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# THE FREE RIDER PROBLEM, IMPERFECT PRICING, AND THE ECONOMICS OF RETAILING SERVICES 

Victor P. Goldberg*

## I. Introduction

In GTE Sylvania, ${ }^{1}$ the Supreme Court acknowledged what a group of law and economics scholars had been arguing for the previous two decades: ${ }^{2}$ vertical restrictions that limit intrabrand competition can have a desirable effect on interbrand competition. ${ }^{3}$ The Court approvingly accepted the argument that the free rider problem might justify a manufacturer's use of vertical restrictions. ${ }^{4}$ The argument, in its simplest form, is that if a retailer provides services such as advice and demonstrations to consumers, a consumer could make use of the service and then buy the product from a "no- frills" retailer. If the manufacturer cannot control the free riding proclivities of other retailers, no retailer would find it in his interest to provide the consumer services. Vertical restrictions shield a retailer from free riding and make provision of the services profitable.

[^0]This argument may have been too successful; both courts and commentators have tended to treat customer services as a necessary and sufficient condition for an efficiency-based rationale for vertical restrictions. Richard Posner, for example, suggests that one way of distinguishing the "dealer cartel" theory from the "efficiency" theory is to determine whether the retailer provides customer services. ${ }^{5}$ In Eiberger v. Sony, ${ }^{6}$ the Second Circuit Court of Appeals held that the seller did not provide unique services to the consumer and that the restrictions were therefore invalid. On the other hand, in Davis-Watkins v. Service Merchandise, ${ }^{7}$ the Sixth Circuit held that microwave ovens sold by full-service retailers were different goods from those sold by discounters, and therefore held the restrictions in that case valid. Robert Pitofsky, arguing against legalizing resale price maintenance (RPM), ${ }^{8}$ claims that RPM often has been used in contexts in which special customer services are not provided:
[T]hink for a moment about the product areas in which resale price maintenance has appeared-boxed candy, pet foods, jeans, vitamins, hair shampoo, knit shirts, men's underwear. What are the services we are talking about in these cases? Take jeans. What services does Saks Fifth Avenue provide that K-Mart does not? In both stores, the jeans are laid on the table, customers take them to a dressing room, try them on, and buy them. Is it really plausible that Jordache is fixing the resale price at $\$ 32$ and denying the product to K-Mart in order to induce Saks to promote services on jeans? I think not. ${ }^{9}$

Pitofsky's implication that a search for customer services in these contexts would prove futile is probably correct. If one takes a somewhat different approach, however, a plausible explanation for adopting vertical restrictions in these and many other contexts can be developed. Rather than focusing on the provision of retailing services to customers, I emphasize the provision of services by retailers to manufacturers. ${ }^{10}$ This argument will be developed in the next two sections. The first, Section II,

[^1]focuses on one category of service-rental of shelf space; ${ }^{11}$ Section III emphasizes a second category-endorsement services. ${ }^{12}$

Section IV considers the use of vertical restrictions in "bonding" a retailer. ${ }^{13}$ Section V extends the analysis to provide some explanations of the manufacturers' practice of "forcing" retailers to carry more of a good, or more products, than they would want to carry. ${ }^{14}$

The perspective adopted here provides a rich array of plausible rationales for adopting vertical restrictions. Indeed, this article concludes that we have almost an embarrassment of riches; ${ }^{15}$ there are too many explanations. That does not mean that we will be incapable of distinguishing among alternative explanations. It simply means that we cannot get away with flip answers to hard questions. To understand why manufacturers adopt a particular retailing strategy, it will be necessary to engage in a detailed inquiry into the economics of selling those manufacturers' products. ${ }^{16}$ The key to that inquiry is to recognize that retailing services represent an input into production of the final product and that the manufacturer has the same incentive to economize on the use of this input as on the use of steel, electricity, assembly line workers, and so forth.

## II. Renting Shelf Space

In this section, I will develop three points that help explain why a manufacturer might utilize vertical restrictions: (a) one retailer's selling activity can affect the costs of other retailers (for convenience this can be called the "externality problem"); (b) retailing services often are sold to manufacturers with contingent compensation; and (c) the package of retailing services can be conveniently summarized as the rental of shelf space. I shall then explore the interrelationship of these three points.

## Externalities and Overfishing

The selling efforts of retailer X can either decrease or increase the selling costs of retailer Y . If X provides demonstrations of how the pro-

[^2]duct should be used, $Y$ can sell the product without incurring the costs of demonstration. If $X$ is not compensated by $Y$, the manufacturer, or the customer, he will cease to provide the service. Since the manufacturer contracts with all the retailers, it is in a position to internalize the externality. ${ }^{17}$ The manufacturer can subsidize X (for example, with cooperative advertising) or control Y (tax, penalize, or otherwise restrict its choices). This is the standard "customer service," free rider argument. ${ }^{18}$

Alternatively, X's activity might raise Y's selling costs. The more homes that X's salesmen visit in a neighborhood, for example, the lower the probability that any customer will buy from Y. If X does not take into account its effect on Y's costs, it could expend too much selling effort. This is analogous to the well-known "overfishing" problem. ${ }^{19}$ If a large number of fishermen have access to an unregulated fishery, they will not take into account the adverse consequences of their individual expenditures on the costs of the other fishermen and, consequently, will engage in excessive fishing. The costs per fish are greater than they would be if the fishery could be properly regulated. Similarly, if a manufacturer could reduce competition among its salesmen, its selling costs could be lowered. The manufacturer is in a position to internalize the externality by restructuring the incentives of X and Y .

In the first instance, the manufacturer can impose vertical restrictions on the Ys to enable the Xs to receive the rewards associated with their activities. In the second instance, the manufacturer can impose the restrictions on the Xs to penalize their cost-increasing activity. Despite the obvious similarities between the two problems, the second has received much less attention than the first. This imbalance stems from treating the former as one involving services for customers rather than for manufacturers. The different perspective adopted in this paper suggests that these are just two variations on the same theme.

## Contingent Compensation

The manufacturer that purchases retailing services normally compensates the retailer indirectly by selling the good to the retailer, who then resells it. It might seem a bit odd to characterize these two transactions for goods as a single transaction regarding a service. However, the particular form the transaction takes should not obscure the economic

[^3]functions being served. In this arrangement, compensation is contingent upon sale of the good. That is, the retailer receives nothing unless the good is sold, in which case the payment is the difference between the wholesale price and the retail price-the gross margin.

This form of compensation is not inevitable. Retailers could be paid in a number of different ways. Customers could be charged an entry fee; ${ }^{20}$ shelf space could be rented for a fixed monthly rate; a manufacturer could lease departments in an outlet and pay a fixed fee, a percentage of the gross (that is, of total sales revenues), or some combination of the two; salesmen could be paid on an hourly basis; manufacturers could pay a flat monthly rate for a promised level of retailer effort; or retailing services could be priced like advertising, on the basis of estimates of foot traffic certified by independent sources. Nevertheless, the most popular pricing mechanism is paying the retailer the gross margin. I will not explore in detail why this is generally the most efficient way to price retail services; for my purposes, it is sufficient that it is so.

