supra* note 11, at 687 n.186.

depend on the intensity of QV investment competition, which will not correlate well with the profitability of oligopolistic pricing.[53] Although, obviously, I sympathize with Professor Bork's desire for evidence, I doubt we can test oligopolistic price theory in the real world. Thus, even if oligopolistic pricing theory did imply a correlation between concentration and OMs, we could not test it in the other "straightforward" way that has been tried — *viz.*, by doing a cross-industry study of the relationship between (P-MC) and concentration — for increases in concentration would probably lead to increases in (P-MC) even if they did not raise OMs (since they would be associated with increases in BCAs in any case). In the end, then, one's estimates of the importance of oligopolistic pricing may have to depend both on one's experience and on the results of a theoretical analysis of the profitability of such pricing.

Professor Bork's conclusions that oligopolistic pricing cannot occur unless it is overtly contrived are based on "[e]vidence supplied by antitrust cases" that "(1) a large price drop occurs when even one firm appears to challenge an established monopolist; (2) oligopolists are frequently discovered in overt collusion; and (3) even overt collusion among oligopolists frequently breaks down. . . ."[54] For several reasons, I find this evidence unpersuasive: (1) the type of one-firm challenge Bork describes would clearly decrease prices by reducing BCAs even if it did not affect OMs and (2) the existence of numerous instances of overt and unsuccessful collusion is not inconsistent with the existence of many more cases of successful oligopolistic pricing of all sorts (natural, tacitly contrived, and overtly contrived). Although my experience is much more limited than Professor Bork's, it does suggest much more pessimistic conclusions than his.

My belief in the empirical importance of oligopolistic pricing primarily reflects my theoretical analysis of the profitability of such pricing. In fact, my analysis suggests that in some circumstances, sellers can obtain oligopolistic margins without incurring any costs. Thus, sellers who can rely on the fact that they would find it possible and directly profitable to beat any undercutting

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53. For an elaboration of this point, see Markovits, *A Response to Professor Posner,* 28 STAN. L. REV. 919, 943-44 (1976). Bork attributes high rates of return to superior efficiency. *See* R. BORK, *supra* note 1, at 181. However, if the number of efficient firms that did not face high (π_D + R) barriers was sufficient to preclude each from confronting (M + O) disincentives, their own QV investment competition would prevent them from realizing supranormal returns.

54. R. BORK, *supra* note 1, at 181.

offer a rival chose to make to their customers may not need to deter their rivals from undercutting by incurring the cost of retaliating against their undercutters or reciprocating to their cooperative rivals. In particular, in individualized pricing contexts, sellers will be able to practice oligopolistic pricing naturally whenever (1) the strategic and mechanical cost[55] of changing their initial bid is less than the profits they would have realized *ab initio* at the reduced price and (2) buyers are sufficiently likely to give their best-placed suppliers a chance to rebid to make their second-best-placed suppliers reluctant to incur the mechanical and strategic costs of calculating and communicating an underbid.[56]

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55. In my terminology, the strategic costs of such a price change are the costs it generates for a seller by angering customers who already have bought his product at the recently announced higher price (and who therefore may refuse to buy the product in the future, irrational as that may seem, or may make negative statements about the product's general quality to other potential buyers) and/or by inducing customers to respond to any price changes he should effectuate in the future by delaying their purchases in the expectation that, in time, these prices also will be reduced. The mechanical costs of changing a newly announced price are the cost of communicating the change to one's sales organization as well as the cost of physically retagging the goods or changing some associated advertising. I should note that in across-the-board pricing contexts a seller may reduce both the strategic and mechanical costs of such price changes by making premature price announcements, which will enable him to change his originally announced price before he has tagged his products or made any sales if his rivals do not lock themselves into satisfactory price responses.

56. Thus, the ability of a seller to obtain a natural OM will increase with the costs its closest rival has to incur to calculate and make its bid. I should note that the probability that a given buyer will give his best-placed supplier an opportunity to beat an underbid may be inversely related to the size of the OM this supplier has tried to obtain (or more directly to the extent to which the underbid is more attractive than the original offer the buyer received from his best-placed supplier). This inverse relationship may occur (1) because the extent to which the buyer's "non-rational" annoyance at his supplier's attempt to obtain an "undeserved" natural OM will increase with the size of the natural OM the underbid reveals, (2) because the extent to which a buyer finds it strategically useful to sacrifice short-run returns to establish his unwillingness to allow his suppliers to abuse him by obtaining substantial natural OMs also may increase with the size of the natural OMs sought, or (3) because buyers who obtain substantial underbids may be more likely to conclude that their best-placed supplier has miscalculated and could not now change his bid without incurring prohibitive strategic or mechanical costs — *i.e.*, because such buyers may conclude that it would not even be in their short-run interest to incur the cost of offering their best-placed supplier the opportunity to bid again. (The buyer will have to incur both mechanical and strategic costs to give his best-placed supplier a chance to rebid. The mechanical costs are simply the costs of recontacting the relevant seller. The strategic costs, which are far more important, are the losses the buyer will sustain because of the tendency of such a move to deter his inferior suppliers from underbidding his superior suppliers in the future. Accordingly, the strategic costs a buyer will have to incur to recontact his best-placed supplier will increase with the visibility of his behavior and the extent to which he will engage in individualized transactions with knowledgeable partners in the future. I should also note that the ability of a seller to obtain

Moreover, my analysis also suggests that sellers may be able to contrive oligopolistic prices relatively cheaply even when they cannot obtain OMs naturally. Since, as we have seen, the cost to an individual pricer X of stealing some rival R's customer is often far less than the resulting harm to R, X can often inflict deterrent harm[57] on a prospective undercutter R relatively cheaply. Specifically, the cost to X of such retaliation will tend to be lower the lower R's OCAs, the more frequently X is well-placed to steal R's customers relative to the number of times R is well-placed to steal X's, and the greater X's ability to detect the fact that he has been undercut and to identify his undercutter.[58] In addition, a seller who cannot obtain OMs naturally can reduce the cost of contriving oligopolistic prices by offering to reward those rivals who do not undercut him by not undercutting their oligopolistic prices. Thus, at virtually no cost to him,[59] a seller X can benefit his rival R by the size of X's competitive advantage over the third-best-placed supplier of those of R's customers whom X is second-best-placed to supply.[60] Although these benefits will rarely be large

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natural OMs will increase with his OCAs since the probability that a seller would not find the strategic and mechanical cost of reducing his initial price prohibitive will increase with the profits he would have made had he charged the lower price originally; this probability will increase the seller's ability to obtain a natural OM both directly and by increasing the likelihood that the relevant buyer will give him an opportunity to rebid.)

57. In general, to deter others, the oligopolistic pricer will have to deprive the under-cutters he identifies of more profits than they realized by undercutting him, since his potential undercutters will realize that he will not always be able to detect that he has been undercut (since he may lose customers through changes in taste that deprive him of his best-placed position) and to identify his undercutters so that he will not always retaliate against his undercutters.

58. The cost of retaliation affects the profitability of retaliation in two ways: first, by affecting the losses the oligopolistic pricer has to sustain when he does have to retaliate effectively and, second, by influencing the credibility of his threat to retaliate (and hence the probability that he will in fact be undercut and have to retaliate) by reducing the profitability of his carrying out his threat.

59. In a world without antitrust, the cost to X of making and fulfilling his promise to R will equal the certainty equivalent profits he could make by undercutting R if R charged an oligopolistic price without securing X's cooperation or if X induced R to charge such a price and then welshed on his promise of cooperation. Since I doubt that R would continue to charge such a price on his own if X consistently undercut him and am certain that X could not welsh on such promises without destroying his ability to dupe his rivals, I expect that the relevant costs are trivial.

60. Let us assume that R, X, and R's next closest rival Z could all supply some buyer Y at a marginal cost of one dollar, but that Y had a ten cent preference for R's product over X's and a twenty cent preference for R's product over Z's. In this case, X could enable R to raise his price from $1.10 to $1.20 without incurring a risk of undercutting. (The text assumes that R has not secured anyone else's cooperation. Thus, if R had already secured Z's cooperation in the above example, the value of X's cooperation would be increased by an amount equal to Z's advantage over R's third closest competitor for

enough to deter a rival from undercutting a large amount of oli-
gopolistic pricing, they will often substantially reduce the retalia-
tory harm the oligopolistic pricer must threaten. Moreover, since
the ratio of harm inflicted to cost incurred will decline for each
successive act of retaliation, a firm's ability to reciprocate will
reduce the cost of the retaliation it must threaten by a greater
proportion than it reduces the harm it must threaten. Hence,
oligopolistic pricing may also be profitable for firms that cannot
obtain OMs naturally and who would have to incur prohibitive
costs to secure their rivals' cooperation exclusively through
threats and acts of retaliation.

    Obviously, the profitability of contrived oligopolistic pricing
will also depend on many other factors.[61] Nonetheless, this analy-
sis suggests why I am not surprised by my own experience —
which indicates that natural and contrived OMs are far more
common than Bork supposes.

    In short, I believe that Bork underestimates the incidence of
both predatory and oligopolistic pricing. Although such pricing
will be difficult to prove,[62] I suspect that far more resources

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Y's patronage. Similarly, when *X* is not *Y*'s closest competitor, his cooperation will be
valuable to *R* if *R* has already secured the cooperation of *X*'s other superiors.)

    61. Thus, the size of the most profitable contrived OM for an individualized pricer
to seek from some buyer *Y1* will be inversely related to the size of his OCA when dealing
with *Y1* (which determines the amount of safe profits he must risk to do so) and directly
related to the sum of the OCAs he enjoys in his relations with buyers *Y2 . . . N* (which
affects the credibility of his threats by determining the amount of profits his retaliation
will protect).

    62. Thus, the fact that a price is below marginal cost does not establish its predatory
character since such a price may be promotional — *i.e.*, since its profitability may depend
on its ability to increase the future sales of the relevant product by increasing consumers'
experience with it. Similarly, the fact that a price exceeds marginal cost, average total
cost, or even the seller's highest nonoligopolistic price does not establish its nonpredatory
character. Thus, in an across-the-board pricing situation, a seller may charge a price
that contains a lower oligopolistic margin than he could have obtained naturally in order
to drive a rival out of business. Unfortunately, there are also no simple ways to determine
the oligopolistic character of a price (much less to determine whether an oligopolistic price
has been contrived, obtained naturally, or charged by mistake). More particularly, I
believe there are only three ways to determine whether particular prices are oligopolistic:
the first, straightforward (but costly) method determines whether a particular price is
oligopolistic by computing the highest nonoligopolistic price and comparing it with the
actual price; the second, comparative method infers the existence of an OM from inter-
temporal or inter-regional price differences that cannot be accounted for by non-
oligopolistic factors (*e.g.*, differences in BCAs) that would affect the relationship between
the relevant HNOPs; the third, behavioral, method infers the existence of an OM from
proof of behavior that is normally associated with contrived oligopolistic pricing — such
as acts of reciprocation or retaliation. For an analysis of the inadequacy of some of the
other methods that have been proposed for identifying oligopolistic prices (such as the

should be devoted to their detection and prevention.

D. *The Competitive Impact of Horizontal Mergers*

Professor Bork argues that mergers up to sixty or seventy percent of the market will be very unlikely to reduce competition.[63] "Partly as a tactical concession to current oligopoly phobia and partly in recognition of Section 7's intended function of tightening the Sherman Act rule," he recommends that section 7 be interpreted to make "presumptively lawful all horizontal mergers up to market shares that would allow for other mergers of similar size in the industry and still leave three significant companies."[64] This section will be divided into two parts: the first will summarize the most important ways[65] in which a horizontal merger can affect the intensity of price and QV investment competition;[66] the second will explain why predictions of the competitive impact of horizontal mergers should not be based on the kind of market concentration and market share data on which Bork relies — *i.e.*, why it would be more accurate and more cost-effective to predict the competitive impact of horizontal mergers

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price discrimination test, excess capacity test, supranormal profit test, and straightforward price difference test), see Markovits, *supra* note 53, 940-49.

63. R. Bork, *supra* note 1, at 221.

64. *Id.* at 221-22.

