PREDATORY PRICE CUTTING: THE STANDARD OIL (N.J.) CASE

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He [Rockefeller] applied underselling for destroying his rivals' markets with the same deliberation and persistency that characterized all his efforts, and in the long run he always won.—IDA TARBELL.

I. INTRODUCTION

THE purpose of this paper is to determine whether the pre-dissolution Standard Oil Company actually used predatory price cutting to achieve or maintain its monopoly. This issue is of much more than antiquarian or theoretic interest. Settling it is of direct importance to present anti-trust policy. At the very least, finding the facts should aid in defining certain hazy notions that now figure in discussions of monopoly and its control.

The *Standard Oil* case of 1911[1] is a landmark in the development of antitrust law. But it is more than a famous law case: it created a legend. The firm whose history it relates became the archetype of predatory monopoly. It is sometimes said that *Standard Oil* was influential because it revealed deadly and reprehensible techniques by which Monopoly on a heroic scale could be achieved and, probably more important, perpetuated. Historians tell us that the facts revealed in *Standard Oil* were in good part responsible for the emphasis that the antitrust laws came to place upon unfair and monopolizing business practices.

Perhaps the most famous of all of the monopolizing techniques that Standard is supposed to have used is local price cutting. Given the bad repute in which monopoly has long been officially held in this country, and the prominence of predatory pricing in *Standard Oil,* it is not surprising that the practice received special attention in the law. Monopoly was not new in 1911, but a predatory giant may have seemed novel. The vision of a giant firm that used a brutally scientific, and completely effective, technique for acquiring and maintaining monopoly must have aroused uncommon concern. Standard was invincible. Anything economists could say about the transience of monopoly must have seemed hopelessly unrealistic in view of the vigor and success with which Standard was said to have prevented entry.

In any case, by 1914, in the Clayton Act, predatory price discrimination was included among a select group of business practices the character or effect of which called for explicit statutory prohibition. The Robinson-Patman

[1] Standard Oil Co. of New Jersey v. United States, 221 U.S. 1 (1911).

amendment of 1936 lengthened the list, but certainly did not weaken the hostility toward local price cutting. Indeed, its legislative history and subsequent interpretation reveal a continuing dread of the device.

Predatory discrimination thus occupies a special and almost unquestioned place in law and economics. This has led to a certain amount of difficulty, especially in connection with the Robinson-Patman Act. Some critics claim that this statute unnecessarily restricts rivalry, thereby softening competition. Yet even the critics apparently fear that if we permit the helpful kind of discrimination we will encourage the lethal kind. Most are obliged to rely on the tenuous standard of intent to distinguish one kind from the other.

This fearful ambivalence, in which the spectre of *Standard Oil* figures prominently, may be responsible for the continuing, and somewhat fruitless, arguments about the proper role of a "good faith" defense under Section 2(B) of the Robinson-Patman Act. It may also account for the popular view that disciplinary price cutting makes cartelization easier and its benefits more lasting. It surely has influenced thinking about small firms that face large rivals.

For these reasons, a re-examination of *Standard Oil* may be worthwhile.

II. Predatory Price Cutting: Some Hypotheses

According to most accounts, the Standard Oil Co. of New Jersey established an oil refining monopoly in the United States, in large part through the systematic use of predatory price discrimination. Standard struck down its competitors, in one market at a time, until it enjoyed a monopoly position everywhere. Similarly, it preserved its monopoly by cutting prices selectively wherever competitors dared enter. Price discrimination, so the story goes, was both the technique by which it obtained its dominance and the device with which it maintained it.

The main trouble with this "history" is that it is logically deficient, and I can find little or no evidence to support it.[2]

A brief examination of the logic of predatory price discrimination is helpful in interpreting the facts. In the beginning, oil refining in the United States apparently was competitive. Necessary capital was relatively slight, because of the modest quality demands imposed by consumer preferences and the primitive technological character of the refining process itself. The number of re-

[2] I am profoundly indebted to Aaron Director, of the University of Chicago Law School, who in 1953 suggested that this study be undertaken. Professor Director, without investigating the facts, developed a logical framework by which he predicted that Standard Oil had not gotten or maintained its monopoly position by using predatory price cutting. In truth, he predicted, on purely logical grounds, that they never systematically used the technique at all. I was astounded by these hypotheses, and doubtful of their validity, but was also impressed by the logic which produced them. As a consequence, I resolved to investigate the matter, admittedly against my better judgment; for, like everyone else, I knew full well what Standard had really done.

finers was evidently large, since the Standard interests bought out more than a hundred of them. Standard Oil was not born with monopoly power: as late as 1870 it had only 10 per cent of the refining business.

The usual argument that local price cutting is a monopolizing technique *begins* by assuming that the predator has important monopoly power, which is his "war chest" for supporting the unprofitable raids and forays. Evidently the technique could not be used until the Standard interests achieved the necessary monopoly power. Similarly, advantages from monopsonistic bargaining[3] would not be available until the buyer attained considerable stature.

A simpler technique did exist, and Standard used it. Unless there are legal restraints, anyone can monopolize an industry through mergers and acquisitions, paying for the acquisitions by permitting participation of the former owners in the expected monopoly gains. Since profits are thus expanded, all of the participants can be better off even after paying an innovator's share to the enterpriser who got the idea in the first place.

Under either competition or monopoly, the value of a firm is the present worth of its future income stream. Competitive firms can be purchased for competitive asset values or, at worst, for only a little more. Even in the case of important recalcitrants, anything up to the present value of the future monopoly profits from the property will be a worthwhile exchange to the buyer, and a bountiful windfall to the seller.

It is conceivable that Standard did not merge to the full size it wanted, but did achieve whatever size was necessary to use predatory techniques to grow the rest of the way. How would it go about using them? Assume that Standard had an absolute monopoly in some important markets, and was earning substantial profits there. Assume that in another market there are several competitors, all of whom Standard wants to get out of the way. Standard cuts the price below cost. Everyone suffers losses. Standard would, of course, suffer losses even though it has other profitable markets: it could have been earning at least competitive returns and is not. The war could go on until average variable costs are not covered and are not expected to be covered; and the competitors drop out. In the meanwhile, the predator would have been pouring money in to crush them. If, instead of fighting, the would-be monopolist bought out his competitors directly, he could afford to pay them up to the discounted value of the expected monopoly profits to be gotten as a result of their extinction. Anything above the competitive value of their firms should be enough to buy them. In the purchase case, monopoly profits could begin at once; in the predatory case, large losses would first have to be incurred. Losses would have to be set off against the prospective monopoly profits, discounted appropriately. Even supposing that the competitors would not sell for

[3] Example: railroad rebates. Although this subject lies outside the present inquiry, I am convinced that the significance of railroad rebates has also been misunderstood.

competitive value, it is difficult to see why the predator would be unwilling to take the amount that he would otherwise spend in price wars and pay it as a bonus.

Since the revenues to be gotten during the predatory price war will always be less than those that could be gotten immediately through purchase, and will not be higher after the war is concluded, present worth will be higher in the purchase case. For a predatory campaign to make sense the direct costs of the price war must be less than for purchase. It is necessary to determine whether that is possible.

Assume that the monopolizer's costs are equal to those of his competitors. The market has enough independent sellers to be competitive. Otherwise the problem of monopolizing it ceases to concern us. This implies that the monopolist does not now sell enough in the market to control it. If he seeks to depress the price below the competitive level he must be prepared to sell increasing quantities, since the mechanism of forcing a lower price compels him to lure customers away from his rivals, making them meet his price or go without customers. To lure customers away from somebody, he must be prepared to serve them himself. The monopolizer thus finds himself in the position of selling more—and therefore losing more—than his competitors. Standard's market share was often 75 per cent or more. In the 75 per cent case the monopolizer would sell three times as much as all competitors taken together, and, on the assumption of equal unit costs, would lose roughly three times as much as all of them taken together.[4]

Losses incurred in this way are losses judged even by the standard of competitive returns. Since the alternative of outright purchase of rivals would have produced immediate monopoly returns, the loss in view of the alternatives can be very great indeed.[5] Furthermore, at some stage of the game the competitors may simply shut down operations temporarily, letting the monopolist take all the business (and all the losses), then simply resume operations when he raises prices again. At prices above average variable costs, but below total unit costs, the "war" might go on for years.

Purchase has an additional marked advantage over the predatory technique. It is rare for an industrial plant to wear out all at once. If price does not cover average variable costs, the operation is suspended. This will often leave the plant wholly intact. In the longer run, it may simply be the failure of some key unit, the replacement of which is uneconomic at the present price level, that precipitates shut-down. In either case, physical capacity remains,

[4] Any assumption that the monopolizer's size gives him sufficient cost advantages rapidly takes us away from a predatory price cutting example and into the realm of so-called natural monopolies.

[5] It must not be supposed that, just because he enjoys profits elsewhere, anyone will be so stupid as to assume that it is costless to use them for anything but the best alternatives.

and will be brought back into play by some opportunist once the monopolizer raises prices to enjoy the fruits of the battle he has spent so much in winning.

All in all, then, purchase would not be more expensive than war without quarter, and should be both cheaper and more permanent. It may at first be thought that predatory pricing more than makes up for its expense by depressing the purchase price of the properties to be absorbed. In effect, this requires that large losses reduce asset values less than smaller losses. This is not at all likely. Furthermore, assuming that the properties in question are economic,[6] it is unlikely that their long-run market value will be much reduced by an artificially low price that clearly will not be permanent. The owners can shut down temporarily, allowing the monopolist to carry all of the very unprofitable business, or simply wait for him to see the error of his ways and purchase. Even if there is widespread bankruptcy, wise men will see the value to the monopolist of bringing the facilities under his control, and find it profitable to purchase them at some price below what the monopolist can be expected to pay if he must. Since the monopolist is presumably interested in profits, and has a notion of the effect of discount factors upon future income, he cannot afford to wait forever. Properties that a would-be monopolist needs to control can be an attractive investment.

Predation would thus be profitable only when the process produces purchase prices that are so far below competitive asset figures that they more than offset the large losses necessary to produce them. One empirical test, for those who suspect the logic, would be to examine prices paid for properties in cases where predatory pricing is alleged to have been practiced.

Some of the most strategic factors to be monopolized may be the skilled managerial and technical personnel of competitors. Reproducing them can be a much more formidable and longer job than the construction of physical facilities. But short of murder, the cost of which can also be expected to be high if undertaken in any quantity, the only feasible way of preventing their embarrassing and costly reappearance is to hire, retire, or share with them. None of these things can be accomplished well or permanently if these people are too much badgered in the process.[7]

There are two other crucial issues that must be examined, the first dealing with the extent to which monopolization is profitable; the second, with the

[6] If they are not, they need not concern us, since their extinction might be expected or welcomed under competition.