## Shelf Space Rental

A manufacturer rents shelf space from a retailer in much the same way as a retailer rents facilities from a landlord. ${ }^{21}$ The rent a landlord can charge depends largely upon location, but the rental value can also be influenced by deliberate policies of the landlord. For example, the landlord might provide parking spaces, attractive landscaping, advertising or entertainment to attract crowds, thereby enhancing the value of the site. Such expenditures could increase the rental value for a broad class of potential tenants, or they could be targeted at a few product lines, or even at a particular manufacturer's products.

The same is true of the retailer who rents shelf space to a manufacturer, although the contribution of "location" to total rental value is undoubtedly smaller. As in the case of the landlord, the retailer's efforts could enhance the value for a wide set of uses or could be targeted to more specific needs. Thus, customers could be attracted to a retail outlet by attractive architecture and displays, by a retailer's reputation for high product quality and a liberal returns policy, by the quality and quantity of the store's salespeople, and so on. Retailers could also increase the rental value for more specific uses. For example, operating a bridal registry will make shelf space more valuable for manufacturers of fine china,

[^4]crystal, and silverware, but will be of no use to makers of sporting goods. ${ }^{22}$ At the limit, the value-enhancing expenditures could increase the value of shelf space for only one purpose, the sale of a particular manufacturer's product (newspaper advertisements, signs, maintaining inventory, product demonstrations, and so on).

The standard free rider argument has concentrated on the productspecific services. My argument does not exclude them, but it does not rely upon them to any extent. It holds even if the only service supplied is the volume of foot-traffic generated by the location of the retail outlet. If that were indeed the only service provided, however, it would be unlikely that contingent compensation would be the most efficient pricing method. Consider the analogy with the landlord. If a landlord provides only the location, it generally will rent at a fixed fee. If it takes a more active role in generating business (for example, the lessor of a shopping center who engages in crowd-generating advertising), it is more likely that at least part of the rent will be based on a percentage of the gross (a form of contingent compensation). Ceteris paribus (other things being equal), the more the lessor must do to maintain the value of the asset (location), the more likely it is that some form of contingent compensation will be used.

Thus, it is likely that the retailer is renting more than "unimproved location." But it is important to recognize that much of the expenditure that increases the value of the shelf space does so for a wide range of products, not simply those of a particular manufacturer. The types of products specified by Pitofsky would be of this sort. ${ }^{23}$ The manufacturer of underwear or knit shirts wants to have his goods displayed to a large number of potential customers in an attractive atmosphere, and is willing to pay a higher rental fee for shelf space to a retailer who can provide this. ${ }^{24}$

## Restricting Intrabrand Competition

We can now bring together these separate strands. Consider a manufacturer who enforces resale price maintenance and permits only one retailer to carry its product in local markets. ${ }^{25}$ Assume that there are no quantity discounts so that the average wholesale price is constant. The marginal cost curve is the vertical sum of the wholesale price plus the

[^5]marginal selling costs, $\mathrm{MC}_{1}$ (see Figure 1). With a fixed retail price, the retailer can vary only its selling effort, which, for convenience, we can take to mean varying the linear feet of shelf space rented to a manufacturer. ${ }^{26}$ The retailer would equate marginal revenue to marginal cost and assign enough shelf space to the manufacturer to have expected sales of $\mathrm{Q}_{1}$. Subsequently I add layers of complications to this story, but those complications can be left aside for now. ${ }^{27}$

What happens if the manufacturer allows a second, identical retailer to sell in the same market? Both retailers would find that their marginal costs of selling shift leftward to $\mathrm{MC}_{2}$. If the combined sales of the two retailers $\left(2 Q_{2}\right)$ exceed $Q_{1}$, adding the second retailer is in the manufacturer's interest. The manufacturer should, in this stylized world, continue to add dealers in the region until the gains from the intensive coverage are just equal to the costs of the reduction in sales per retailer. Thus, the greater the adverse effect of an increase in the number of competing retailers upon a retailer's costs, the more likely it is that the manufacturer would find it advantageous to limit the number of competitors.

## FIGURE 1



[^6]Note that it is unnecessary to invoke either economies of scale in selling a product or heterogeneity of retailers for this argument to be valid. ${ }^{28}$ Nor is the indirect nature of the retailer's compensation of any consequence. This argument would be unaffected even if the retailer charged a flat rate of, say, $\$ 2$ per linear foot of shelf space per month.

Heterogeneity makes the story more interesting, but raises no new problems. If the manufacturer allows a discounter to sell in the same market as his department store clients, he still must take into account the adverse effect of the discounter's sales on the costs of the other retailers. This does not mean that the rational manufacturer would inevitably refuse to sell to (or rent shelf space from) discounters. Instead of renting high price shelf space from Saks Fifth Avenue exclusively, for example, it might choose to rent less space from Saks and augment this by renting low-price shelf space from K-Mart. The most efficient arrangement might even entail Saks and similar firms not carrying the product at all (compensation would be less than the opportunity cost of their shelf space).

An analogy might clarify this point. Consider a manufacturer assigning salesmen to a territory. It could hire two business-school graduates (the Saks-quality retailers) who could expect to earn about $\$ 50,000$ per year given the size of the territory and the form of compensation. Alternatively, it might replace one of these stalwarts with two lesser lights (K-Mart types), so that the remaining high-priced salesman could expect to earn $\$ 40,000$ per year and the other two $\$ 25,000$. The firm might do better yet if it employed no business-school grads and hired four of the lower quality salesmen at $\$ 20,000$ per person. A priori, we cannot ascertain which of these arrangements would be in the manufacturer's best interest.

Restrictions on competitors have a second effect. Since the retailer's compensation is contingent upon selling the goods, the retailer requires some assurance that the extent of intrabrand competition will not be increased after the retailer agrees to carry the goods. The higher the gross margin, ceteris paribus, the more costly it is for the manufacturer to provide the assurance. The high margins make cheating by other retailers more profitable and therefore raise the costs to the manufacturer of policing that behavior. Thus, if a retailer promises to sell only in territory A and receives a $10 \%$ commission on his sales, he might be quite content to confine his activity to that territory. If, however, the commission were $50 \%$ he would be more likely to break his promise and to court customers beyond his territorial boundaries. The retailer might attempt to do this directly by, for example, soliciting customers in other regions, or indirectly, by transshipping to unauthorized retailers in other markets.

[^7]Shielding the retailer from competition in any dimension (price, territory, classes of customers) ${ }^{29}$ always imposes some costs on the manufacturer, so it has strong economic incentives to make the restrictions no more onerous than necessary. Vertical restrictions are not like virginity: prices can be maintained a little bit; territories can be a little bit exclusive. The manufacturer has to choose the dimensions in which it will restrict dealer competition and the extent to which it will do so. Thus, a manufacturer might want to give some assurance that there will not be "too much" competition from other dealers in the area carrying the same brand, but it need not promise that no other dealers would be enfranchised in the same area. The Magnavox franchise agreement, which is typical, made clear that the manufacturer reserved the right to expand the number of retailers in the local market: "Dealers will be geographically located so as to provide easy customer access to our products, and yet be so limited as to give Magnavox franchised Dealers a minimum of dealer competition with a maximum sales potential per Dealer." ${ }^{30}$

## III. Endorsement

A second class of services provided to manufacturers by retailers is endorsement of the product. By carrying a product, the retailer provides an endorsement that can be valuable. Instead of paying an ex-athlete to say "I like it" in a television commercial, the manufacturer can pay Macy's to say "I like it enough to stock it." In effect, the manufacturer rents the retailer's brand name. Compensation, again, is typically indirect; the retailer's payment is included in the difference between the retail price and wholesale price. ${ }^{31}$ The sale of endorsement services is not a one-way street. Manufacturers also engage in activities which generate sales for retailers. If people are drawn to a retail establishment because it carries a particular brand, the retailer receives a valuable service. This service, too, is rarely priced directly. The manufacturer is compensated by the difference between production costs and the wholesale price.

