Extension of Monopoly
Power Through Leverage

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Discussion Paper No. 4
5/84

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Abstract

The debate over the ability of firms to use restrictive practices to leverage their monopoly power from one market to another continues to be lively. The past few decades have been marked by the increased prominence of the view that such leverage is impossible, and that benign explanations account for the widespread use of the suspected tactics. This paper attempts to refocus the controversy by examining a number of systematic weaknesses in the attacks on leverage theory. First, the most frequently advanced arguments suggesting the impossibility of leverage are shown to mischaracterize the issue for both descriptive and prescriptive purposes. Second, critics of leverage theory often rely upon a number of simplifying assumptions (often implicit) that hide the potential for extending monopoly power. Third, supposedly benign explanations for observed behavior are often far weaker than many commentators admit. Fourth, generally ignored alternative theories of managerial decisionmaking suggest interpretations of restrictive practices that require analysis extending beyond the parameters of existing commentary.

It would be a mistake to conclude from these generalizations that traditional formulations of leverage theory were always right after all. Rather, the analysis suggests that the problem of understanding behavior by powerful firms is vastly more complicated than either group is willing to admit. Many of the past conclusions concerning restrictive practices may be seen as deriving more from selective inclusion and exclusion of competing arguments and an excessive reliance on ungrounded assumptions concerning the operation of the marketplace. The most important question raised by this exploration concerns the role of antitrust policy in a world that is not amenable to understanding in terms of the simplifications thought necessary to sustain a limited intervention into the market.
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Introduction

The debate over the ability of firms to use restrictive practices to leverage their monopoly power from one market to another has continued throughout the history of the antitrust laws. The past few decades have been marked by the emergence among a group of commentators of the argument that such leverage is impossible, and thus that restrictive practices previously seen by courts as devices to extend monopoly are benign or even may be efficient devices by which firms maximize their profits taking as given the market conditions they face. These developments are briefly described in Part I.

There are a number of deficiencies in the analysis of recent commentators who have attempted to proclaim the death of leverage theory. Their basic mistake is in their central thesis that antitrust law should be indifferent to the exploitation of

1. Assistant Professor of Law, Harvard University. Northwestern University, A.B., 1977; Harvard University, J.D., 1981; A.M., 1981. The helpful comments and assistance of Lucian Bebchuk, Brad Karp, and Steven Shavell are greatly appreciated.
monopoly power because extant power is a fixed sum, and thus will result in the same damage regardless of how it is deployed. Although of some superficial appeal, it can readily be demonstrated that their analysis is strongly counterintuitive. Consider the case of a terrorist on the loose with only one stick of dynamite. The fixed sum thesis posits that since the power is fixed -- i.e., we are assuming that the terrorist has one and only one dynamite stick -- we are indifferent to where the dynamite is placed. It is all too obvious, however, that the potential damage resulting from power in this context, as well as in virtually any other we can imagine, is overwhelmingly dependent upon how it may be used. Part II of this paper both develops the general theoretical invalidity of the fixed sum thesis in the leverage context and presents factors indicating that leverage, even interpreted as extension of monopoly power, is possible in practice.

The practical claims of Part II are limited in that it is only established that leverage must be taken seriously; other explanations for restrictive practices are not ruled out.\textsuperscript{2} Part III offers arguments questioning the plausibility of the most frequent explanations the critics of leverage theory offer to explain observed restrictions. In addition, I develop alternative motivations for these practices that have received too little attention by courts and commentators -- firm's

\textsuperscript{2} Section II-A, however, does indicate how some of the other explanations, if valid, would not necessarily exonerate the defendant's behavior, as many of the critics claim.
misperception of self-interest and objectives that can be contrary to profit-maximization. Part IV offers some warnings concerning the potential deception that can be involved in comparing competing hypotheses in this area.
I. The Leverage Debate

Since the passage of the Sherman Act, the debate in most contexts over the leverage issue has followed a rather simple pattern. The often superficial assertion that many trade practices are attempts to extend monopoly power has been advanced by courts almost from the beginning, and this position generally continues to prevail, as noted in Section A. Section B explores what has become the dominant response of a growing number of commentators during the past three decades. This response asserts that it is simply impossible to extend monopoly power using such practices, and that they can better be understood as attempts to maximize profits rather than to extend existing monopoly.

A. The Traditional Leverage Argument

This position states that a monopolist's use of its power in its own market to control activities in another market typically represents an attempt to spread its power to the other market. This position was advanced in the dissent in *A.B. Dick*, and became the controlling position of the Supreme Court in its

Motion Picture Patents decision.\textsuperscript{5} It has been repeated frequently in the tying context ever since,\textsuperscript{6} and has been applied to other vertical arrangements as well.\textsuperscript{7} The Court and commentators have advanced other reasons to support their hostility to such practices,\textsuperscript{8} which are beyond the scope of this paper.

\textbf{B. The Response}

\textsuperscript{5} Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 518 (1917). Motion Picture Patents was not technically an antitrust case. The Court in affirming a decision that held the patentee's tying clause to be invalid, found support for its views in Congress' recent enactment of Clayton Act Sec. 3, but did not technically decide whether there was an antitrust violation. \textit{Id.} at 517-18.

\textsuperscript{6} See, e.g., United Shoe Machinery Corp. v. United States, 258 U.S. 451, 457-58 (1922); Carbice Corp. of Am. v. American Patents Development Corp., 283 U.S. 27, 32 (1931); Times-Picayune Publishing Co. v. United States, 345 U.S. 594, 611 (1953) ("But the essence of illegality in tying arrangements is the wielding of monopolistic leverage; a seller exploits his dominant position in one market to expand his empire into the next."); Fortner Enterprises, Inc. v. United States Steel Corp., 394 U.S. 495, 509 (1969); R. Posner, \textit{Antitrust Law} 171-72 (1976) (noting the traditional argument); L. Sullivan, \textit{Antitrust} 431 (1977) ("The consistent judicial instinct has been that these arrangements have but a single purpose and effect, to extend the seller's power in the market for the tying product into that for the tied product."); Ferguson, \textit{Tying Arrangements and Reciprocity: An Economic Analysis}, 30 \textit{Law \\& Contemp. Probs.} 552, 561-62 (1965). See also R. Posner, \textit{supra}, at 183 (indicating that the framers of section 3 of the Clayton Act, 15 U.S.C. Sec. 14 (1976), believed in the leverage theory).


\textsuperscript{8} See, e.g., Blake & Jones, \textit{Toward a Three-Dimensional Antitrust Policy}, 65 \textit{Colum. L. Rev.} 422, 433-36 (1965) (protection of individual freedom and opportunity). It should be noted that commentators who reject the leverage hypothesis and thus advocate that various practices be legal are necessarily rejecting such alternative rationale for existing prohibitions.
1. The Fixed Sum Argument

Bork argues that "[t]he law's theory of tying arrangements is merely another example of the discredited transfer-of-power theory, and perhaps no other variety of that theory has been so thoroughly and repeatedly demolished in the legal and economic literature." Proponents of this position usually trace their arguments to the teachings of Aaron Director. The analysis was well explained by Posner:

A ... fatal ... weakness of the leverage theory is its inability to explain why a firm with a monopoly of one product would want to monopolize complementary products as well. It may seem obvious that two monopolies are better than one, but since the products are by hypothesis used in conjunction with one another to produce the final product or service in which the consumer is interested (duplication, or computation, or whatever), it is not obvious at all. If the price of the tied product is higher than the purchaser would have had to pay in the open market, the difference will represent an increase in the price of the final product or service to him, and he will demand less of it, and will therefore buy less of the tying product. To illustrate, let a purchaser of data processing be willing to pay up to $1 per unit of computation, requiring the use of one second of machine time and 10 punch cards, each of which costs 1 cent to produce. The computer monopolist can rent the computer for 90 cents a second and allow the user to buy cards on the open market for 1 cent, or, if tying is permitted, he

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10. Many of the proponents were Director's students at the University of Chicago. The only time Director published this line of argument was in Director & Levi, Law and the Future: Trade Regulation, 51 Nw. U. L. Rev. 281, 290, 292. Bowman's application of this argument in the tying context, Tying Arrangements and the Leverage Problem, 67 Yale L.J. 19, 21 (1957), has much to do with its popularization among commentators. It should be noted, however, that much of the argument seems to have been understood decades before, as indicated by the Supreme Court's opinion in the first United Shoe case, United States v. United Shoe Machinery Co., 247 U.S. 32, 65 (1918).
can require the user to buy cards from him at 10 cents a card -- but in that case he must reduce his machine rental charge to nothing, so what has he gained?

As this example suggests, in the absence of price discrimination a monopolist will obtain no additional profits from monopolizing a complementary product.

Bork refers to the argument thus criticized as the "fallacy of double counting" and applies this analysis in a number of contexts. I will refer to this criticism as the "fixed sum" view of monopolistic practices. The argument is that the monopolist may be able to gain its profit all from its own market, all from another, or from any combination thereof, but the total amount of restriction that the monopolist will profitably be able to impose is fixed regardless of the type of practice that is used.

2. The Profit-Maximization - Monopoly Extension Distinction

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This summary of the critics' argument is not sufficiently precise. It is well known that a monopolist will not garner the same reward regardless of its actions. For example, if it were to set its price at the competitive level (i.e., at marginal cost), it would receive no excess profits at all. Thus, the critics from the beginning have distinguished between practices that are merely profit-maximizing for a given quantum of monopoly power and those practices which extend monopoly power into other markets.14 The former are deemed legitimate on the ground that any challenge of such practices implicitly challenges the legitimacy of the extant monopoly power, and such an attack should be directed at the monopoly itself.15 If legal, the

14. See, e.g., W. Bowman, note 13 supra, at 54 ("the most pertinent question involves whether patentee-licensee agreements are profit-maximizing or monopoly-extending"); id. at 240 ("No careful distinction between monopoly maximization and monopoly extension has been articulated and consistently applied [by the Supreme Court]."); Director & Levi, note 10 supra, at 290 (price discrimination "might be considered more an enjoyment of the original power than an extension of it"); id. at 295; Bowman, note 10 supra, at 19 ("A distinction can usefully be made between leverage as a revenue-maximizing device and leverage as a monopoly-creating device. The first involves the use of existing power. The second requires the addition of new power." (Footnote omitted.)); id. at 23 (applying the distinction); Burstein, A Theory of Full-Line Forcing, 55 Nw. U. L. Rev. 62, 62 (1960); Baldwin & McFarland, Tying Arrangements in Law and Economics, 8 Antitrust Bull. 743, 768 (1963); id. at 771 n.54b (applying the distinction); Comanor, Vertical Mergers, Market Power, and the Antitrust Laws, 57 Amer. Econ. Rev. 254, 254 (1967) (distinguishing between "market power" and "market position"); R. Posner, note 6 supra, at 29 (specially defining the phrase "unilateral noncoercive monopolization" to refer to monopolistic practices that extend monopoly power), id. at 171 (applying the distinction); Bauer, A Simplified Approach to Tying Arrangements: A Legal and Economic Analysis, 33 Vand. L. Rev. 283, 292, 298, 299 n.52 (1980); Markovits, Tie-Ins and Reciprocity: A Functional, Legal, and Policy Analysis, 58 Tex. L. Rev. 1363, 1369 (1980).

15. See, e.g., Bowman, note 10 supra, at 32.
profit-maximizing practices should be deemed permissible; if illegal, remedial powers should be brought directly to bear on the monopoly. The latter -- monopoly extension -- which the critics associate with the traditional leverage argument, is conceded to be illegitimate but thought to be impossible because of the fixed sum argument.

The analysis underlying this position has not been directly refuted. Competing viewpoints generally repeat the more superficial argument that was generated by the courts or develop rather narrow exceptions that implicitly concede most of the ground to those advancing benign characterizations of restrictive practices. The next Part of this paper seeks to broaden substantially the scope of the controversy as well as to provide a general framework from which to understand and evaluate those partial refutations offered in the past.
II. The Possibility of Leverage

There are two basic deficiencies in the response that has been offered to rebut the simplistic leverage theory put forth by the courts. Both derive from the principle illustrated in the introduction by the discussion of the placement of a stick of dynamite. First, as will be explored in Section A, the distinction between extension and maximal exploitation of monopoly is problematic because it does not have the obvious implications for antitrust policy that are often advanced and because the distinction itself is somewhat arbitrary. Of course, given the latter, it should not be surprising that the former point would follow. Second, the fixed sum argument, although an improvement upon the courts' analysis, is itself overly simplistic. Section B will outline a common set of problems that arise in the application of the fixed sum hypothesis. The implication is that leverage, even as defined by the fixed sum critics, is more plausible in some settings than they are willing to admit.