[7] "[A]s Mr. Rockefeller and Mr. Archbold testified, most of the concerns which were brought together continued to be operated and managed by the former owners." Brief for the U.S., Vol. 1, at 19.

Further, "There are only a few cases in which the Standard interests, during this period [1872–80], acquired stock in concerns without taking the former owners in as stockholders of the Standard, or bringing them into the combination by leaving them a minority interest in the original concern." Id., at 32.

necessary conditions for its success. Monopolization as such will be carried only so far as is necessary to maximize profits, since it inevitably involves certain expenses of planning, purchase, and rationalization. In the case of a vertically integrated industry the would-be monopolist will choose to monopolize the level that will produce the largest net profit. This requires choosing that one which is both cheapest to control and over which control is likely to endure. If a monopoly can be achieved at the refining level, for example, there is little sense trying to achieve one at the crude oil producing level, or marketing. Standard Oil of New Jersey achieved a refinery monopoly; anything more would have been redundant.[8]

This should not be taken to mean that the monopolist will not care what happens to the other levels; for he has every interest in seeing to it that the other levels are not monopolized by someone else. In marketing, for example, he would prefer that the product be distributed as cheaply as possible, since he can then extract full monopoly revenues from the level in his control. This point is important in interpreting the facts of the *Standard Oil* case.

Obstacles to entry are necessary conditions for success. Entry is the nemesis of monopoly. It is foolish to monopolize an area or market into which entry is quick and easy. Moreover, monopolization that produces a firm of greater than optimum size is in for trouble if entry can occur even over a longer period. In general, monopolization will not pay if there is no special qualification for entry, or no relatively long gestation period for the facilities that must be committed for successful entry.

Finally, it is necessary to examine certain data that are often taken to be symptomatic of predatory price cutting, when in fact they may be nothing of the sort. Assume that a monopolist sells in two markets, separated effectively by transport costs or other impediments to free interchange, and that he has a complete monopoly in both. Elasticity of demand is assumed to be the same in both markets, and monopoly prices are identical. Assume that, for some unknown reason, entry occurs in one market but not in the other. Supplies are increased in the first and price falls; price in the second remains unchanged. There are now two different prices in the two markets, reflecting the existence of alternative supplies in the first. The theory of the dominant firm, maximizing by taking into account the outputs of his lesser rivals at various prices, appears to fit the case. An objective fact-finder discovers that the monopolist is discriminating in price between the two markets. A bad theorist then concludes that he is preying on somebody. In truth, the principle established is only that greater supplies bring lower prices.

[8] This abstracts from any cost reductions that integration may make possible. These have nothing to do with the problem at hand.

See Bork, Vertical Integration and the Sherman Act, 22 U. of Chi. L. Rev. 157 (1954). Standard began producing crude oil in 1889, and by 1898 produced 33 per cent of the total. By 1906, its share declined to 11.11 per cent. Transcript of Record Vol., 19, at 626 (Def. Exh. 266).

Compare this example with another. Assume that we have two separate markets, and that each is in short-run competitive equilibrium with firms earning super-normal returns. Assume that, for some reason, entry takes place in one market but not in the other. Supply increases and price falls in one but not in the other. From this evidence of price changes in both the monopoly and competition examples, the inference is simply that greater supplies lower prices. We should not infer from the price data that either case has anything to do with predatory price-cutting.

To sum up: (1) Predatory price cutting does not explain how a seller acquires the monopoly power that he must have before he could practice it. (2) Whereas it is *conceivable* that someone might embark on a predatory program, I cannot see that it would pay him to do so, since outright purchase is both cheaper and more reliable. (3) Because monopolization by any technique always involves some expense, a firm *qua* monopolizer will carry it to the one securest level in an integrated industry, not to all. (4) Actual variations in prices among markets may be accounted for in terms of variations in demand elasticities, but do not imply or establish that anybody is preying on anybody else.

III. Testing the Hypotheses

The voluminous Record in the Standard Oil of N.J. dissolution suit furnishes a test of these propositions.[9]

The Record shows that Standard established a refining monopoly.[10] Collusion among 100 to 200 different sellers was unstable. Standard achieved its monopoly position through merger and acquisition.[11] Although the Govern-

[9] The Transcript of Record consists of over 11,000 printed pages of exhibits and testimony; Appellants' briefs and oral argument covers more than 900 pages; Appellee's briefs and arguments almost 1300 pages. The full record is thus more than 13,500 pages long. Unless otherwise noted, volume references are to the Transcript of Record.

[10] In 1879, Standard and those concerns "in harmony" with it, apparently refined from 90 to 95 per cent of the U.S. output. See Vol. 6, at 3303. It is not clear just what these data mean. Mr. Archbold testified that in 1870 Standard did about 10 per cent of the refining business in the United States; and that for 1888 Standard's share was probably 75 per cent. Id., at 3246–68. I think that much work remains to be done to determine how Standard's market position really changed over time. See e.g., Vol. 2, at 783–784.

In any case, Standard's position in crude oil production was relatively small; it did very little retailing and did not perform all of its own wholesaling; several major railroads and the pipeline systems of Pure, Tidewater, Texas Co., Gulf, and others competed in the transportation of crude oil. Its strongest position was evidently in refining.

[11] "Q. Had you difficulty before you entered into relations with the Standard Oil Company to make money out of the business? A. The competition was always very sharp, and there was always some one that was willing to sell goods for less than they cost, and that made the market price for everything; we got up an association, and took in all the refiners until some of them went back on us, and that would break up the association; we tried that two or three times." Vol. 6, at 3303.

See also Mr. Rockefeller's interesting testimony on the difficulty of effecting stable conspiracies. Vol. 16, especially at 3074–75.

ment alleged that Standard employed other techniques as well, it concluded that:

> Unquestionably the principal means used by the defendants to monopolize and restrain trade and commerce in petroleum has been the combination of previously independent concerns. . . .[12]
>
> . . . Standard acquired 123 refineries (many of which also did a marketing business), 11 lubricating oil works, 24 pipeline concerns, and 64 exclusively marketing concerns; a total number of 223.
>
> Neither did these acquisitions all occur at an early date. about half of them, in number, occurred since 1879, and many important ones between 1890 and 1902. . . .[13]

Of the refineries it acquired, Standard dismantled at least 75, and ultimately produced a greatly increased volume in only 20 separate installations.[14]

1. PRICE CUTTING AGAINST COMPETING REFINERS

Standard's monopoly was in refining. Is there any evidence that predatory price cutting helped to achieve it?[15] To discover whether local price cutting played any part in the many refinery acquisitions made by the Standard interests, I checked the whole Record for testimony about every refinery known to have been bought.[16] Furthermore, I have tried to check every alleged case of local price cutting involving competitive refiners that Standard did *not* buy. I can find few specific references to refiners in connection with allegations that Standard cut prices to drive out competitors. The following are the principal examples, including cases in which the marketing subsidiaries or branches of Standard's integrated competitors were involved. They are certainly the most significant ones.

a) "SUSPECT" CASES INVOLVING ACQUISITIONS

The Cleveland Acquisitions.—During 1871–72 the Rockefeller interests purchased at least 17 Cleveland refineries.[17] I can find no real evidence that predatory price cutting or any other type of coercion figured in the acquisitions. According to Mr. Rockefeller, the consolidation of the Cleveland refineries was a blessing to all concerned, and arose

> In a most natural way. . . . We were; [*sic*] neighbors, acquaintances, friends, having had our prosperity there together in the business in the good days; and beginning

[12] Brief for the United States, Vol. 1, at 169.

[13] Reply Brief for the United States, at 62.See Appendix C, Sheets 1–11.

[14] Id., at 63–64.

[15] The first problem is to discover which companies were really refiners. Oddly enough, many of the firms mentioned in the record have "Refining Company" as part of their names, but were apparently not refiners at all. One example is Mr. Castle's Columbia Refining Co., wholly a marketing concern. Possibly the owners concluded that customers are better disposed towards marketers who make the products they sell.

[16] Brief for the United States, Vol. 1, Appendices C & D; Vol. 19, at 662–63; Vol. 17, at 3290.

[17] Reply Brief for the United States, Appendix C, Sheet 1.

generally to recognize the changes that were coming, and the lessening of the chance of good returns from the refining business on account of the overproduction of refined oil, or the overproduction of the refinery construction.[18]

On the other hand, Mr. Lewis Emery, Jr., a long-time crude oil producer and refiner from Bradford, Pennsylvania, offered the following hearsay on the subject: "I talked with quite a number of them afterwards, and they said they thought the case was hopeless and they had arranged with the combination."[19]

Predatory price cutting had nothing to do with the acquisitions, according even to Mr. Emery's version. There is some question about Mr. Emery's testimony in any case: Emery was testifying, in 1908, about events that occurred 36 years earlier. Furthermore, he had evidently not been in Cleveland at this time and had no first-hand knowledge of the affair.[20]

There are very good reasons to suppose that no kind of coercion figured in the Cleveland purchases. The stock records and a great deal of testimony confirm that Standard's usual practice during this time was to employ the managers and owners of the firms they absorbed, and often to make them shareholders as well. Victimized ex-rivals might be expected to make poor employees and dissident or unwilling shareholders.

Mr. Emery's Own Experience.—Lewis Emery entered the industry as a crude oil producer in 1865. By 1870 he became interested in the Octave Oil Company and Refinery. In 1875, Emery closed down the Octave, and in 1876 sold it to the Standard interests for $45,000.[21] Emery claimed that the railroad pool agreement of 1874 had squeezed him out along with other small Western Pennsylvania refiners. Predatory price cutting clearly had nothing to do with it.[22]

[18] Vol. 16, at 3065.

[19] Vol. 6, at 2625. According to Emery, the refiners were pushed into consolidation because of the rail rate "preferences" given to Standard in the South Improvement Company program and the succeeding pool agreement of 1874. The South Improvement program apparently never became effective; and the contract of 1874, which Emery said sealed the doom of Pennsylvania independent refiners, simply *equalized* rail freight from Cleveland and Western Pennsylvania refineries. Id., at 2724, 2732. See testimony of Archbold, id., at 3244–45.

[20] Though it does not really prove anything, it is interesting that Emery was first of all a crude producer and like any raw materials supplier had little affection for the monopsony that faced him. He was also a successful politician during a period in which anti-trust had great popular appeal. Id., at 2642.

[21] Id., at 2610, 2640. It was small, and must have been relatively high cost, since Standard dismantled it forthwith.

[22] See Note 19, supra. Apparently even the railroad rebates, which Emery claimed built Standard, were also available to the small refiner:

"[I]n the very early history of the Octave Oil Company, when we were shut down, we went to the railroads and they said they would give us 25 cents rebate. . . . [p]er barrel on oil." Id., at 2772–73.