[^8]The owner of the brand name, whether it is the manufacturer or the retailer, possesses a valuable asset. When the owner rents out this asset, it seeks to be compensated. It also wants to prevent the lessee from engaging in activities that reduce the asset's value. Vertical restrictions can be used both to facilitate compensation and to maintain the value of the brand name asset.

## Compensation for Brand Name Rental

Howard Marvel argues that a manufacturer may not be adequately compensated for its endorsement if the retailer finds it profitable to divert the customers to the products of other manufacturers:

These customer-generating investments create business from which the dealer can readily profit, but there remains for the manufacturer the problem of charging its dealers for the additional custom. The simplest way to do so is by incorporating the charge for the manufacturer promotional effort into the wholesale price of the good. That is, the manufacturer offers the dealer a tie-in sale-the physical product together with a set of likely customers for that product. A problem with this tie-in arises if the dealer is able to benefit from the manufacturer's promotional effort while avoiding the promotional charge. If, for example, the additional customers are generated by advertising investment, the promotional charge is avoided if the dealer substitutes a similar, but unadvertised, brand for the advertised product. Exclusive dealing, by preventing this sort of substitution, provides the manufacturer with a property right to his promotional investment. ${ }^{32}$
In effect, the retailer has the short-run incentive to use "bait and switch" tactics, attracting customers with brand A and then selling them brand B. ${ }^{33}$ To put the same point a bit differently, other manufacturers have an incentive to free ride on the original manufacturer's brand name.

The retailers that enter into contracts with the manufacturers are not necessarily the only beneficiaries of the manufacturer's endorsement. If one retailer carries a single brand exclusively, other retailers carrying inferior brands will have an incentive to locate adjacent to the first retailer, in order to free ride upon the drawing power of the high-quality product. ${ }^{34}$ In turn, the manufacturer can select various devices to limit the damage. It could try to link together its reputation and that of the retailer (gasoline stations and fast food outlets provide examples). Private landowners could internalize the externality by bringing adjacent retail outlets under common ownership and restricting the free riding of

[^9]tenants. Restrictive covenants in shopping center leases would be a manifestation of this device. In addition, retailers could engage in collective action to contain this form of free riding. Zoning and other land use controls could be used in this way. ${ }^{35}$

The brand name retailer is faced with an analogous problem. If, say, Bloomingdale's carries a particular line of dresses, the manufacturer could take advantage of that valuable endorsement by selling through less distinguished outlets that trumpet the fact that the goods are sold in Bloomingdale's. Keeping the goods out of the hands of retailers who free ride on the quality retailer's brand name is one solution to this problem. A weaker alternative is clipping the labels from the goods sold through the lesser retailers.

## Maintaining the Value of the Brand Name Asset

A franchisor rents use of its brand name to franchisees. If a franchisee reduces the quality of the product sold, it bears only some of the costs, while the value of the franchisor's brand name suffers. For example, a fast-food franchisee that caters primarily to tourists might find that a reduction in quality has little direct impact on its future sales. It saves money by degrading quality and externalizes the costs to the franchisor. If the franchisor cannot restructure the franchisee's incentives, the system breaks down. All of the franchisees have a short-run incentive to produce a below-average product, and if they do so, they destroy the value of the brand name. This is a variant on the "lemon problem." ${ }^{36}$ In the long run, it is in the interest of both franchisor and franchisee to discourage this "quality free riding." Policing it, however, is costly. Other things being equal, the larger the number of franchisees, the more expensive it will be for the franchisor to maintain a given level of quality and, therefore, the value of the brand name. On the other hand, the greater the value of the brand name, the greater are the rewards to the franchisor from aggressive policing to maintain quality.

The foregoing argument is not novel. ${ }^{37}$ However, the analogous ar-

[^10]gument with respect to the brand name retailer has been ignored. The value of the retailer's endorsement depends, in the long run, on the quality of the products it sells. If it deals with a single manufacturer, that manufacturer's quality will determine the value of the retailer's brand name. If the retailer carries more than one brand, the value of its endorsement will depend on the average quality of the products it carries. Each manufacturer has an incentive to free ride on the quality of the others. It is in the long-term interest of the manufacturers not to free ride on the quality of other manufacturers. Their short-term incentives, however, are to cheat. The retailer can "promise" to each manufacturer that the quality of other manufacturers will be at a certain level (or within a certain range). Ceteris paribus, the larger the number of brands, the more expensive it will be for the retailer to maintain a given level of average quality. And, as in the previous case, the greater the value of the retailer's endorsement, the greater are the benefits from policing quality.

## Resale Price Maintenance Across Brands

In all these cases, the owner of the brand name finds it easier to police the free riding if the number of parties with which it deals is reduced. If the number were reduced to one, the problem would be virtually eliminated (except for the noncontractual free riders discussed above). This is the solution provided by exclusive dealing. There are real costs, however, associated with restricting dealings to a single party. A franchisor obviously would find that restricting itself to a single franchisee was an unacceptable resolution. Retailers would be reluctant to sacrifice the genuine economies of selling multiple brands through the same retail outlets. It is possible, however, to reap some of the benefits associated with exclusive dealing, while at the same time carrying a broader line of products.

In the remainder of this section, I will discuss one way to accomplish this trade-off: the retailer's use of price lines and standard markups. The manufacturer is told, in effect, that if it wants retailers to carry its shirts, it must make them so that they are of a quality that could sell at a retail price of, say, $\$ 14.98$, with a mark-up of $100 \%$ over wholesale. ${ }^{38}$ If the retailer develops a reputation for following this policy for all products in a particular class, it provides the manufacturer with some assurance that the retailer will not profit by engaging in "bait and switch" tactics. The retailer can communicate its quality expectations to the trade so that inadvertent quality variation will be avoided. The manufacturer's short-term incentive to shade quality still exists, but the price lines can help raise the cost of cheating (or lower the cost of cooperative behavior). The price lines restrict the range in which quality can vary

[^11]and thereby make it easier for a retailer to determine whether a manufacturer is providing a comparable combination of price and quality. ${ }^{39}$ Moreover, if both the retail price and mark-up are fixed, it is easier for the retailer to utilize sales figures as an indicator of a manufacturer's quality. This information would be available too late in the case of a oneshot transaction between the manufacturer and the retailer. But if the manufacturer is concerned about its reputation with a particular retailer or with the trade, the information can be of considerable value. ${ }^{40}$

The retailer who uses price lines and standard mark-ups is, in effect, engaging in a variety of resale price maintenance. In this instance, however, price is maintained within a retail outlet and across brands. It is a relatively simple step to extend this argument to price maintenance across outlets. If all retailers used different price lines, manufacturers would have to produce a large variety of different qualities in order to conform with the different standards. This would result in shorter production runs, causing increased unit costs and probably would make it more difficult for the manufacturer to maintain the value of its brand name to both consumers and retailers. There would be a tendency to converge on a small number of price lines (and mark-ups) for related goods.