A. Failure of the Profit-Maximization - Monopoly Extension Distinction

This Section advances two criticisms of the profit-maximization/monopoly extension distinction. Subsection 1 reveals the fallacies underlying the assertion that only monopoly
extension offers grounds for policy concern. Subsection 2 argues that the distinction is meaningful only as a heuristic device to clarify the time frame of analysis -- i.e., short run versus long run -- and is thus without a priori normative significance. This interpretation also highlights the potential for error in using inappropriate models for analyzing restrictive practices.

1. The Distinction Has Limited Relevance

The critics concede that a monopolist's profits, and thus the welfare cost to consumers, will depend upon the tactics it employs. In the simple example of price setting, described previously, the monopolist cares greatly whether it must price at cost or is permitted to elevate its price to the profit-maximizing level. It is entirely conceivable that an appropriate competition policy might constrain this freedom. In fact, a wide variety of direct regulations at both the state and federal level do just that. Such regulation is not part of the existing antitrust regime, but the point is that this result is not inevitable. When the issue concerns whether a wide variety of restrictive practices that are either explicitly

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16. See page 8 supra.

17. The most obvious reasons why this is the case include views concerning the courts' capacity to regulate prices directly, see, e.g., United States v. Trenton Potteries Co., 273 U.S. 392, 397-98 (1927), but see United States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912), and the view that legitimate monopolies deserve the reward to serve as an encouragement to efficient behavior, see generally, e.g., Kaplow, The Patent-Antitrust Intersection: A Reappraisal, 97 Harv. L. Rev. XXX (forthcoming June 1984) (reward for inventive activity).
addressed by the antitrust statutes\textsuperscript{18} or arguably within their general scope\textsuperscript{19} should be deemed illegal, it is essential to consider the overall costs and benefits of permitting the practice.\textsuperscript{20} While it may often be true that practices enabling a firm to maximize its return in a given market will be on-balance desirable from this perspective, there is no a priori reason to believe that this would generally be the case. Slawson has properly criticized Bowman, and implicitly a number of others as well, for begging the question on this issue.\textsuperscript{21}


\textsuperscript{19} For example, virtually any practice used by a firm to recover monopoly profits can be argued to fall within the prohibition of section 2 of the Sherman Act, 15 U.S.C. Sec. 2 (1976).

\textsuperscript{20} Of course, issues concerning legislative intent as well as those concerning less narrowly economic ramifications, see, e.g., note 8 supra, might also be relevant, or even decisive. Only the direct, narrowly defined, economic effects are discussed here.

\textsuperscript{21} Slawson, \textit{A Stronger, Simpler Tie-In Doctrine}, 25 Antitrust Bull. 671, 688-89 (1980). He indicates that all uses of monopoly are within the general concern of the antitrust laws, although he does not get the mileage out of his point that it deserves. For example, when discussing tying arrangements shortly after making his criticism, he responds to the price discrimination motivation by stating that "of course this cannot possibly be a use's only effect, even if it is the seller's only purpose.... The other effects should at least be examined in order to determine whether they are anticompetitive or harmful in other respects ...." \textit{Id.} at 690 (all but first emphasis added). His earlier point, as explained in the text to follow, proves that one must do more than examine the other effects. It establishes that the price discrimination effect itself must be scrutinized. Turner's analysis of tying arrangements also takes issue with the position of Bowman and others of similar views, but does not attack directly the claim that profit-maximization in itself is unobjectionable. See Turner, \textit{The Validity of Tying Arrangements Under the Antitrust Laws}, 72 Harv. L. Rev. 50, 63 n.42 (1958) (noting that one must account for the effects on competing sellers, which seems similar to the effects Slawson emphasizes).

Burstein, who is responsible for much of the more rigorous
The reply that the criticism is better directed at the existence of the monopoly itself is remarkably deficient. First, in many instances there is no simple remedy that would restructure the market effectively, so prohibition of the profit-maximizing practice may be a good second best. Second, the cost of remedies where they are available may in fact be greater than the cost of permitting the monopoly to exist while controlling its behavior. Finally, it may well be desirable to permit some monopolies to come into and remain in existence yet provide them with smaller rewards than those they might realize if permitted unlimited exploitation.22

This perspective casts in a somewhat different light numerous defenses of various restrictive practices. For example,23 one development of the analysis concerning the use of restrictive practices as profit-maximizing devices, see Burstein, The Economics of Tie-In Sales, 42 Rev. Econ. & Stat. 68 (1960); Burstein, note 14 supra, concludes that existing prohibitions are desirable despite the fact that in large part the prohibited practices enhance the gains from monopoly power rather than extending monopoly power, see id. at 93, although he does not develop why it is that he thinks it appropriate to take that position. Ferguson reaches conclusions similar to those of Burstein, see Ferguson, note 6 supra, at 564-66, although he does not expand upon this part of the analysis. Sullivan also advances the position that, for example, product packaging to permit higher profits should not be permitted, see L. Sullivan, note 6 supra, at 453, although his statement is not fully responsive since he does not indicate why we should not permit monopolies to reap higher profits, which the critics note are assumed to be legitimate.

22. One area that obviously presents numerous instances subject to precisely this sort of analysis is the exploitation of a patent monopoly. See generally Kaplow, note 17 supra.

23. The text focuses on price discrimination, which is the most commonly noted of the supposedly benign explanations for restrictive practices of this kind. Other explanations are often offered in the same casual manner. For example, Bowman argues
common argument is that many such practices do not extend monopoly but merely serve to permit profit-maximization through price discrimination. Of course, direct attempts to price discriminate are illegal under the Robinson-Patman Act. Since this prohibition is the most sharply criticized of all the antitrust provisions, it may not be surprising that the commentary concerning the use of various practices to facilitate that tying may be used as a technique of evading price regulation, see Bowman, note 10 supra, at 21-23, which in fact may have been the most plausible explanation for the tying arrangement in Northern Pacific Ry. v. United States, 356 U.S. 1 (1958). His observation that "no revenue can be derived from setting a higher price for the tied product which could not have been made by setting the optimum[, i.e., profit-maximizing,] price for the tying product," id. at 23, is inapposite since the purpose of the price regulation was to prevent just that. The best that can be said in defense of his position is that since evasion of the price regulation is the result, it is the regulatory commission that should have jurisdiction rather than the courts hearing antitrust controversies. That, of course, is an alternative, but it is not obviously the best and it would require substantial further analysis to establish that it was. Moreover, if a court examining a tying practice must decide which of many purposes motivates the restriction, see generally Part III infra, it may be sensible to reject Bowman's conclusion if the most benign explanation the defendant can offer is that it is attempting to evade price regulation. (No doubt, if asked by the regulatory agency, the defendant would deny this objective and claim to be extending its monopoly power into the unregulated market, which is beyond the agency's jurisdiction.)

24. See, e.g., R. Posner, note 6 supra, at 173, quoted at page 7 supra; id. at 174-75; Bowman, note 10 supra, at 19 n.4. Very similar arguments are made concerning the use of such practices to earn greater profits by exploiting the complementarity in demand between two or more products. See, e.g., Bowman, supra, at 25-27 & n.21.


26. See, e.g., R. Bork, note 9 supra, at 382-401 ("antitrust's least glorious hour"); P. Scherer, Industrial Market Structure and Economic Performance 580-82 (2d ed. 1980) ("an extremely imperfect instrument[, i]t is questionable whether the circle of beneficiaries extends much wider than the attorneys who earn sizable fees interpreting its complex provisions").
price discrimination would have proceeded along these lines. Yet it is somewhat ironic for commentators to criticize challenges to practices that question the legitimacy of the underlying monopoly when that monopoly has not itself been deemed illegal while defending those same practices because they serve a supposedly benign purpose which has been deemed illegal. More careful commentary has on occasion both recognized this connection and noted that price discrimination can be more costly than is often assumed to be the case. 27

2. The Distinction Is Arbitrary

The foundation of the position that various restrictive practices should be permissible because they are merely devices that maximize profit also suffers from the inability to maintain a relevant conceptual distinction between profit-maximization and monopoly extension. Initially, practices in both categories are motivated by the firm's desire to increase its profits. 28 And it was already noted in section 1 that practices that merely increase profits to an existing monopoly, without "extending" it, have effects on the welfare loss that results. From the perspective of welfare economics, practices that have similar

27. See R. Posner, note 6 supra, at 11-13, 177-79; Markovits, note 14 supra, at 1445. It is not my purpose here to evaluate Posner's ultimate conclusion that tentatively would permit most restrictive practices despite the difficulties related to price discrimination, R. Posner, supra, at 178-80, but merely to highlight my argument that labelling a practice as profit-maximizing rather than exclusionary leaves one far short of understanding what is necessary to reach a conclusion concerning whether the practice should be prohibited.

28. But see Section III-B infra.
effects on social welfare are viewed similarly, so any attempt to
draw a relevant economic distinction between profit-maximizing
techniques and monopoly extension techniques must rely on grounds
other than an evaluation of the net welfare effects of each
practice. But why would one want to make such a distinction?

The answer to these questions can be understood by attempting
to make more rigorous the distinction these commentators have in
mind. I believe that their two categories can only be given
meaning as an implicit attempt to distinguish between short run
and long run phenomena -- or static and dynamic models, using
more technical language. Thus, profit-maximizing practices are
meant to refer roughly to those actions that can have fairly
direct and immediate effects whereas monopoly extension refers to
behavior designed to have implications on the magnitude of
profits and welfare loss in the future. For example, typical
measures of market power ask how much prices can be raised above
cost under current market conditions.\textsuperscript{29} Inputs into the relevant
formula include information such as the short run elasticity of
market demand and the existing market share of the dominant
firm.\textsuperscript{30} The pricing decision, which can be implemented rather
quickly, is the prototypical example of what would be considered
a profit-maximization device.\textsuperscript{31} By contrast, practices designed

\textsuperscript{29} See generally Landes & Posner, Market Power in Antitrust

\textsuperscript{30} See id. at 944-47.

\textsuperscript{31} Under this framework, schemes designed to exploit
interdependency in demand among goods is placed in the
profit-maximization category. Bowman originally considered this
to affect the market share and elasticity of market demand might be labelled monopoly extension devices. These practices do not increase short run profits, and might even decrease them. The firm's motivation is to change the structural conditions it faces in the future in order that it may receive greater profits then. This perspective is not static in the sense that it does not take the existing parameters as given; rather it is dynamic in that it focuses upon how the parameters change over time.

The point of section 1 was that although this distinction may aid one's analysis in a number of contexts, it has no a priori implications for the desirability of practices that affect profits in the short run versus those having implications in the long run. The additional point which can now be seen is that this static versus dynamic distinction, although an aid to understanding, is not one that even in theory could be helpful in the manner intended by those who rely on it so heavily. The reason is simply that static analysis has never been understood by economic theory as a privileged arena for behavior by firms, but rather as merely a simplification to help analyze complex

as the one true possibility for leverage. See Bowman, note 10 supra, at 25-27. More recently, Bowman has been sharply criticized for this categorization on the ground that practices with such effects are analytically similar to price discrimination, which is not monopoly extending. See Note, note 13 supra, at 922-27. My attempt to understand the implicit rationale behind the profit-maximization/monopoly extension distinction is consistent with this latter position. The very existence of this dispute over categorization is in the end largely semantic, reinforcing my overall conclusion in this Section that this long-used distinction is both indeterminant and irrelevant.

32. I must concede at least this much as I use the distinction to help explain the issue I discuss in subsection B2 infra!
behavior.

Reconsidering the price setting issue helps to illustrate this point. It is well known that the prices charged by a dominant firm may influence entry into the industry, and thus long run market share and market power. Thus even short run pricing behavior has long run effects. A rule that permitted every practice that had effects only in the short run probably would permit nothing. A modification that prohibited only practices with adverse long run effects, regardless of the short run implications, would be rather incongruous. First, since the aggregate welfare effect of any practice is the discounted sum of the effects in the present and future, one again wonders why the present should be ignored. Second, since no effects, even changes in pricing policies are immediate, and since most long run effects begin to be felt -- however slightly -- almost immediately, the idea of separating the two is most unpromising. Finally, such a rule may well be backwards in some cases. For example, a practice may have tremendously beneficial short run effects and moderately adverse long run effects. Presumably one would not ignore the former, but instead balance the two. The


34. Future effects are given less weight, that weight being a function of what is deemed to be the appropriate social discount rate.
same reasoning is appropriate when the short and long run effects are reversed.