See also the testimony of Archbold, id., at 3244–45; and Josiah Lombard, an independent: "They gave . . . all shippers over that road a rebate of ten per cent, which we got with others." Vol. 1, at 265. See also note 37, infra.

Whatever his reasons for selling the Octave, Mr. Emery was apparently not discouraged. For, in 1879, Emery and two partners formed Logan, Emery & Weaver, and started a new refinery at Philadelphia.[23] By 1880 the refinery was completed.[24] Nevertheless, he testified, his firm soon had trouble getting empty railroad cars.[25] Seven years later, Logan, Emery & Weaver sold out to Standard.[26] According to Emery, the original cost of the refinery, lands and wharves was $350,000. Standard bought the refinery for $275,000 and promptly dismantled it, though Emery claimed that the plant was "[f]irst class in every sense."[27] He did admit that refinery depreciation was commonly 10 to 15 per cent per annum.[28] Emery said he sold because he could not get crude oil. The problem was, according to Emery, that Standard and the crude oil producers had agreed to reduce crude output after the excessive production of 1887.[29]

Mr. Emery had also been interested in the Equitable Company, which built a crude oil pipeline in 1878, and sold it to the Tidewater interests for $178,000 in 1879. In 1889 Mr. Emery bought a small Bradford refinery for $5,000, commencing business with 250-barrel stills.[30] By 1908, output was 1,500 barrels per day. The Emery Manufacturing Company at Bradford, Pennsylvania thus had a much-enlarged refinery worth $250,000 to $400,000 and gathering lines worth $200,000. Sales had expanded from about $20,000 per year to between $480,000 and $600,000 per year. Standard's "predatory" tactics, if there were any, had apparently neither discouraged nor ruined Mr. Emery's own business.[31]

[23] Mr. Emery was by this time a member of the Pennsylvania Legislature and remained in office for 10 years thereafter. Vol. 6, at 2642.

[24] Interestingly enough, Mr. Emery had borrowed $25,000 from—of all people—the Standard Oil Company. Id., at 2643.

[25] Id. General rail car shortages were not infrequent during this period. Some oldtimers indicated that certain rail centers attracted refiners because they typically provided plenty of empty freight cars.

[26] Id., at 2645.

[27] Id., at 2646. Emery asked $750,000 for the refinery, but accepted $275,000. Id., at 2768. Emery thought the plant was worth the money, "[b]ecause we had a large export trade, what independent refineries there were, and a very good opportunity to make a margin on our oils if we could get them there at the same price the Standard Oil Company did." Id. It is not clear whether Standard bought only the refinery for $275,000 or refinery, wharves, and real estate.

[28] Id., at 2738.

[29] Id., at 2646. It seems strange that Standard, a large net purchaser of crude oil, would acquiesce in any scheme to increase the price of its principal raw material. In any case, abortive crude oil producers' cartels attempted, from time to time, to monopolize and shut in wells. See testimony of Rockefeller on the 1872–74 shut down. Vol. 16 at 3073 et seq.; also testimony of Tarbell, Vol. 3, at 1430.

[30] With a probable daily output of 90 to 150 barrels.

[31] Vol. 6, at 2769–70.

Furthermore, Emery became president of the United States Pipeline Company, which, in 1891, constructed a crude oil pipeline. The United States Pipeline Company later sold out to the Pure Oil Company.[32] When Emery sold the company, he took about $100,000 in Pure Oil Company stock, and retained a $15,000 interest in U.S. Pipeline. By 1893, Standard had bought a four-tenths interest in the United States Pipeline, but Emery and his colleagues frustrated their efforts to vote the stock.[33] In 1908, Emery's Philadelphia refinery had a capacity of 2,000 barrels per day, and his other oil interests were extensive. Emery clearly had a successful career, an important part of which consisted of selling companies to Standard and others. However rough the competitive storm may have been, Emery certainly weathered it well.

Emery's sole allegation of local price cutting concerns his Philadelphia marketing business, which he ultimately leased to Pure Oil Co. He admits he did not know who really started the Philadelphia price war.[34]

Holdship & Irwin.—In 1878 this Allegheny, Pennsylvania firm, with an output of 1,000 barrels of products per day, leased their refinery to Standard for 5 years.[35] Under the lease, the partners continued to run the refinery for Standard on a salary basis till 1883, when the lease expired and Holdship & Irwin resumed operation on their own account.[36] In 1886, they sold the refinery to Standard, with the understanding that they would not go back into the oil refining business. Mr. Irwin's testimony does not indicate that Standard used coercion of any kind.[37]

The Empire Oil Works, and the Globe Refining Co.—In 1875 or 1876, Mr. David P. Reighard started the Empire Oil works in Pittsburgh. When Holdship & Irwin sold in 1886, Reighard also sold out to Standard.[38] Reighard stayed out of the oil business till 1887, when he built the Globe Refining Company at Pittsburgh.[39] He ran the Globe for 18 to 20 months, then sold out to Standard again. At the same time, Mr. Reighard sold a large Phila-

[32] Emery summed up Pure Oil's business by saying that "Their money has been principally made in the production of crude oil." Id., at 2718. According to Emery, Pure Oil's sales rose at least 15 per cent to 20 per cent between 1900 and 1908; dividends were 8 per cent per annum.

[33] Id., at 2659–60.

[34] Id., at 2668–69. Emery did admit that he had cut Standard's prices, at 2785 ff.

[35] Id., at 3013—Testimony of Lewis Irwin. [36] Id., at 3014.

[37] Id. Irwin's testimony is also interesting on other grounds. (1) He claims that Standard accomplished considerable economies of scale. Id., at 3022. (2) In the period 1872–74, when both the railroad and oil industries were overbuilt and "demoralized," everyone in the oil business was getting rail freight rebates ("drawbacks"). In Irwin's words, "There were drawbacks and drawbacks within drawbacks. . . . Everybody got drawbacks in those days." Id., at 3026–27.

[38] The Empire and Holdship & Irwin were co-owners of a pipeline system. Id., at 3131.

[39] It had 12 crude stills, each of 600 barrels capacity, and some pipelines. Id., at 3134.

delphia refinery, which he was in the process of building.[40] The sale was no occasion for sadness, for as Mr. Reighard put it:

> Well, the reason I sold out was I found that the bonus that I asked those people (the Standard Oil) was as much as I could actually make on the profits for 15 or 20 years to come. [41]

Reighard sold for $1,224,800 in trust certificates and $50,000 cash.[42] Each of the last two refineries that Reighard sold to Standard had cost between $200,000 and $250,000. Thus it was that Mr. Reighard managed to build and sell three refineries to Standard, all on excellent terms.

Woodland Oil Company (Mr. C. J. Castle).—Mr. Castle was an important government witness on predatory price cutting and other unfair competition. He had been an oil refiner, and was still a marketer of petroleum products when he testified. At this point we will deal only with Mr. Castle's early role as a refiner who sold out to the Rockefeller group.

In 1883, Mr. Castle and a partner started the Woodland Oil Company, a small Cleveland refinery.[43] They began with $8,000 to $10,000 capital. By 1886, book capital was $14,000, and Woodland sold to the Rockefeller interests for the same amount. Castle implied that one reason he sold was inability to get crude oil from the Standard Oil pipeline. But he did not allege that predatory price cutting played any part in the sale, and did not feel aggrieved at the price Standard paid for his property.[44] Indeed, after selling the refinery, he went to work for Standard and remained in their employ for about 14 years.

Castle told several other stories about Standard's predatory price cutting during the period in which he worked for them.[44a] Nevertheless, I think it is significant that when he left Standard in 1900 he was clearly unafraid: he immediately started a rival oil marketing firm.

The Rocky Mountain Oil Company.—Mr. E. M. Wilhoit's brief but pointed version of this affair clearly implies intent and ability to crush out competition. Wilhoit was employed by Standard at the time this incident took place, and claimed to know something about it. In his words,

[40] Id., at 3136.

[41] Id., at 3135.

[42] "Well, they didn't want us to take any certificates at all. . . . I forced them, or went after them several times till I got them to give me some certificates." Ibid. The value given for the trust certificates was par value. Market value was higher. Vol. 17, at 3332. The Government gives the "competitive value" of the two Reighard properties as $823,000. Reply Brief for the United States, Appendix C, Sheet 8.

[43] Capacity: 200 barrels per day. Vol. 6, at 3060. By 1908, capacity of Standard's Whiting, Indiana refinery was 25,000–30,000 barrels per day.

[44] Id., at 3029.

[44a] The relevant anecdotes are analyzed in the Marketing section of this paper.

Before the Refinery got in operation, the Standard Oil made our fight on the Rocky Mountain Company and the Union Pacific went into the hands of a receiver and the Refinery was afterwards dismantled—went broke of course.[45]

On the surface, this incident is the nearest thing to predatory price cutting that I found in the Record. But there are reasons to suppose that there was something more here than meets the eye.

First, it is interesting that no complaint from the Rocky Mountain interests appears in the Record. Second, Continental—the Standard Company in the area—had entered into an agreement with the Florence Oil and Refinery Company and the United Oil Company, both located at Florence, Colorado.[46] Under the agreement, the two refiners sold their whole output of refined products to Continental. Prices were presumably attractive to the refiners, though, in view of the almost complete marketing monopoly of Standard in the area, quantities taken must have been limited.[47]

The United commenced refining oil about 1887 or 1888.[48] Sometime after Florence and United entered into the exclusive arrangement with Continental, shareholders of United and Florence started the Rocky Mountain Company at Pueblo, Colorado. A price war with Continental ensued. About 1894, after some two years of conflict, Rocky Mountain sold its crude oil properties to Western Oil Company, a producing subsidiary of United and Rocky Mountain. It is not clear what happened to the refinery itself, except that Rocky Mountain no longer ran it.[49]

What does this episode mean? Although the facts are not as ample as we would like, there is one hypothesis that is both logical and wholly consistent with what facts we do have: Standard had marketing facilities in the area, but no local supplies. Standard's refined products had to be brought in from Whiting, Indiana. The United-Florence interests had crude oil and refinery capacity. There may have been other competing refiners in the market as well.

Standard agreed to take certain quantities of refined products from United-Florence, at specified prices, in return for which the refiners agreed not to sell to anyone else. A restricted refinery output could be better for all concerned. But to get it, Standard would have to share monopoly gains with the refiners.

[45] Vol. 3, at 1216. The Government's position runs less to intent and causes, and more to a history of events. For, in Volume 2 of Brief for the United States, at 157, the Government says: "parties connected with the United Company undertook to establish another refinery known as the Rocky Mountain . . . a violent price-cutting competition started in between the Standard's marketing company, the Continental, and this company . . . the Rocky Mountain Company failed and went out of business."