65. For a more complete summary, see *Horizontal Mergers, supra* note 11, at 690-97.

66. In what follows, I will adopt Professor Bork's and the courts' assumption that in normal horizontal merger cases, such an analysis should be made by comparing the situation the merger would produce with the status quo. Admittedly, this procedure may allow horizontal mergers that would otherwise have been replaced by more pro-competitive internal growth, non-horizontal mergers, horizontal mergers, or resource releases (managerial dismissals or dividend declarations which release resources to more pro-competitive alternative uses by others). However, in most situations, a requirement that two merger partners show that their merger's prohibition would not have deterred them from engaging in more pro-competitive conduct would probably be self-defeating, given the tendency of such an approach to deter firms from engaging in any horizontal mergers at all. Of course, there are situations in which the mergers would not be likely to be deterred — *viz.*, where one of the *MP*s was a failing company or clearly would not take full advantage of its assets without engaging in a merger. The failing company doctrine and the Court's decision in United States v. General Dynamics, 415 U.S. 486 (1974), probably reflect this fact. Nevertheless, it is somewhat surprising that a court that has developed the toe-hold merger doctrine in the conglomerate area should not have created some analogue for horizontal merger cases — though the judges' "need" for such a doctrine has clearly been reduced by their failure to recognize the possibility that horizontal mergers that create efficiencies may actually increase competition in comparison with the status quo. I should note that I do doubt that the Clayton Act authorizes such nonstatus quo comparisons: doctrines like the toe-hold merger doctrine come close to imposing a novel duty on business firms to increase competition under a statute which seems to condemn only behavior that decreases competition in comparison with the status quo.

through a method that does not presuppose the definition of any relevant "markets."

1. *The Possible Competitive Impacts of Horizontal Mergers: A Summary*

This section will summarize (1) the ways a horizontal merger that generates no static or dynamic efficiencies[67] can affect price and QV investment competition and (2) the ways any static or dynamic efficiencies a merger does generate may affect its competitive impact. A horizontal merger that generates no efficiencies will tend to increase the BCAs, the natural OMs, and the contrived OMs of the merger partners (*MP1* and *MP2*) by reducing the attractiveness of the rival offers against which the *MP*s must compete. First, such a horizontal merger will tend to increase the *MP*s' BCAs to the extent that they were each other's closest competitors for the patronage of particular buyers: in particular, such a merger will increase the best-placed *MP*'s BCA by an amount equal to the second-best-placed *MP*'s advantage over the third-best-placed suppliers of the buyers in question. Second, by raising their BCAs, a horizontal merger will increase the *MP*s' ability to obtain OMs naturally by increasing the probability that they will find it profitable in the short run to beat an inferior rival's underbid. Third, a horizontal merger will increase the *MP*s' contrived OMs: (1) by reducing the communication costs they must incur to contrive an OM (by obviating their communicating with each other and permitting both to communicate in one act to a given rival) and by increasing the extent to which one partner can rely on its pricing decisions to communicate implicitly its anti-competitive intentions (when one of the merger partners has a reputation that the other lacks for contriving or for accurately assessing its position); (2) by increasing the merger partners' ability to detect undercutting by using repeat sales records to predict the probability that any given percentage of their customers would have defected spontaneously (by increasing the number of customers they serve, particularly when some rivals might otherwise have undercut both merger partners); (3) by

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67. An efficiency is said to be "static" if it does not relate specifically to the relevant firm's ability to grow. Thus, a merger that reduced a firm's marginal cost curve would be said to have generated a static efficiency. An efficiency is said to be "dynamic" if it relates specifically to the firm's ability to grow. Thus, a merger that created a new firm that would find it more profitable to introduce an additional product variant than either of its predecessors would be said to have generated a dynamic efficiency.

increasing their ability to identify their undercutters (by elimi-
nating one possible undercutter, by providing them with more
relevant circumstantial evidence through facilitating the pooling
of their sales records, and perhaps by enabling the merger part-
ners to pool other sorts of information that would give them a
more accurate picture of their individual rivals' competitive posi-
tions relative to them); (4) by increasing the credibility of their
threats and promises (by enabling the merged company to take
advantage of the stronger reputation of one of its predecessors and
by increasing the actual profitability of retaliation and reciproca-
tion); (5) by reducing the cost of the necessary rewards and pun-
ishments by enabling the merged firm to use any excess recipro-
catory power either merger partner had vis-à-vis a particular
rival, by increasing each *MP*'s reciprocatory power (where one
MP was some *R*'s closest rival and the other *MP* was that *R*'s
second-closest rival), and by enabling the merged company to use
both merger partners' products to punish a rival for undercutting
either merger partner (where the *MP*s face different harm in-
flicted to cost-incurred ratios for their marginal [last necessary]
acts of retaliation); and (6) by increasing the benefits generated
by such behavior by increasing the BCAs the merger partners
have to protect against undercutting and enabling both to profit
from any reputation that either's reciprocation or retaliation
would create.

In fact, a horizontal merger that generates no efficiencies will
also tend to increase the competitive advantages and contrived
OMs of the *MP*s' rivals. Thus, to the extent that the horizontal
merger increases the *MP*s' BCAs and OMs, it will tend to increase
their rivals' overall competitive advantages (OCAs — which in-
clude their contextual cost advantages) by increasing the prices
the *MP*s charge their own customers, the discriminatory charac-
ter of the prices they would have to charge the *R*s' customers to
steal them, and hence the contextual costs the *MP*s would have
to incur to undercut their rivals. Moreover, as we have seen, any
such increase in the *R*s' OCAs will also facilitate their obtaining
natural OMs. Finally, and most importantly, the *MP*s' horizontal
merger will increase their *R*s' ability to contrive OMs in various
ways. For example, in individualized pricing situations,[68] a hori-
zontal merger will tend to increase the contrived OMs of the

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68. Although space does not permit, similar points could be developed for across-the-
board pricing situations. *See Horizontal Mergers, supra* note 11, at 637-58.

merger partners' rivals (1) by reducing the costs to them of making the necessary communications (by enabling such rivals to communicate simultaneously to both merger partners); (2) by reducing the costs they must incur to identify their undercutters (by reducing by one the number of independent possibilities and by enabling them to pool information about the customers they lost that either *MP* was well-placed to steal); and (3) by reducing the cost to them of rewarding or punishing the merged firm (by enabling them to take advantage of any excess reciprocatory power they had in relation to one of the merger partners, by enabling them to punish the merged company by stealing more of one of the merger partners' customers than would otherwise have been necessary — *i.e.*, by spreading the *MPs*' defenses, and by increasing the individual *MPs*' BCAs and hence vulnerability to retaliation). Although these effects of the *MP1-MP2* merger on the competitive advantages and oligopolistic margins of their rivals would not be relevant under my reading of the Sherman Act, they would be relevant under my interpretation of the Clayton Act.

Horizontal mergers that do not generate efficiencies may also affect the intensity of QV investment competition.[69] As we saw, the intensity of QV investment competition is defined in terms of the lower of the total $(\pi_D + R + S + L)_E + M^*$ barriers and disincentives facing the best-placed potential expander at the entry-precluded expansion-barring QV investment level and the total $(\pi_D + R + S + L)_N$ barriers facing the best-placed potential competitor at the entry-precluded QV investment level. Where the established firms are unable to take advantage of the investment restriction opportunities the barriers to entry create — *i.e.*, where the relevant $(\pi_D + R + S + L)_E + M^*$ is less than the $(\pi_D + R + S + L)_N$ — a horizontal merger may reduce the intensity of QV investment competition in four primary ways: (1) by raising the relevant $(\pi_D + R)$ barriers where one of the *MPs* was the original best-placed expander and he finds it optimal to allocate to consolidating the merger resources that he would otherwise use for internal growth; (2) by raising the relevant L barrier where one of the *MPs* was the original best-placed expander and the merger increases his vulnerability to retaliation by allowing his rivals to injure him by stealing his merger partner's customers; (3) by raising the relevant L barrier where one of the *MPs*'

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69. For a more complete discussion of these possibilities and an analysis of some perverse results, see *id.* at 680-82.

rivals R was originally the best-placed expander and the merger increases the *MPs'* ability to retaliate against R's expansion by internalizing to the new concern the benefits *MP1*'s retaliation would generate for *MP2* (by deterring future QV investments) and by facilitating joint retaliation by both; and (4) by raising the relevant M* where one of the *MPs* was originally the best-placed expander and his intended expansion would reduce his partner's returns. On the other hand, where potential competition was effective, *i.e.*, where the relevant $(\pi_D + R + S + L)_N$ is less than $(\pi_D + R + S + L)_E + M^*$, a horizontal merger may also decrease QV investment competition by raising L_N (by internalizing to the new firm the benefits *MP1*'s retaliation generates for *MP2* and by facilitating their joint retaliation).

In short, horizontal mergers that generate no efficiencies will reduce price and QV investment competition both by internalizing to the merged firm the damage each *MP*'s price or QV investment moves do to the other (and thereby increasing the *MPs'* BCAs and M disincentives) and by facilitating oligopolistic interactions between the *MPs* and their *Rs* (and thereby increasing the natural and contrived OMs the *MPs* and their *Rs* can obtain as well as the L barriers the *MPs* and their *Rs* face).

'Let us now analyze the competitive significance of any efficiencies the horizontal merger might create. Most judicial discussions of such efficiencies assume that their tendency is anti-competitive[70] while most academic discussions ignore their possible impact.[71] Admittedly, a horizontal merger that generates

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70. *See, e.g.,* Brown Shoe Co. v. United States, 370 U.S. 294 (1962). *But see* Williamson, *Economies as an Antitrust Defense Revisited,* 125 U. PA. L. REV. 699 (1977).

71. For example, the Williamson trade-off analysis ignores the impact of merger-generated efficiencies both on the prices charged to buyers the merged firm does not obtain and on the intensity of QV investment competition. *See* Williamson, *Economies as an Antitrust Defense: The Welfare Trade-Off,* 58 AM. ECON. REV. 18 (1968). In part, this failure of antitrust analysts to work through the competitive consequences of efficiencies reflects their doubt (which Bork seems to share) about the feasibility of demonstrating the existence of such efficiencies in a litigative context. *See* R. BORK, *supra* note 1, at 219-22. In fact, if I am correct in assuming that most of the efficiencies mergers generate reflect nonscale complementarities, problems of proof will be even worse than was previously supposed (since engineering studies of economies of scale will be relevant). In this note, I will propose a technique that will enable the government to make the ultimate merger decision depend on such efficiencies without requiring judges or administrators to estimate their magnitude (although it will still be necesary for them to determine the character of the relevant efficiencies — *i.e.,* whether they are marginal or fixed, static or dynamic).

The basic approach is familiar to all economists: a merger license fee that would resemble in some respects a pollution tax or license. In particular, the merger fee would be designed to guarantee the pro-competitive impact (or alternatively, the allocative

static efficiencies may decrease QV investment and hence price competition in the long run by inducing the exit of an established firm or deterring the entry of a potential competitor. In particular, this will be the result if the efficiency-generated improvement in the competitive position of the merged firm reduces by a critical amount the number of customers the established firm (best-placed potential entrant) is (would be) best-placed to obtain or the size of the average competitive advantage it enjoys when best-placed. In general, however, the immediate pro-competitive con-

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efficiency) of any merger whose participants were willing to pay the fee they were charged. Unfortunately, it will be even more complicated to calculate the relevant merger fee than to calculate the appropriate pollution tax. In this note, I can simply delineate the general outline of the method that would have to be used. First, one would estimate the private profitability and the competitive impact of the relevant merger on the assumption that it would generate no efficiencies. Second, one would gather evidence on the character of the efficiencies in order to assess the ratio of their private value to their competitive value.. To see why such information is relevant, note that a static fixed cost efficiency that will not carry over to an expansion will have no competitive value (value to the relevant consumers) though it will have considerable private value, while a static marginal efficiency that will affect the *MPs'* position primarily in their relations with customers whom they were originally second-best-placed to serve will have far more competitive value than private value (since it will reduce the prices these buyers pay even where the *MPs* do not end up supplying them by decreasing their best-placed suppliers' OCAs). *See also* note 107 *infra*. Third, one would estimate this private value to competitive value ratio by combining one's conclusions about the character of the efficiencies in question with other data that are relevant for this purpose. For example, as the preceding discussion implies, in the case of marginal static efficiencies one would want to know the relative frequency with which the *MPs* were best-placed, second-best-placed, and close-to-second-best-placed. Finally, one would use the results generated in this fashion to calculate the merger fee that would guarantee that the decision that would be most privately profitable for the *MPs* would also be most pro-competitive.

A numerical example might be useful. Assume that one had reached the following two conclusions: (1) absent any efficiencies, the relevant merger would decrease competition by two million dollars and would generate eight hundred thousand dollars profit for its participants; (2) the ratio of the competitive value of the efficiencies the merger would generate to the profits they would yield the *MPs* was two to one. These facts imply that the merger would be pro-competitive only if it yielded efficiencies that were worth more than one million dollars to its participants — since only then would the competitive value of the efficiencies exceed the two million dollar competitive loss the merger would have generated absent the efficiencies in question. The public fee-setter would therefore set the merger fee at $1,800,000, since the *MPs* would be willing to pay that fee only if they expected the merger to generate efficiencies that were worth at least one million dollars to them.