Just as it typically matters where the terrorist leaves the stick of dynamite, it also typically matters how a firm chooses to exercise the power that it has. The fixed sum hypothesis is thus seen not as an inherent physical law, on a par with the conservation of mass plus energy, but rather as a position that when properly examined is at base counterintuitive.\textsuperscript{35} It does not follow, of course, that everything a firm might do is undesirable. This even more obviously fallacious position seems not far removed from some judicial pronouncements. What remains to be considered, then, is the plausibility that various adverse effects may result from the assorted restrictive practices scrutinized under the antitrust laws. Such an inquiry is vastly beyond the scope of this paper. The remarks that follow in Section B are confined to the possibility that leverage can be used in the manner originally postulated by the courts and challenged by their critics.

\textsuperscript{35} It is hard to understand how Bork can agree that the Court was correct in forbidding predation in Lorain Journal Co. v. United States, 342 U.S. 143 (1951), \textit{see R. Bork}, note 9 \textit{supra}, at 344-45, without conceding that the fixed sum hypothesis is flawed in principle. He distinguishes Griffith -- where he feels "the fallacy of double counting" led the Court astray -- primarily on the grounds that Lorain Journal had a high market share, predatory intent, and no apparent efficiency justification. \textit{Id.} at 345. Yet these arguments would have been irrelevant if the structure of argument itself were logically fallacious, as most of Bork's discussion suggests.
B. How Past Analysis Often Hides the Potential for Leverage

I am clearly not the first to argue that leverage is possible in some instances in spite of the criticism offered by those advancing the fixed sum hypothesis. My purpose here is two-fold. First, I will attempt to systemize the arguments that may be combined in a variety of contexts to explore the potential for leverage. Second, in the process, I will explore some elements of the system that typically are overlooked by both critics and supporters of the courts' edicts.

I believe that at least four components should be part of the typical leverage inquiry. First, it is important to understand the potential cost to the firm itself of employing the restrictive practice. Practices that come cheap are more likely to be utilized in attempts to secure effects in the long run even when they may be somewhat speculative. Second, as explored previously in subsection A-2, it is necessary to focus explicitly on the relationship between the short and long run, noting that the firm will be willing to incur positive net costs from a static perspective in order to achieve overall profits taking into account long run effects. The other two components I identify concern the strength of self-corrective market forces. The third point is that free rider problems may often inhibit the ability of competitors, purchasers, or suppliers to counter the

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36. This list does not attempt to be exhaustive, and I would hope that the potential for further development in this area will be enhanced by clarifying the elements as much as possible.
designs of a firm employing restrictive practices. Fourth, I will explore briefly the possibility that market imperfections may facilitate the effectiveness of restrictive practices in modifying market structure. All four points are commonly overlooked or underestimated by the strongest critics of the courts' proscriptions.

1. Failure to Note Minimal Cost of Monopolistic Practices

The point here is extremely simple and has been noted before. To the extent restrictive practices cost the firm using them very little, they are much more likely to be used. The question of how much restrictions might cost the firm has frequently been overlooked. Director and Levi note when discussing United States v. Griffith\(^37\) that "it would seem that in order to impose additional coercive restrictions on the suppliers, as, for example, on the suppliers for competitive markets, the monopoly owner would have to pay the suppliers for these additional restrictions."\(^38\) But how much would the monopoly owner have to pay? Bowman notes that "the demand for the tying product at any price will be less than the demand before the imposition of the tie-in."\(^39\) How much less? If different brands or different outlets are fungible, or at least rather close substitutes, it would cost next-to-nothing to induce a customer or supplier to deal with one firm rather than another. Although this point is

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37. 334 U.S. 100 (1948).
frequently ignored, it was noted long ago by Turner in the tying context and by Blake and Jones as applied to foreclosure through vertical mergers. In fact, it is even possible in some contexts that there would be some cost savings involved in the foreclosure, so the restrictive practice might break even or offer a modest gain in the short run. This point alone does not make the leverage argument. However, in light of such low (or even negative) costs, the expected payoff need not be overwhelmingly high to induce firms to make a variety of attempts at leveraging their way to greater profits in the future.

2. Use of Static Models

Subsection A-2 discussed how the distinction between profit-maximization and monopoly extension can be understood, if at all, as a distinction between effects that can be observed in a static model and effects that only emerge from a dynamic perspective. Thus, if the courts' critics are attempting to


41. Blake & Jones, note 8 supra, at 454-55 (discussing Brown Shoe Co. v. United States, 370 U.S. 294 (1962)).

42. See Bauer, note 14 supra, at 299 (discussion in tying context of decreased marketing costs). The same argument can be made in the other contexts as well. For example, this is apparent from Blake and Jones' discussion of Brown Shoe. See note 41 supra.

43. If the costs truly were negative, i.e., the firms saved more in sales expenditures and the like than the inducements cost them, one would be inclined to approve of the restrictive practices simply because they are an efficient sales practice. Of course, this conclusion depends upon the leverage effects being remote and also assumes that other considerations would not lead to an opposite conclusion, see note 8 supra.
demonstrate that monopoly extension cannot be accomplished using the restrictive practices they examine, one would expect their analysis to focus exclusively upon dynamic models. Quite surprisingly, the opposite has often been the case. To the extent this is true, of course, their criticism is wholly beside the point. This is because the argument attempts to disprove the existence of effects that by definition only appear in a dynamic framework by using analysis confined to static models that by definition ignore these effects.

The practice of predatory pricing illustrates this point. \(^{44}\) A dominant firm is hypothesized to substantially lower its prices for a period of time in order to drive out competitors or scare off new or potential entrants. It is conceded that the firm will suffer losses in the short run. \(^{45}\) The strategy is only pursued because the firm expects to make a greater profit in the long run than it would have in the absence if its predatory strategy. \(^{46}\)

\(^{44}\) No attempt is made here to make any arguments concerning either the plausibility that predatory pricing occurs with any substantial frequency or the appropriateness of the many legal rules that have been offered to address the issue. The purpose here is solely to describe the static/dynamic distinction in a well-understood context.

\(^{45}\) The nature of the losses that are necessarily borne depends upon how predation is defined. Under any definition, there are losses relative to the price the firm would otherwise have charged. For the purposes of this illustration, however, it would be simplest to assume that there are net operating losses (i.e., price does not cover variable cost) during this initial period.

\(^{46}\) See, e.g., III P. Areeda & D. Turner, note 11 supra, at 151 ("Indeed, the classically feared case of predation has been the deliberate sacrifice of present revenues for the purpose of driving rivals out of the market and then recouping losses through higher profits earned in the absence of competition.").
It is obvious that static analysis -- determining whether the firm profited immediately by its price cut -- would produce the misleading conclusion that predation was never profitable. One could only reach that conclusion, or any other, after taking into account the dynamic effect on the firm's market position. In the predation context, commentators have long recognized this rather obvious point, but in examining other exclusionary practices, particularly in the leverage context, many have failed to appreciate the need to consider how the effects of a practice over time can be dramatically different from their immediate impact on the firm employing it.

A number of the leading attacks on the view that leverage can extend monopoly implicitly or explicitly take a static perspective. For example, Director and Levi's argument that it is costly "to impose additional coercive restrictions on ..."

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47. It is still the case that criticism of static analysis has been in order. See, e.g., Williamson, Antitrust Enforcement: Where It's Been, Where It's Going, 27 St. Louis U. L. Rev. 289, 301 (1983) (footnote omitted, quoting Baumol, Quasi-Permanence of Price Reductions: A Policy for Prevention of Predatory Pricing, 89 Yale L.J. 1, 2 (1979)):

Although a consensus on this issue has not yet developed, there is widespread concern that a marginal cost pricing standard is defective. A basic problem with this criterion is that it appeals to static welfare economics arguments for support while predatory pricing is unaviodably an intertemporal issue. As William Baumol succinctly puts it, static analysis of the kind on which Areeda and Turner rely is "inadequate ... because it draws our attention away from some of the most pressing issues that are involved." The "nub of the problem ... [is] the intertemporal aspect of the situation."
suppliers.\(^{48}\) implicitly takes a static outlook, for the point is only that the attempt will be net costly in the present. Bowman indicates that if "the same output of the tied product can still be produced under circumstances consistent with competitive production of the tied product, no additional or new monopoly effect should be assumed."\(^{49}\) That is true for the present, but Bowman does not assess the long run impact of shifting sales of the tied product toward the firm employing the tying arrangement. Bork's arguments often implicitly assume that the firm employing the practice is not motivated by potential long run effects on market structure.\(^{50}\) Posner sometimes makes similar mistakes,\(^{51}\) although on at least one occasion he 

\begin{itemize}
  \item 48. Director & Levi, note 10 supra, at 292 (discussing United States v. Griffith, 334 U.S. 100 (1948)).
  \item 49. Bowman, note 10 supra, at 20. Bowman continues his argument by stating that "[i]f the tying seller gave a compensating advantage to the buyer, he might not be displaced. But in that event the tie-in would no longer be useful." \textit{Id.} at n.6. The criticism in text applies equally to this point.
  \item 50. See R. Bork, note 9 supra, at 306-07 (noting lack of impact of exclusive dealing in one-store towns, not considering whether there will be any long run impact on the market structure of the upstream industry); 372-81 (noting potential short-run profit-maximizing effects of tying; dismissing entry barrier argument because no current monopoly profit results).
  \item 51. For example, he argues that if there are two manufacturers, each with half of the market, neither will be able to put the other out of business by purchasing all the distributors because "[t]he minimum price for the distributors' assets will be the cost to the second producer of being forced out of business, since the second producer will pay any price up to that cost in order not be forced out." R. Posner, note 6 supra, at 199. It is unclear why Posner believes this indicates that such a purchase of all distributors could not occur. That the winning bid would be high does not imply it would not be made if the winner can expect monopoly profits in the future as a result. Cf. Kreps & Wilson, \textit{On the Chain-Store Paradox and Predation: Reputation for Toughness} 41-57 (Stanford University Graduate
explicitly notes such errors when made by others. Other commentators in this tradition often take the same approach.

School of Business Research Paper No. 551, June 1980). Posner also argues that IBM's price reduction in response to entry by Telex, see Telex Corp. v. International Business Mach. Corp., 367 F. Supp. 258 (N.D. Okla. 1973), rev'd, 510 F.2d 894 (10th Cir. 1975), was desirable since it was above cost and brought lower prices to consumers. R. Posner, supra, at 194-95, see id. at 193 ('can exclude only a less efficient competitor'). In making a similar analysis of price discrimination used as an entry deterrent, he claims that "[i]t is indefensible, however, to try to justify such a prohibition on the ground that it makes entry less attractive [since] [t]he effect of the ... lower prices ... is to increase output in [such] markets -- a good effect of discrimination." Id. at 206. Both of these arguments are true if one makes a static comparison to an identical state of affairs where the price is not reduced, with the result that output is less. But this ignores the effect of permitting such behavior on a firm with a long run outlook in that it permits the firm to elevate its price in the pre-entry state of affairs. See, e.g., Hay, A Confused Lawyer's Guide to the Predatory Pricing Literature, in S. Salop, Strategy, Predation, and Antitrust Analysis 155, 161-66 (1981) (less efficient rival may substantially reduce price from monopoly level); Ordover & Willig, An Economic Definition of Predatory Product Innovation, in S. Salop, supra, at 301, 365-70 (vertical leverage with similar effects). Whether this result is desirable is a very complicated question, see, e.g., sources cited at note 33 supra, but one that must be addressed before a conclusion such as Posner's can be reached.

52. Posner correctly discusses how it may be possible for a firm to establish an effective threat of localized predatory behavior with the result that it can deter entry without often having actually to spend resources engaging in predation. See R. Posner, note 6 supra, at 185-86. This observation concerns only one dynamic aspect of a firm's pricing strategy, as noted in the preceding footnote.