[46] Standard later came to own 17 per cent of the stock of the United. Ibid. This may raise certain questions of minority shareholders' interests.

[47] The government claimed that a little over 1 per cent of the market was supplied by independents and "the marketing of oil in this territory is extremely profitable." Ibid.

[48] Vol. 1, at 155.

[49] Id., at 181.

In that way duplication of marketing facilities and refining capacity could be avoided.

In this case, as in other such sales arrangements, there must have been a temptation for the producers to sneak out a little more output on the side, in violation of the agreement, and thereby make supernormal returns on a larger output. That would be the best of all possible worlds: the monopoly price could be gotten from Standard on a limited quantity; in addition, a larger amount could be disposed of, on the side, at higher than competitive prices. Since United and Florence had an agreement with Standard for limited quantities, one way to chisel or to work their way into a larger share of the cartel profits would be to start a new firm. This they did in the form of the Rocky Mountain Company. Mr. Wesley H. Tilford, Treasurer of the Standard Oil Company of New Jersey, explained the purpose of Rocky Mountain in these words:

> They were not satisfied with the interest in the United and they built another refinery to take part of their own business.[50]

Mr. Henry M. Tilford, President of Continental since 1893, confirmed and elaborated Wesley Tilford's recollection of the incident:

> Early in 1891 or 1892 Mr. Daniel Eells came to our office, and had an interview with W. H. Tilford and myself in which he stated that he and some friends proposed to build a refinery in Colorado, and asked if the Continental Oil Company would take their output. He was told the Continental Oil Company was getting from the Florence Oil and Refining Company and the United Oil Company all the oil they could market in that vicinity. Some little time afterwards he came back to the office and said that the refinery had been built, and asked again if the Continental Oil Company could take the output, and he was advised that they could not, that the situation was the same as it was before. . . . They commenced business and they commenced cutting prices.[51]

What happened after the reabsorption of Rocky Mountain is also consistent with the cartel hypothesis: The refiners *raised* the prices of refined products to Continental. Whatever their object, then, the net result was that United and Florence apparently emerged from the conflict with more favorable contract terms *vis a vis* Standard.[52] Tilford did not regard Rocky Mountain as having failed, but simply as having been reabsorbed by those who started it.[53]

With the passage of time, more refineries were built in the Rockies. By 1907, when Mr. Henry Tilford testified, refineries had been built in Sugar Creek and Evanston, Wyoming; Spring Valley, and Boulder, Colorado. At

[50] Id., at 156.

[51] Vol. 2, at 730–31.

[52] It may be that the cartel had more refiner members than United and Florence, for Tilford said "there were other people in the oil business selling oil to the Continental, and indirectly it affected them, of course." Vol. 1, at 177, and see also 180.

[53] Id., at 181.

least two, those at Spring Valley and Boulder, were independent, and built between 1905 and 1906.[54] This suggests either that memories are short; or that those who were familiar with the episode did not regard the Rocky Mountain incident as a case of predatory price cutting.

The 1895 Purchases.—James W. Lee, Vice President and Director of Pure Oil, testified that in the 1890's a group of Pennsylvania refiners sent emissaries to Standard to moderate the "destructive competition" that plagued them.[55] Standard offered to purchase their pipelines and facilities, for cost plus 12 per cent. Whether for those terms or not, some of the group sold out, including Mr. Ramage.[56] It is interesting that none of those who sold out came forward to testify that they had been abused in any way.

Most did not sell, but banded together and formed the Pure Oil Company in 1895.[57] Pure Oil thus became the largest independent oil company in the United States. It was also a profitable one.[58]

Although Lee did not allege local price cutting, he claimed that Standard had squeezed the independent refiners by bidding up the price of crude oil in 1895.[59] As it turns out, however, since Standard was actually buying 90 per cent of the crude oil in question, such a maneuver would have cost Standard a great deal more than those it was seeking to punish.[60]

The Argand Refining Company.—In spite of having "the regular severe competition of the Standard all the way through,"[61] this refinery was a profitable business. It earned "a little over $35,000" a year, net, with 600 barrel still capacity and $50,000 beginning capital.[62] Dividends were paid regularly at the rate of $2\frac{1}{2}$ per cent per quarter.

Argand included among its stockholders several railroad officials.[63] According to Cram,

[54] Vol. 2, at 731–32.

[55] Vol. 6, at 3169–70. Lee did not refer to local price-cutting as a factor.

[56] Ramage evidently took some Standard stock, for he appears on the Standard stockholder lists. Messrs. Fertig and Burwell also sold.

[57] Consistent with logic, but not with a theory of predation, are Standard's persistent efforts to buy stock control in Pure Oil Company affiliates. Vol. 6, at 3176–79.

[58] Id., at 3191. [59] Id., at 3192–93.

[60] Id., at 3192–3194. Apart from this elementary fact, quite acceptable and logical alternative explanations were given.

[61] Testimony of Cram, Volume 3, at 1349. Earlier he had said: "Not anything more than ordinary competition in their business, I should judge. . . . Well, I cannot say they cut on us particularly; they were a larger concern than we were and we followed their prices." Vol. 5, at 2422.

[62] Vol. 3, at 1351. At that time, a still would be "run off" about once every two or three days at best. This would have made a 200 barrel per day output, or 73,000 barrels per year without allowance for down time and "turnarounds." Actual output was probably lower. See Vol. 5, at 2419–20.

[63] Vol. 3, at 1349.

> There were no threats as to what they [Standard] would do if we didn't sell out. Our railroad stockholders became convinced that we would lose our railroad business, from which we derived half of our net profit.[64]
>
> The refinery was finally disposed of [to Standard] on a lease basis for $20,000 a year, for a period of ten years. It was afterwards adjusted on a cash basis on which our stockholders, on which the company, got $180,000. [65]

Predatory price cutting obviously had nothing to do with the sale.[66]

Scofield, Shurmer and Teagle.—This firm was one of the last large refiners purchased by Standard before its dissolution. SS&T had a refinery at Cleveland,[67] and sold about 200,000 barrels of refined products a year in Michigan, Illinois, Indiana, Iowa, Nebraska, Kansas and Missouri.[68] SS&T and Standard were old rivals, and had several clashes over the years. In 1876 Standard and SS&T ended one competitive struggle by signing a market-sharing contract. Under its terms Standard guaranteed a minimum profit to SS&T, in exchange for output limitation; and shared additional profits in specified proportions.[69] But in 1880, SS&T broke the contract, and, when Standard sought to enforce it, denounced the instrument as a tool of an unlawful monopoly.[70]

Nevertheless, when SS&T sold out, Walter Teagle joined Standard, as did the old staff. According to Walter C. Teagle, son of the head of SS&T, Standard continued to employ all but three SS&T employees after the acquisition.[71] Standard operated the SS&T facilities under the style of Republic Oil Company till about 1905.[72] Claims that Standard operated SS&T as a "bogus independent" only strengthen the hypothesis that there was no coercion surrounding the sale. For it is impossible to keep a secret when those who must be relied on to keep it can injure their enemies by betraying it.

[64] Id., at 1350. About half of the $200,000 capital stock was held by officials of the B&OSW and the Marietta & Columbus Northern Railroads. These railroads bought about one-fourth or one-fifth of Argand's output.

[65] Id., at 1352. The sale apparently was consummated in 1897. Cram agreed to stay out of the oil business, as did some others. Vol. 5, at 2424.

[66] It is curious that in his much earlier testimony Cram did not mention the possible loss of railroad business as a factor in the sale. Whereas in his later testimony he is not really hostile to Standard, and certainly does not claim local price cutting, Cram seems less happy with the sale. Perhaps he came to regret it. One possibility is that Cram felt aggrieved when the ample "stand-by" salaries Standard paid the managers under the original settlement gave way to a cash settlement to stockholders.

[67] According to Teagle, "We had a refinery at Cleveland, but the refinery at Cleveland was old and out of date, and the capacity of it was limited as compared with the sales end of our business. I don't suppose we refined, during the years immediately previous to our sale, over 35 to 40 per cent of the refined oil products that we sold. Cleveland had ceased to be a refining center." Vol. 3, at 1467.

[68] Id., at 1468. [69] Vol. 16, at 3204. [70] Id., at 3205.

[71] Vol. 3, at 1150. SS&T sold out in 1901. Id., at 1153. After the dissolution Mr. Teagle became president of Standard Oil of New Jersey.

[72] Id., at 1153 ff.

In any case, there is no evidence that predatory price cutting had anything to do with the SS&T acquisition, or with the terms on which Standard purchased it.[73]

Summary.—The record does not indicate that predatory price cutting forced any refiner to sell out. The only doubtful case is that of the Rocky Mountain Company and, in my opinion, this incident is no exception to the rule. Furthermore, there is no evidence that predatory price cutting was used to depress asset value of any of the more than one hundred-twenty competitive refineries that Standard bought.[74] So far as I can make out, Standard's purchase terms were generally very good, and sometimes lavish. Abstracting from purchases, the mortality rate in refining was evidently low after Standard achieved a monopoly position.

b) "SUSPECT" CASES THAT DID NOT RESULT IN MERGER OR PURCHASE

There remains the possibility that Standard used local price cutting to drive rival refiners to the wall without purchasing them. Perhaps Standard, without having to buy them out, simply exterminated them.

The following integrated refining firms at one time or another had local, or general, clashes with Standard. Standard did not buy, or merge with, any of these firms. Testimony about these incidents was often vague, which is not too surprising in view of the very long period covered.[75] There is also a large amount of pure hearsay, and many facts were hotly controverted.

Fehsenfeld (The Red C Interests).—Mr. W. H. Fehsenfeld was president of the Red C Oil Manufacturing Co. of Baltimore.[76] Red C was a marketing company, but Fehsenfeld was also president of Island Petroleum, a refiner.[77]

Fehsenfeld testified that up to about 1897, Red C and Standard competed in the South in the sale of barreled refined products. After 1897, Standard relied increasingly upon the tank wagon method of distribution. Red C continued to emphasize barrel distribution.[78] According to Fehsenfeld, Standard

[73] One independent oil man made the following observation about SS&T: "They had a plant that they maintained and they maintained it until they *succeeded* in selling out to the Standard." Vol. 2, at 987. (Italics supplied.)

There is no real evidence that the "bogus" Republic waged predatory price cutting campaigns, either. See testimony of Crenshaw, for example, on the amicable settlement of one price cutting flurry in 1902: Vol. 3, at 1173–74.

[74] See Mr. Lombard's testimony on the "very fair" prices Standard paid the refiners it bought out. Vol. 1, at 250.