That manufacturers and retailers do use retail prices and gross margins for communicating information about anticipated quality sheds light on an old problem in economics-the "marginal cost controversy."41 The standard way of reconciling the observation that retailers engage in mark-up pricing with standard theory is to assert that if the mark-up does not yield maximum profits, the firm eventually will adjust the markup in the direction dictated by profit maximization. The argument is correct in identifying the tendency to adjust mark-ups. It is misleading, however, in its failure to recognize the broader role the mark-up has to play. If the mark-up is to play its part in conveying quality information, it is likely to be very sticky. ${ }^{42}$ The argument is misleading in a second sense as well. The sticky mark-up conceals the aggressive, continual repricing of retailing services that occurs; the mark-up is not the price of the service being provided. ${ }^{43}$

[^12]
## IV. Future Dealings

Paradoxically, one way in which manufacturers can economize on selling costs is to pay "too much" to retailers. If the privilege of continued future dealing with a particular manufacturer is a valuable asset, the retailer, in effect, puts up that asset as its bond of performance. ${ }^{44}$ The greater the value of that asset (the higher the rewards of dealing with this manufacturer), the more the retailer risks by acting against the manufacturer's interests or orders. By threatening to withdraw the carrot of high annual profits, the manufacturer can induce the retailer to engage in particular activities that would not otherwise be in that retailer's short-term interest. In a sense, the manufacturer pays for the privilege of exerting power over the retailer. Moreover, the high rewards will attract a queue of willing retailers (the "reserve army of the unemployed"), who provide the manufacturer with additional freedom to discipline its existing retail clients.

Vertical restrictions can be used to enhance the value of continued future dealing with the manufacturer. ${ }^{45}$ By establishing the terms on which other retailers can compete with a given retailer, the manufacturer can influence the expected future earnings (the size of the bond). The greater the protection, the greater will be the bond, all other things being equal.

There are, however, limits to the efficacy of using vertical restrictions to provide retailers with high deferred compensation. First, by increasing the retailer's protection from intrabrand competition, the manufacturer inevitably incurs costs. ${ }^{46}$ Second, the higher the gross margin, the more vulnerable the arrangement is to cheating by other retailers in the form of price cutting or violation of territorial restrictions. Third, the manufacturer's incentive to cheat the retailer by terminating the arrangement prematurely and denying the retailer some of its deferred compensation increases with the size of the bond and the credibility of the manufacturer's promise suffers as a result. As the gross margin increases, a manufacturer would find that in order to maintain a given level of trustworthiness it would have to meet a higher standard of proof (or otherwise incur costs) in order to terminate a retailer. ${ }^{47}$

[^13]
## V. Forcing

A common complaint of retailers is that manufacturers try to force them to carry more of the manufacturers' products than they might otherwise choose to carry. The issue arises in a number of antitrust contexts (for example, tie-ins and reciprocity) and in the regulation of certain franchise relationships. Most states, for instance, have legislatively prohibited auto manufacturers from forcing dealers to accept unwanted vehicles. ${ }^{48}$ Analytically, it makes no difference whether the compulsion takes the form of a legally binding contract, a non-contractual but practically binding understanding, ${ }^{49}$ or informal persuasion, such as the oblique suggestion by a salesman that life would be more pleasant if the retailer carried a more complete selection of the manufacturer's product line. In all these cases, if the retailer refuses, it runs the risk that some penalty will be imposed.

Many explanations for this behavior have been proposed in the literature. ${ }^{50}$ Tie-ins facilitate price discrimination, allow sellers to avoid price controls, and so on. In this section, I focus on three explanations based upon imperfect pricing: (a) fine-tuning the price of shelf space; ${ }^{51}$ (b) influencing the retailer's price/effort decision; ${ }^{32}$ and (c) constraining "creamskimming." ${ }^{3}$

## Price Search

Why would a manufacturer using resale price maintenance be willing to pay the same price for retailing services provided by a major New York department store as for those of an undistinguished retailer in a rural area? The question is deceptive, since the mark-up is not really the price of the retailing services but is only a device for providing indirect compensation. With compensation paid in the form of the gross margin, the manufacturer pays the same fee per unit sold to all its retailers, but not the same fee per unit of retailing service purchased (which is not ob-

[^14]servable). If the only retailing service provided were shelf space rental, the fixed gross margin would result in different monthly rentals being paid to the retailers. The major department store might receive a substantial payment, while the undistinguished retailer would obtain only modest compensation. The existence of resale price maintenance does not, therefore, mean that the manufacturer pays the same price for shelf space to all retailers. There is no reason to believe, however, that the pricing mechanism would accurately price any particular retailer's shelf space.

The retailer maximizes profits by equating its marginal costs to the retail price (see Figure 1). Were the resulting implicit price of shelf space too high, the manufacturer could reduce it by forcing the retailer to carry more goods than the retailer desired. ${ }^{54}$ The manufacturer would confront the retailer with an all-or-nothing offer telling the retailer either to allocate additional shelf space to the manufacturer's product or risk termination. Instead of asking for more of the retailing input directly, the manufacturer could require the retailer to buy more units of the product than usual, or it could establish a sales quota for the retailer that exceeded its profit-maximizing quantity. The marginal profit of the retailer from the additional selling effort provided would be negative but so long as the total profits exceeded zero, the retailer would find accepting the offer worthwhile.

The all-or-nothing offer is a form of tying or "bundling." The sale of the good is conditioned upon purchase of other units of the same good. The tie need not be to the good itself. Instead, it could be across products, transactions, or time. That is, all sorts of bundling arrangements-tie-in sales, full-line forcing, reciprocity, requirements contracts (intertemporal tie-ins ${ }^{55}$-could be used in this manner.

That bundling could be used by a monopolist to facilitate price discrimination ${ }^{56}$ and metering ${ }^{57}$ is well-known. I am adding a twist to that argument. There need be no monopoly power at all. The bundling is simply a manifestation of normal economic activities: ascertaining the value of an economic good (shelf space) and haggling over its price.

[^15]There is no real difference between the manufacturer who says, "If you don't reduce your shelf space price, I shall go elsewhere," and one who says, "If you don't meet your sales quota, I shall terminate you." The similarity is obscured by the indirect manner in which the price of shelf space is quoted. What appears to be price discrimination results, paradoxically, in the price paid per foot of shelf space equalizing over different manufacturers. That is, different manufacturers displaying at Macy's will pay approximately the same price for equivalent shelf space. Likewise, each manufacturer would pay very different prices for shelf space in different outlets because the value of the rental space differs. (This would be analogous to a law firm paying $\$ 2$ per square foot per month for office space in the downtown area and at the same time paying $\$ 1$ per square foot for space in the suburbs.)

One could argue that big firms should not be able to use their bargaining strength to reduce the price of their inputs. I do not find this position attractive, but it is not indefensible. It is probably consistent with the underlying rationale of Justice Black's tying opinions ${ }^{58}$ and the goals of some proponents of the Robinson-Patman Act. Nevertheless, it should be clear that even if the law did penalize certain forms of bundling, thereby raising the costs of certain bargaining strategies to manufacturers, it is by no means clear that small retailers (the presumed beneficiaries of this policy) would gain. The small retailers are more likely to end up with highly priced, but unused shelf space.