53. See, e.g., Note, note 13 supra, at 911 n.70 (using static analysis to criticize Slawson's "fanciful[] suppos[ition]," which was in fact grounded in part on entry barriers, see Slawson, note 21 supra, at 681 -- a dynamic effect); id. at 917 (same). In fact, this entire Note, carrying the subtitle "Invalidating the Leveraging Hypothesis," is exclusively limited to static analysis. See, e.g., id. at 925 ("tying arrangements can increase a monopolist's profits only if its customers have differences in demand elasticities that are indicated by combining the commodities in different proportions") (emphasis added)).
It is hard to understand why so much of the criticism of leverage theory operates primarily in a static framework when even some of the earliest and most unsophisticated statements of the leverage theory were explicitly grounded in a dynamic model.\textsuperscript{54} For example, statements concerning foreclosure typically look to the long run erosion of the market position of competitors. Although the process was never specified with any rigor, at least the general flavor has been clear enough. Arguments concerning the erection or maintenance of entry barriers, to be discussed briefly in subsection 4 below, also have been grounded explicitly in a dynamic context, as have more sophisticated arguments concerning reputation effects of practices by established firms,\textsuperscript{55} strategic positioning,\textsuperscript{56} and --

\textsuperscript{54} One possibility is that dynamic models are much more imposing and less likely to lead to determinate conclusions than static analysis. I find Spence's reply compelling: "My own view is that the state of our understanding of both dynamic strategy and intertemporal market performance is currently insufficient to justify confident conclusions with respect to rules and standards. But I do think that it is better to admit ignorance than to defend rules based on incomplete static models of industries." Spence, \textit{Competition, Entry, and Antitrust Policy}, in S. Salop, note 51 \textit{supra}, at 45, 87.


other effects on firms' costs. Of course, there have been ad hoc discussions of and replies to such arguments, but they would have assumed a more central role in the debate if the focal point for the primary analysis were not so fixed on static models.

3. Overlooking the Free Rider Problem

The moment analysis of anticompetitive practices moves beyond the static context, it becomes necessary to evaluate more carefully the impact of the self-correcting processes of the market place. In a competitive market, if a single firm raises its price, others will charge less, and the firm cannot profit because it is unable to sell its product at the higher price. Firms that can raise prices and still retain a substantial portion of their customers are said to have market power, which necessarily implies that other firms will be unable or unwilling to produce at lower prices the output necessary to deny the powerful firm of its profit. In the long run, however, other firms in the industry will be able to expand their output even further, and new firms will be encouraged to enter the industry

and the Persistence of Monopoly, 72 Amer. Econ. Rev. 514 (1982); Spence, Entry, Capacity, Investment and Oligopolistic Pricing, 8 Bell J. Econ. 534 (1977); Williamson, note 47 supra, at 311 ("Strategic behavior is an interesting economic issue only in an intertemporal context in which uncertainty is featured." (Emphasis in original)).

57. See, e.g., Williamson, note 47 supra, at 309 ("The upshot is that the [predatory pricing literature's] equally efficient rival criterion is primarily suited to static circumstances where historical differences and continued cost asymmetries may be presumed to be absent." (Emphasis in original.)).

that offers prospects for high profits. In many settings, market power tends to be eroded over time. Depending upon the time frame, however, it may still be desirable to regulate conduct that may only be viable in the short run. After all, costs incurred for merely a few months or years are costs nonetheless. There is, for example, little disagreement that price-fixing should be broadly proscribed even in those industries where the prospects for substantial long run excess profits are not great.

This analysis must be adjusted slightly to deal with the leverage context. Here the issue concerns the ability of a firm over a period of time to enhance its power in some market. For the firm to succeed, and thus for society to lose out, existing competitive forces must be insufficient to stifle the firm's progress. One issue arising in this context, which is precisely the question addressed in the preceding paragraph, is whether significant power is possible in the new market. Since that issue is often not decisive and raises a number of questions unrelated to the focus of this paper, it will not be explored here, except for the discussion in subsection 4.

The other relevant issue, which will be the subject of this subsection, concerns the market power build-up itself. Firms that will be the losers in the future -- e.g., the customers and suppliers of the industry undergoing change -- have an interest in stopping the firm attempting to leverage its way to a second

59. See id. at 957; sources cited at note 33 supra.
monopoly. The problem, however, is that their interest will often be insufficient to motivate them to act in a manner that will prevent the leverage from being effective. Resistance by such firms is subject to the free rider problem. If, for example, there are many customers buying the product of an industry that is becoming more concentrated, each buyer will be unwilling to incur a significant expense in preventing the concentration because it bears the total cost of any of its efforts but only receives a benefit in proportion to its share of the market. Speaking more roughly, but to some more intuitively, each buyer reasons that it can take a "free ride" on the efforts of the other buyers who will bear the expense of preventing the rise of concentration. And if the others are inclined to reason in much the same way, it would not have made much difference if the buyer had tried to prevent the inevitable, except that the valiant buyer would be out whatever the hopeles defenses had cost. 60

Commentators arguing that leverage will generally be impossible often rely upon the ability of potentially affected firms to thwart efforts to extend monopoly, failing to take any note of the free rider problem. Director and Levi, when criticizing the

60. This refusal to go along with the collective best interest corresponds precisely with the incentive for firms in a cartel to cheat. If the circumstances are conducive, cartels may be able to achieve stability over some period of time. More often, the circumstances are such that one does not even observe attempts at cartelization. Similarly, there may be circumstances in which a group of buyers could overcome the free rider problem in fighting the firm attempting to monopolize their source of supply, but it can hardly be assumed that this will generally be the case. See page 33 infra (end of this subsection).
Court's decision in United States v. Griffith,\(^{61}\) argue that "it [would not] seem in the interest of the suppliers to encourage the growth of monopoly among the exhibitors."\(^{62}\) Concededly the suppliers would be displeased with the prospect, but no reason is offered indicating why it would have been in the individual interest of any supplier to undergo the cost of carrying on the fight. In discussing United Shoe,\(^{63}\) Bork argues that "exclusion would of course be detrimental to the shoe manufacturers [who bought from United]. They would prefer not to have to deal forever with a monopolist."\(^{64}\) He ignores the distinction between their preferences generally stated and whether it would have been in their financial interest to act on such preferences. Bork repeats the mistake when discussing exclusive dealing\(^{65}\) and price discrimination.\(^{66}\) When analyzing reciprocity, Areeda and

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61. 334 U.S. 100 (1948).


64. R. Bork, note 9 supra, at 140.

65. "The large firms, here the theaters, would not stand for such nonsense for a moment. They would support new entrants in the production and distribution of advertising films or enter that activity themselves. They would certainly not use their own market strength to give a monopoly to their suppliers." Id. at 308 (discussing FTC v. Motion Picture Advertising Service Co., 344 U.S. 392 (1953)). Of course, since the market consisting of the buyers was quite concentrated, the magnitude of the free rider problem would be less. It is still not obvious how the theaters would have behaved.

66. "... [S]ellers who saw a monopoly developing at the customer level would offer the lower prices to other customers to prevent that outcome." Id. at 390. Whichever seller takes this altruistic action must, however, bear the full cost, while the benefits accrue to all.
Turner claim that "the defendant's customers will not lightly join in the destruction of his rivals, for they would not want to be totally dependent upon him." The free rider argument indicates that although they will not "lightly join in," they likely will join nonetheless. Perhaps this is why Areeda and Turner continue by noting that "[a]t least when other things are equal, they will not participate in the weakening of those rivals." That reservation is precisely correct, but it moots their argument in this context. Presumably other things will not be equal -- i.e., there will be some cost so long as the defendant is offering some inducement.

Posner is much more aware of the issue than the other commentators, although his treatment is also unsatisfactory. For example, he argues that purchasers will be in a position to thwart predatory pricing attempts by continuing to buy from higher-priced sellers and thus preserve the competitive structure


68. Id. It is uncertain from this discussion whether Areeda and Turner are aware of the implications of the free rider argument in this context. In his earlier analysis of the tying issue, Turner noted that purchasers going along with the sellers engaging in the restrictive practice may suffer in the long run, but comments that "[t]here is little doubt that the risk was deemed negligible by the buyers and lessees concerned." Turner, note 21 supra, at 61. Turner may well have been right on the facts of the case he was discussing, Northern Pacific Ry. v. United States, 356 U.S. 1 (1958), but the free rider problem would have provided an independently sufficient explanation for the buyers and lessees' willingness to go along.

69. The point in subsection 1 is that such inducements will often cost the defendant very little.
for the source of supply. 70 Unlike the others, however, Posner admits that "[t]his analysis does not, however, completely negate the possibility of effective predatory pricing" because, among other things, the purchaser "may decide to act as a 'free rider.'" 71 Posner also argues that purchasers would not go along with exclusive-dealing contracts that were exclusionary. 72 Here he concedes that "each shoe manufacturer might reason [along the lines suggested by the free rider argument; however], there is no certainty that he would. If people always thought in such ways, no cartel, other than one that was legally enforceable, would be even partially effective." 73 This brief concession in the first instance is excessively mild under the circumstances, and his refusal to concede any ground in the second instance is indefensible. Of course it is not "absolutely certain" that every shoe machinery manufacturer would succumb to self-interest, or that the self-interest of each would necessarily prevent action. The point of the free rider problem argument is not that "people always [think] in such ways," but that they often do. Presumably, effective cartels are not observed in every industry in every region at all points in time because firms often think in such ways, but cartels are in fact sometimes observed, suggesting that sometimes they do not. The point here is simply

70. R. Posner, note 6 supra, at 184.
71. Id. at 184-85 (emphasis added).
72. See id. at 202 (generally), 203 (applying argument to United Shoe).
73. Id. at 204 (emphasis in original).
that the free rider problem should be identified and taken seriously where conditions are conducive to its existence. 74

Finally, Easterbrook, writing in the context of predatory pricing, has recently made the first significant attempt to deal with the free rider problem. His primary argument expands upon the idea that buyers can act collusively to protect the dominant firm's rivals and thus preserve competition in the long run. 75 His conclusions, however, remain unpersuasive. The complexity of the analysis makes it impossible to examine fully each aspect here. Three defects are most notable. First, he implicitly makes highly unrealistic assumptions concerning the lack of transaction costs. 76 Second, he extrapolates from indeterminacy

74. Posner argues that a "second producer can overcome the free-rider problem by offering to lease the machine ... on the condition that a specified minimum number of shoe manufacturers lease machines from him. Each lessee would find it advantageous to enter such a contract ...." Id. at 204. Posner surely is right since it is true by definition that if individual actors subject to the free rider problem can act in concert there is no more free rider problem. The question is whether concerted action is plausible under the circumstances. Such action may be hard to coordinate, subject to cheaters, and illegal as well. One could argue that since such coordinated responses have not been observed in reported cases, there must have been no threat to begin with. My point here is that another plausible explanation is that the free rider problem inhibited such response. On the choice between such competing explanations, see generally Part III infra.


76. The hypothetical possibility that buyers may get together with victims of predation or new entrants is of itself of no significance, for such arrangements are always possible in a world with perfect costless bargaining. The same analysis demonstrates the lack of any need for antitrust laws since consumers could always erode market power in collaboration with entrants and fringe firms. Moreover, this would hardly be necessary because if consumers could overcome free rider problems
in formal models and uncertainty in the real world to confident results that by no means represent the only possibilities and in some circumstances seem quite unlikely. 77 Third, he does not and combine against a monopolist or cartel they could directly bargain for an efficient result, just as the public needs no protection from pollution laws if collective action is possible. The flaw in Easterbrook's conjecture is that he does not indicate that the strategy he contemplates is realistic. For example, he assumes that large groups of consumers will be able to strike long term contracts setting both prices and quantities with firms about which little may be known and that are under attack by the predator. See Zerbe & Cooper, An Empirical and Theoretical Comparison of Alternative Predation Rules, 61 Tex. L. Rev. 655, 697 (1982) (footnotes omitted):

To buttress this position, [Easterbrook] develops an elaborate scenario in which purchasers band together in order to defeat attempted predation at the producer level. This line of reasoning is ultimately indecisive. Offering possible solutions does not demonstrate that the problem will actually be solved. Indeed, Professor Easterbrook's solution of having customers execute long-term supply contracts may involve considerable private costs and ultimately is improbable. For each scenario where predation fails, it is possible to construct another one where it succeeds.