I should also note that a perfectly analogous method could be used if one's goal was to increase allocative efficiency. Two changes would be necessary. First, one would have to substitute in step one a calculation of the amount by which the merger would misallocate resources if it did not generate efficiencies for the original estimate of the amount by which it would reduce competition in such circumstances. Second, one would calculate in step three the ratio of the allocative value of the relevant efficiencies to their private value to the *MPs* rather than the competitive value/private *MP* value ratio described above.

sequences of such changes in position are likely to prevail. Thus, a merger that improves the *MP*s' competitive position by generating a static efficiency (*e.g.*, by reducing its marginal cost) will tend to increase competition by reducing the *R*s' BCAs whenever the relevant *MP* either was second-best-placed or was worse-than-second-best-placed by less than the efficiency in question. Moreover, any tendency such an efficiency has to reduce the *R*s' BCA will also reduce the *R*s' ability to obtain OMs naturally as well as the OCAs and contrived OMs the *MP*s enjoy or obtain. Finally, even if the efficiency does not lessen any *R*'s BCA, it might diminish its contrived OM by allowing the merged firm to profit from undercutting an oligopolistic price the *R* might otherwise have contrived to obtain. Similarly, a merger that reduced the π_D barrier the merged company faced (*e.g.*, by combining an *MP* with excess managerial capacity in its production department with an *MP* with excess capacity in distribution) would tend to increase the intensity of QV investment competition[72] by reducing the π_D barrier[73] and perhaps the M disincentives[74] facing the established firm that would be best-placed to expand the market's QV investment if entry were precluded.

Accordingly, the net competitive effect of any horizontal merger will depend on whether its tendency to generate static and dynamic efficiencies that will increase the competitive pressure the *MP*s place on their rivals outweighs its tendency to reduce such competition by internalizing to the merged firm the damage its predecessors' price and QV investment moves previously inflicted on each other as well as by facilitating various contrived and actual oligopolistic interactions between the *MP*s and their *R*s.

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72. Assuming that potential competition is ineffective.

73. Assuming that one of the *MP*s was originally the relevant best-placed expander or that he originally faced barriers that exceeded those confronting the relevant best-placed expander by less than the efficiencies the merger would generate.

74. Assume, for example, that a rival of the *MP*s was originally the only firm that was not deterred from expanding by the $(\pi_D + R + S + L)_E$ barriers it faced and that this R was deterred from expanding by the M disincentives it originally confronted. By reducing the π_D barriers the merged firm faced, the merger might eliminate the M disincentives confronting the R by guaranteeing that the merged firm would expand if the R did not. Admittedly, perverse results are also possible in this context. Thus, when the R in question originally would have expanded despite the M disincentives he faced, the merger might deter his expansion by creating a situation in which both he and the merged firm faced higher (natural) oligopolistic disincentives. Alternatively, such a dynamic efficiency might tend to reduce competition by inducing the merged company to prevent entry by expanding in a situation in which entry would otherwise have occurred. However, I am confident that both these perverse results are less likely than the pro-competitive effect described in the text.

2. *A Critique of the Market-Oriented Approach to Merger Analysis*

As we have seen, Bork follows the universal tradition of predicting the competitive consequences of horizontal mergers from the *MPs'* market shares and their market's concentration. This section will explain the preferability of an alternative that would not require any "relevant market" to be defined.

The undesirability of the traditional approach partially reflects the inability of market-share data to reveal much about a large number of highly relevant factors to which it does not even purport to relate. Thus, market shares have little bearing on (1) the potentially pro-competitive efficiencies the merger will generate, (2) many determinants of the effectiveness of potential competition (*e.g.*, the growth rate of market demand), and (3) many reputational, informational, and other factors (*e.g.*, the stability of buyer preferences through time or the strategic and mechanical costs of changing an operational price) that affect the ability of the relevant sellers to obtain natural or contrived oligopolistic margins. Of course, if this were the traditional approach's sole failing, market share and concentration data could continue to play a crucial role in the analysis of the legality of horizontal mergers; one could simply amend the traditional approach by adjusting the various combinations of market shares and concentration levels that condemn a horizontal merger to reflect the value of the significant factors to which traditional market-share data is insensitive.

However, a far more radical departure is required. In particular, the market-oriented approach must be totally rejected, because in our monopolistically competitive world, market share and concentration data do not even tell us much about the factors to which they supposedly do relate. More specifically, the market-oriented approach fails because data on the merger partners' market shares and on the concentration of the relevant markets do not predict well such matters as (1) how often the merger partners were each other's closest competitors, (2) the size of the second-best-placed merger partner's OCA over the third-best-placed supplier of the relevant buyers, (3) how often the merger partners were close to being each other's closest competitors, (4) how often the merger partners were or were close to being their various other rivals' closest competitors, (5) how often and to what extent either merger partner was a close competitor of one of its rivals significantly less often than vice versa, (6) to what

extent (in the above cases) the other merger partner was a close competitor of that rival more often than vice versa, (7) how many firms could undercut any given contrived OM that the market's various sellers might charge, (8) to what extent a retaliating merger partner was its partner's close competitor less often than were the firms whose undercutting its retaliation would deter, (9) to what extent an undermining across-the-board price or new QV investment would harm some products or outlets disproportionately more than others, and (10) the probability that one or both *MP*s would have been best-placed to expand their market's QV investment beyond what would otherwise be its equilibrium level. At least in part, the inability of such market-aggregated data to predict these determinants of the impact of horizontal mergers reflects the product and locational differentiation that are the defining characteristics of our monopolistically competitive world — *viz.*, reflects the facts that in such a world, even when there is a clear break in the chain of competitors (so that markets can be defined in a nonarbitrary way), (1) some firms outside the associated market will be able to compete for some of its buyers, (2) various firms within the market will not be universally or equally competitive with each other, and (3) different firms in the same market, and *a fortiori* in different markets, will have very different distributions of competitive ranks, advantages, and disadvantages.[75]

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75. It should now be possible to explain why mergers between firms with more than 70% of some market may not decrease competition while mergers between firms with relatively low market shares may decrease it — *i.e.*, why Bork's particular market-oriented predictions are likely to be incorrect. In what follows, I will assume that we are dealing with cases in which there is some nonarbitrary way to define the relevant markets — that there is, for example, a break in the chain of competitors that permits one to isolate groups of suppliers who are far more competitive with each other than with anyone else. Even on this assumption, a merger between firms that have 70% of the relevant market may not be anticompetitive. Thus, such a merger may not increase the merger partners' BCAs (and derivatively their natural OMs and their *R*s' OCAs) since the *MP*s may almost never be each other's closest competitors. This result could obtain either because the *MP*s were almost never second-best-placed (because, for example, both *MP*s produced highly differentiated products whose buyers had strong preferences for the product of their favored *MP* over that of the other so that each *MP*'s closest rival was almost always the producer of a cheaper, nondifferentiated good) or because the *MP*s were less competitive with each other than with other firms in the market. (This condition is not inconsistent with our market definition. Thus, the *MP*s might still be more competitive with each other than with anyone outside the market. Alternatively, the *MP*s might both be quite competitive with one or more common independent rivals.)

Nor is there any reason to believe that such a merger will increase the merger part-

ners' natural oligopolistic margins since, for example, it may not increase their BCAs, may not yield any relevant economies of scale and may not significantly improve the *MPs*' ability to initiate a series of premature price announcements. Moreover, for two reasons, such a merger may also not increase the *MPs*' contrived OMs. First, such a merger may not increase the profitability of contriving OMs: in particular, such a merger will not facilitate contrived oligopolistic pricing if the *MPs* were never close to being each other's closest competitors; if they already have sufficient customers to identify their undercutters from repeat sales records; if they have different close rivals; if they have no excess reciprocal power; and if they have similar harm inflicted to cost-incurred ratios for their respective marginal necessary acts of retaliation against any given rival. Second, contrived oligopolistic pricing may have been sufficiently unprofitable pre-merger for such *MPs* to make any merger-related increase in its profitability inconsequential: thus, even in concentrated markets contrived oligopolistic pricing will be unprofitable if the *MPs* have always been confronted with a large number of equally well-placed "closest" rivals — *viz.*, members of a competitive fringe that are second-best-placed far more than they are best-placed; if the incidence of taste changes varies sufficiently through time to preclude the drawing of any reliable inferences from repeat sales records; if the *MPs* rarely are each other's closest rivals; and if the *MPs*' closest rivals enjoy very small BCAs. For similar reasons, a horizontal merger between firms with 70% of the market may not increase the size of the *MPs*' *Rs*' contrived OMs.

Finally, such a merger may also not reduce the intensity of QV investment competition. Thus, since as we have already suggested, such a merger may not reduce the cost of retaliation, it may not increase the prevailing L barriers. Certainly, there is no reason to believe that such a merger will inevitably increase the $(\pi'_D + R)$ barriers the *MPs* face by inducing the merged firm to allocate to consolidating the merger managers who could otherwise have been used to supervise an expansion; and even if it does, such an increase will have no significance where potential competition is effective or some other established firm would have been better placed to expand in any case. Similarly, such a merger will also not reduce QV investment by increasing M where some other potential or established rival is better placed to increase the market's QV investment to or beyond its original level and/or where the *MPs* can introduce new projects that are largely uncompetitive with their old.

Thus, the fact that a merger involves firms with 70% of the market does not guarantee its having any significant tendency to reduce competition. Indeed, where such a merger does have such a tendency, the fact that the *MPs* have large market shares is not inconsistent with its producing a sufficient amount of static and dynamic efficiencies to give it a net pro-competitive impact: once it is recognized that most of the efficiencies that mergers generate arise from the combination of assets that are complementary for nonscale reasons, there is no reason to suppose that mergers between large firms with high market shares will be significantly less likely to generate such economies. Accordingly, Bork's conclusion that mergers between firms with 70% of the market will tend to reduce the intensity of competition is simply not justified.

For analogous reasons, I would also not assume that a merger between relatively small firms will not have a net anti-competitive impact. Thus, such a merger will increase the *MPs*' BCAs where the *MPs* are often each other's closest competitors — because they are second-best-placed far more often than they are best-placed and/or because they are more competitive with each other than with most other firms in the market in question. Moreover, for a variety of reasons, such a merger may increase the MPs' contrived OMs: in particular, such a merger can facilitate contrived oligopolistic pricing in a number of circumstances — *e.g.*, where the *MPs* would often have been sufficiently well-placed to undercut each other's OMs, where the information pooling that the merger permits increases their ability to detect undercutting and identify their undercutter from their repeat sales records (because their original sales are too low, because the same rivals are well-placed to undercut each, and because each has different important information about the appeal of some rivals' products), where one of the *MPs* has excess reciprocal power in his dealings with a close rival of the other *MP*, or where the two *MPs* have different harm

Accordingly, I believe that predictions of the competitive effect of horizontal mergers should be based on direct estimates of the factors I have described. The direct method may not even be much more expensive: the market-oriented approach already requires one to make crude estimates of much of the data I have described in order to define the relevant markets, and my approach obviates deciding which set of market definitions is most appropriate — a task that consumes an extraordinary amount of resources to produce aggregate figures with less predictive value than the disaggregated data from which they are derived. Even if the optimal version of the nonaggregated approach is more expensive than the traditional market-oriented procedure, its

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inflicted to cost-incurred ratios for their marginal necessary acts of retaliation against the same rival. Moreover, any such increase in the profitability of contrived oligopolistic pricing may have practical significance since even small firms in unconcentrated markets may find it profitable to contrive oligopolistic prices (because only a few of their rivals would be able to undercut such prices, because the percentage of spontaneous defections is stable through time, because each seller has a large number of small buyers, because each R has significant BCAs that make it vulnerable to retaliation, etc.). Similarly, a merger between firms with low market shares might increase the MP's Rs' contrived OMs (because both tended to be well-placed to steal the customers of the same Rs, because some R had a lower harm-inflicted-to-cost-incurred ratio for the marginal necessary act of retaliation against $MP1$ than against $MP2$).

Moreover, since BCAs may be higher in an unconcentrated market in which differentiated products are produced than in a concentrated market in which a homogeneous product is produced and since a QV investment may have a concentrated impact within an unconcentrated market, a horizontal merger that enables two small firms to pool their power against some QV investor may also decrease QV investment competition by increasing some relevant L barrier. In addition, since small firms may be better placed to expand than their larger rivals, may operate in markets in which potential competition is ineffective, may have to allocate scarce managerial talent to consolidating their merger, and may be less able to introduce new variants or outlets that are less-than-typically competitive with their previous projects, mergers between small firms may also reduce QV investment competition by raising the critical $(\pi_D + R)$ barrier or M disincentive. Finally, since the fact that a merger involves small firms in an unconcentrated market does not guarantee its efficiency, as Bork assumes, R. BORK, *supra* note 1, at 219, any anti-competitive tendency such a merger has may result in its being anti-competitive on balance. (Because Professor Bork assumes that mergers between small firms in unconcentrated markets cannot reduce competition, he concludes that they must be motivated by a desire to achieve efficiencies (or to take advantage of tax gimmicks). Since, as we have seen, such mergers can reduce competition, Bork's conclusion about their probable efficiency is unwarranted.)