## The Price-Effort Trade-off

Quantity forcing can be a variant of maximum resale price maintenance. If the retailer determines the retail price, its profit-maximizing decisions will not be optimal from the manufacturer's point of view. The manufacturer has an incentive to constrain the retailer in the quantity or price dimension, in order to make its profit-maximizing decisions more consistent with the manufacturer's interests. If the retail and wholesale prices are independent, the retailer's unconstrained incentive is to set the price too high; if, however, the wholesale price is a function of the retail price, the retailer's incentive is to set the price too low.

I will discuss the latter case first. Two examples are the movie distributor that establishes its rental as a percentage of the gross ticket sales, and the auctioneer that sells items on consignment for a percentage of the selling price. ${ }^{59}$ The retailer could divert revenues from the manufacturer by selling the item at a low price and raising the price on complementary goods. A low admission price to the theater, for instance, could be com-

[^16]bined with a high price on popcorn. ${ }^{60}$ Moreover, the retailer's incentive to search for the top price is attenuated. The retailer can pursue profits by providing more selling effort or by lowering the price. The retailer might be indifferent between a high effort/high price and low effort/low price combination if the two yielded the same profits at the retail level. But, since the initial seller's reward depends upon the price, he will not be indifferent. This is a variation on the loss leader theme. ${ }^{61}$ A minimum price can restrict the seller's ability to profit at the principal's expense. Fine arts auctions, for example, often allow the principal to establish a price floor. ${ }^{62}$ Alternatively, the principal might impose a quantity maximum, on the assumption that anyone selling at that rate must be cheating on price.

Let us return to the case in which the retailer buys at a fixed wholesale price and is free to resell at whatever price it would like. The retailer has the incentive to choose a retailing strategy that results in a higher price and lower selling effort than the manufacturer would prefer. This is more likely to be the case (a) the more the manufacturer has shielded the retailer from intrabrand competition, and (b) the stronger the brand identity of the manufacturer. To deal with this problem, manufacturers could impose maximum resale prices. ${ }^{63}$ Or, as in the previous case, they could focus on quantity instead. The manufacturer could set quotas, deliver more output than the retailer wanted, and so forth. ${ }^{64}$

In other parts of this paper, I have assumed that the manufacturer would find it attractive to use resale price maintenance. In this section, I explicitly dropped that assumption and instead focused on instances in which the manufacturer wants the retailer to search for profitable retail prices. In these instances, it is often in the manufacturer's interest to constrain the retailer's decision in the quantity or price dimension. Thus, we have one more possible explanation for vertical restrictions (minimum

[^17]or maximum resale price maintenance), as well as for various forms of forcing.

## Cream-Skimming

If a manufacturer's product line includes both popular and unpopular models, the retailers' short-term incentive is to "skim the cream," ordering only the popular models. However, this behavior can adversely affect the long-term interests of the manufacturer and the retailers. Consequently, the manufacturer will commonly try to induce (or force) the retailers to carry a broad product line which includes some of the less popular models.

It is useful to begin the analysis by considering a manufacturer that is vertically integrated into retailing and that produces a line of products with fairly regular model changes. A large share of the production costs are product-specific and are incurred before the manufacturer has reliable information about the relative popularity of the different products. Moreover, shifting capacity from unpopular to popular models becomes more expensive as time passes. When the market information does become available, a considerable amount of product-specific costs already has been sunk. At that time, the manufacturer must take into account the incremental production costs for its different models (which, by assumption, are rather low until the capacity constraint is approached) and the incremental costs of selling the different models (which implicitly include price reductions). Suppose model A proves to be extremely popular and model B rather unpopular. The manufacturer would find that its most profitable strategy would be to continue producing the less popular line, thus incurring the low marginal production cost, and to spend a considerable amount on retailing effort. (The production rate need not, of course, remain constant; it will depend to a great extent upon the anticipated costs of selling.) The firm would incur low marginal selling costs on the popular items and high marginal selling costs on the unpopular ones. ${ }^{65}$

[^18]What if the manufacturer were not integrated into retailing?
The production and retailing decisions must now be coordinated across organizational boundaries. If the wholesale prices were completely flexible, there would be no difficulty, since the wholesale price would reflect the marginal production cost. If wholesale prices were not perfectly flexible however, the retailer would have an incentive to engage in actions that were not in the long-term interest of the parties. ${ }^{66}$

Consider the extreme case in which the manufacturer sets the wholesale prices before any market information is available and sticks to those prices for the entire model year. The retailer would attempt to buy the popular models, which are easy to sell, and shun the less popular ones. In the short run, the individual retailer benefits from this creamskimming. However, if manufacturers learn to anticipate such behavior by the retailers, they will raise their average wholesale price to cover the costs of the unsold, unpopular models. ${ }^{67}$ It might, therefore, be in the long-term interests of the manufacturer and the retailers to devise techniques to discourage the retailer from engaging in cream-skimming. ${ }^{68}$ The manufacturer could condition certain discounts on the retailer's carrying a "representative" line, establish quotas in different product categories, or ship unordered products to dealers who would then be responsible for disposing of them. ${ }^{69}$ It could also require the retailer to buy the goods before the market information became available. If a retailer engaged in too much cream-skimming, the manufacturer could penalize it by "losing orders," by favoring loyal dealers when rationing "hot" models, or by making the termination of the agreement more likely. ${ }^{70}$

The more the costs of resale vary across a firm's product line, all other things being equal, the more difficult it will be to constrain creamskimming by retailers. The retailers' sales of the items that are difficult

[^19]to sell are subsidized by sales of the popular items. (Recall that with contingent compensation, the costs of selling are borne only by the "successes"; with cream-skimming, the relatively successful products carry some of the costs of selling the relatively unsuccessful products.) If it must compete with retailers that sell the popular items in the line but do not have to bear the costs of carrying the other items, the problems of the full-line retailer are exacerbated. ${ }^{71}$

The entire argument hinges upon one factor: the wholesale prices of the manufacturer's product line cannot adjust perfectly to reflect new market information that becomes available after a considerable amount of product-specific costs has been sunk. For our purposes, it is not necessary to determine why the prices perform this task imperfectly; it is sufficient to note that when they do fall short of perfection, we are likely to observe manufacturers forcing (or inducing) retailers to carry a broad product line which includes products that are difficult to sell. ${ }^{72}$

## VI. Conclusion

It is not necessary to invoke special consumer services or cartels to explain why a rational manufacturer would impose vertical restrictions on its retailers. Even if the only function the retailer performed was to rent conveniently located shelf space, the manufacturer might find that its selling costs were reduced by altering the incentives of the retailersrestricting the retailers' choice on resale price, territories, the makeup of the product line, the quantity of goods carried, and so forth.

The set of plausible explanations is considerably enriched when we take into account the problems inherent in pricing services. That it is difficult to explain why particular restrictions are adopted in a given context should not be surprising. The task is akin to determining the proper amount of aluminum to use in manufacturing a car. We have to know a lot about the technology and the relative prices to even hazard a guess. All I purport to do is to indicate some aspects of the technology of selling.