77 See Easterbrook, note 75 supra, at 269 ("predator's rival, after all, has the same incentive as the predator to ride out the price war"); 285 ("unlikely that any one of these strategies dominates all others. The solution is indeterminate"); 285 n.7 ("[t]here is not often a solution to an n-player game of the sort described in the text"); 286 ("if each firm is uncertain of the other's costs, neither has a clearly superior strategy."); 293 ("there is no clearly dominant strategy here"). Easterbrook's ability to reach confident conclusions in spite of this problem has aptly been criticized. See Zerbe & Cooper, note 76 supra, at 697-98 (footnote omitted):

The interaction between a predator and its target is similar to a game of poker. With each player able to bluff or play straight, the outcome depends on both the play and the other player's reaction to that play. This interdependence means that the ultimate outcome hinges on expectations. In a game of sufficient complexity, game theory is indeterminate, and arguments claiming that one player will always win or usually win are invalid.

Where he does make determinate statements at the more detailed
fully escape even rather direct applications of the free rider problem to his hypothesized solution. Easterbrook must still be complimented for taking seriously an issue that most have for so long ignored in numerous antitrust contexts.

It is particularly perplexing that the free rider problem has received so little attention by commentators critical of the leverage theory. These commentators tend to be the same people who are critical of the Court's prohibition of resale price

analytical level, as when arguing that in a sequence of markets "[t]he process can be extended to show that A would not predate at all," id. at 285-86, his conclusion is simplistic. (Analogous reasoning would prove that strikes and war would never occur.) First, if one assumes that the number of markets, or the number of potential entrants, is not fixed in advance but rather is subject to some uncertainty, his argument may well fail. See Kreps & Wilson, note 55 supra, at 275. Second, if reputation effects are taken into account, see sources cited at note 55 supra, the opposite conclusion is quite plausible. These particular criticisms illustrate the more general point that when a more complete account is taken of real differences between, for example, a large predator and a potential entrant, the worries Easterbrook criticizes using oversimplified formal analysis are seen to be more serious.

78. Easterbrook's argument does not clearly indicate how a group of buyers will be able to accomplish the coordinated long-term contracting arrangement. If any buyer expects the contract to succeed in keeping the market competitive, it will have an incentive to purchase in the interim from the predator at the lower predatory price and then pay the competitive price in the future after the predation has failed. If the contracting arrangement is expected to fail, it will not protect the buyer's future but will still cost the buyer something in the short run. To suggest that a victim or entrant could overcome this problem by a requirement that the contract not be effective unless most buyers agree -- in addition to raising possible legal problems of its own -- is analogous to suggesting that voluntary contributions could support national defense or bribe polluters to change their ways so long as contributions are contingent on sufficient participation. Of course, overcoming the free rider problem is possible in some contexts, but such solutions cannot fairly be taken for granted -- with little analysis of obvious transaction costs -- especially when far more plausible conjectures concerning the likelihood of predatory behavior are rejected as uncertain and indeterminate.
maintenance\textsuperscript{79} and of territorial restrictions (until the latter was sanctioned in \textit{Sylvania}).\textsuperscript{80} The leading efficiency justification offered for these vertical arrangements is that they allow manufacturers to circumvent the free rider problem at the retailer level.\textsuperscript{81} The emergent pattern is that those commentators who advocate the curtailment of antitrust intervention display this wisdom offered by economics when it supports their position, but ignore or cast dispersions upon the importance of such wisdom when it cuts against them. Hopefully this subsection makes clear that free riders travel on two-way streets.

\textbf{4. Tendency to Assume Perfect Markets}

It is well known that markets do not always function in accordance with the textbook model of perfect competition, and that the economic analysis of any situation must be adjusted accordingly. In fact, the whole of antitrust concerns the study of imperfect markets. Thus it seems obviously counterproductive to carry on antitrust analysis without carefully addressing the possibility that defects in the competitive process are central to understanding the behavior under scrutiny. Although the cry to take note of market imperfections is hardly novel, the frequent

\textsuperscript{79} See Dr. Miles Medical Co. v. John D. Park & Sons Co., 220 U.S. 373 (1911).


failure to heed this warning in the context of analyzing the plausibility of leverage warrants its consideration here. But since this issue arises not merely as an incident of the leverage debate, but rather forms the core of much of antitrust analysis, I will allow one well-known example to serve as the necessary reminder.

The most common area of dispute in this respect concerns the capital market. The issue arises with vertical integration, as with mergers, where the argument offered by those suspicious of the practice is that potential entrants will be less able to regulate the behavior of existing firms since it is now necessary to enter at two levels in order to compete effectively. It is argued that it will be more difficult to raise the capital for this endeavor than if, for example, it were only necessary to enter at the manufacturing level, relying upon already existing retailers to sell one's output. Director and Levi's response was that "[i]t is not evident whether the argument is based on an imperfection in the capital market, on the reluctance to assume the consequent risks, on the economies associated with raising large amounts of capital, or on the less efficient scale imposed on rival firms." What is surprising is not that these questions are raised, as they should be, but that they are often deemed sufficient to end the discussion. Director and Levi only claim to be raising the issue, but the general tone of their

83. Id. at 293.
article as well as the views often attributed to Director on this subject suggest that their questions are intended to be leading. Bork argues that "[t]here [is] nothing to the notion that an established firm might integrate vertically in order deliberately to raise the capital requirements of entry" primarily because "[c]apital suppliers take risks when the stakes are high," and it is assumed that excessive profits can be reaped upon entering the integrated industry.

It has adequately been noted that this position ignores a number of obvious realities. For example, the position assumes that no substantial risk arises from the fact that the new

84. See, e.g., id. at 296 (concluding sentences: "We do suggest that in the future there may well be a recognition of the instability of the assumed foundation for some major antitrust doctrines. And this may lead to a re-evaluation of the scope and function of the antitrust laws.").

85. R. Bork, note 9 supra, at 241-42, 323.

86. See, e.g., Porter, Strategic Interaction: Some Lessons from Industry Histories for Theory and Antitrust Policy, in S. Salop, note 51 supra, at 449, 466 ("There is widespread belief among managers that the diversified firm gains resulting advantages in access to capital compared to single-business firms, implying imperfections in the external capital market." (Footnote omitted.)); Williamson, note 47 supra, at 301:

The possibilities that remediable impediments to entry might arise and that such circumstances are identifiable ought to be considered. Consistent with his neglect of strategic factors, Bork seems unwilling to entertain such possibilities. This unwillingness is due chiefly to his implicit assumption that labor and capital markets operate without friction, so that every market outcome is presumptively a merit outcome and further discussion is pointless. Once transaction costs are admitted, however, the assumption of frictionless markets no longer applies, the possibility of introducing strategic impediments to entry arises, and the main argument needs to be qualified.
entrant is inexperienced, that there is no greater risk of failure when two new ventures must be launched rather than one, and that any such risks can be avoided by coordinating a simultaneous entry at both levels by two independent firms.\(^{87}\) Posner, who is also critical of the entry barriers argument, takes a more moderate position. In the context of predatory pricing, for example, he concedes that "[t]his might lengthen the time it took for entry ... more time may be required to launch a large enterprise than a small one -- but it should not preclude entry entirely."\(^{88}\) Posner's analysis indeed discusses how the delay may be far longer in some industries than others, in particular noting the example of U.S. Steel\(^{89}\) -- where it took decades for its market share to decline substantially -- which is particularly relevant to the vertical integration question.\(^{90}\) Whether expressed as a diminished probability of entry or as delay before new entry -- and both are plausible -- there is obviously a cause for concern. As noted previously,\(^{91}\) for example, were it not for the fact that such delays and


\(^{88}\) R. Posner, note 6 supra, at 187 (footnote omitted).

\(^{89}\) See id. at 58.

\(^{90}\) See id. at 197-98. He emphasizes that the effect is one of delay rather than preclusion. See id. at 197 n.41.

\(^{91}\) See page 29 supra.
uncertainties in entry are widespread, there would be no need even for the proscription against price-fixing. The discussion of entry barriers in this context serves as a reminder that market imperfections of this sort are not matters of occasional relevance to antitrust analysis, but lie at its very heart.\textsuperscript{92}

\textsuperscript{92} See page 37 supra.
III. Alternative Explanations of Allegedly Monopolistic Behavior

The argument in Section II-B only establishes that leverage as traditionally understood (i.e., "extension" of market power) is plausible in some circumstances, not that it is the inevitable result of various restrictive practices. As Section II-A demonstrated, however, it does not follow that the absence of the traditional leverage effect eliminates all cause for antitrust concern. Depending upon the resolution of disputes concerning other uses and effects of restrictive practices, it is quite plausible that they sometimes are desirable, sometimes irrelevant, and sometimes undesirable. It would then be necessary to investigate which effects were most likely in

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93. Markovits, who has written extensively on the leverage theory as applied to tie-ins and reciprocity, at times characterizes the position of those advocating restriction as believing that the profitability and leverage effect of such restrictions is inevitable. See Markovits, Tie-Ins, Reciprocity, and the Leverage Theory Part II: Tie-Ins, Leverage, and the American Antitrust Laws, 80 Yale L.J. 195, 204, 243 (1970). Of course, if that were the case, tie-ins and reciprocity would be seen between all conceivable goods and services everywhere one looked. It may be that some statements by courts and commentators can be so interpreted, but it seems an unnecessary diversion to focus much attention on such an extreme position. A more limited claim would be that sometimes the restrictions are profitable, and when the restrictions are used the leverage effect is inevitable. In fact, some commentators explicitly take this position, although the impact they claim inevitably accompanies the restrictive practice is more modest than the simple second monopoly position. See, e.g., Slawson, note 21 supra, at 676 ("foreclosure which any tie-in effects" (emphasis in original)), 690 ("there is always at least some lessening of competition" (emphasis in original)).
various circumstances. Such an analysis could lead one to favor: (1) nearly absolute prohibitions if the effects were almost never desirable, and if it were difficult to isolate such cases from the others; (2) qualified per se rules if fairly accurate and administrable rules of thumb could be developed to distinguish groups of cases; (3) a rule of reason if it were thought possible to implement using the litigation process and deemed necessary to examine each case independently because of great case-by-case variations; or (4) no regulation if it were thought that detrimental effects were rare and difficult to segregate from beneficial effects.

To reach any of the above conclusions, it would be necessary to explore not only whether and when the traditional leverage effect was possible, as in Section II-B, but also what competing explanations for an antitrust defendant's conduct might be more plausible. Section A will demonstrate how some of the most commonly offered alternative explanations, regardless of whether they should be viewed as exonerating the defendant, are not very plausible in many circumstances. This leaves one in the difficult position that it may often be the case that all the regularly debated theories have rather weak claims to explaining observed behavior. Section B examines some alternative explanations that have received too little emphasis in the debate over restrictive practices.

A. The Plausibility of Alternative Explanations

Derived from Profit-Maximization
It is not my purpose here to add another round to the endless
debate involving each of the many explanations offered for every
variety of restrictive practice, and their application to each of
the cases and hypotheticals that have arisen since the passage of
the Sherman Act. Rather, I will briefly note three recurring
weaknesses in many of the arguments which have been advanced to
explain many restrictive practices. It should be clear that I do
not intend these criticisms to apply either to every argument, or
to the application of any argument to every case. The weaknesses
I note, however, arise with sufficient frequency and are
overlooked sufficiently often to deserve systematic
presentation. The arguments to follow generally indicate either
that a hypothesized motivation is implausible or that, even if
the motivation is accurate and, after engaging in the analysis
suggested by Section II-A, deemed to be worthy of preservation,
little would be lost if the restrictive practice were not
permitted.

1. Less Restrictive Alternatives Ignored or Underestimated

The ability of the defendant to accomplish its stated
objectives without relying on the restriction has two
implications. First, it casts doubt on the hypothesis that the
alleged purpose is the actual purpose, especially where the less
restrictive approach appears to be more effective at
accomplishing the stated goal. Second, to the extent the alleged
purpose is deemed affirmatively desirable, the availability of
alternative means indicates that a general prohibition of the
restrictive practice would result in little, if any, cost.
The most common instance of downplaying or ignoring less restrictive alternatives concerns the price discrimination motivation for restrictions, particularly tying arrangements.\textsuperscript{94} It is often alleged that the monopoly good (the tying product) -- typically a machine -- is sold or leased with a second good (the tied product) -- typically something used with the machine -- that is priced above its cost and thus recoups a profit in proportion to the customers use of the machine.\textsuperscript{95} This practice is often called metered pricing because the tied good acts as a meter that measures use of the machine.\textsuperscript{96} But why not simply use a meter if this is the purpose?\textsuperscript{97} Or examine the company's

\textsuperscript{94} The less restrictive alternative issue in this and other contexts is explored in Kaplow, note 17 supra, at XXX.