[75] Testimony covered the period 1865 through 1908.

[76] Vol. 5, at 2302.

[77] Id., at 2330. Fehsenfeld was also President of the Columbia Oil Co., and Vice-President of both the Georgia Oil Co. and the Richmond Oil Co. All but Island were marketing companies. Island owned stock in the various marketing companies.

[78] Red C did sell by tank wagons in and around Baltimore, and had various commission agents and jobbers over the country.

systematically offered price inducements to merchants to prevent Red C from making up carload shipments of 60 barrels, and sometimes induced Red C customers to countermand their orders.[79]

At one time or another, Red C faced competition from five different "bogus independents" operated by Standard.[80] According to Fehsenfeld, "[T]hey sold regardless of price, in order to secure our business. . . ."[81] On some occasions, at least, Red C clearly started the price cutting. Indeed, Red C evidently employed price cutting whenever it served their interests. As Fehsenfeld explained:

> I did certainly cut the price in order to get the business. . . . As occasion was necessary; that is to say, *in going into a territory we would have to offer some inducement*. . . . Sometimes I would sell—it would depend entirely upon the quality of the oil—at prices lower than the Standard or sell at prices higher than the Standard.[82]

According to C. T. Collings, Second Vice-President of the Standard Oil Company of Kentucky, Red C had always been a price cutter. Standard, on the other hand, found price cutting an unattractive policy. In Collings' words,

> Red C . . . had a way every once in a while of sending out one or two men, rushing them around over the South Carolina Field, and making up carload orders by cutting our prices from a half to one and a half cent a gallon. . . . we had lost quite a good deal of business in years gone by by this system. . . . As you will see here in every one of those letters where their prices are mentioned, they are from half a cent to a cent and a half below our price. . . . We didn't go down to their very low prices, except, I believe, in one case, and that was at Union, South Carolina. . . . We do not initiate the cut. We rely on our having been the pioneers in establishing the business, serving the trade with good oil in the most-up-to-date manner, and that if a competitor comes in there to get our business he must necessarily cut the price or offer some inducement in order to wean the trade away from us. Therefore, it is not necessary for us to cut prices.[83]

Although he said that thirty years of competing with Standard were hard, Fehsenfeld acknowledged that the Red C interests had grown steadily and prosperous since their modest beginning in 1878.[84] Before 1903, Standard twice tried to purchase the Red C group but failed.[85]

[79] Id., at 2303.

[80] Id., at 2311.

[81] Id., at 2319.

[82] Id., at 2341. (Italics supplied).

[83] Vol. 12, at 895–96. See also Vol. 13, at 1536–37. There is a great deal of corroborating testimony. See, for example, Vol. 13, at 1306 et seq., 1322 et seq., 1362 et seq., 1364–65, 1440. The Record is liberally sprinkled with evidence, and anecdotes of competition between Red C and Standard. For example, see Vol. 5, at 2303, 2307, 2310, 2313, 2316, 2406–9, 2476; Vol. 10, at 1747–58, 1760–1775; Vol. 12, p. 913; Vol. 13, at 1110–13, 1139–44, 1158 et seq., 1167, 1239, 1250, 1305–07; Vol. 15, at 2443–44; Vol. 20 at 100–101, 146–48, 152–3, 156–68, 212 et seq. In fact, much of Volumes 13 and 20 concerns this rivalry.

[84] Vol. 5, at 2333. Island was organized in 1901, when Red C integrated "backwards" into refining. Id., at 2337. Island owned the controlling interest in the Richmond Oil Co.

[85] Id., at 2329.

Cornplanter Refining Company.—Founded about 1888, Cornplanter was an old rival of Standard. Although there was a good deal of hearsay about Standard "attacking" Cornplanter over the years, it is clear that from time to time Standard and Cornplanter entered into agreements to avoid competition.[86] Mr. Todd, Cornplanter's Manager, testified that Standard had threatened Cornplanter with extinction, but that it never materialized.[87] Cornplanter was a Warren, Pennsylvania refiner, but, among other places, also sold in the St. Paul area.[88] The Manager of Standard's Whiting refinery told Todd that Cornplanter was selling too much kerosene in the St. Paul territory, and that if they did not agree to reduce output and regulate sales, Standard would run them out of business. Mr. Todd understood well the economics of local price cutting, for, as he testified:

> Well, I says, "Mr. Moffett, I am very glad you put it that way, because if it is up to you the only way you can get it [the business] is to cut the market, and if you cut the market I will cut you for 200 miles around, and I will make you sell the stuff," and I says, "I don't want a bigger picnic than that; sell it if you want to," and I bid him good day and left.[89]

The Standard threat never materialized.

Todd also testified that about 1898 a Standard Oil executive told him Standard's policy was to put all independents out of business.[90] Standard then launched a price-cutting war against Cornplanter in New York. Todd said Standard started it, but acknowledged that Cornplanter had started a price-cutting campaign around Boston.[91] The "war" was costly to both sides, and they entered into a market-sharing agreement for the Boston territory. Prices rose "from 6½ to 10 cents in a very few days, and they remained there for a long time."[92] The agreement, first for three years and later renewed for five, remained in effect until about 1906. At that time, Cornplanter sold its Boston distribution facilities to the Gulf Refining Company, an aggressive independent concern.

Todd testified to other conflicts,[93] and still other agreements,[94] with Standard. In spite of their difficulties with Standard, Cornplanter's capital had

[86] See, e.g., Vol. 6, at 3209 et seq.

[87] Id., at 3212.

[88] Id., at 3213.

[89] Id., at 3214, and also at 3227.

[90] Id., at 3215–16.

[91] Id., at 3216. Cornplanter's gallonage trebled in Boston. Id., at 3231.

[92] Id., at 3217. Cornplanter had acquired the Boston facilities when it bought out the New England Oil Company about 1897. Id., at 3228, 3230.

[93] Id., at 3220–21. See also testimony of Hopkins, Vol. 3, at 1030 about cutting Standard's prices.

[94] Vol. 6, at 3207–8, 3220, 3223–28.

grown, in the twenty years of its existence, from $10,000 to $450,000. Todd admitted that they were still alive and, indeed, very healthy.[95]

Crew-Levick.—Crew-Levick had several refineries.[96] George J. Wolff, Baltimore manager, testified that a Standard "bogus" concern had waged war on them. Wolff admitted that he sometimes cut Standard's prices in Baltimore,[97] and acknowledged that Standard, whatever its motives, hadn't been able to kill Crew-Levick:

> Q. You don't think you need any guardian for carrying on business against the Standard Oil Company, do you?
> A. No, by gosh! I don't.[98]

Crew-Levick had apparently done well in Baltimore, for as Wolff testified:

> Q. From 1904 until recently you had a pretty steady increase, haven't you?
> A. Yes, sir. The day I took charge I only sold 400 gallons, and that was all my own.
> Q. And that would be about 2,000 gallons a week?
> A. Yes.
> Q. And now you sell about 20,00 gallons a week?
> A. Yes, Sir.[99]

Some Other Refining Companies.—Defendant's Exhibit 277[100] indicates that in 1908 there were 123 independent refineries in the United States. Some were undoubtedly very small; some were not. The list includes firms which are major companies today and which were substantial even then. Pure Oil, Tidewater, Gulf, The Texas Company, Sun Oil Company, and Union Oil are perhaps the outstanding examples. By 1908, the Texas Company had a refinery of 12,000 barrels per day capacity; Gulf had two: one of 10,800, another of 41,600 barrels per day.[101] Pure, Tidewater, Gulf, and Texas each had large crude oil pipeline systems.

Standard owned about 31 per cent of Tidewater's common stock, and had various agreements with that firm.[102] It also owned a substantial interest in the Pure Oil pipeline affiliate, but never achieved control.

There always had been some competing refiners.[103] At least 10 independent

[95] Id., at 3221. Cornplanter had numerous other oil interests as well. Id., at 3232 et seq. They marketed under several names, including Tiona Oil.

There are many references to the competition of Cornplanter and Standard. See, e.g., Vol. 20, at 45, 61–62, 114; Vol. 6, at 3213–18; Vol. 15, at 2383–87; Pet. Exh. 635.

[96] See Vol. 20, at 105–106. Interestingly enough, they were operated under different names: Crew-Levick, The Glade Oil Works, The Muir Works, The Seaboard Oil Works.

[97] See, e.g., Vol. 20, at 118 et seq., 122, 126, 131. See also Vol. 16, at 2612 et seq.

[98] Vol. 20, at 126. [99] Id., at 109. [100] Vol. 19, at 662–63.

[101] A 40,000 barrel per day refinery is of quite respectable size even today, and very large for its time. Testimony of Emery, Vol. 6 at 2704, 2710–12.

[102] See e.g., Archbold's testimony, Vol. 17, at 3321.

[103] Vol. 1, at 243–44; Vol. 3, at 1467; Vol. 5, at 2542; Vol. 6, at 2626, 2642, 2705, 3015, 3131, 3132; Vol. 16, at 3139; Vol. 17, at 3446; Vol. 20, at 31.

refineries which were built before 1890 were in continuous operation through 1908,[104] By 1895, there were 38 competing refineries.[105] By 1906, the figure had grown to 123.[106]

The Pure Oil Company, formed in 1895, is only one example of the growth and prosperity of independent refiners.[107]

Refining: Summary.—I can not find a single instance in which Standard used predatory price cutting to force a rival refiner to sell out, to reduce asset values for purchase, or to drive a competitor out of business. I do not believe that Standard even tried to do it; if it tried, it did not work.

Standard bought many firms, and paid well to get them. Its purchases continued pretty much up till dissolution, and were apparently necessary to preserve the monopoly position it had built. In addition to purchasing many competitors, Standard entered into market-sharing and price-fixing agreements with still others.[108]

From the beginning of Standard's power, and throughout the period of its greatest strength, new firms sprang up and prospered; old firms survived and grew.

2. PRICE CUTTING INVOLVING JOBBERS AND RETAILERS

It is significant that far and away the largest amount of testimony about price cutting concerns the jobbing and retail levels. Most of the firms alleged to have been involved in price cutting by Standard were non-integrated marketers; the bulk of them were retail merchants and peddlers. Marketing affiliates of competing refiners have already been discussed.

Oil marketing, though different from what we know today, was changing. Before about 1890, refiners sold most of their products in barrels to jobbers, who then distributed the product locally.[109] About that time Standard began "tank wagon" delivery to grocers and other retailers. Under that system, Standard set up bulk stations to which it shipped barrels or tank cars of products, and from which it sent out tank-wagons to serve retailers directly. A tank wagon was just what the name implies: a horse-drawn wagon with a

[104] Vol. 5, at 2542; Vol. 6, at 2651, 2705, 2840, 3015, 3061, 3207; Vol. 20, at 106–107.