Proponents of vigorous enforcement of the antitrust laws should not draw comfort from the fact that it is difficult to explain why specific restrictions are adopted in a given context. It seems clear that the class of acts for which there is a plausible efficiency rationale is even broader than the usual free-rider argument suggests. Because it is so difficult to determine the effect of various retailing strategies on costs, policymakers should be cautious about imposing their judgments upon the industry. Absent some plausible interbrand cartel arguments, the presumption

[^20]ought to be that the manufacturer knows best how to combine the inputs into selling in the least costly manner. Courts should not second-guess them by insisting upon "less restrictive alternatives," ${ }^{73}$ unbundling, ${ }^{74}$ "competition on the merits," ${ }^{75}$ and so forth.

Even activity that appears to be central to the operation of a cartel can, upon careful inspection, often have a benign explanation. For example, the activities of the National Association of Retail Druggists (NARD) in the first four decades of this century, which included the establishment of uniform retail prices and their enforcement with boycotts wherever possible, certainly looked like those of a dealer cartel. ${ }^{76}$ I would speculate that reinvestigation of that period would show that much of NARD's policy can be explained by the "quality assurance" argument developed in Section 3. The rhetoric would be that of price fixing and cartels (at least until they had hired sophisticated lawyers who polished their prose). But after we had pierced the rhetorical veil, we would likely find a more reasonable explanation for the behavior.

It is generally argued that the Robinson-Patman Act protects the "Mom and Pop" stores from the "big guys." ${ }^{77}$ The discussion here suggests a different interpretation. By restricting a manufacturer's ability to adjust his compensation for retailing services by means of discounts, rebates, and so forth, Robinson-Patman requires a manufacturer to make more of its compensation in the form of a high gross margin. The higher the gross margin, the more vulnerable the traditional retailers are to competition from the discounters. It is, therefore, at least plausible that the principal beneficiaries of the Robinson-Patman Act in the recent past have been the discounters. That is, Robinson-Patman rules lead manufacturers to overcompensate discounters, and the strict enforcement of laws against resale price maintenance and other vertical restrictions reinforces the effect. ${ }^{78}$

[^21]
[^0]:    ${ }^{\text {* }}$ Professor of Law, Northwestern University School of Law; B.A. 1963, Oberlin College; M.A. 1964, Yale University (Economics); Ph.D. 1970, Yale University (Economics). Part of the work was completed while the author was a John M. Olin Fellow in Law and Economics at the University of Chicago during 1984. The author wishes to thank the John M. Olin Foundation for their support. The author additionally wishes to thank Peter Carstensen, Frank Easterbrook, Geoffrey Miller, Dan Polsby, Lou Stern, David Teece and the participants in seminars in economics at Northwestern University and in law at Yale University for helpful comments on drafts of this Article.
    ${ }^{1}$ Continental T.V. v. GTE Sylvania, 433 U.S. 36 (1977).
    2 See, e.g., Posner, Antitrust Policy and the Supreme Court: An Analysis of the Restricted Distribution, Horizontal Merger and Potential Competition Decisions, 75 Colum. L. Rev. 243 (1975); Telser, Why Should Manufacturers Want Fair Trade?, 3 J.L. \& Econ. 86 (1960).
    ${ }^{3}$ Intrabrand competition refers to competition among sellers of the same product-for example, two retailers carrying Magnavox television sets. Interbrand competition refers to the competition between Magnavox and Sony in selling televisions. By restricting competition among its dealers, Magnavox can enhance its ability to compete with Sony.

    4 The Court said:
    Established manufacturers can use . . . [vertical restrictions] to induce retailers to engage in promotional activities or to provide service and repair facilities necessary to the efficient marketing of their products. Service and repair are vital for many products, such as automobiles and major household appliances. The availability and quality of such services affect a manufacturer's good will and the competitiveness of his product. Because of market imperfections such as the so-called "free-rider" effect, these services might not be provided by retailers in a purely competitive situation, despite the fact that each retailer's benefit would be greater if all provided the services than if none did.
    Continental T.V. v. GTE Sylvania, 433 U.S. at 55.

[^1]:    5 "If no presale services (local advertising, display and so forth) are in fact provided, this is strong evidence of cartelization." Posner, Reflections on Sylvania, 45 U. ChI. L. Rev. 1, 17-18 (1977). In a recent opinion, Judge Posner points to the lack of a plausible free rider argument in finding that a particular restriction is likely to violate the antitrust laws. General Leaseways, Inc. v. National Truck Leasing Assoc., 744 F.2d 588, 592 (7th Cir. 1984) (preliminary injunction granted to member of association who had been suspended for violating rules restricting members' location).

    6 Eiberger v. Sony Corp. of America, 622 F.2d 1068 (2d. Cir. 1980).
    7 Davis-Watkins Co. v. Service Merchandise Co., 686 F.2d 1190 (6th Cir. 1982).
    8 Resale price maintenance entails any restrictions on pricing discretion imposed by a manufacturer on subsequent sellers of the product (wholesalers and retailers). It has been a per se violation of the antitrust laws since the Dr. Miles case. See Dr. Miles Medical Co. v. John D. Park \& Sons, 220 U.S. 373 (1911). The Supreme Court reaffirmed this last term in Monsanto Co. v. Spray-Rite Serv. Corp., 104 S.Ct. 1464 (1984). However, the language of that decision was sufficiently vague to suggest that the issue is not yet settled.

    9 Pitofsky, Why "Dr. Miles" Was Right 8 Reg. 27, 29 (1984).
    10 The distribution chain, of course, has more links. In Monsanto Co. v. Spray-Rite, the disputants were a manufacturer and a terminated wholesaler. No harm is done by confining the discussion to the manufacturer-retailer relationship.

[^2]:    ${ }^{11}$ See infra text accompanying notes 17-30.
    12 See infra text accompanying notes 31-43.
    ${ }^{13}$ See infra text accompanying notes 44-47.
    14 See infra text accompanying notes 48-72.
    ${ }^{15}$ See infra text accompanying notes 73-78.
    16 There are few such studies in the literature. For some examples, see Goldberg, Resale Price Maintenance and the FTC: The Magnavox Investigation, 23 Wm. \& Mary L. Rev. 439 (1982) [hereinafter cited as Goldberg, Magnavox Investigation]; Goldberg, Enforcing Resale Price Maintenance: The FTC Investigation of Lenox, 18 AM. Bus. L.J. 225 (1980)[hereinafter cited as Goldberg, Lenox Investigation]; Goldberg \& Erickson, The Law and Economics of Long-Term Contracts: A Case Study of Petroleum Coke (1984)(unpublished manuscript on file at Northwestern University Law Review); Kenney \& Klein, The Economics of Block Booking, 26 J. L. \& Econ. 497 (1983); Marvel, Exclusive Dealing, 25 J. L. \& Econ. 1 (1982); Palay, Comparative Institutional Economics: The Governance of Rail Freight Contracting, 13 J. Legal Stud. 265 (1984).

[^3]:    17 That is, the manufacturer is in a position to take into account the effects of the interaction between the retailers.

    18 There could also be an "agglomeration effect." The clustering of sellers of similar products can increase the patronage of a local retail market, reducing the costs to each retailer of generating sales. The agglomeration effect is of obvious importance across brands. The clustering of sellers of a single manufacturer's products is less likely to be significant. There could, however, be an indirect effect. For example, a successful downtown shopping area attracts a large number of "up-scale" department stores which carry many of the same high quality lines.