\textsuperscript{95} One instance of the over-application of this argument is the use of International Salt Co. v. United States, 332 U.S. 392 (1947), as an illustration. See M. Handler, H. Blake, R. Pitofsky & H. Goldschmid, Cases and Materials on Trade Regulation 1144 (2d ed. 1983); Bauer, note 14 supra, at 294-95. Omitted from these renditions of International Salt's facts is the tying agreement's inclusion of a provision that permitted buyers to purchase their salt elsewhere if International's prices were more than those of any competitor. See 332 U.S. at 394 n.5.

\textsuperscript{96} The example of tying staples to a shoe button stapling machine, see Heaton-Pensular Button-Fastener Co. v. Eureka Specialty Co., 65 Fed. 619 (C.C.W.D. Mich. 1895), rev'd, 77 Fed. 288 (6th Cir. 1896), was used by Bowman in describing this argument, Bowman, note 10 supra, at 23-34, and has been replayed ever since, see, e.g., P. Areeda, Antitrust Analysis 735-36 (3d ed. 1981).

\textsuperscript{97} Bowman seems to concede as much, Bowman, note 10 supra, at 24, but fails to connect the implications of his argument to his conclusions. Ferguson seems to rely upon the costs of installing, inspecting, and preventing tampering with meters as the basis for the manufacturer's preference for tying in some circumstances. See Ferguson, note 6 supra, at 556. While he may sometimes be right, his analysis overlooks the similar, but often greater costs of tying and the likely need to meter in any event, as noted in the text that follows. Moreover, if the issue is whether there would be a significant cost in banning tying
books? Either of these alternatives may be necessary even if a tying arrangement is relied upon since the seller must verify that the buyer is in fact using its tied goods with the machine rather than those available by hypothesis at a lower price from rivals. Moreover, unless there is the happy coincidence that arrangements that sometimes facilitate desirable price discrimination, it is relevant that the costs of the alternative are at most an insignificant portion of what is at stake.

98. Markovits' assertion to the contrary, Markovits, note 93 supra at 237; Markovits, note 14 supra, at 1380, may sometimes be true, but he ignores most of the costs of the tying arrangement and limits his argument to the case where the tied product would be easy to identify. Of course, if he means identification at plant inspections, the advantages over meter-reading begin to vanish. And if the inspection occurs at the plant or involves occasional samples of the end-product, detection may be most difficult. Computer cards can be labelled, but salt and staples are another matter. However, in his conclusions, Markovits seems willing to admit that tie-ins are not necessary to accomplish meter pricing, which he indicates militates against a prohibition since the results can be accomplished in any event. See Markovits, note 14 supra, at 1440-41. This point is quite right, but can also cut the other way: if, for example, price discrimination is viewed as one of the few beneficial uses of tying, his argument would indicate that there is little if any cost in a flat prohibition. If price discrimination were considered undesirable, and tying were simply the most efficient way of bringing it about, it would not follow that a prohibition was in order if the result would be to cause firms to continue their price discrimination in ways that simply cost more. See id. at 1429-31. Of course, the more costly are the alternatives, the smaller the proportion of firms that would continue to find price discrimination worthwhile.

It is also possible that the use of the tied good will not be a perfect proxy for use of the tying product, as when there are variable proportions in production. In addition, using the buyers' books may allow monitoring of additional factors that better facilitate tailoring the price charged to the buyer's valuation of the machine. For example, Burstein's discussion of the use of full-line forcing to extract profits, Burstein, note 14 supra, at 89, overlooks that either simple franchise fees or annual charges based on book measures may be a far more precise method of accomplishing the intended result. In fact, without initial reliance on information from buyers' books, it may be difficult for the seller to collect the information it needs to determine what the prices for the involved products should be in the first place under a tying or full-line forcing arrangement.
the seller was already be producing a sufficient quantity of the
tied good,\footnote{Of course, it is precisely in such cases, which include a
substantial majority of those that have come before the Supreme
Court, that the leverage hypothesis is a possible alternative
explanation. \textit{See} United States v. Loew's, Inc., 371 U.S. 38
(1962) (distributor producing sufficient quantity of tied product
-- undesirable films); Northern Pacific Ry. Co. v. United States,
356 U.S. 1 (1958) (tied product -- transportation services -- was
fully installed); International Salt Co. v. United States, 332
U.S. 392 (1947) (seller was the nation's leading producer of the
tied product -- salt); International Bus. Mach. Corp. v. United
States, 298 U.S. 131 (1936) (seller was already producing 81% of
the tied product -- tabulating cards); Motion Picture Patents Co.
v. Universal Film Mfg. Co., 243 U.S. 502 (1917) (holder of
patented motion picture projector was already producing a
sufficient quantity of the tied product -- motion picture film).
\textit{But see} Carbice Corp. v. American Patents Dev. Corp., 283 U.S. 27
(1931) (evidence suggests that seller produced only 7% of the
increased demand for the tied product -- solid carbon dioxide).

Many other objectives can often be pursued

The argument that it may often be cheaper to use a tying
arrangement because, for example, service representatives from
the manufacturer must visit periodically in any event, yielding
possible economies in delivery, is terribly weak in many
contexts. First, if that were true, the buyer would voluntarily
accept the other good since the manufacturer could afford to sell
it for less than rivals. Second, the idea that a service
technician can carry a tool box under one arm and a few dozen
boxcars of salt, computer cards, or whatever else under the other
is rather fancifull. There may be an exception in the case of
photocopy machines, if they can be trained to break down just
before running out of paper and other supplies, but again there
would be no need for compulsion, and only by happenstance would
such matches result.
as well or better without tying arrangements.\footnote{101}{Of course, there will be some instances in which tying may be the only feasible way to effectuate price discrimination.\footnote{102}}

Finally, even where the less restrictive alternative is noted, there is a tendency to give it too little weight. For example, in the well known I.B.M. punchcard tying case, Posner argues that "[i]f the purpose of imposing the tie-in really was to protect good will rather than to discriminate, the specifications alternative was presumably less efficent than the tie-in; otherwise the manufacturer could have promulgated specifications voluntarily."\footnote{103}{Aside from other deficiencies in this}

\footnote{101}{See, e.g., L. Sullivan, note 6 supra, at 454 (explaining voluntary arrangements apart from tying are superior in facilitating secret price concessions by oligopolist's attempting to cheat). Bork argues that, for example, "the tying of salt to a salt-dispensing machine may be the equivalent of a requirements contract, and so lower both the selling and manufacturing costs."\footnote{R. Bork, note 9 supra, at 379. The obvious alternative of permitting the buyer voluntarily to negotiate a requirements contract with the seller or some other producer would presumably be as efficient, or more so to the extent some other seller of the tied product was more conveniently located or in some other way better suited to the buyer's needs. Another example is Sidak's argument that technological tie-ins facilitate risk allocation, Sidak, Debunking Predatory Innovation, 83 Colum. L. Rev. 1121, 1135 (1983), which is justly criticized in Ordover, Sykes & Willig, Predatory Systems Rivalry: A Reply, 83 Colum. L. Rev. 1150, 1162 n.26 (1983) ("However, even if risk sharing is desirable, tie-ins may not be. A warranty, a contingent sale, or a leasing arrangement may do a better job of risk allocation. For all these reasons, we suspect that the use of technological tie-ins for risk sharing is quite infrequent.").}

\footnote{102}{See, e.g., Sidak, note 101 supra at 1138 ("The additional cost of designing and manufacturing the camera and cartridge in a uniquely compatible configuration surely is less than the cost of monitoring millions of amateur photographers over a number of years to determine whether they are buying only Kodak film." (Footnote omitted.)).}

\footnote{103}{R. Posner, note 6 supra, at 175.}
argument, this deduction in no way indicates the significance of the resulting additional cost. The facts of *I.B.M.* strongly indicate that any such cost would have been miniscule at best, so Posner's point lacks appreciable significance in determining an appropriate rule.

2. Unsupported Post Hoc Conjecture

Most of the proferred objectives for tying can only be realized if the firm implementing the practice is consciously pursuing them. Quite obviously, price discrimination and other more complicated package pricing schemes can only work if the prices are set in a manner dictated by the underlying economic theories. Thus, in analyzing past cases, one would suspect that if many of these alternative explanations were the true explanation for the restrictive practice, the defendants would have argued these points strongly before the court. The fact

104. If the manufacturer expected to receive any other benefit from the arrangement, this inference would not follow. This entire process of reasoning in this context is examined in Part IV infra.


106. The same can be said of the theory that the tying arrangement is designed to recoup depreciation of a leased machine, see Hansen & Roberts, *Metered Tying Arrangements, Allocative Efficiency, and Price Discrimination*, 47 So. Econ. J. 73 (1980).

107. Of course there is the complication that if the defendants perceived that the court would find their alternative explanations equally reprehensible, they would hardly further their cause. The prohibition against direct price discrimination, see page 14 supra, offers one possible example, although this prohibition was not strengthened until after some of the relevant court battles.
is that not only did these theories receive virtually no attention in the leading Supreme Court opinions on tying, but they were not even raised in the parties' briefs. One

108. These alternative explanations for the restrictive practices have never commanded a majority of the Court. In fact, the notion that a tying arrangement can operate as a vehicle for price discrimination by measuring the intensity of use and permitting a royalty to be obtained according to the machine's inputs or outputs has been pronounced only in a single rather old dissenting opinion. In Henry v. A.B. Dick Co., 224 U.S. 1, 65 (1912), Justice White's dissent addressed the explanation now endorsed eagerly by commentators that a tying arrangement can be and should be best understood as a means whereby the seller of a machine can extract a royalty based on the output of a machine. During the past seventy-two years, the opportunities for the Court to embellish or simply reiterate this position have been legion, yet it has failed to do so. One reason why the alternative explanations might have been omitted from judicial opinions arises from the defendants' failure even to raise such contentions in their briefs. See infra note 109.

109. For example, the hypothetical explanation offered in Peterman, The International Salt Case, 22 J. L. & Econ. 351, 362 & n.19 (1979), concerning distribution costs would surely have been raised in the defendant's brief if it had in fact been the defendant's motivation. An examination of the brief demonstrates, however, that such a motivation was not discussed, nor even mentioned. Indeed, the argument that the tied product operates as a counting device that is capable of measuring a machine's output and thus generating a royalty according to intensity of use has been proffered but twice (and both times in summary fashion) in briefs submitted by parties attempting to justify their tying arrangements. Again, it is of some interest that this alternative explanation for the tie-in has not appeared in a Supreme Court brief in the past sixty-two years. In United Shoe Co. v. United States, 258 U.S. 451 (1922), counsel for the appellant-defendant allocated one clause of a single sentence in a 1562 page brief to the proposition that the tied products might serve as a meter to measure the use of the tying product. See Brief for Appellants, Vol. 1, at 225. As was averred to supra in note 108, in Henry v. A.B. Dick Co., 224 U.S. 1 (1912), counsel for the appellee-defendant similarly argued that the tied product operated as a meter capable of measuring the use of the tying product so as to facilitate the determination of an appropriate royalty. See Brief for Appellee at 15-16.

Notwithstanding the lore perpetuated by commentators, intricate pricing explanations for restrictive practices, to the extent two extremely brief passages constitute a genre of explanation, have been jettisoned entirely in the ensuing six decades in favor of
explanation for this might be that such alternative theories were beyond the understanding of management at that time, which seems entirely plausible since they were not well-recognized by economists until the past few decades.110

Both these points tend to eviscerate theories attempting to criticize past decisions on the ground that they overlook what were obviously the true motives of the defendants. Moreover, this argument suggests that the most plausible explanations for the defendants' behavior were those understood and argued about at the time. Of course, it now can be argued that in the future the situation is different since defendants will have read the past three decades of literature and now know how to be efficient in ways they had never dreamed of before. Although this point is important, there is the danger, of course, that old practices will often continue to be done for old reasons, and that the only change will be in the sophistication of expert testimony and

various other justifications: (1) The protection of goodwill — see Brief for Appellants at 13, 34, in International Salt Co. v. United States, 332 U.S. 392 (1947); Brief for Appellants at 8-16, in International Bus. Mach. Corp. v. United States, 298 U.S. 131 (1936); Brief for Appellants, Vol. 1, at 221-26, in United Shoe Co. v. United States, 258 U.S. 451 (1922); Brief for Appellees at 13, in Henry v. A.B. Dick Co., 224 U.S. 1 (1912); (2) Financing for research and development expenditures by generating rewards for innovations beyond that obtained via a single monopoly in the tying product market (an explanation directly at odds with the fixed sum thesis) — see Brief for Respondents at 25, 27, in Carbice Corp. v. American Patents Dev. Corp., 283 U.S. 27 (1934); (3) Creating or exploiting economies of scale — see Brief for Appellants at 49-52, in Times-Picayune Publishing Co. v. United States, 345 U.S. 394 (1953); Brief for Appellees at 116, in United States v. Griffith, 334 U.S. 100 (1948).