[105] Vol. 6, at 2690–2712.

[106] Vol. 2, at 651; Vol. 5, at 2543–45; Vol. 6, at 2691, 2700, 2704, 2710, 2711–12; Vol. 8, at 1002 (Pet. Exh. 396); Vol. 17, at 3290; Vol. 19, at 627 (Def. Exh. 269), 662; Brief For Appellants, Vol. 1, Appendix III, at 266.

For the more rapid growth of competition in the export trade, see Vol. 8, at 904 (Pet. Exh. 377). Competitors' greatest growth was in products other than kerosene. Brief for Appellants, Vol. 2, at 102–03.

[107] Pure's crude oil receipts more than doubled between 1900 and 1906. Vol. 3, at 1443, 1451. Another interesting example is the New York Lubricating Co. Vol. 2, at 532–33, 766–67, 773.

[108] For some of the agreements, see Vol. 1, at 175–76, 214–23; Vol. 2, at 734, 738, 946, 950; Vol. 3, at 1130; Vol. 17, at 3321; Vol. 12, at 955.

[109] Testimony of Archbold, Vol. 17, at 3467–68.

wooden or iron tank mounted on it. Each tank wagon served 30 to 50 specified retail customers. Tank wagon drivers poured or pumped gasoline and kerosene into store-keepers' tanks, taking cash on delivery. Standard ultimately sold most of its products through the tank wagon channel.[110] Collings, of the Standard Oil of Kentucky, testified that as much as 90 per cent of his sales were made in that way.[111] The remainder continued to go to jobbers and peddlers.

Peddlers usually called at a tank station and filled their own wagons. To reflect the savings on delivery, and their larger average purchase, peddlers usually paid $\frac{1}{2}$ to 1 cent per gallon less than the tank wagon price.[112] Retail peddling wagons made 150 or more selling stops per day.

Jobbers were thus being displaced by an integrated marketing apparatus pioneered by Standard and imitated quickly by its competitors. Peddlers too, faced sweeping changes. Gas and electricity had begun to challenge the household kerosene market on which peddlers depended. The rise of the automobile was just beginning. These forces would ultimately make kerosene, then the principal product, a fourth-rate fuel.

At the same time these changes were taking place, refiners were groping for more efficient ways to market their products. Even as it was developing tank wagon delivery, Standard also experimented with its own peddling operations. It tried to keep its ownership of them secret. These constituted most of the "bogus independents" about which we have heard so often. Almost all the rest were jobbing concerns, generally small ones. They were never of great importance quantitatively.[113] And, for whatever it is worth, Standard was not the only company with "bogus" peddlers and jobbers.[114]

Standard gave several reasons for not advertising its connection with these

[110] The proportion varied among the different territories. Barrel, jobber, and commission-agent distribution were more important in very small communities, and in certain mountainous areas. As late as 1904, for example, Standard was still extending tank wagon service to small New York communities. In all areas, tank wagon delivery was coming to be the dominant method.

[111] Vol. 12, at 896.

[112] Standard's competitors also granted these terms.

[113] More than half of the "bogus" concerns were strictly retail peddling outfits. Most were very small; they averaged, perhaps, two or three peddling wagons. In addition, most did not last very long. "They were an experiment in selling oil directly to the consumer, which largely on account of the necessity of giving credit, proved a failure." Brief for Appellants, Vol. 2, at 192. See also Vol. 13, at 1523–25. Most were gradually withdrawn as the equipment wore out. Those few that continued became "Can Departments" of the various Standard companies.

Furthermore, there is some question about just how secret these firms were supposed to be, and grave doubts about how secret they in fact were. Finally, the government, and witnesses for it, erroneously accused Standard of owning and operating firms that it did not really have anything to do with. For example, see Vol. 5, at 2412, Vol. 12, at 779–80, 790–91; Vol. 13, at 1218–20, 1279–83, 1307, 1533–35.

[114] There are many examples, including the firms operated by Mr. Castle, National Refining Co., Red C, Crew-Levick, et al.

firms. First, persistent public attacks on its monopoly and high profits had prejudiced some of the trade against buying Standard products.[115] Second, some of the marketing concerns that it bought had substantial good will and better local market acceptance than Standard could economically create. Third, to break local retailer and peddler cartels and to meet the competition of other peddlers, from time to time Standard found it useful to run in a retail outfit selling at competitive prices. But to do these things without antagonizing its tank wagon customers, secrecy was useful.[116] Fourth, this approach permitted Standard to experiment with new personnel and marketing methods without abandoning the old, and without committing large resources.

As tank wagon distribution largely displaced barrel delivery to jobbers, Standard sought to extend integration further. As Mr. Squires put it:

> [W]e reached a point where it was felt that possibly another step nearer the consumer might be taken and save him money. It was learned that the retailer was making from 50 to 100 percent profit, and it was believed that we could save one-half of this to the consumer. To make this move required a great deal of care and caution, so that the trade which we were supplying might not be antagonized; also for the purpose of developing any impracticable features which in the end might prove it was not the proper course to pursue. Therefore a few towns were selected to make the experiment, and the towns quoted above were used for the purpose. . . .
>
> But a very serious obstacle soon developed itself, namely, the giving of credit. The storekeeper gave credit to his customers, whereas with us they paid cash. This became such a factor as to make it almost impossible to sell the large quantity which was sought through this medium. Various ways were tried to see if it could not be overcome—like the sale of tickets by milkmen—but it did not work. Then credit was given, but our loss by bad debts was in itself sufficient to practically kill the enterprise. In addition to this we discovered that the expense due to wear and tear of the equipment was great. On account of loaning the cans to the consumer, being our property and not theirs, they did not take the proper care of them. More or less were damaged by carelessness and some were lost entirely. Therefore it was decided, after a very careful canvass of the experience of the different towns, to abandon the idea. Gradually from point to point the equipment was withdrawn, with the exception of two, namely, Youngstown and Cleveland, which have always been known by refiners as peddling points, due to the fact that a number of peddlers had been in existence there for years and the consumer had become familiarized with that means of delivery.[117]

Whether these were really Standard's motives, or merely clever rationalizations, is both imponderable and irrelevant. Suffice it to say that such a

[115] It is impossible to know how important this prejudice was, but it is clear that it existed. One possible symptom is the flavor of names adopted by some competitors: Antitrust Oil Co.; Freedom Oil; Uncle Sam Oil Co.; etc.

[116] Collings: "We would much prefer selling to the dealer. That was the business that we were especially engaged in and prepared to take care of." Vol. 12, at 887.

[117] Vol. 13, at 1523–24. Mr. Squire was not exaggerating retail margins, as the Record amply confirms. Whether margins were high because of retailer cartels or high costs does not matter. What does matter is that Standard, like any refiner, had every interest in reducing them. See also, Vol. 2, pp. 757–58; Vol. 3, p. 1109; Vol. 5, pp. 2583, 2602, 2584.

course of action is reasonable in light of the evolution of the industry. This evolution in fact accelerated after the 1911 dissolution when competition increased. It was not a creature of monopoly. After all, where are the kerosene peddlers today? The alternative explanation, that Standard sought to monopolize wholesale and retail distribution, is certainly less logical and is less consistent with the facts that we have.

In retailing, numbers were often very large, and entry was cheap and quick. Standard Oil never had, or apparently sought, a monopoly of retailing. It would have been pointless to try, and probably impossible to achieve. With a refining monopoly, Standard's interest in marketing should logically have been to keep it efficient and highly competitive.[118]

Of all the "levels" in the oil business, retailing would have been the most difficult for Standard to monopolize, and a monopoly there would have been the most transient of all. The reasons are simple. Kerosene retailers were of two sorts: grocers and other retail merchants, who kept tanks or barrels from which they filled customers' oil cans; and peddlers, who operated one or more wagons which went house-to-house on regular routes, much like the milkman of today and the iceman of old.

The skills and resources devoted to refined oil peddling were neither expensive, scarce, nor specific. A wagon, horse, driver, and some cans or a tank made a peddler.[119] A large peddling concern might have two or three wagons. The resources could, and did, move quickly out of oil peddling and back again, lured by the prospects for gain.

Similarly, entry into grocery retailing and general merchandising has never been difficult. Very early in the game, Mr. Rockefeller realized that a private monopoly of crude oil was impossible.[120] He must have realized that a retailing monopoly was even more hopeless. Only governments succeed for very long in monopolizing activities of that kind. Furthermore, Standard evidently

[118] A monopolist in manufacturing would prefer that marketing have zero costs and be competitive. In that way, the maximum monopoly returns could be extracted from manufacturing.

[119] Shea testified that he entered the peddling business in 1892 with $25.00 of his own money, $25.00 borrowed capital, and a borrowed horse. He grew rapidly, and branched off into jobbing as well as retailing. "I would imagine that we are doing about 30 times as much business as we were in 1892 when we first started." Vol. 5, at 2493.

[120] Rockefeller's description of the ill-fated crude producers' agreement of 1872 is classic:

"I could not state how long it was in existence or said to be operative, but the high price for the crude oil resulted, as it had always done before and will always do so long as oil comes out of the ground, in increasing the production, and they got too much oil. We could not find a market for it.

"[O]f course any who were not in this association were undertaking to produce all they possibly could; and as to those who were in the association, many of them men of honor and high standing, the temptation was very great to get a little more oil than they had promised their associates or us would come. It seemed very difficult to prevent the oil coming at that price. . . . There was a limitation beyond which we, as refiners and merchandizers in the oil, could not go. We were their servants in passing on to the consumer concluded that its interests could usually best be served by letting someone else perform the retailing function.

Thus it was that before the dissolution jobbers and retailers were exposed to evolutionary forces at work in the industry at large. These changes persisted, indeed probably accelerated, after the dissolution.[121] In addition, jobbers and retailers were subject to all the ills and quarrels that characterize petty trade, where size was small and numbers large. It is not surprising, therefore, that most complaints about price cutting involved non-integrated marketers.[122]

It is clearly impossible to review here all of the incidents involving jobbers and retailers. The record is filled with many very similar examples, and commenting on each of them is an unnecessary and uneconomic task.[123] For present purposes, it is enough to review some of the more important and representative cases. The incidents can conveniently be divided into three categories: (*a*) alleged price cutting which involved competing marketers, but which had no particular outcome; (*b*) alleged price cutting accompanied by purchase of competing marketers; (*c*) alleged price cutting accompanied by the disappearance of competing marketers. Alleged incidents of the first class are numerous, but do not support a theory of predatory monopolization. Examples of the second and third class would be more useful for such a theory, but are very scarce.[124]

Only a few representative incidents will be discussed in detail; others will be cited.

a) PRICE CUTTING WITH NO SPECIFIED OUTCOME

The bulk of evidence, and assertion, established only that Standard sold at different prices within the same community or among communities; and that the lower prices often resulted from greater competition.[125]

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the refined product, and the limitation was there in what we could at that time sell." Vol. 16, at 3074.