    19 See Gordon, The Economic Theory of a Common-Property Resource: The Fishery, 62 J. PoL. ECON. 124 (1954).

[^4]:    20 Even if the consumer pays an entry fee, the manufacturer can be viewed as ultimately, though indirectly, paying that fee. Competition in the retailing industry would result in the reduction of the manufacturer's payment. This is similar to the effect that an increased price for magazines (i.e., an entry fee) would have on that magazine's advertising rates.
    ${ }^{21}$ The notion that retailers are engaged in renting shelf space provides a clue for explaining the existence of regular seasonal sales. If the value of shelf space fluctuates in a seasonal pattern, retailers would have an incentive to use "peak load pricing," charging high prices, say, in the Christmas season and lower prices in the January white sales.

[^5]:    22 In listing the characteristics its dealers should have, Lenox, a manufacturer of fine china, included "a well trained full time bridal consultant with a bridal registry." Goldberg, Lenox Investigation, supra note 16, at 245.

    23 See supra text accompanying note 9 .
    24 This does not, however, mean that he would pay the retailer a higher gross margin. See infra text accompanying notes $54-58$.

    25 It is not uncommon for manufacturers utilizing a selective distribution system to restrict both the number of retailers in a region and their resale prices. Both Lenox and Magnavox had such policies. See generally Goldberg, Lenox Investigation, supra note 16; Goldberg, Magnavox Investigation, supra note 16.

[^6]:    26 While it might seem that shelf space is a "bygone" and ought to be treated as a fixed cost, this is not the case. Since the shelf space can be rented to other manufacturers, the price it can fetch in its best alternative use is reflected in the retailer's marginal cost of selling more of the particular product.

    27 The analysis is more complicated if retailers can also compete in the price dimension; for a formal model that has both selling effort and price as decision variables, see R. Schmalansee, The EConomics of Advertising (1972).

[^7]:    28 The argument in the text does rely upon diseconomies of scale (rising costs) at the retailer level. That should be the norm in retailing since the firm will find that the increased sales must be made to customers living at greater distances from the retail outlet.

[^8]:    29 A manufacturer could set aside certain classes of customers for particular retailers. For example, a computer manufacturer might enfranchise some dealers to sell only to business customers and others only to individuals. One possible way of dividing customers is for the manufacturer to recognize a sort of "property right in customers"; if dealer $X$ signs up a particular customer, the manufacturer's other dealers would either be prevented from dealing with that customer or would be required to pay "damages" to $X$ if they did sell to that customer.

    30 See Goldberg, Magnavox Investigation, supra note 16, at 453. Magnavox sold to retailers in almost 900 markets. Of these, over $50 \%$ had only one Magnavox dealer; only $5 \%$ of the markets had more than six Magnavox retailers. Id. at 496. Lenox computed a "Buyers Potential Statistic" to determine the number of franchised dealers for a given area. Goldberg, Lenox Investigation, supra note 16, at 244-45. Automobile dealers have succeeded in obtaining regulations in many states which grant them greater protection from intrabrand competition than the manufacturers desire. See Smith, Franchise Regulation: An Economic Analysis of State Restrictions of Automobile Distribution, 25 J. L. \& ECON. 125 (1982).

    31 Salespeople could also endorse the manufacturer's products. These endorsements might take the form of comparisons with competing brands, perhaps even other brands carried by the retailer.

[^9]:    32 Marvel, supra note 16, at 7.
    33 This is the basis for the manufacturers' hostility to having their products used as loss leaders. The retailer uses the low price of the product (rather than its reputation, as such) to generate sales of other products. The purpose of a loss leader is to entice the customer into the store, not to sell the good. Thus, the retailer will combine the low price with as few retailing services as it can-poor location within the store (lower valued shelf space), poor mixes of sizes and models, and so forth. See infra text accompanying notes 59-64.

    34 I am indebted to Sandy Grossman and Dan Fischel for this observation.

[^10]:    35 It makes no difference whether the manufacturer acts directly to prevent the free riding, or whether the actions are taken by retailers, landlords, or city councils. As long as someone does it, the manufacturer will be able to capture a higher share of the rewards for generating business.
    ${ }^{36}$ See Akerlof, The Market for "Lemons": Quality Uncertainty and the Market Mechanism, 84 Q. J. Econ. 488 (1970).

    37 "Product reputation is a communal asset. If the costs of degrading quality fall primarily on the brand name, rather than on the individual dealer, dealers would find that failure to maintain the brand name would not impair their short-run interests." Goldberg, The Law and Economics of Vertical Restrictions: A Relational Perspective, 58 Tex. L. Rev. 91, 108 (1979). See also R. Bork, The Antitrust Paradox: A Policy at War With Itself 435-36 (1978) (noting that a national refiner wishing to appeal to those customers who value a high degree of service must establish the uniformity of his product and that "the deviation of any significant number of stations from the product standard will lessen the effectiveness of the refiner's advertising and reduce the appeal that uniformity makes in itself").

[^11]:    38 The policy can be more complicated than simply stating a price and sticking with it. It can include scheduled price reductions (sale prices) or scheduled removal of the item from the retail outlet to an off-price outlet (liquidators, basements, etc.).

[^12]:    39 A product that is "too different" can cause problems for a retailer. For example, for a long time department stores refused to carry blue jeans in men's departments because of the great difference between jeans and the traditional products. See E. Cray, Levi's 114-15 (1978).

    40 In the candy industry, when ingredient costs change, firms commonly hold the price constant and vary the size of the bar. This practice is a plausible response to the quality assurance problem.
    ${ }^{41}$ See Hall \& Hitch, Price Theory and Business Behaviour, Oxford Econ. Papers 12 (1939); Machlup, Theories of the Firm: Marginalist, Behavioral, Managerial, 57 Am. Econ. Rev. (1967).

    42 Department stores have traditionally used "keystone pricing"-setting the retail price at double the wholesale-for a wide variety of products.

    43 This argument will be developed infra text accompanying notes 54-58.

[^13]:    44 See Klein, Transaction Cost Determinants of "Unfair" Contractual Arrangements, 70 AM. Econ. Rev. 356 (1980); Williamson, Credible Commitments: Using Hostages to Support Exchange, 83 Am. Econ. Rev. 519 (1983). For a more extensive discussion of the role of "exit barriers" and the devices used to construct them, see Goldberg, supra note 37, at 97-103.

    45 Note that the threat of termination also is a way of enforcing the vertical restrictions. The argument is not circular since enforcement of the vertical restrictions is a means to an end, not an end in itself.

    46 See supra text accompanying notes 25-30.
    47 I have developed this argument elsewhere. See Goldberg, A Relational Exchange Perspective on the Employment Relationship in Firms, Organization and Labour: Approaches to the Economics of Work Organization 133-34 (F. Stephen ed. 1984).

[^14]:    48 See Smith, supra note 30, at 136-37, 141.
    49 Major oil companies have influenced the choice of tires, batteries, and accessories by their dealers in many ways short of overt tie-ins. These have often run afoul of the antitrust laws. See, e.g., FTC v. Texaco, 393 U.S. 223 (1968); Atlantic Refining Co. v. FTC, 381 U.S. 357 (1965).

    50 See, e.g., R. Posner, Antitrust Law: An Economic Perspective 171-84 (1976); Baker, The Supreme Court and the Per Se Tying Rule: Cutting the Gordian Knot, 66 VA. L. Rev. 1235, 1257-61 (1980); Bowman, Tying Arrangements and the Leverage Problem, 67 Yale L.J. 19 (1957).