110. The argument began to emerge, although still without direct application to antitrust policy, in Bailey, Price and Output Determination by a Firm Selling Related Products, 44 Amer. Econ. Rev. 82 (1954) Compare the discussion in subsection B-1 infra.
briefs offered in defense.

3. Ambiguity of Questioning the Existence of Market Power

A common controversy involving the rules governing restrictive practices concerns the market power that ought to be required as a threshold to liability.\textsuperscript{111} This issue has been central because of the obvious link between the traditional leverage theory and market power: in order to extend monopoly from one market to another, there must be some monopoly in the first market to begin with. What has generally been overlooked, however, is that demonstrating the lack of significant monopoly power in the first market casts doubt not only on the leverage explanation, but also on many of the others as well.\textsuperscript{112} For example, it is generally known that price discrimination as well as other more complicated

\textsuperscript{111} In reference to tying and related practices, see, e.g., R. Bork, note 9 supra, at 367-68; Slawson, note 21 supra, at 684-91. On the more general issue of market power requirements as thresholds to liability, see Kaplow, The Accuracy of Traditional Market Power Analysis and a Direct Adjustment Alternative, 95 Harv. L. Rev. 1817 (1982); Landes & Posner, note 29 supra; Schmalensee, Another Look at Market Power, 95 Harv. L. Rev. 1789 (1982).

\textsuperscript{112} Bowman notes that "[a] tie-in is a useless device unless the supplier possesses substantial monopoly over the tying product." Bowman, note 10 supra, at 26. This observation is offered in connection with Bowman's criticism of the monopoly extension view, and he fails to note its implication for the plausibility of the alternative explanations he presents. Similarly, Bork does not hesitate to offer price discrimination, see R. Bork, note 9 supra, at 376-78, as one of his "useful [and 'most realistic'] explanations of observed tie-ins," id. at 375-76, without noting that his earlier criticism of the Court's views based on lack of market power, see note 111 supra, applies to his position as well.

It does not cast doubt on all the others, such as the use of tying as a quality control, which is subject to many of the arguments noted in subsection 1 supra.
package pricing schemes assume that the firm employing the devices has monopoly power, for if it did not, it would lose those consumers charged the higher net price to its competitors. The presence of market power is highly relevant to analyzing tying; in fact, my point here is that it is more relevant than is typically perceived by those who usually raise the point. It is not, however, an obvious implication that market power should be central to the courts' inquiries in this area because it has been noted that the degree of extant market power may not facilitate determining which among competing explanations for observed behavior is the most plausible.

113. See F. Scherer, note 26 supra, at 315.

114. Market power is only the most prominent example of such misleading analysis. One Commentator argues that leverage is an implausible "explanation of ties between goods unrelated in demand." Note, note 13 supra, at 917. Of course, such ties would be ineffective in accomplishing price discrimination, pricing of complementary goods, protection of goodwill, efficiencies in package sales, and most other purported objectives of tying as well. But see Section III-B infra (non-profit-maximizing motivations). Thus, what may be a highly complex inquiry into whether there is any demand interrelationship between the tied and tying products or services may prove to be of little use in determining the underlying causes and effects of a defendant's behavior.
B. Alternative Managerial Motivations

The existence of such a wide array of competing explanations for a defendant's behavior directs the analysis towards inferences about managerial motivations.\(^{115}\) The standard assumption of neoclassical economic analysis, which is carried over to antitrust analysis, is that firms seek to maximize profits. Sophisticated noneconomists have long understood that this perspective does not entail a shortsighted focus on current profits but rather considers long run costs and returns, and accounts for them accordingly. This assumption is invoked so often\(^ {116}\) as to make it almost beyond question in the minds of some. Typically, the assumption is implicit, as in the argument that an exclusionary practice is unprofitable and thus it must be that the firm has some other purpose in mind. For many purposes, this assumption serves quite well, and it would obviously be difficult to maintain the extreme opposite assumption that profits are of little or no interest to most firms. Yet adherence to strict profit-maximization may obscure much of what explains the behavior in question. This Section explores some alternative managerial motivations that may help in understanding

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115. Of course, if a practice clearly cannot have detrimental effects, there may be no need to worry. However, if detrimental effects are possible, but not profit-maximizing, then the analysis of this Section applies with full force.

116. See, e.g., P. Areeda & D. Turner, note 11 supra, at 184 (analyzing reciprocity: "it is profit rather than volume that induces a supplier to make reciprocal purchases from the defendant who will then buy from him"); R. Bork, note 9 supra, at 145 (predation).
the behavior of firms that employ restrictive practices.

1. Misperception of Self-Interest

One need not move far from the neoclassical profit-maximization assumption to admit the possibility that on occasion firms err in their estimation of the net profitability of various actions.\textsuperscript{117} Of course, a priori, there may be no reason to expect any particular mistake, and it is clearly difficult to develop useful models that can predict random miscalculation or stupidity by firms.

It is still possible, however, that certain systematic errors might be observed that would be relevant to antitrust policy.\textsuperscript{118} To take the simplest example relevant to this context, one might argue that even if a leveraging strategy is unprofitable or doomed to complete failure in the long run, it may be that many firms cling to a misguided belief that it can succeed and thus will make repeated attempts in any event.\textsuperscript{119} In this particular

\textsuperscript{117} More extreme formulations are also possible. \textit{See, e.g.}, Priest, \textit{Cartels and Patent License Arrangements}, 20 J. L. \& Econ. 309, 312 (1977) ("There remains, however, a more serious objection to determining the competitive effect of a firm's actions on the basis of the intent of its managers. There is no reason to believe that company officials understand the mechanism by which any particular practice or policy affects profits.").

\textsuperscript{118} \textit{See R. Posner, note 6 supra}, at 182, 184-87 (noting, but not analyzing, the possibility of "irrational behavior"); Williamson, note 47 supra, at 312 (noting possibility of mistaken attempted predation).

\textsuperscript{119} \textit{See Allen, Vertical Integration and Market Foreclosure: The Case of Cement and Concrete}, 14 J. L. \& Econ. 251, 270-72 (1971) ("Vertical mergers to protect one's historic market share may have simply seemed like the correct thing to do; whether such moves were really likely to enhance a firm's profits may have
example, some firms might believe that leverage will build entry barriers even though their construction will cost far more than their future worth, or that the short-run sacrifices in the profits of the tying product will pay off in the long run on profits of the tied product when there is in fact little prospect of such success. Such conjectures, as noted previously, are quite plausible in the light of the fact that courts and commentators fully believed such arguments for decades and in perhaps a majority of instances continue to believe this today.

Although the purpose of the antitrust laws is not to improve

been a question getting close analysis only when it was too late."

120. Precisely the same argument would be relevant to a number of similar antitrust issues, such as the prospect of long-run gains through predatory pricing, discussed in the text to follow, the likelihood that other firms will not cheat on the cartel price, or the prospect that a horizontal merger will create an atmosphere more conducive to collusive behavior.

121. See page 51 supra.

122. Perhaps I reflect some personal bias in doubting that judges, lawyers, and commentators are so much less intelligent and informed than business managers that the continued belief of theories by the former has no bearing on the plausibility of the existence of similar beliefs by the latter. This position is reinforced because these groups of people often associate together and have similar educations and backgrounds, because information concerning managerial motivations has often been available to the former groups when analyzing the behavior of the latter, and because, as noted at page 49 supra, the managers when their companies have been defendants have generally had every incentive to inform the former groups to the extent there was a divergence in belief. See also Blake & Jones, note 87 supra, at 393-94.
the effectiveness of management, it does not follow that the possibility of misperceptions by management should be ignored. First, as was explained in introducing this Section, it is important to understand motivations to guide inferences concerning the likely effects of restrictive practices. Second, misperceptions might lead to the same, if not even greater, anticompetitive results as restraints of trade that are in fact profit-maximizing. In the leverage examples noted previously, I hypothesized only that the exclusionary behavior would not ultimately prove profitable to the firm, without denying that it might have a serious exclusionary effect. Of course, whether this conclusion would follow in other cases depends on the sort of miscalculation that it is plausible to think may have been made. Finally, even if the long-run exclusionary effect fails to materialize, the firm's behavior may still be costly. When firms make unprofitable decisions, it is often the case that society as a whole rather than merely the shareholders and management

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123. See, e.g., R. Bork, note 9 supra, at 249 ("But antitrust does not exist as a means for federal courts to review and revise management judgments about efficiency."); Allen, note 119 supra, at 274 ("Perhaps a public policy against such vertical mergers protects both competitors and competition from firms' mistakes. But it does so by protecting firms from their own mistakes. Whether this is a worthwhile aim of public policy is at least debatable." (Emphasis in original.)); Baxter, Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis, 76 Yale L.J. 267, 318 (1966); cf. R. Posner, note 6 supra, at 205 ("implications for policy are unclear"); Easterbrook, note 75 supra, at 279 ("It would ... be legitimate to object that [social loss from unprofitable predation] has nothing to do with antitrust law, which cannot address all welfare reducing activities.").
suffers.124

One might ask whether such problems should be addressed by the antitrust laws rather than some other, perhaps not-yet-existent body of law. Resolving this issue is beyond the scope of this paper, but a few observations are in order. First, if one is worried about various undesirable effects stemming from a single practice, it would often be sensible to deal with them by using the same regulatory apparatus. Second, to the extent one has trouble determining which of many possible motivations can explain and which effects will result from the observed behavior, it would seem incongruous to permit a restrictive practice under the antitrust laws because, for example, rather than inevitably resulting in anticompetitive effects it sometimes results in other effects, which are themselves undesirable.125

2. Sales and Growth Maximization

In the past few decades, there has been increasing development, at both the theoretical and empirical levels, of the view that many large firms can be better understood as maximizing their total output, sales, or growth rates or, more generally, 

124. In a simple model of perfect competition, this conclusion would always be true. Since the relevant application to leverage assumes that there is some monopoly power to begin with, some actions that diminish profits, such as accidentally charging a competitive price for a few decades, are obviously socially beneficial. But many, such as the use of resources to drive other firms out of the market or to erect entry barriers, typically will be net social costs even if they do not accomplish their purpose. See, e.g., R. Posner, note 6 supra, at 187-88 (predatory pricing).

125. See also Kaplow, note 17 supra, at Section IV-A.
fulfillment of the management's interests rather than those of shareholders. These theories differ from simple profit-maximization in that they suggest that firms would be willing to spend more on various activities -- for example, price cutting, advertising, and plant expansion -- than a simple profit calculus would dictate. The reason most commonly offered is that management, not wholly controlled by shareholders, may benefit by trading off size for profits. It should immediately be apparent that this theory has striking implications for much of antitrust. For example, virtually all of the practices

126. See generally W. Baumol, Business Behavior, Value and Growth (1967); R. Marris, The Economic Theory of Managerial Capitalism (1964); O. Williamson, The Economics of Discretionary Behavior (1964); Bailey & Boyle, Sales Revenue Maximization: An Empirical Vindication, 5 Ind. Org. Rev. 46 (1978) ("sales maximization hypothesis was treated as a serious motivation by corporate managers in 70% of the firms analyzed"); Hirschey & Werden, An Empirical Analysis of Managerial Incentives, 7 Ind. Org. Rev. 66 (1980) (empirical evidence of dual profit and sales incentives for managers of large industrial corporations). This theory has continued to be the subject of extended debate, see, e.g., F. Scherer, note 26 supra, at 37-41, most of which will not be considered here. First, it is far beyond the scope of this paper to attempt a definitive resolution of that controversy. Suffice it to say that this view surely has enough plausibility to warrant far more serious consideration in antitrust scholarship. Second, one of the most serious criticisms offered to rebut this position concerns the ability of firms to survive if they behave in this manner, and the argument to follow in text provides some of the reasons why survival would be plausible in the present context.