In short, I believe that a detailed analysis of the factors that determine the competitive impact of a horizontal merger suggests that the correlation between the market shares of the MPs and the concentration of their market, on the one hand, and the competitive impact of their merger, on the other, is too low to justify Bork's rule. Indeed, in our monopolistically competitive world, I would not even establish a presumption that high market share mergers in concentrated markets are anti-competitive or that low-market-share mergers in unconcentrated markets are not. Unfortunately, I see no useful way to avoid the kind of case-by-case analysis my nonaggregated approach entails.

greater accuracy would more than justify the additional cost. Although reasonable persons can certainly disagree about which of the above factors should be estimated and how precisely, I am confident that some more or less refined version of the non-aggregated approach I have described will be more cost-effective than any possible market-oriented approach.

E. *Monopoly and Monopolization*

Three basic issues arise under this heading: (1) how does one tell whether a firm possesses monopoly power (*inter alia,* what is the relationship between a firm's market share and its monopoly power); (2) what is the legal significance of a firm's possessing monopoly power under a proper interpretation of section 2's rule that no person "shall monopolize"; and (3) on policy grounds, should one break up firms that have monopoly power.

1. *The Relationship Between Market Share and Monopoly Power*

Although Professor Bork is clearly dissatisfied with the traditional equation of monopoly power with high market shares, he does not address this issue directly.[76] In fact, the correlation between monopoly power and market share is almost certainly too low to permit an inference of the former from the latter.[77] In my opinion, a firm's monopoly power should be defined in terms of its competitive advantages and the lower of (a) the barriers to entry facing its best-placed potential competitor or (b) the barriers to expansion and monopolistic investment disincentives facing the established rival who would be best placed to expand QV investment in the relevant "market" if entry were precluded. On this definition, a firm's monopoly power will reflect its ability to charge supracompetitive prices and to earn supracompetitive returns on its most profitable projects without taking advantage of any kind of oligopolistic interdependence. If one accepts this definition (which does correspond to the general way courts have defined monopoly power),[78] one clearly will not be able to predict

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76. In fact, Bork does not analyze monopoly power and oligopoly power separately.

77. The last section explained *inter alia* why the ability of firms in different markets to engage in various oligopolistic interactions probably is not highly correlated with their market's concentration or their own market shares. This section explains why the monopoly power of firms in different industries will not correlate highly with their respective market shares.

78. *See, e.g.,* United States v. E.I. DuPont de Nemours & Co., 351 U.S. 377, 391

a firm's monopoly power from its market share. Thus, a firm's market share — which reflects the frequency with which it is best placed — will have little bearing on its competitive advantages — which equal the amount by which it is best placed. Indeed, at one extreme, one can imagine a firm with 100% of its market and virtually no BCAs at all. This result might occur, for example, if the relevant firm was always only slightly better placed than a "closest rival" that sold the same product in a different geographic market or that produced a different product through a process that could be immediately converted to produce a competitive good. At the other extreme, one can imagine a firm with a low market share in an optimally defined market that did enjoy substantial BCAs when dealing for the patronage of particular buyers who had a strong preference for its product or distributive variant. Of course, these extreme cases do not demonstrate the weakness of the correlation between market shares and BCAs, but they do suggest why it may be dangerous to predict a firm's BCAs from its market share. In fact, there is even less reason to believe that a firm's market share will have much bearing on its actual and potential rivals' barriers to expansion and entry. Although firms which maintain high shares of growing markets probably do face lower QV investment barriers than their established and potential competitors,[79] this correlation has little bearing on the absolute height of the barriers facing their rivals. In short, I doubt there is much inter-market correlation between a firm's market share and monopoly power. Even if this view is too pessimistic, the market-oriented approach to predicting a firm's monopoly power would be liable to the same criticism as its horizontal merger counterpart: it would clearly be more accurate and might even be cheaper to estimate BCAs, entry barriers, expansion barriers, and investment disincentives directly than to try to predict the firm's monopoly power by collecting data to define a relevant market and then predicting the firm's monopoly power from market share figures that lose much of the value of the nonaggregated data on which the market definition was based. Obviously, this result has substantial implica-

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(1956): "Monopoly power is the power to control prices or exclude competition." My definition focuses on the extent of a firm's nonoligopolistic control over prices and QV investment.

79. As we shall see, an established seller who is worse placed than some rival to make a QV investment the latter finds only marginally profitable may still find it profitable to make the investment in question if his expansion would do less damage to his pre-existing capital than the rival investment it deters. *See* text at note 84 *infra.*

tions for the drafting of any new deconcentration legislation as well as for the interpretation of any current antitrust provision that is held to make possession of monopoly power an element of an antitrust offense.

2. *The Relationship Between Monopoly Power and a Section 2 Offense*

As Bork shows,[80] the courts — and indeed individual judicial opinions — have waffled among three interpretations of the Sherman Act's command that "no person shall monopolize." According to the most stringent version of this command, section 2 prohibits the possession of monopoly power; according to the least stringent version, section 2 prohibits the possession of monopoly power only if it has been achieved through conduct that would itself constitute a Sherman Act violation; and finally, according to Judge Wyzanski's intermediate version, although section 2 does not prohibit monopoly power obtained through legitimate business skill (*i.e.*, through "allocative efficiency"), it does condemn monopoly in some cases in which no behavioral violations of the Act have occurred — *viz.*, where the monopoly grew from neither business skill nor behavioral violations but from some "practice which without being predatory, abusive, or coercive was in economic effect exclusionary."[81]

Professor Bork argues for the least stringent interpretation of section 2. Although Bork's policy argument for this interpretation is not entirely convincing since the allocative efficiency of much of the behavior on which judges have focused is far more ambiguous than Bork maintains, his interpretation is more compatible with the fact that the Act does condemn "monopolization" and not "monopoly." Moreover, this linguistic argument is confirmed by the greater compatibility of the least stringent interpretation with the structure of American regulatory policy — which recognizes and protects (for example, through patent laws) the right of individuals to improve the demand-cost combination they face by reducing their costs or improving their products as well as their right to exploit any such position. On these grounds, then, I share Bork's preference for the least restrictive interpretation of section 2. However, I agree neither with Bork's independent criti-

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80. *See* R. BORK, *supra* note 1, at 164-75.

81. *See id.* at 171 (quoting Judge Wyzanski's opinion in United States v. United Shoe Mach., 110 F. Supp. 295, 341 (D. Mass. 1953)).

cism of Wyzanski's intermediate test nor with Bork's analysis of the legality of many of the practices at issue in major section 2 cases. As we have seen, Wyzanski focused on the intermediate case of monopolies caused by behavior that was neither predatory nor allocatively efficient. Bork dismisses Wyzanski's contention that such monopolies violate section 2 on the ground that it deals with an empty legal box — *i.e.,* that profitable business behavior must be either anti-competitive (violate the Sherman Act) or allocatively efficient. However, this contention is simply incorrect. In general, a firm may find particular behavior profitable for three different reasons: (1) because it reduces the attractiveness of the rival offers against which it must compete (because it is anti-competitive); (2) because it improves the demand-cost position of the firm by reducing its costs or changing the character of its product (because it is presumptively allocatively efficient); or (3) because it helps the firm to exploit a given demand-cost position. Unfortunately, as Wyzanski's analysis implies, practices that function in the third way may well be allocatively inefficient even though they are privately profitable. Thus, as we shall see in Part F, various kinds of pricing strategies (such as price discrimination and transaction-surplus-saving supramarginal-cost price-shifting tie-ins) can misallocate resources while they increase their employers' profits by raising their ability to convert buyer into seller surplus. Moreover, although this result is probably atypical, such practices may occasionally produce the anti-competitive result Wyzanski fears — *i.e.,* may lead some rival to exit by making it profitable in the short run for their user to offer better terms to buyers who otherwise would have patronized the rivals in question.[82] However, even when they do, I reject Wyzanski's assumption that the resulting monopoly violates the Sherman Act on the ground that our legal system's recognition of the right to innovate (reduce costs and change products) implies the legitimacy of attempts to exploit the more favorable demand-cost position thereby achieved.[83] In short, Wyzanski's legal box is misanalyzed, not empty (as Bork supposes).

Moreover, although Wyzanski's functional classification of business conduct (*e.g.,* of the ten-year leases United Shoe employed) is often highly debatable, Bork too readily assumes the

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82. Note that, on my interpretation, such an act would not violate the Sherman Act since its profitability would not depend on its inducing the relevant rival to exit.

83. Indeed, as I have already suggested, I would even qualify the Clayton Act's competitive impact test to reflect this judgment.

allocative efficiency of the various types of behavior that has led judges to condemn particular monopolies. In fact, the character of even such apparently desirable behavior as Alcoa's eager embracing of every investment opportunity[84] is highly ambiguous. To see why, let's examine United Shoe's ten-year leases. United's ten-year lease may simply have been an efficient method of insuring that its product reputation would not be damaged by improper servicing, of supplying its customers (shoe manufacturers) with capital, and of shifting risk from them to United. On this account, the fact that United's customers could save relatively little money by returning the machines early would reflect the fact that much of the "rent" paid in later years was really a repayment of the loan United supplied by undercharging them in early years. On the other hand, particularly if United arranged new leases with its customers well before the expiration of its old, the loans might have been a form of predatory pricing directed at potential entrants. On this account, United's loans would have conveyed a bribe (in the form of a reduced rent) to its customers conditional on their committing themselves to United — *i.e.*, conditional on their agreeing to terms that would have made it far less attractive for them to shift their patronage to a new entrant. Although the resulting increase in the barriers to entry might have been disadvantageous to United's customers as a group, the cost to United of securing this advantage may well have been minimal. Thus, although each of its customers might have required a large payment for its commitment if its refusal would have bound all other buyers to follow its example, each might be willing to succumb for a small payment if the survival of any new shoe equipment manufacturer depended on its obtaining a large number of customers and each shoe manufacturer realized that its individual availability would not significantly affect a potential entrant's profit expectations. In other words, since a decision by any given customer to maintain its flexibility might provide a kind of public good for all of United's customers, United might be able to purchase its customers' commitment cheaply. Clearly, such behavior would violate the Sherman Act (as I construe it) since its profitability would depend on its tendency to reduce the attractiveness of the rival offers against which United had to compete. Of course, if the cost of determining whether such a bribe had actually been conveyed was high, a

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84. These expansions led Judge Learned Hand to condemn Alcoa's monopoly in United States v. Aluminum Co. of America, 148 F.2d 416 (2d Cir. 1945).

presumption of efficiency would be justified if the likelihood of such a predatory bribe were relatively low. I suspect that such bribes may be executed too often for this possibility to be ignored. In any case, I doubt that the cost of identifying such bribes would turn out to be prohibitive.[85]

In short, the allocative efficiency and legal status of much of the behavior on which section 2 judges have focused is far more ambiguous than Bork maintains. I suspect that Bork would not find this result entirely displeasing, since it would justify a reinterpretation of some landmark section 2 cases that would make them more compatible with the legal rule we both believe the Sherman Act contains.

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85. In fact, the character of even Alcoa's practice of "doubling and redoubling its capacity before others entered the field" could violate my interpretation of the Sherman Act. Although, obviously, Hand's opinion does not draw these distinctions, one could differentiate three categories of monopoly-producing, entry-deterring expansions: the first would contain all entry-deterring expansions that would have been profitable even if entry had been independently precluded — *e.g.,* even if the investor faced the associated monopolistic investment disincentives he would have confronted if there were no threat of entry. The second would include all entry-deterring expansions that would not have been profitable if the threat of entry had not eliminated the monopolistic investment disincentives the investor would otherwise have faced — *i.e.,* that would not have been profitable had they not deterred an entry that would have reduced the profits the investor realized on his pre-existing capital. Finally, the third would include any entry-deterring expansion whose profitability depended on its reducing the profits the investor realized on his pre-existing projects less than they would have been reduced by the entry the expansion in question deterred — *i.e.,* whose profitability depended on the monopolistic investment *incentive* the potential entrant created. It is clear to me that all expansions in this third category would violate my interpretation of the Sherman Act since their profitability depends on their reducing the attractiveness of the offers against which the investor's pre-existing projects compete. In fact, a rule condemning such "reprehensible, anti-competitive" expansions would even make good policy sense: the fact that the expansion's profitability depended on the expanding established firm's monopolistic incentives to expand implies that the deterred best-placed entrant was allocatively better placed than the expanding established firm to introduce a new QV investment into the market (since the entry would have been profitable even though the potential entrant had no monopolistic incentive to enter.)