    51 See infra text accompanying notes 54-58.
    52 See infra text accompanying notes 59-64.
    53 See infra text accompanying notes 65-72. The list is not meant to be exhaustive. A manufacturer could use the high rewards from carrying a subset of its products as an inducement to a retailer to carry its new products. In effect, the manufacturer rents its reputation to the new product. While the implicit "rental" does not have to take place within an integrated firm, that will often be the most efficient way of doing it. It is likely that since 1970 Levi Strauss has used the high profitability of its basic jeans as a lever for gaining shelf space for new products. See L. Rush, A Study in Vertical Restrictions: The Levi Strauss Case (March 1984) (unpublished Ph.D. Dissertation, U.C. Davis Dept. of Econ.).

[^15]:    54 If, on the other hand, the retailer's revenue from carrying a particular manufacturer's products would not cover the opportunity cost of the shelf space, the manufacturer could increase its offer price indirectly by making side payments in cash or in kind to the retailer. Free in-store displays and putting clothing on hangers are examples.

    55 In the Standard Stations case Justice Frankfurter wrote: "Tying agreements serve hardly any purpose beyond the suppression of competition . . . . Requirements contracts, on the other hand, may well be of economic advantage to buyers as well as sellers, and thus indirectly of advantage to the consuming public." Standard Oil Co. v. United States, 337 U.S. 293, 305-06 (1949). The latter are, of course, a subset of the former.

    56 See Adams \& Yellen, Commodity Bundling and the Burden of Monopoly, 90 Q. J. Econ. 475 (1976); Stigler, United States v. Loew's Inc.: A Note on Block Booking, 1963 Sup. Ct. Rev. 152. Stigler's analysis of "block booking" is almost certainly wrong. See Kenney \& Klein, supra note 16, at 498-99.

    57 See Bowman, supra note 50, at 23.

[^16]:    58 See Baker, supra note 50, at 1296-1305 (citing Fortner Enterprises, Inc. v. United States Steel Corp., 394 U.S. 495 (1969); Northern Pac. R.R. v. United States, 365 U.S. 1 (1958)).

    59 For example, Sotheby's catalogue states:
    Our standard commission for selling fine art property at auction is $10 \%$ of the successful bid price of each lot sold for more than $\$ 3000$ and $15 \%$ of the successful bid price of each lot sold

[^17]:    for $\$ 3000$ or less, in either case together with an amount equal to the $10 \%$ premium paid by the buyer as part of the total purchase price.
    Chinese Works of Art, Paintings, Textiles and Furniture 4 (Sotheby's catalogue for auction on Oct. 8, 1983) [hereinafter cited as Sotheby's].

    60 See generally Kenney \& Klein, supra note 16, at 516-31.
    61 The dependence of the wholesale price on the retail price is not necessary for the loss leader problem to exist. It does, however, involve both features noted in the text: the retailer gains by diverting the customers to purchasing something else, and the retailer can substitute retail price cuts for selling effort in a way that results in less compensation for the manufacturer.

    62 Sotheby's policy is as follows:
    A 'Reserve' is the confidential minimum price agreed between the seller and us, below which the lot will not ordinarily be sold . . . . Our standard advice to sellers is that reserves be set at a percentage of the mean of the estimates, generally somewhat below the low estimate shown in the estimate sheet provided with this catalogue. In no case do we permit a reserve to exceed the high estimate shown in the estimate sheet.
    Sotheby's, supra note 59, at 6. When petroleum coke was sold on commission, the contracts usually included a minimum price. See Goldberg \& Erickson, supra note 16, at 21-25.

    63 See Easterbrook, Maximum Price Fixing, 48 U. Chi. L. Rev. 886, 891 (1981).
    64 Smith, supra note 30, at 128, makes this argument with regard to automobile dealerships.

[^18]:    65 The cream-skimming model depends upon the unpopular models having a positive value. Even if these models had no resale value and had to be scrapped, there would still be interesting implications for the economics of retailing. The manufacturer would have an inventory problem: how much of the goods should be produced and stocked at the retail outlets? A reduction in the costs of production or a reduction in the costs of holding inventory would result in an increase in the amount the firm would hold at its various outlets and would also result in a higher proportion of goods being scrapped. Thus, the scrappage rate for magazines is about $40 \%$, and is even higher for comic books and newspapers. See Buchan \& Siegfried, An Economic Evaluation of the Magazine Distribution Industry, 23 Antrireust Bull. 19, 34-39 (1978). If the variance of sales across models increases, the share of goods that must be scrapped also increases. Since these costs must ultimately be covered if the firms are to survive, the production costs per unit will be a smaller share of the selling price the greater the variance. Women's clothing, for example, would have a higher manufacturer's markup than would men's clothing.

    Suppose now that salvage value is not zero. The greater the salvage value, other things being equal, the lower the cost of holding the inventory. This is fairly obvious and does not add much to

[^19]:    the previous analysis. However, if salvage value is not fixed, more interesting issues arise. Thus, businessmen have incentives to devise techniques to increase the scrap value (for example, day-old bread, in-store sales, and sales through liquidators). One manifestation of this would be to increase the selling effort on slow movers while maintaining the retail price; this is the case discussed in the text.

    66 The fact that manufacturers often are willing to incur these costs of imperfect coordination suggests that there exist considerable diseconomies of vertical integration.

    67 Barzel, Measurement Cost and the Organization of Markets, 25 J. L. \& Econ. 27, 37-39 (1982), and Kenney \& Klein, supra note 16, at 509, refer to the problem as "oversorting" or "oversearching."

    68 Manufacturers would have the incentive to engage in more extensive pre-production market research and to take other actions that would avoid some of the costs arising from the retailer's cream-skimming.

    69 For examples of all these practices, see Goldberg, Magnavox Investigation, supra note 16, at 470-73, 483-85.

    70 Kenney \& Klein, supra note 16, at 516-31, state that the block booking engaged in by major motion picture distributors prior to the Paramount decree was a device for constraining creamskimming or oversearching. An exhibitor that refused to accept one unpopular film in a block of N films had to pay liquidated damages equal to $1 / \mathrm{N}$ of the block price.

[^20]:    ${ }^{71}$ The problem of competition from retailers carrying only part of the product line is analogous to the "sustainability" problem in regulated industries. See Panzar \& Willig, Free Entry and Sustainability of Natural Monopoly, 8 BELL J. EcON. 1 (1977).

    72 Kenney \& Klein, supra note 16, at 524-27, suggest some reasons for average cost pricing of feature films.

[^21]:    73 See P. Areeda, Antitrust Analysis 700 (3d ed. 1981); L. Sullivan, Handbook of the Law of ANTITRUST 411, 414, 416 (1977); Baker, supra note 50, at 1249-51, 1275-82; Pitofsky, supra note 9, at 29-31.

    74 See L. Sullivan, supra note 73, at 415. See also Fortner Enterprises, Inc. v. United States Steel Corp., 394 U.S. 495, 503-04 (1969).

    75 See Baker, supra note 50, at 1267-74.
    76 See J. Palamountain, The Politics of Distribution 90-106, 235-53 (1955).
    77 See E. Gellhorn, Antitrust Law and Economics In A Nutshell 369 (1981).
    78 Yale Brozen makes a similar point in his Foreword to R. Posner, The Robinson-Patman AcT (1976). See id, at iii.