127. See generally Jensen & Meckling, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. Fin. Econ. 305 (1976). A similar example is management's potential gain from diversification -- e.g., through a conglomerate merger -- that products no corresponding benefits to shareholders. See, e.g., Amihud & Lev, Risk Reduction as a Managerial Motive for Conglomerate Mergers, 12 Bell J. Econ. 605 (1981).

128. This theory has been noted in this context before, although without analysis of its specific application or relevance to
connected with the leverage issue operate to increase the sales or growth of the firm. Comments concerning tying often note the immediate effect in shifting sales of the tied product from other firms to the tying firm. Arguments concerning long-run growth in the market for the tied product, and entry barriers, as in the case of tying, vertical mergers, and a number of other restrictions, all concern future growth (or prevention of decline) in the firm's sales. Thus, to the extent firms depart from profit-maximization, one might observe widespread use of the restrictive practices discussed in this paper regardless of whether much of the leverage theory discussed in Section II-B or some of the competing explanations discussed in Section III-A are operative.

antitrust policy. See Blake & Jones, note 8 supra, at 460-61. This branch of economic analysis was not nearly as developed when Blake and Jones wrote, almost two decades ago. More recently, the connection has been noted by Porter, note 86 supra at 482-83 (footnote omitted):

Interacting with these considerations is the separation between ownership and control. The essence of the separation is that managers do not perceive their personal interests to be coincident with maximizing the long-run value of the firm. This can be because of bankruptcy fears, monetary incentives based on short-run profitability, criteria for promotion that often stress short-run performance, and other failures of reward systems that stem from imperfect information. Separation between ownership and control also allows other forms of managerial utility maximization, such as pursuit of status, exit barriers due to emotional attachments, and the like. Finally, separation of ownership and control, coupled with various transactions and information costs, also gives room for differences among companies in the decisionmaking power and authority of different functional departments or individual executives. The degree of separation between ownership and control and its internal consequences can and does vary among firms in a given industry, with the result that competitors can differ sharply in their motivations.
One of the most common criticisms of these other theories is that they assume that the firm in question has some excess profits, or "slack"; otherwise, if the firm attempted to maximize sales at the expense of profits it would soon find itself out of business. Of course, even if one thought that such slack was not present in most large firms, the issue here concerns the applicability of these theories to the situation in which slack is present since the defendant possesses at least some monopoly power.

As with the case of possible managerial miscalculation, alternative managerial motivations ought to be taken seriously. First, they are similarly necessary if one hopes to understand and infer the likely effects of firm behavior. Second, the

129. See, e.g., F. Scherer, note 26 supra, at 38.

130. Note that it is not even necessary that the firm have excessive profits generated in connection with one of the products affected by the restrictive practice. It is enough that it have some excess from other areas of its activity, and that it believes the payoff in terms of sales expansion to be sufficiently great in the area to which it is applying the restriction. Such restrictions often will offer substantial sales at little cost, as noted in subsection II-B-1 supra.

Note how this argument contrasts strongly to argument within the pure profit-maximization paradigm where, as numerous commentators have argued, see, e.g., P. Areeda & D. Turner, note 11 supra, at 182; R. Bork, note 9 supra, at 144-45, the fact that a firm has excess profits in one market or product does not necessarily imply that they will be used to expand sales in another. In regard to that position, I should note that the criticism in subsection II-B-4 supra concerning the tendency to assume perfect markets is doubly relevant. Profit-maximizing behavior is itself one of the assumptions of a perfect market, so this whole discussion can be seen as an instance of the market imperfections point raised earlier.

131. For example, two attempts at a comprehensive analysis of tying arrangements in well-known Supreme Court cases analyze the
implications of alternative motivations are quite consistent with, and perhaps even more suggestive than miscalculation of the possibility that traditional anticompetitive effects result. Finally, even if antitrust were not designed to rectify such managerial behavior, it may nevertheless be sensible to prohibit practices adopted for the reasons discussed here, just as was the case with miscalculation.

A more sophisticated understanding of what motivates firm behavior thus is of great importance to understanding much of what transpires in antitrust. This paper only hints at some of the implications that would follow from a greater appreciation and application of some of these insights from economic analysis of the past few decades. Of all the issues examined in this paper, it seems evident that this one in particular assumes an importance quite large relative to the attention it has received. As a result, it offers one of the most fruitful paths for further inquiry.

application of a wide array of possible motivations without even considering this rather straight-forward explanation. See Cummings & Ruhter, The Northern Pacific Case, 22 J. L. & Econ. 329 (1979); Peterman, note 109 supra (International Salt).
IV. Choosing Among Competing Hypotheses

Given the vast uncertainty concerning firm behavior, commentators on all sides of the issue tend subtly, and perhaps quite unintentionally, to manipulate available knowledge to yield spurious conclusions. The process often takes the form of argument by process of elimination in which a handful of competing motivations for a firm's behavior are presented and discussed. After all but the last possible motivation has been analyzed and shown to be uncertain, implausible, and highly contingent on unusual fact patterns, it is common to hear the proclamation that the final explanation (the author's favorite) must therefore be the true one. The problem is that this ultimately victorious theory has not been subjected to quite the same scrutiny as were the theories previously eliminated.

This manipulation of the reader is possible for two reasons. First, each of the theories is so complicated and subject to so many reservations that it is possible both to refute (or confuse) any single theory ad nauseam and at the same time to make a powerful case for whichever theory the author favors while holding back, in both tone and substance, a portion of the criticism of that position. Second, the author's choice of organization can exercise additional influence. As I indicated, the process of elimination technique seems prominent. By the end
of the discussion the reader hopes for something that works; the author then supplies the psychic gratification in the form of a plausible resolution to a seemingly insoluble problem. Moreover, by saving the affirmative argument for the end, the applicability to the author's position of criticism applied to earlier arguments may well be overlooked. 132

This pattern of argument, which is quite plausibly unintentional, has been employed by advocates on all sides of the issue. For example, Turner argues as follows:

If in a described category of cases the tie-in serves no useful function, or if any useful function can be fulfilled in a large majority of instances by less restrictive devices, it is a reasonable assumption that the purpose of the seller in using a tie-in is to restrain competition in the tied product and that he has the power over the tying product which his purpose implies he has. 133

Bork takes the mirror image of this position:

It is important to see that [the firm] must offer something to the food canners to get them to sign requirements contracts, and it must offer that something for the life of the contract, which means that, in terms of cutting out rivals, the contract offers [the firm] no advantages it would not have had without the contract. The advantage of the contract must be the creation of efficiency, and Areeda cites a variety of efficiencies that such contracts may create. In this situation, efficiencies are the reality, and the fear of foreclosure is chimerical. 134

132. One such instance is the earlier discussion at page 52 supra of how the requirement of monopoly power for leverage to be successful tends to remain unmentioned when offering price discrimination as a competing hypothesis.

133. Turner, note 21 supra, at 62 (emphasis in original).

134. R. Bork., note 9 supra, at 304-05 (emphasis added). He argues somewhat similarly in an earlier article discussing while discussing Brown Shoe: "Given a fragmented manufacturing industry
Many others have made similar arguments. In light of this pattern, Burstein deserves praise for the open-mindedness of his early treatment of the leverage issue. To avoid this frequent such as that in Brown Shoe, the desire for monopoly profits could not inspire a merger trend. In such circumstances, therefore, the existence of the trend must be taken as prima facie evidence that greater concentration is socially desirable." Bork, Contrasts in Antitrust Theory: I, 65 Colum. L. Rev. 401, 412 (1965). Of course, one could also develop the reasons why the integration would not be efficient -- for example, because if it were internal expansion would be the preferred route -- and then argue that the actual motive must have been the desire for monopoly profits. See Blake & Jones, note 8 supra, at 459 n.141 (criticizing Bork & Bowman along these lines). See also id. at 461.

135. Posner, for example, argues that the less restrictive alternative to price discrimination "was presumably less efficient than a tie-in; otherwise the manufacturer would have promulgated specifications voluntarily." R. Posner, note 6 supra, at 174 (emphasis added). He then adds that the balance favors permitting the practice since the arrangement "is unlikely to have any competitive significance in the market for the tied product." Id. at 176. Of course, one could just as easily note the insignificance of any possible efficiency benefit, see page 49 supra, and argue that the balance must surely therefore come out the other way. Posner's treatment of the entry deterrence motive in this example is similar. See id. See also id. at 204 (after extensive criticism, rejecting the exclusionary motive for United Shoe's leasing practices in favor of a nonexclusionary motive that was mentioned more briefly and subject to no scrutiny).

136. See Burstein, note 14 supra, at 93-95 (concluding section). For example, he notes:

In this connection, it is important to stress the limitations of the method of science. To assert that a given model (say my own) is consistent with most of the data is not to assert that other models are consistent with none of the data. This paper has been written in the hope that it will permit systematic explanation of a wider range of behavior than was permitted by existing theory. Nevertheless, there remain cases that are consistent with previous theories, including that of extension-of-monopoly, and it is entirely possible that there are important and numerous classes of cases for which the latter model works better.

Id. at 94 (emphasis in original). See also Blake & Jones, note 8
problem, it is necessary to be more reflective of the structure of argument leading to any conclusion, and certainly in this context to be wary of conclusions suggesting that one or a few simple explanations dominate all others.

This criticism might be applied to this paper as follows: The lengthy discussion of leverage in Part II, although hopefully succeeding in resuscitating the plausibility of the theory, may not have left one with the view that such leveraging as described could explain the wide use of some restrictive practices that is observed. The discussion in Section III-A leaves the reader highly dubious of all the other theories that have been put forth to explain why firms engage in restrictive practices. Finally, we are offered the author's explanation in Section III-B concerning alternative theories of managerial motivation. That theory, we observe, was not scrutinized nearly as strictly as were the others. I hope to avoid this criticism by noting the wide range of qualifications throughout my argument as well as by framing the final argument explicitly as one that has yet to be examined seriously and is worth attention, especially when all other avenues have been so well traveled, rather than as the actual, final, and true explanation of the tying cases or antitrust generally.

supra, at 459.
Conclusion

This paper has developed a number of propositions central to the continuing debate over the leverage issue. As a theoretical matter, it was demonstrated that the profit-maximization/monopoly extension distinction is misleading as both a basis for guiding policy decisions and as a method for analyzing the effects of restrictive practices. The latter point, combined with the intuition that how firms deploy their power can make a difference, provided the foundation for undertaking a more critical analysis of the potential for leverage. It was shown that, when often implicit simplifications were relaxed, monopoly extension even as traditionally defined is fully possible. It is worth noting that the frequently omitted elements of the analysis have two common characteristics. First, the omissions correspond to the assumption that unregulated markets operate in conformity with simple textbook models, reflecting a faith consistent with a general hostility to antitrust. Second, the fact that all these points have long been understood intuitively by businesses, although perhaps only more recently bolstered by sophisticated economic analysis, suggests that conventional wisdom derived through experience, unrigorous as it might be, should not be rejected so quickly on the basic of elementary reasoning.

Those prepared to dismiss traditional explanations have
frequently exhibited little reluctance in offering alternative explanations of firms' motivations, even when those theories were apparently unknown to the firms themselves. Of course, this cannot be a decisive ground for rejecting these possibilities altogether. However, the common pattern of offering hypothetical situations where such theories would apply does little to establish the validity of these claims when a variety of competing accounts are similarly plausible. The process of making definitive inferences is further complicated by the possibility that management decisionmaking is subject to systematic misperceptions of the effects of restrictive practices or is motivated by goals that diverge from the traditional assumption that firms seek only profits.

Taking all these issues together, it may come as a surprise that both courts and commentators express such confidence not only in explaining behavior in particular instances, but in making broad generalizations claiming to characterize behavior in large classes of cases or -- in the case of those rejecting leverage outright -- in all cases. At least three explanations are possible. The first is carelessness, mistake, or insufficient sophistication in examining truly complex problems. Second, and more cynically, various courts and commentators on both sides of the question may be motivated more by advancing certain positions than by understanding the complexity before them. Finally, having accepted that market behavior is sufficiently problematic to reject faith in a model of perfect competition that would justify abolition of the antitrust laws,
it may be that all are reluctant to admit that market behavior is also far too intricate to succumb to a model of limited intervention that antitrust has represented from the outset.