[121] In 1911, for the first time, gasoline sales passed kerosene.

[122] Standard claimed that its tank wagons served 37,000 towns in the United States. The number of jobbers and peddlers must also have been large.

[123] To a remarkable degree, the record is freighted with casual hearsay, petty complaints of small traders, and countless unimportant charges and countercharges. This is probably attributable to the nature of the proceedings under which testimony was taken. Witnesses appeared before an Examiner, not a judge, who felt that he had no power to rule on the admissibility of evidence. A large amount of the Government's testimony came from ex-employees of Standard, most of whom had been discharged or resigned under pressure. Several admitted grudges against Standard management. Some of these witnesses were testifying about Standard operations of which they had no direct knowledge. E.g., Vol. 5, at 2347, 2364, 2381; Vol. 15, at 2472.

[124] Because firms often were both jobbers and peddlers, and testimony about them was often scant, it is impossible to segregate the incidents into those involving jobbers or peddlers. Such a distinction would have little value in any case.

[125] See, for example, Vol. 8, at 905–1011 (Petitioner's Exhibit 379–96); Vol. 10, at 1624–1659 (Pet. Exh. 628–635). But compare Vol. 8, at 664; Vol. 10, at 1624; Vol. 21, at 133

Hisgen Brothers.—A typical example of a marketing firm that complained about local price cutting is Hisgen Brothers. The type of evidence presented is also representative of this whole class of incidents.

Hisgen started selling axle grease in 1889.[126] In 1900, they began retailing and wholesaling kerosene, which they purchased from independent refiners. They complained that in 1901, when they started selling kerosene in various small towns along the Hudson River, Standard cut prices to run them out. Prices elsewhere were said to have remained high. Standard's records indicated that their kerosene prices actually rose during the time Hisgen said Standard was cutting in the six towns involved.[127] Six grocers testified that it was Hisgen, not Standard, who started price-cutting.[128] In any case, Hisgen admitted that he sometimes did cut Standard's prices,[129] and was very vague about Standard's cuts against him.[130] Later episodes around Springfield, Massachusetts show that, at least part of the time, Hisgen initiated price cuts against Standard.[131]

Quite apart from the question of who started the price wars, Hisgen apparently did well. During 1904, for example, Hisgen Brothers did 21 per cent of the oil business at Springfield, and increased their share to 30 per cent in 1905.[132] After 1900, they greatly enlarged their territory and business and apparently prospered in the process.[133]

(Pet. Exh. 962). See also, Vol 2, at 937; Vol. 3, at 1046; Vol. 5, at 2484, 2490–91; Vol. 17, at 3620–2, 3628; Vol. 20, at 229–31, 233.

[126] Vol. 4, at 1795. By the second year business trebled, and kept on increasing. By 1900 sales were $80,000 to $100,000. Hisgen twice ran for Governor of Massachusetts on an anti-trust (anti-Standard Oil) platform. Vol. 4, at 1800, 1841, 1848–49, 1852.

[127] Vol. 12, at 713, 813–15. At one time prices did decline, allegedly because of price cutting by Tiona, marketing subsidiary of Cornplanter Refining Co. Id., at 716.

[128] Vol. 12, at 780–82, 812–13, 818-19, 822–24, 826–27, 830–31, 833–35; Vol. 4, at 1894–95, 1963–66.

[129] Vol. 4, at 1813–15, 1856 et seq., 1888–89, 1898, 1977–78. See also id., at 1932–37, 1952, 1964–72; Vol. 12, 729–37, 782–88, 810–17, 822–37.

[130] Vol. 4, at 1861, 1874.

[131] In 1904 Hisgen began selling at 10½¢ per gallon, undercutting Standard by ½¢. Part of the following decline was attributed to a general price reduction over a wide territory; part to further cutting by Hisgen. In 1905, Hisgen stopped cutting, and Standard's prices rose. Vol. 10, at 1636.

[132] Brief for Appellants, Vol. II, p. 177. See also Vol. 12, at 782–85, 809–810; Vol. 10, at 1636.

[133] Vol. 4, at 1836–44.

There are numerous other examples of this class of incidents. See, for example:

H. C. Boardman. In 1904, when Standard fired him, Boardman opened a marketing business in Augusta. Vol. 5, at 2189. Prices fell. Id., at 2169–71. Boardman captured and held one-third of the trade. In his words:

> "If I could get a third of the trade, I was satisfied. I recognized the fact that the Standard had to live, too, and needed the money, and so I thought I would let them live. So I kept it at 11 cents." Id., at 2171.

In 1906 Boardman opened up a tank station in Denmark, South Carolina. While he was *b*) PRICE CUTTING AND PURCHASING

There were several allegations that Standard used local price cutting to force independent marketers to sell out. For the most part, the evidence was simply that there was price cutting and someone affected by it sold out to Standard. In a few cases, the testimony was somewhat more pointed. The following are the most important and relevant examples.

G. T. Wofford.—From 1898–1902, Mr. Wofford was chief clerk and assistant to the Manager in the Birmingham headquarters of the Standard Oil Company of Kentucky.[134] He testified that Standard gave rebates to induce countermands or requirements contracts. Collings denied these allegations.[135] About the end of 1902, Wofford and some associates started the Southeastern Oil Company—a marketing firm—in Birmingham. According to Wofford, Kerosene prices fell steadily from 14 cents to 11 cents per gallon. Southeastern lost money, and sold out to Standard about 1904. There are several convincing reasons why this is *not* a case of successful predation: First, Wofford admitted that it was not Standard's price-cutting on kerosene that made the business unprofitable: "We made a reasonable profit on that particular grade of oil, but we lost money on the general business."[136] Second, Standard claimed, and there is some evidence to support it, that Southeastern solicited the sale to Standard.[137] Third, there was even some testimony that Standard did not actually cut prices before Southeastern sold out.[138]

Fourth, the Government claimed that Standard's Birmingham business was profitable during 1903.[139]

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erecting tanks, Standard cut prices. Id., at 2175. But, cut as they would, Boardman got about 40 per cent of the business. Although he was largely confined to one territory, and therefore should, so we are told, have been particularly vulnerable to "discriminatory sharp-shooting," Boardman prospered. His trade was profitable from the start; by 1908 he had 75 per cent of the Augusta lubricating oil business, and one third of the refined oils trade. Id., at 2171, 2181. Boardman started business with a capital of $3,000, including tanks and a wagon. The first year his sales were $40,000, the second year, $50,000, and the third year $60,000. "I have never had a month yet that I haven't made a nice profit, even from the first month." Id., at 2181.

C. J. Castle. Vol. 6, at 3040, 3044–46, 3055–57, 3067–68, 3088; Vol. 13, at 1483, 1517–18.

St. Louis Oil Co. Vol. 2, at 891, 894, 896, 899, 900. For a similar case, see Vol. 15, pp. 2411–2415, 2425; Vol. 20, pp. 229–33.

E. M. Wilhoit. Vol. 3, at 1037–38 et seq., 1269–70. "In going into a new territory I cut usually the Standard price." Id., at p. 1227.

Cooper Brothers. Vol. 5, at 2358–59, 2392–2400; Vol. 15, at 2434, 2453, 2472–73, 2542–46.

Testimony of Maxon and Kercher. Vol. 5, at 2459–70; Vol. 6, at 2811–13, 2815–33. But see Vol. 12, at 922–23, 969.

[134] Vol. 5, at 2150.

[135] Id., at 2155–56; Vol. 12, at 908.

[136] Vol. 5, at 2156.

[137] Vol. 12, at 848.

[138] Id., at 847–48, 908.

[139] Brief for the United States, Vol. 2, at 486. After the sale, Wofford went on to establish another successful oil marketing firm.

People's Oil Company.—E. N. Wooten, an ex-Standard employee, testified that from 1892 to 1898 Standard cut prices severely at Atlanta to kill off the People's and the Commercial, and that both were forced to sell out to the Standard.[140] Collings denied that Standard started a price war or tried to drive them out.[141] There is both indirect and direct evidence that they were not *forced* out: First, Wooten said the sales were secret, and secrets cannot usually be kept when parties are aggrieved. Second, People's was a *customer* of Standard. Third, the former owner of People's explicitly denied that she was forced out or underpaid.[142] Fourth, Wooten acknowledged that the value of People's and the Commercial had not been higher at any time than when they sold out.[143]

Testimony of Mr. Castle.—Castle testified that while employed by Standard, he forced an independent Port Huron, Michigan dealer—Mr. Campfield —to sell out to Standard sometime after 1889.[144] Correspondence indicated that Castle was supposed to rebate to dealers to keep the Port Huron kerosene price depressed to 6 cents per gallon to combat Campfield.[145] It is not clear who started the price cutting, and I can find no further evidence about the incident. There is no doubt that Castle employed rebates extensively in the Ohio territory;[146] that is why Standard claimed they fired him. Castle also testified that he forced a Cuyahoga Falls peddler named Blackburn to sell out.[147] For one who claimed to have waged war so long and widely, even the results that Castle claimed appear slender, indeed.[148]

[140] Vol. 5, at 2096–2103. Commercial was owned by the Peerless Refining Company of Cleveland. Standard claimed to have fired Wooten because of his alleged "drug habit." Vol. 12, at 906.

[141] Id., at 897–901.

[142] Vol. 18, at 253 (Def. Exh. 92½).

[143] Vol. 5, at 2149. Another example is the purchase of two wholesale marketing organizations started by a Mr. Joseph. According to Cooke, a Government witness,

> "[T]he Standard was anxious to get a location . . . and they realized there was hardly room for two companies (it was not a large town), and they went to Joseph and offered to buy him out; and I must say for the Standard Oil Company, they were very fair and equitable with him because they gave him a darned sight more than the old trap was worth." Id., at 2531.

Joseph agreed to stay out of the oil business, but soon came back, put up another bulk plant, and started cutting prices.

"Q. And the Standard met his cut?

"A. Well, you wouldn't expect them to take bank shots all the time, would you?" Ibid. Joseph sold out again.

[144] Vol. 6, at 3059–60.

[145] Vol. 10, at 1894–95 (Pet. Exh. 836, 837).

[146] Vol. 3, at 1362–3; Vol. 6, at 3030, 3037–38, 3039–45, 3071; Vol. 10, at 1886 (Pet. Exh. 829); Vol. 13, at 1511–15; 1576.