Indeed, I can even imagine an argument that QV investments in the second category also violate my formulation of the Sherman Act since their profitability does depend on their reducing the attractiveness of the *independent* offers against which the expander must compete. In my opinion, however, this conclusion is not required by my verbal formulation and would condemn behavior that is in no sense reprehensible. Thus, a rule forbidding QV investments in category two would not make good policy sense since there is good reason to believe that the established firms which would make the QV investments in question would face barriers to expansion that were lower than the barriers to entry facing the deterred potential entrant — since the alternative conclusion would result in the relevant investments being made by an allocatively worse-placed firm.

3. *The Policy Grounds for Deconcentration*

As I have suggested, Bork believes not only that the antitrust laws do not condemn monopoly *per se* but also that a policy of deconcentrating industry would seriously misallocate resources. Bork's argument against the deconcentration proposals contains two major premises. First, he maintains that there is no "significant output restriction problem arising from the concentration of any industry."[86] And second, he contends that since "any size [a company] achieve[s] by internal growth without predation is the most efficient size for that firm," then "the dissolution of any such firm will always create an efficiency loss."[87] I have already explained why I disagree with Bork's first premise. I also disagree with his second, which takes a mistakenly static view of industrial efficiency. More particularly, I disagree with Bork's second premise because the efficiency of established firm expansions reflects their need to grow[88] rather than to take advantage of static economies of scale. If I am correct, it may be possible to require efficient expanders to divest some of their projects without reducing their operating efficiency. Admittedly, such a divestiture policy might artificially reduce the incentive of firms to invest in their original "market"[89] and might even induce them to raise their prices[90] or underinvest in cost-reducing innovation or product improvements.[91] Nevertheless, a deconcentration policy directed at industries with higher-than-average DU/QV ratios (rather than at industries with high concentration levels) might still be allocatively justified by its ability to reduce inter-industry

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86. R. BORK, *supra* note 1, at 178.

87. *Id.* at 194.

88. As Edith Penrose has argued, firms need to grow in order to make full use of the increasing managerial talent at their disposal — increasing because, unlike most assets, the productive capacity of managers tends to increase through time — *i.e.*, with experience. *See* E. PENROSE, THE THEORY OF THE GROWTH OF THE FIRM (1959).

89. Even if a divestiture order would not affect the operating efficiency of a company, the transaction cost of selling a division would reduce the private returns of an expansion. A deconcentration policy would therefore create an artificial incentive for firms to diversify. I should note, however, that this artificial incentive might be a useful offset to the monopolistic investment incentives that artificially increase the absolute and relative attractiveness of expanding in one's original markets (as opposed to diversifying).

90. If the likelihood that a firm would be required to divest one or more of its projects increased with its market share, a firm might find it profitable to charge a price that exceeded the conventional profit-maximizing level in order to reduce its sales and market share.

91. If the likelihood that a firm would be required to divest one or more of its projects increased with its BCAs and the barriers to entry and expansion its rivals faced, the divestiture policy would artificially reduce the relevant firm's incentive to increase its BCAs and the barriers in question.

and quantity-vs.-QV-investment misallocations.[92] I should emphasize, however, (1) that the current deconcentration proposals — which focus on market shares and concentration — would be totally ill-suited for this purpose, (2) that QV investment misallocation might better be handled through tax policy in any case,[93] and (3) that reasonable persons certainly could conclude that the resource misallocation caused by legitimately obtained monopoly power cannot be reduced without generating prohibitive transaction costs and misallocative incentive distortions.

F. *The Competitive Effect and Allocative Efficiency of Vertical Practices*

As I have suggested, Professor Bork analyzes accurately and comprehensibly many of the legitimate business functions of the various vertical practices to which the antitrust laws relate. This section will investigate his conclusion that such practices virtually never reduce competition and always increase allocative efficiency.

Two preliminary questions must be addressed before we can analyze the competitive effect of such vertical practices as resale price maintenance, vertical territorial restraints, price discrimination, tie-ins, and reciprocity: (1) are we to focus on the competitive effect of an individual firm's use of these techniques or the competitive effect of a rule allowing all suppliers of some buyer or buyers to use them and (2) when analyzing a technique's competitive effect, should we ask what behavior the parties will substitute for the behavior we contemplate forbidding. At times, the courts have concluded (1) that they should look to the competitive effect of an individual firm's use of a technique and (2) that behavior that is anti-competitive compared with *some* alternative is not legal simply because the lawful behavior with which it will be replaced is even more anti-competitive. I disagree with both these positions. The first converts the courts into parimutuel handicappers by requiring them to forbid more successful firms

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92. As we saw, such a policy would also be likely to reduce labor-leisure misallocation, present-vs.-future consumption misallocation, RUO misallocation among distant competitors (since the relevant firms would probably have higher-than-average P/MC ratios), as well as various income-distribution misallocations.

93. Thus, one could raise (lower) the *effective* tax rate on corporate profits in industries that would otherwise have a higher (lower)-than-average DU/QV ratio. Admittedly, such a policy would not generate the first three types of improvements listed in the previous footnote. However, these disadvantages might be outweighed by the difference between the transaction cost of administering such a statute and the sum of the transaction costs and operating efficiency losses any divestiture order would generate.

from using profitable techniques that less successful firms may use. In brief, I find this objectionable both because it is inconsistent with the notion that firms that have lawfully obtained BCAs may enjoy their fruits and because it would require the courts to force firms to operate in an allocatively (as well as a privately) inefficient manner. The second is objectionable because it compels the courts to make decisions which clearly will have anti-competitive effects — in the face of the clear congressional goal of increasing the intensity of competition.

Bork's discussion of the competitive effect of vertical practices focuses on the leverage theory that the only function of such practices is to enable firms to use their "monopoly power" in one market to obtain monopoly power in another. As Bork and many others have argued, this theory basically assumes that the monopolist can have his cake and eat it too — that the monopolist can use in a second market the monopoly power he enjoys in a first market without forfeiting his ability to use that power in the first as well. In reality, except in the trivial case in which the vertical practice functions by concealing predatory behavior, no vertical practice can have an anti-competitive effect unless its profitability does not depend on its reducing competition. Although this conclusion implies that such practices cannot violate the Sherman Act, it leaves open the possibility that an individual vertical agreement or (preferably) the general availability of such agreements may violate the Clayton Act. In particular, such agreements may violate the Clayton Act as I construe it if they are less profitable for marginal established competitors or potential entrants than for well-established concerns and if their relative profitability does not reflect their relative allocative efficiency when used by the firms in question. Although Bork is somewhat too complacent about this issue, his conclusion that such agreements do not violate the Clayton Act is undoubtedly generally correct — primarily because such agreements do not seem likely to favor well-established firms, but also because their profitability often reflects their allocative efficiency.

However, I disagree with Bork's conclusion that virtually all such vertical practices are allocatively efficient. In part, my disagreement derives from my rejection of the two premises that underlie his method for predicting an event's allocative efficiency. In part, though, it reflects his failure to recognize (in this context as well) one of the major ways in which business practices can increase profits; *i.e.,* that a business practice can increase profits not only by (1) creating business efficiencies and (2) by reducing

the competition the firm confronts but also, as Judge Wyzanski may have perceived, (3) by increasing its ability to exploit a given demand-marginal cost position (*e.g.,* to convert buyer into seller surplus). Although I disagree with Wyzanski's assumption that such practices tend to reduce competition ("further the dominance" of the firm), there is no reason to expect them to be allocatively efficient.

Admittedly, many of the vertical practices Bork analyzes do generate business efficiencies. For example, resale price agreements or vertical territorial restraints generate efficiencies when they increase the ability of firms to induce their distributors to offer pre-sales advice or post-sales service or to communicate their discoveries to each other. So do tying (reciprocity) agreements that reduce the cost a seller (buyer) has to incur to deter its customers (supplier) from combining its product with privately and allocatively inferior complements (using inferior ingredients). However, many vertical practices function exclusively in the third way just described. Thus, price discrimination and certain types of tie-ins function by increasing their employer's ability to take advantage of a given demand-marginal cost position. Since such practices probably do not promote allocative efficiency in any way in our worse-than-second-best world (given the undesirability of the additional QV investment they may generate by enabling their employer to profit more from any BCAs they create) and since they misallocate resources directly in a variety of different ways, they are likely to be allocatively inefficient in relation to both the simple kind of single pricing that dominates economics textbooks and the more sophisticated kinds of pricing systems likely to be adopted if these devices are prohibited.

In what follows, I will illustrate these points (as well as the inadequacy of Bork's unit-output allocative-efficiency test) by analyzing the allocative efficiency of price discrimination and one type of tie-in, which I call a transaction-surplus-saving[94] supramarginal-cost price-shifting tie-in. Bork bases his conclusion that price discrimination is not generally misallocative on the fact that an individual seller's price discrimination seems as likely to increase as to decrease its own unit output (in comparison with single pricing — *i.e.,* in comparison with a policy of setting a single per-unit price and allowing buyers to purchase as much as

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94. Transaction surplus is defined to equal the sum of buyer and seller surplus — *i.e.,* the area between the demand curve the seller faces and his marginal cost curve, between zero output and the actual output.

they want at that price). In fact, if the unit-output price test for allocative efficiency were justified, price discrimination might even be allocatively justified by its tendency to increase the discriminator's rivals' unit outputs since the ability of a firm to offer a low discriminatory price to someone else's customers will induce its better-placed rival to charge a lower price (and therefore sell a higher unit output).

As we have seen, however, one cannot predict a practice's allocative efficiency from its effect on unit output. Unfortunately, the more sophisticated analysis I outlined in the second section suggests that price discrimination is almost certainly less allocatively desirable than single pricing — at least when the discriminatory prices are charged to buyers the relevant seller is best-placed to serve. Clearly, since price discrimination is more expensive to execute than single pricing (the discriminator must do additional market research to determine which of its customers place higher and lower values on its product, must incur the extra cost of communicating prices individually to its customers, and must incur costs to prevent its low-price customers from engaging in arbitrage), the practice will be misallocative if it has a neutral effect on other sorts of resource allocation. In fact, at least when practiced in relation to customers the discriminator is best-placed to serve, price discrimination seems likely to increase other kinds of resource misallocation. Thus, such price discrimination will tend to generate consumption-optimum misallocation by allocating goods from buyers who valued them more highly (buyers who would have purchased the relevant product at its optimal single price but do not at the higher discriminatory price) to buyers who value them less highly (buyers who buy them only because of a discriminatory low price).[95] By enabling marginal QV investors to reduce the surplus their consumers realize, such price discrimination may also exacerbate quantity-vs.-QV investment misallocation.[96] Admittedly, the non-transaction cost

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95. This conclusion relates to the traditional welfare economics proof that consumption-optimum misallocation will arise where the relative cost of two goods to buyers of both is not the same at the margin. Obviously, price discrimination does not result in a physical transfer of some product X from a higher-demand to a lower-demand buyer. Instead, the middle-demand original buyer of X who is offered the higher price purchases some product V instead while the low-demand buyer who is offered the lower price buys X rather than the W he originally purchased. However, since there is no reason to believe that P/MC will differ in W and V, the resource flows from X-middle (X_M) to V and from W to X-low (X_L) can be treated as a flow from X_M to X_L (inasmuch as the missing V to W link would be allocatively neutral if $[P/MC]_V$ equalled $[P/MC]_W$.

96. Recall that the distortion introduced by consumer surplus offsets the larger distortions introduced by supracompetitive pricing. Relatedly, price discrimination will also cause resource misallocation to the extent that it encourages firms to use resources to obtain monopoly positions through anticompetitive behavior.

effects of price discrimination may be desirable when the discriminator offers its low price to someone else's customer. Thus, although sales made by competitive inferiors will normally be misallocative in themselves (will normally cause intra-industry RUO misallocations), a rule that allowed firms to discriminate would probably cause not an increase in such sales but a decrease in the prices charged by the competitive superiors of the potential discriminators. In my terminology, such a rule would reduce the OCAs of the discriminator's rivals[97] by reducing the contextual cost of discrimination. As we have seen, any such tendency to reduce prices would improve resource allocation by decreasing quantity-vs.-QV investment misallocation, labor-leisure misallocation, production-process research misallocation, and various kinds of income-distribution-related misallocation. Thus, even though resources will normally be misallocated by price discrimination directed at the seller's own customers, there may be an allocative case for allowing sellers to charge discriminatorily low prices to someone else's customers.[98] In any case, Bork is clearly far too optimistic about the allocative efficiency of price discrimination.

Bork is also too optimistic about the allocative efficiency of the vertical devices (such as tying and reciprocal-trading agreements) firms use to increase their ability to exploit their demand-marginal cost position in their relations with a single customer. I will illustrate this point by analyzing the allocative efficiency of a type of full requirements tie-in he does not discuss — *viz.*, the supramarginal-cost price-shifting tie-in in which a seller X sells some product A for a lower unit price than he otherwise would have charged on condition that the buyer Y purchase for more than its market price its full requirements of a second product B (that may be neither a substitute nor a complement of A).

To analyze such tie-ins, we must first examine the pricing strategy a nonperfect competitor would find optimal for an individual buyer if that seller could not use tying or reciprocatory

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97. To the extent that differences in the contextual legal costs of discrimination that different rivals would face created differences in the amount by which competitive inferiors were disadvantaged, the legalization of price discrimination would decrease contrived OMs as well by increasing the number of inferiors able to profit in the short run from undercutting a given OM.

98. Such a solution would best be implemented by giving price discriminators a "someone else's customer" defense (which resembles vaguely the "meeting competition in good faith" defense of our present Robinson-Patman Act). Obviously, the viability of this approach depends on the ability of the sellers to prove to a reviewing authority that they were not best placed to serve buyers to whom they granted price concessions.

agreements. Diagram 2 illustrates the possible strategies such a seller could choose (as well as the functioning of the type of tie-in with which we are now concerned). In particular, Diagram 2 shows the position of a seller X who faces curves DD_{XAY} and MC_{XAY} when selling product A to buyer Y. If such a seller were required to sell A separately, if could use any of three strategies: (1) perfect price discrimination (pure lump-sum pricing), which it could effectuate by charging the buyer the highest lump-sum fee it would be willing to pay (NIG in a perfectly informed world) for the right to purchase A for a per unit price OG equal to its transaction-surplus-maximizing (TSM) marginal cost (its marginal cost at its TSM output — GI, the output at which DD_{XAY} and MC_{XAY} intersect);[99] (2) conventional single pricing, which would be effectuated by charging no lump-sum fee and the supra-marginal cost price ($Q\alpha$) associated with the output at which the conventional MR and MC curves intersect (αB); and (3) a mixed strategy in which a smaller lump-sum fee (say NKJ in a perfectly informed world) is combined with a supracompetitive per unit price (say OJ). Obviously, if information were perfect and transaction costs zero, the perfect price-discrimination strategy would be optimal, since the lump-sum fee can convert all buyer surplus into seller surplus without reducing output and thereby destroying transaction surplus. In practice, however, pure lump-sum pricing is unlikely to be optimal. In a world of imperfect information and transaction costs, perfect price discrimination reduces its user's profits (in comparision with single pricing) (1) by offering no protection against his own pessimism (when he may underestimate the lump-sum Y would pay because he underestimates the units Y expects to buy),[100] (2) by offering no protection against Y's pessimism (where Y underestimates his quantity demand for A and therefore the dollar value of the right to purchase A),[101] (3) by increasing the total risk costs he and Y must bear by shifting the risk that Y's quantity demand will turn out to be lower than

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99. DD_{XAY} and MC_{XAY} respectively stand for the demand and marginal cost curves X faces when selling A to Y.

100. If X underestimates Y's quantity demand for A, X's supramarginal cost price will give him unanticipated profits when Y turns out to purchase more A than X anticipated.

101. If Y underestimates his own quantity demand for A, he will also underestimate the additional costs X's supramarginal cost price will impose on him (and hence will be willing to give X more profits in the form of such unit markups than in the form of a lump-sum fee).
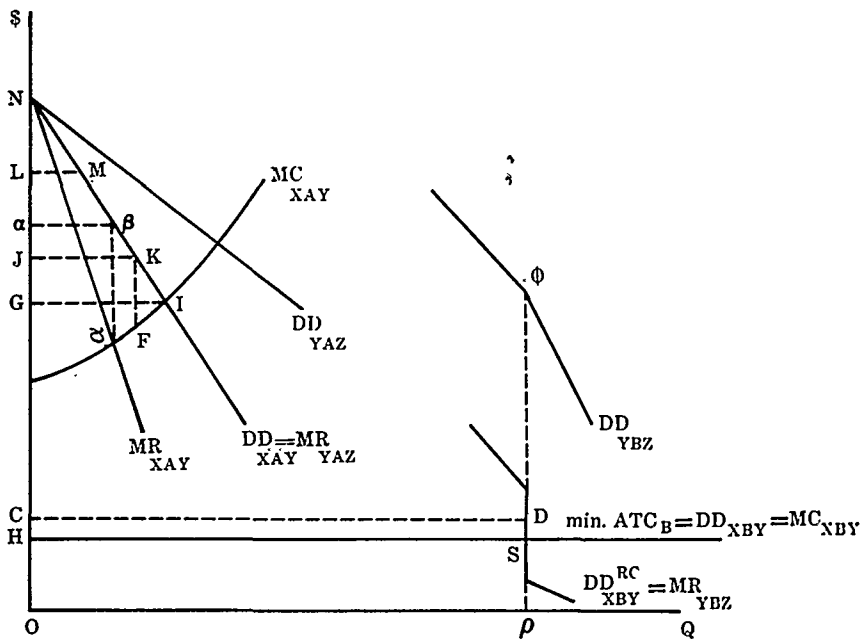
DIAGRAM 2

expected from X to Y[102] (where Y is more risk-averse or X's uncertainty is smaller than Y's because, for example, retailer Y is interested in his share of the resale market for A while X is interested only in A's overall sales), (4) by increasing the costs X must incur to prevent or allow arbitrage (by creating a difference between the per unit price Y pays and the average lump-sum plus unit price X seeks from other buyers), and (5) by increasing the costs X has to incur to negotiate and execute his contract with Y (by complicating the agreement and necessitating a written document). On the other hand, except where transactions involve little money, single pricing will also be nonoptimal, since it allows much unnecessary consumer surplus to escape, ($N\beta\alpha$), and destroys ($\beta I\vartheta$) transaction surplus as well by reducing A's unit price sales below the transaction-surplus-maximizing level at which DD_{XAY} and MC_{XAY} intersect. In general, then, sellers will find it optimal to combine a lump-sum fee with some supramarginal cost pricing. In particular, the optimizing seller will continue to raise his per

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102. Under a lump-sum pricing arrangement, Y has additional risk because his payment will not decline proportionately with his quantity demand when his quantity demand turns out to be less than he expected. X is interested in the risk costs Y must bear because they influence the size of the lump-sum fee that Y is willing to pay — *i.e.*, because they reduce the payment he is willing to make below NIG.

unit price and lower his lump-sum fee until the benefits unit-price increases create (by helping him to overcome his and his customer's pessimism, by reducing the sum of his and his customer's risk costs, and by decreasing his customer's incentive to engage in arbitrage) just equal the costs such increases create by reducing output and destroying transaction surplus. Obviously, then, one factor that will influence the amount of supramarginal cost pricing such a seller will find optimal is the relative amount of transaction surplus successive unit price increases must destroy to convert buyers surplus into seller surplus — *i.e.*, the seller-surplus-plus buyer-surplus-minus ratio (ΔSS +/ΔBS-) for marginal increases in prices,[103] where the difference between (ΔSS+) and (ΔBS-) is the amount of transaction surplus the relevant price increase destroys (ΔTS-). *Ceteris paribus*,ΔSS+/ΔBS- will tend to be higher the smaller the original gap between price and marginal cost, the greater the original output, the steeper the relevant demand curve, and the less positively sloped the relevant marginal cost curve. In what follows, I will assume that X's optimal independent strategy would be to charge Y a lump-sum fee of LMKJ for the right to purchase as much A as he wishes at per-unit price OJ (where NML equals the risk costs such an arrangement would impose on Y plus any buyer surplus its strategic bargaining position enables it to obtain).

We should now be able to understand how a tie-in can benefit a seller by increasing the efficiency of his supramarginal cost pricing by shifting its locus to a different product with a more suitable DD-MC combination. As I have suggested, Diagram 2 illustrates this possibility as well. In addition to DD_{XAY}, MR_{XAY}, and MC_{XAY}, Diagram 2 contains four other curves with which we will be concerned. All four assume that X manufactures A, that Y is a retailer that resells both A and B to final consumers Z, and that (for convenience sake) Y's marginal costs are costs of goods sold. Thus, (1) DD_{YAZ} is the demand curve Y faces when reselling A to Z (since Y is assumed to incur no marginal costs other than the costs of goods sold, MR_{YAZ} indicates the value of successive units of A to Z [$MR_{YAZ} = DD_{YBZ}$]); (2) DD_{YBZ} and MR_{YBZ} are the demand and marginal revenue curves Y faces when reselling B to Z (although this assumption is not essential to our analysis, Diagram 2 does assume that Y faces a kinky oligopolistic demand

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103. (ΔSS+) represents the additional surplus a seller can obtain through a marginal increase in his unit price. (ΔBS-) represents the amount of buyer surplus such a marginal price increase will remove from the relevant buyer.

when selling B [though not when selling A], that DD_{YBZ} is kinked at $\emptyset$ and that MR_{YBZ} is therefore discontinuous at the associated output op ;[104] (3) DD^{RC}_{XBY} is the demand curve X faces when selling B to Y under a full requirements contract (hence the superscript RC) (since such a contract obligates Y to treat X as a monopolist of B, the height of DD^{RC}_{XBY} equals the value of successive units of B to Y — which on our [marginal cost equals cost-of-goods sold] assumption equals MR_{YBZ}); finally (4) DD_{XBY} indicates the demand curve X would face when selling B to Y without a full requirement contract (for simplicity, Diagram 2 assumes that B is produced in a perfectly competitive market so that DD_{XBY} equals the minimum average total cost of B [min ATC_B], which also equals its marginal cost to X [MC_{XBY}]).

X would implement the tie-in with which we are now concerned by offering to reduce the unit price it charges Y for A from OJ to OG in exchange for Y's agreement to purchase his full requirements of B from X as well for SD = HC more than its normal market price. If (as I assume by construction) the extra surplus Y expects to obtain on A (JKIG) equals the expected cost to him of the full requirements contract on B (CDSH) and if (as I also assume) the tie-in does not increase the riskiness of this transaction for Y, Y will be indifferent between this tie-in and the independent deal on A X would otherwise have offered. However, X will not in general be indifferent between these two options. Thus, on the plus side, the tie-in will tend to be more attractive for X, to the extent that the $\Delta SS+/\Delta BS-$ ratio for the price increase on B is higher than $\Delta SS-/\Delta BS+$ for the relevant price decrease on A. Since in Diagram 2, X can remove CDSH = JKLG of buyer surplus by raising its price on B without destroying the KIF in transaction surplus it would have had to destroy to remove a comparable amount of surplus by raising its

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104. Kinked oligopolistic demand curves arise in tightly oligopolistic markets in which each seller finds that his rivals will not follow his price increases above the prevailing market level though they will match his price decreases below the prevailing level. Such a reaction pattern will cause the demand curve to kink since it implies that each seller will lose more sales if he raises his price above the prevailing market level than he will gain if he lowers his price the same amount below the original prevailing market level. Obviously, since each seller will therefore gain more marginal revenue by reducing his price to the prevailing market level than he will obtain by lowering his price below the prevailing market level, the marginal revenue curve associated with a kinked oligopoly demand curve will be discontinuous at the output associated with the kink (*e.g.*, at output op in Diagram 2). The structure portrayed in Diagram 2 could be found in many situations. For example, if X — a clothing store in a small town — were the only store to sell high quality suits (product A) but sold socks and underwear (product B) in competition with a department store or Army-Navy store, it might face a kinked oligopoly demand curve on B but not A.

price on A, the tie-in will yield KIF more profits than X's optimal mixed strategy in the situation in question, other things being equal. Although this result is associated with the discontinuity in DD^{RC}_{XBY} in Diagram 2, comparable results can be generated by far less restrictive assumptions. Similar results will occur to the extent that B's TSM output is higher than A's, DD^{RC}_{XBY} is steeper than DD^{RC}_{XAY} over the relevant range, and MC_{XBY} is less positively sloped than MC_{XAY} to the left of their respective TSM outputs. Of course, any such gains the tie-in achieves will be more or less offset to the extent that the tie-in's supramarginal cost pricing on B offers X less protection against arbitrage, pessimism, and risk aversion than the supramarginal cost pricing on A it replaces. It is obvious that the tie-in clearly will be inferior in some such respects. Not only will the tie-in not reduce Y's incentive to engage in arbitrage on A, it will create an additional enforcement problem for X by giving Y an incentive to cheat on his requirements obligation on B. However, to the extent that Y's quantity demands for A and B (at given prices) are always in the same proportions, X's supramarginal cost pricing on B may give him virtually the same protection against his pessimism, Y's pessimism, and his and Y's risk aversion as the supramarginal cost pricing on A it replaces. Thus, since a reseller's (Y's) sales of accessories (socks and underwear — B) will often be appropriate to his sales of the relevant main item (suits — A) and since many resellers (Y) sell products whose sales depend on the same factor (*e.g.*, weather), X can often arrange a tie-in such that (1) X will realize unanticipated profits through his supramarginal cost pricing on B (unanticipated because of X's underestimate of Y's quantity demand for B) whenever he underestimates Y's quantity demand for A and hence the lump-sum fee Y would be willing to pay him; (2) Y will underestimate the cost to him of accepting the requirements contracts on B (Y will underestimate his quantity demand for B) whenever he underestimates his quantity demand for A and hence the value of the right to purchase A at its TSM-marginal cost (the lump sum fee he should be willing to pay X); and (3) the payments Y must give X for A (in the form of supramarginal cost prices on B) will decline more or less proportionately with the value to Y of the right to purchase A at its TSM-marginal cost (since the former depends on Y's quantity-demand for B and the latter on Y's quantity-demand for A, which we are assuming will fluctuate together). Hence, the type of tie-in with which we are now concerned will sometimes increase its user's profits by reducing the transaction surplus its user's supra-

marginal cost pricing destroys by more than it raises the user's enforcement costs, the losses the user sustains from its and its customers' pessimism, and the risk cost the user and its customers bear.

Now that I have described the way in which such tie-ins enable sellers to better exploit their demand-marginal cost positions, I should be able to evaluate their allocative efficiency. Unhappily, at least where A and B are not complements or substitutes,[105] such tie-ins are likely to be allocatively inefficient: the savings in transaction surplus they generate generally will not be associated with an RUO allocative gain in our worse-than-second-best world,[106] and the investment incentives they create may actually exacerbate quantity-vs.-QV investment misallocation, while the associated increase in negotiation, enforcement, and perhaps risk costs will have allocative as well as private significance. In other words, in our worse-than-second-best world, such tie-ins are little more than allocatively expensive devices for transferring income to their users.

In short, since many vertical practices work not by creating "business efficiencies" but rather by letting their users exploit a given demand-marginal cost situation, Bork's presumption that such devices are allocatively efficient is unjustifiable. In fact, most vertical practices that are designed to enable their employer to take better advantage of a given demand-marginal cost position are probably misallocative.

G. *The Competitive Effect of Conglomerate Mergers and the Toe-Hold Merger Doctrine*

This section will analyze Bork's comments on the competitive effect of conglomerate mergers and the toe-hold merger doctrine — *i.e.,* on the consequences of such mergers and doctrines for the welfare of the customers of both the *MPs* and the *MPs'* product market rivals *R.*[107] I will criticize and propose alternatives

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105. Where A and B are complements or substitutes (*e.g.,* where they are inputs used in variable proportions), the saving in transaction surplus is likely to entail an allocative as well as a private gain.

106. Bork's results reflect the fact that marginal cost will tend to be systematically below marginal allocative costs in our worse-than-second-best world.

107. I should emphasize the difference between the competitive impact and allocative efficiency of conglomerate mergers or conglomerate merger doctrines. In part, this difference reflects the fact (already noted) that any tendency a conglomerate merger has to decrease (increase) QV investment competition (*e.g.,* by eliminating an effective potential competitor) will probably increase (decrease) its allocative efficiency, given the exces-

to Bork's two basic conclusions in this area: (1) that conglomerate mergers can reduce competition in comparison with the status quo or the independent entry of the outside firm only if the acquired company is a "significant" firm in a market with only one or two such enterprises[108] and (2) that the toe-hold merger doctrine[109] is anti-competitive because acquiring firms will find it most profitable to execute the conglomerate merger[110] that also provides most benefits for the relevant consumers.[111]

1. *Conglomerate Merger and the Status Quo*

I reject Bork's first conclusion both (1) because conglomerate mergers that eliminate an effective potential competitor will reduce competition more often than Bork supposes and (2) because, contrary to Bork's belief, such mergers can also reduce competition by facilitating contrived oligopolistic (and predatory) pricing.[112] Bork's claim that the elimination of an effective potential

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siveness of QV investment in our economy. In part, however, this difference reflects the divergence between the competitive value and allocative value of a given efficiency. For example, the competitive value of any marginal static efficiency a conglomerate merger generates for the *MPs* will be equal to the amount by which it induces the *MPs' Rs* to lower their prices by decreasing such firms' OCAs — *i.e.,* by reducing the *MPs'* basic competitive disadvantages. Thus, a static marginal efficiency would have substantial allocative but no competitive value if the two *MPs* were always either best placed or far-worse-than-second-best placed. In fact, even where such an efficiency has some competitive value — *e.g.,* even where it reduces the *MPs'* costs in relation to customers they were originally second-best placed to serve, its allocative value (which will depend primarily on the allocative gains associated with the tendency of any related price reductions to lower QV investment in the relevant market) will bear little relation to its competitive value (which will be equal to the extent of the price reductions themselves).

108. *See* R. BORK, *supra* note 1, at 260.

109. Put crudely, the toe-hold merger doctrine prohibits outside firms from executing with relatively large inside firms conglomerate mergers that would increase competition in comparison with the status quo or any entry the outside firms might otherwise have undertaken. In other words, the toe-hold merger doctrine restricts outside firms to making so-called toe-hold mergers with relatively small inside firms.

110. Although Bork never admits to this possibility, the doctrine actually presupposes a monotonic relationship between the firm and consumer benefits that would be generated by the preferred merger and all the alternative behaviors the initiating firm might engage in (including not only the alternative conglomerate mergers it could execute in the market in question, but also the alternative conglomerate mergers it could execute into other markets, the internal expansions it could undertake into the instant or other markets in which the acquiring firm was or was not already participating, the alternative horizontal mergers it could execute, or the various decisions it could make to release managers or capital and thereby make them available to alternative users). Like Bork, I will ignore these other possibilities in the text that follows. Obviously, their existence provides one more reason to reject his argument against the toe-hold merger doctrine.

111. R. BORK, *supra* note 1, at 261-62.

112. Of course, one could argue that this effect should not count against the legality

competitor will not reduce competition unless there are fewer than three significant firms in the relevant market[113] reflects the same misperception that distorted his conclusions about the competitive impact of horizontal mergers: his apparent belief (1) that QV investment cannot vary in any given market (so that a conglomerate merger that eliminates an actual or threatened entry cannot thereby affect the intensity of QV investment competition);[114] (2) that nonmonopolists enjoy no BCAs (so that a conglomerate merger that deters an entry or established firm QV investment cannot reduce BCAs); and (3) that oligopolistic margins cannot be contrived unless there are fewer than three significant firms in the market (so that in other circumstances a conglomerate merger cannot increase contrived oligopolistic margins). Since all of these beliefs conflict with the realities of our monopolistically competitive world, conglomerate mergers that eliminate effective potential competitors[115] will always reduce

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of the conglomerate merger — that such illegal pricing should be prosecuted when and if it does occur. In fact, I find this argument quite persuasive where predatory pricing is concerned. However, oligopolistic pricing is sufficiently more common and sufficiently less detectable to make me want to count against a merger any tendency it has to facilitate this practice. I should note that I agree with Bork's rejection of many of the other arguments which have been used to attack conglomerate mergers — *e.g.,* the arguments that they would reduce competition by lowering costs, creating $(\pi_D + R)$ barriers to entry, or creating opportunities for reciprocal dealing.

113. In fact, Bork assumes that competition will not be injured even if there are fewer than three significant firms in the acquired firm's market unless the acquired firm itself is one of the significant firms in question. Bork offers no argument for this qualification and I am unable to understand its basis. *See* R. BORK, *supra* note 1, at 260.

114. Bork does not discuss the ways or circumstances in which the elimination of a potential competitor can affect competition. In particular, although he seems to accept the limit price or wings theory that the presence of an effective potential competitor can induce a market's established firms to lower their prices and increase their unit outputs (*see* R. BORK, *supra* note 1, at the first line of page 260), he never explicitly addresses this issue. In fact, I doubt that potential competition ever induces established firms to lower their prices in the hope of deterring entry, for I suspect that such limit pricing (1) would rarely succeed in deterring entry, (2) would rarely be more profitable than allowing entry to occur even if it were effective, and (3) would rarely be as profitable as the various other methods established firms could adopt to deter entry — *e.g.,* by making additional QV (limit) investments themselves. Accordingly, I believe that a conglomerate merger that eliminates an effective potential competitor will reduce competition either by precluding the entry he would have executed or by obviating and deterring the limit investments his presence would have induced. *See Limit Price Theory, supra* note 13, at 668-82.

115. Bork also does not discuss the circumstances in which an outsider is likely to be an effective potential competitor. The courts have sometimes talked as if an outsider will be effective only if he would have entered absent the merger in question. However, the fact that a potential entrant would not have entered — indeed would not have even contemplated entry — is consistent with his being effective since it may reflect his having induced his established rivals to invest sufficiently to make entry patently unprofitable for him. In practice, a uniquely best-placed potential entrant will be effective whenever

competition in the above three ways — whether or not they involve markets with less than three significant firms — though these anti-competitive effects may be more or less offset by the pro-competitive tendencies of the various kinds of efficiencies such mergers can generate.

I also believe that conglomerate mergers can reduce competition even where they do not eliminate an effective potential competitor by facilitating contrived oligopolistic[116] and predatory pricing. A conglomerate merger between an outside firm K and an inside firm E will always facilitate E's contrived oligopolistic pricing by enabling E to exploit K's reputation for fulfilling his threats and promises and by increasing the credibility of E's threats by increasing the benefits retaliation will generate (by enabling KE's K divisions to exploit the retaliation's enhancing effect on the new company's tough reputation). Moreover, where the conglomerate merger partners K and E have a common conglomerate rival $K_R E_R$, who is active in both the E market and some of K's original markets, the K-E merger may facilitate K's and E's contrived oligopolistic pricing by enabling them simultaneously to communicate to $K_R E_R$ their joint intention to retaliate or reciprocate, by enabling them to pool customers to detect undercutting and identify their undercutter, by enabling them to pool other information about the competitive positions of various rivals that also will facilitate undercutter identification, by enabling them to decrease the cost of effective retaliation by in-

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the $(\pi_D + R + S + L)_N$ barriers he faces are less than the $(\pi_D + R + S + L)_E + M^*$ barriers and disincentives that would confront the established firm that would be best-placed to expand QV investment to the entry-precluding level. This result implies that such a potential competitor will be most likely to be effective (1) where the established firms do not possess patents or raw material monopolies that make $(\pi_D)_N$ exceed $(\pi_D)_E$, (2) where market demand is rising sufficiently rapidly to raise the rate at which the established firms have to expand to preclude entry to a level at which $(\pi_D)_E$ for the last necessary expansion exceeds $(\pi_D)_N$ for the best-placed potential competitor's entry, and (3) where the market contains only a few large potential expanders and new projects are inevitably equally competitive with all their predecessors — so that M^* is positive and significant. By extension, our analysis also implies that a potential competitor who is either worse-than-best placed or nonuniquely best placed to enter will also be effective whenever the entry of his superior and equals would not make entry unprofitable for him if his established rivals made no limit investments. For a further discussion of the effectiveness of potential competitors, see *Limit Price Theory*, *supra* note 13, at 684-90.

116. The Justice Department has recently begun to argue that conglomerate mergers can facilitate such pricing, which it refers to as "conglomerate interdependence and forbearance." *See, e.g.,* United States v. International Tel. & Tel. Corp., 324 F. Supp. 19 (D. Conn. 1970).

creasing their K division's retaliation against $K_R E_R$ and by reducing their E division's retaliation, or vice versa (where the harm-inflicted to cost-incurred ratio for the last act of retaliation that would be necessary for an independent K against $K_R E_R$ is higher than its counterpart for an independent E), and by enabling KE to use any excess reciprocatory power K or E enjoyed in its relations with $K_R E_R$. In fact, in such circumstances, the K-E merger will also facilitate $K_R E_R$'s contrived oligopolistic pricing by reducing its communication costs to K and E, by reducing its costs of retaliating effectively against K and E by permitting it to retaliate where the relevant marginal harm to cost ratio is best, and by letting it use any excess reciprocatory power it has vis-à-vis either of these MPs. Moreover, the power-pooling argument described above also implies that such conglomerate mergers will reduce the cost and increase the profitability of predatory pricing.[117]

Of course, conglomerate mergers that eliminate an effective potential competitor or facilitate contrived oligopolistic or predatory pricing may still increase competition in comparison with the status quo or with the independent entry of the outside MP, for such mergers may also generate static and dynamic efficiencies which increase competition in many ways. Thus, my analysis suggests that the competitive effect of any conglomerate merger will depend on (1) the factors that determine the effectiveness of potential competition,[118] (2) whether the acquiring firm was, or was close to being, the relevant market's best-placed potential entrant, (3) the factors that affect the pre-merger profitability of contrived oligopolistic pricing to the established merger partner E,[119] (4) whether K and E have a common rival $K_R E_R$ and whether K has a tougher reputation than E, (5) the size of the dynamic and marginal static efficiencies the merger generates,[120] and (6) whether E was, or was close to being, better placed to make an additional QV investment than any other established or potential competitor, and the frequency with which E was, or was close to being, some established rival's closest competitor.

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117. A conglomerate merger may also facilitate predatory pricing by giving E access to K's capital. *But see* note 112 *supra.*

118. *See* note 115 *supra.*

119. *See* note 61 *supra;* text at notes 57-60 *supra.*

120. As I have already suggested in the horizontal merger context, one could develop a decentralizing decision procedure that would make the decision to merge depend on the pro-competitive impact of such efficiencies without requiring the government to estimate their magnitude.

2. *The Competitive Impact of the Toe-Hold Merger Doctrine*

Bork bases his conclusion that the application of the toe-hold merger doctrine will always decrease competition on two premises: (1) that the private profitability of a conglomerate merger to its initiator depends solely on its ability to generate business efficiencies and (2) that the value to the relevant consumers of the efficiencies alternative mergers would generate always increases with their value to the merger's initiator. This section will explain why I reject both these premises and why the toe-hold merger doctrine may in fact tend to achieve its goal of increasing competition.

I reject the first premise because, as we have already seen, K may find a K-$E1$ merger profitable for nonefficiency as well as for efficiency reasons. K may be able to profit from a K-$E1$ merger (1) because the merger facilitates K's and $E1$'s contrived oligopolistic (and predatory) pricing, (2) because K can induce $E1$ to sell itself on favorable terms (a) by threatening to enter itself or (b) by threatening to execute with some alternative established firm $E2$ a merger that would substantially and uniquely[121] increase the damage $E2$ could (legally) do to $E1$,[122] and (3) by enabling K to exploit various investor misperceptions.[123] Moreover, there is no reason to believe that the merger that generates the most profitable efficiency for K will also increase K's profits most for these nonefficiency reasons. For example, the fact that a K-$E1$ merger would generate more marginal efficiencies than a K-$E2$ merger does not imply that K could gain more by threatening $E1$ with a merger with $E2$ than by threatening $E2$ with a merger with $E1$. Hence, I suspect that firms like K will often profit most from mergers that generate fewer profitable efficiencies than their alternatives. Hence, even if the value of such efficiencies to K and the relevant consumers were monotonically related,[124] one could not assume that K would always choose the merger that gener-

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121. Obviously, if $E1$'s merger with K would simply result in another outside firm's executing an equally damaging merger with $E2$, K's threat would not be efficacious.

122. For example, a K-$E2$ merger would increase this damage if it generated marginal static efficiencies for $E2$ and $E2$ originally was often $E1$'s closest rival.

123. *See* P. STEINER, MERGERS (1975). I should note, however, that even if this motivation accounted for a substantial number of the conglomerate mergers of the 1960s, investors have probably learned enough from the subsequent performance of the companies involved to make it an unimportant cause of future conglomerate mergers.

124. *I.e.*, even if an increase in the private profitability of the relevant efficiencies was always associated with an increase in the benefits they generated for the consumers in question.

ated efficiencies that were most beneficial to the relevant con-
sumers (much less the merger that was most beneficial to such
consumers overall).

In fact, however, the business and consumer benefits various
efficiencies will generate are not monotonically related. I would
be surprised if the value to buyers of the static and dynamic
efficiencies alternative conglomerate mergers can generate were
even highly correlated with their value to the *MP*s. Let me treat
static efficiencies first. The value of a marginal static efficiency
(that will not carry forward to an expansion) to the merged con-
cern will equal the amount by which it increases the concern's
OCAs in relation to those customers the concern was originally
best placed to serve plus the amount of new OCAs it creates by
increasing the number of customers the merged concern is best
placed to obtain. On the other hand, if the merged firm takes full
advantage of the increase in its OCAs and if the merger does not
affect the net position of the relevant buyers by changing the
contextual costs of the merged firm and its rivals, the benefits
such marginal static efficiencies confer on buyers in the merged
firm's market will equal the amount by which they reduce the
merged firm's rivals' BCAs. More particularly, when the merged
firm is second-best placed both before and after the merger, the
benefit the buyer receives will equal the size of the relevant effi-
ciency; when the merged firm was second-best placed before the
merger but is best placed after, the benefit will equal the size of
the original best placed supplier's BCA; finally, when the merged
firm was worse-than-second-best placed pre-merger but second-
best placed post-merger, the relevant benefit will equal the dif-
ference between the size of the efficiency achieved in relation to
the customer in question and the amount by which the estab-
lished merger partner was originally worse-than-second-best
placed.

Obviously, then, it is reasonably likely that the conglomerate
merger whose efficiencies add most to its participants' joint re-
turns will be less beneficial to the relevant buyers on this account
than an alternative merger that will improve the marginal static
position of a company that is often second- or close-to-second-
best placed, despite the fact that the latter merger would confer
more benefits on the relevant market's buyers. Hence, at least
where marginal static efficiencies are concerned, the premise that
the value of efficiencies to sellers and buyers are monotonically
related fails.

Moreover, even excluding the perverse cases in which a

merger-induced reduction in the established partner's $(\pi_D + R)$ barriers reduces competition, the value of a dynamic efficiency (or that portion that carries over to an expansion) to the merger partners and its value to the market's customers are unlikely to correlate strongly. On the one hand, the private value of such an efficiency-induced expansion to the merged firm equals the difference between the supranormal profits it nominally yields (the OCAs and OMs the merged firm realizes on the new project minus the normal amount of profits on the investment in question) and the avoidable damage it does to the established partners' pre-existing projects. On the other hand, the value of such an efficiency-induced expansion to the relevant consumers equals the sum of the consumer surplus they realize when buying the new product or patronizing the new outlet or plant and the value to them of the price cuts its introduction induces suppliers of the original product set to make. Thus, an aspiring conglomerate merger participant may execute a merger that permits an efficiency-induced expansion that is less valuable to the relevant consumers than the expansion an alternative merger would have induced because the expansion the executed merger permits (1) tended less to benefit consumers by reducing or eliminating various rivals' BCAs (and OMs), (2) generated less consumer surplus for the buyers of the new product or service, or (3) did more damage to the pre-existing projects of the established merger partner. Hence, even if the conglomerate merger partners can profit from the tendency of their merger to increase the established partner's ability to expand, the conglomerate merger that maximizes the profits the merged concern realizes on its merger-induced expansion may not maximize the benefits the outsider's merger confers on the relevant market's buyers. Moreover, in some cases, the outsider may choose a merger that will not generate any dynamic efficiencies because the tendency of an alternative merger to increase the ability of a prospective established partner to expand may actually reduce the merged concern's profits. This perverse result will obtain when the merger-generated reduction in the established partner's $(\pi_D + R)$ barriers will harm the merged concern by inducing another (still better placed) established firm to make a QV investment by eliminating the monopolistic investment disincentives that previously deterred its expansion (by making it profitable for the merged firm to expand if the rival in question did not). Accordingly, even if conglomerate firms always executed the merger that generated efficiencies that were most valuable for them, and even if these

conglomerate mergers never injured buyers, they would often not execute the merger that would have most benefited the relevant market's buyers.

Of course, the unpersuasiveness of Bork's argument against the toe-hold merger doctrine does not imply that the doctrine itself makes any sense. However, a tentative defense can be offered for the toe-hold merger doctrine, or at least for its premise that — from the perspective of the goal of increasing competition — K's choice of a merger partner will be distorted in the direction of relatively large established firms (E_L) as opposed to relatively small established firms (E_S).

Such a distortion could arise for two different sorts of reasons. First, a K-E_L merger might be more likely to increase K's profits by performing functions that did not benefit, or indeed actually harmed, the relevant buyers — *e.g.*, by enabling K to better use its ability to harm its merger partner by entering itself or merging with an alternative firm or by increasing the merged firm's ability to contrive oligopolistic prices. Second, the value to K-E_L of the efficiencies a K-E_L merger would generate may exceed its counterpart for a K-E_S merger by more than the contribution a K-E_L merger would make to the relevant buyers' welfare would exceed its conterpart for a K-E_L merger. I suspect that, on both these accounts, K-E_L mergers will be relatively more attractive to K than they are beneficial to the relevant buyers. In general, K can probably inflict more harm on larger than on smaller established firms. Moreover, K-E_L mergers will be likely to increase K's and E_L's total contrived OMs more than K-E_S mergers will increase K's and E_S's (since E_L has more customers to exploit and more information to contribute to K — though these effects will be offset to the extent that E_L has less need for K's information). In addition, since the ratio of the times large firms are best placed to the times they are second-best or close-to-second-best placed may well be higher than its counterpart for small firms,[125] the marginal static efficiencies K-E_L mergers generate may be relatively more profitable than beneficial to consumers relative to their K-E_S counterparts. Finally, in comparison with their K-E_S

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125. Recall that the contribution marginal efficiencies make to the merged firm is a function of the number of customers the *MPs* are best placed to serve, while the contribution such efficiencies make to the relevant buyers is a function of the number of times the *MPs* are second-best placed. If relatively large firms tend to produce differentiated goods that consumers either strongly prefer or do not particularly like while relatively small firms tend to produce cheaper, less differentiated goods that are many buyers' second choices, the textual assumption would be justified.

counterparts, the dynamic efficiencies (or static efficiencies that apply to expansions as well) that $K\text{-}E_L$ mergers generate will also be relatively more profitable to the merged firm than they are beneficial to the relevant buyers (since E_L is likely to have greater monopolistic incentives to expand[126] and since E_L's new variant will reduce the OCA to an independent rival less often than E'_S).[127]

Of course, these results would not justify a toe-hold merger doctrine unless the distortions they establish are typically critical — *i.e.,* unless the $K\text{-}E_S$ mergers would typically be more pro-competitive when they were less profitable and the $K\text{-}E_S$ mergers are profitable in themselves (would be executed if the $K\text{-}E_L$ mergers were prohibited). Still, the competitive case for the toe-hold merger doctrine is considerably stronger than Bork's conclusion suggests.[128]

III. CONCLUSION

The Antitrust Paradox offers much to any lawyer or economist concerned with antitrust. The book concisely explicates the nonscale business efficiencies which various horizontal, vertical, and conglomerate practices can generate, cogently analyzes the significance and interaction of various legal doctrines, and clearly illuminates the economic behavior involved in many individual cases.

Unfortunately, however, although Bork is generally right about what's wrong, he is usually wrong about what's right. In my opinion, Bork's approach is undermined by his failure to consider the full implications of monopolistic competition and second best. In particular, I believe that this failure has led him to mis-formulate the antitrust laws' tests of legality; to ignore the important distinction between the standards the current antitrust laws contain and those that would be established by an allocatively optimal antitrust policy; to misspecify the conditions for resource

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126. This argument would cut against the toe-hold merger doctrine if E_L and E_S typically faced monopolistic disincentives — *i.e.,* typically were uniquely well placed to add to their industry's QV investment. However, I believe that firms will rarely occupy such a position.

127. This result is implied by the fact that buyers will not benefit if E_L's new variant is better-placed to steal one of E_L's original customers than any of E_L's original rivals for such customers (since E_L will not compete against itself).

128. If I could surmount my own doubts about the legitimacy of such comparisons under the current antitrust laws, I would undoubtedly prefer an approach that is more selective than the toe-hold merger doctrine's crude rule — *i.e.,* that determined on a case-by-case basis whether the outside firm could have executed profitable and competitively superior mergers in the relevant market.

misallocation; to misstate the probable allocative efficiency of various business practices; to underestimate the feasibiliy of oligopolistic, retaliatory, and predatory pricing; and to overlook the possibility that nonoligopolistic restrictions of unit output, quality, and variety might also occur in the absence of a traditional monopoly.

Many of the phenomena with which *The Antitrust Paradox* is concerned cannot be adequately studied with currently accepted conceptual structures. To progress, we will need a vocabulary that facilitates theorizing about the phenomena I have termed QV investment, QV investment competition, QV investment misallocation, (natural and contrived) oligopolistic margins, competitive advantages, contextual costs, individualized pricing, and across-the-board pricing. Regrettably, I suspect that the resulting theories will justify many positive, legal, and policy conclusions that are inconsistent with Professor Bork's sanguine judgments about the efficiency of an unregulated economy. Most important, I suspect that such analyses will demonstrate that oligopolistic and predatory pricing are more troublesome than Bork supposes, that horizontal and conglomerate mergers are anti-competitive and misallocative more often than he believes, and that various vertical practices are less inherently desirable than he concludes. In any case, I am confident that if such theories are combined with the valid insights Bork so effectively communicates in *The Antitrust Paradox*, they will enable the courts, the legislatures, and their company to make better legal and policy decisions.[129]

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129. There is considerable evidence that the Burger Court is far more ready than its predecessors to accept the kinds of sophisticated economic arguments that Professor Bork and I are advocating. *See* Markovits, *The Burger Court, Antitrust, and Economic Analysis,* in a forthcoming collection of essays on the Burger Court, edited by Vincent Blasi and published by the American Society of Law Teachers.