[147] Vol. 6, at 3044. At 3041, he says an unnamed peddler at Columbiana, Ohio also was forced to sell. The Columbiana affair arose out of price-cutting by Freedom Oil, Vol. 13, at 1511–15, as did many incidents in Ohio. Vol. 6, at 3040, 3044.

[148] Mahle, a former Standard stenographer, claimed that Blaustein tried to run Fivel, a peddler, out of Norfolk. Vol. 5, pp. 2211–12, 2360–62. Blaustein denied that, but admitted

c) PRICE CUTTING AND BUSINESS EXTINCTION

There remains the possibility that marketers were exterminated rather than purchased. The evidence is scanty and unconvincing.

Decline of Cleveland Peddlers.—According to Castle, in 1903, when Standard sent peddling wagons into Cleveland, the independent peddlers were doomed.[149] Whereas before that time independent peddlers flourished, their numbers declined drastically:

> [A]t that time peddlers were getting a pretty good rebate and the retail prices hadn't been brought down. They were doing pretty well there for a start. . . . After they brought these wagons on. . . .[I]t made the margin very small, and it had the effect that up to this time there are very few peddlers in the business, at the present time. Out of probably two hundred and fifty at that time, I don't think you could find fifty now.[150]

Squire, of Standard, offered a different and more sensible explanation:

> [I]n 1902 there were 115 peddlers, with no natural-gas meters in use. In 1903 there were 90 peddlers, with 16,194 natural-gas meters in use. In 1904 there were 80 peddlers, with 30,165 natural-gas meters in use. In 1905, there were 78 peddlers, with 46,819 natural-gas meters in use. In 1906 there were 61 peddlers, with 66,743 natural-gas meters in use. In 1907 there were 43 peddlers, with 77,646 natural-gas meters in use. In 1908 there were 40 peddlers, with 83,976 natural-gas meters in use.[151]

Natural gas, of course, was used both for heating and lighting.

The Mahle Testimony.—Mahle gave a great deal of hearsay testimony. For example, he said that three oil dealers in the Baltimore territory had been run out of business by Standard: Tough-Rutherford, McNeil, and the Purse family at Seaford, Delaware. I cannot find any evidence on the first two, but the allegation with respect to Purse is erroneous. The Seaford Company was a Crew-Levick concern, not a Standard "bogus" company,[152] and the Purse family said it was Red C price-cutting that drove them out.

Other Incidents.—H. C. Boardman worked for Standard in Augusta, Georgia from 1886–1904, and testified that during that period Standard cut prices to drive out competitors.[153] Boardman said that one marketer, J. T. Thornhill, "finally abandoned business"; and that other major integrated competitors of

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buying Fivel's wagon and supplies. Vol. 15, at 2434–39. Farquaharson said Blaustein ultimately bought Fivel out for $50 more than the "excessive" figure at which he first offered to sell. Vol. 5, at 2211. See also Vol. 2, at 725–27; Vol. 5, 2100–2, 2107, 2279; Vol. 12, at 902–05; Vol. 15, at 2445–7; 2549–52, 2544.

[149] Vol. 6, at 3054–56, 3108–19, 3124, 3201, 3206; see also Vol. 3, at 1507–10.

[150] Vol. 6, at 3056.

[151] Vol. 13, 1532.

[152] Vol. 13, at 1218, 1278–79, 1281, 1283, 1307. Cf. Vol. 5, at 2412; Vol. 13, at 1219–20.

[153] Vol. 5, at 2163–67.

Standard withdrew from the territory. These allegations were controverted.[154] Even Boardman admitted that Standard cut prices only "as last resort."[155]

Maywood Maxon, once a Standard employee, testified that in 1899 an unnamed independent oil dealer at Paris, Illinois was forced out of business after a year of rebating and price war.[156] Collings denied the whole affair.[157] In another instance, Kercher claimed that a peddler named Wagner left the business.[158]

C. M. Lines testified that he ran a string of bogus peddling wagons for Standard between 1900 and 1903.[159] He said he thought that these concerns lost money.[160] George Lane, who had worked for Lines, said that in Youngstown Lines made a "drive" on another peddler's business, and drove everybody out of business except the man he was after.[161] On the other hand, Vahey, the peddler who was alleged to be the object of Lines' warfare, testified that he did a land office business when the Standard group attacked him.[162] Far from going out of business, he apparently flourished.

Marketing: Summary.—This testimony is voluminous, controverted, and confusing. Many exhibits were ambiguous, and some are of dubious authenticity. Several conclusions stand out, however:

1. If Standard's object was to monopolize marketing—and that would have been irrational to begin with—they failed. For, if we abstract from the decline of kerosene peddling that followed the growth of natural gas in Cleveland, I can find less than 10 small oil dealers whose sale or disappearance appears to have anything to do with local-price cutting. And that is a liberal estimate of the evidence. Some of the firms were nameless; allegations were often vague; most claims were disproved; some, while not controverted, were never really

[154] See e.g., Vol. 12, at 910; Vol. 5, 2163. Boardman himself was a little vague: "I don't know whether they sold out, but the impression was that they sold out to the Standard." Vol. 5, at 2166. Boardman claimed that Tidewater; Crew-Levick; and Blodgett, Moore & Co., all withdrew.

[155] Id., at 2164.

[156] Vol. 3, at 1291, 1293, 1294, 1313. Maxon obviously wanted revenge on Standard; id., at 1294.

[157] Vol. 12, at 890. See also Vol. 5, at 2466–69.

[158] Vol. 6, at 2832–3. But see Vol. 10 at 1846 (Pet. Exh. 798). Kercher was an admitted perjurer. He also had a grudge against Standard, and apparently tried to blackmail them. Vol. 6, at 2949 et seq., 2969 et seq., 2990.

[159] Vol. 6, at 3201 et seq.

[160] Ibid., at 3205.

[161] Vol. 3, at 1356–61.

[162] Vol. 3, pp. 1366–67. Though just a peddler, Vahey was no fool. He claimed that when a Standard employee threatened to put him out of business, he replied that ". . . I was positive it would take him at least two years to put me out of business and maybe he couldn't do it then. . . ." Id., at 1367. For another alleged instance see Nicolai Brothers, Vol. 13, at 1196.

proved. In many cases, probably most of them, the independents clearly initiated price cuts.

The "possible" cases are, therefore, really unexplained cases. Most of them involved peddlers, among whom I would expect failures to be relatively numerous in the absence of predatory practices.

"Fatalities," from all causes, were apparently not very numerous in petroleum retailing and wholesaling, which is surprising in the light of the usual experience in petty trade. There were a fair number of purchases, but fewer than one might have expected.

2. Standard's correspondence and directives to salesmen show that they were intent on getting business that paid, but were not going to give away anything to get it.[163] Salesmen were cautioned to "be as economical in getting this business as possible";[164] were denounced for cutting prices when it was not necessary [165] and for selling too much oil at special prices.[166]

3. It is interesting that most of the ex-Standard employees who testified about Standard's deadly predatory tactics entered the oil business when they left the Standard. They also prospered.

4. Standard apparently had a shrewd and hard marketing organization. It had every interest in distributing as cheaply as possible, and tried to achieve that result.[167]

[163] Standard's salesmen and agents had to fill in "Form 29" requesting permission to cut prices. E.g., Vol. 3, at 1021–22; Vol. 12, at 962. Permission was often withheld. Vol. 10, at 1758–59 (Pet. Exh. 690). See Vol. 12, at 688, 845, 907. Standard's employees by and large appear to have learned what they were told. As one Waters-Pierce man put it:

> "Our goods was [sic] just as good or [a] little better than our competitors and I thought we should get as much for them as possible. [Cutting price] might increase the gallonage, but I figured we would lose money." Vol. 3, at 1170.

Wilmer also testified that Standard expected its salesmen to get the business at remunerative prices, for "[a]nyone could give goods away." Vol. 13, at 1250. Metzell, a competitor's salesman, agreed that "[t]hey are getting all they can." Vol. 5, at 2418. Wilhoit knew that Standard's profitability rested on high prices, not low ones. As he put it,

> "[I]f I could market my goods at such prices as the Standard Oil Company get for them regularly, I would not want but one year's business at their regular prices, if I got twenty-five per cent of the business. One year would be all I want to retire on at their regular price. We don't get their regular price."

Vol. 3, at 1038.

[164] Vol. 10 at 1840 (Pet. Exh. 790).

[165] "I have also corresponded with our agents in the South Carolina field and they fully understand we want to retain our business and would reduce our market ½ cent per gallon rather than see the business go to the other oil companies, but I have impressed upon their minds that we do not want to put this reduction into effect unless it is absolutely necessary." Vol. 10, at 1758–59. (Pet. Exh. 690).

[166] Vol. 12, at 1019.

[167] Collings said that the incidents in Standard of Kentucky territory were in large part caused by excessively high dealer prices that Standard was in the process of breaking down. Vol. 5, at 2462; Vol. 12, at 886–89, 923–927. According to Collings, a peddler working on a 4¢ per gallon margin can do well: As he put it,

> "So that at 4 cents a gallon it will be about, at 150 gallons a day, $6 a day. A man with

IV. Conclusions

Judging from the Record, Standard Oil did not use predatory price discrimination to drive out competing refiners, nor did its pricing practice have that effect. Whereas there may be a very few cases in which retail kerosene peddlers or dealers went out of business after or during price cutting, there is no real proof that Standard's pricing policies were responsible. I am convinced that Standard did not systematically, if ever, use local price cutting in retailing, or anywhere else, to reduce competition. To do so would have been foolish; and, whatever else has been said about them, the old Standard organization was seldom criticized for making less money when it could readily have made more.

In some respects it is too bad that Standard did not employ predatory price cutting to achieve its monopoly position. In doing so it would surely have gotten no greater monopoly power than it achieved in other ways, and during the process consumers could have bought petroleum products for a great deal less money. Standard would thereby not only have given some of its own capital away, but would also have compelled competitors to donate a smaller amount.[168]

It is correct that Standard discriminated in price, but it did so to maximize profits given the elasticities of demand of markets in which it sold. It did not use price discrimination to change those elasticities. Anyone who has relied upon price discrimination to explain Standard's dominance would do well to start looking for something else.[169] The place to start is merger.

It should be quite clear that this is not a verdict of acquittal for the Standard Oil Company; the issue of monopoly remains. What this study says is that Standard did not achieve or maintain a monopoly position through price dis-

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> one horse and wagon that can make $6 a day is doing very well. . . . [W]e figure that from 2 to 3 cents over the tank-wagon price was a fair price for the peddler. They could make a good living out of that. . . . And where they tried to hold up the customer to a fancy profit above that we used our efforts in one way or another to get them to bring it down, the object being, of course, to increase the consumption of oil. We felt, of course, that if they held the price up to 15 or 20 cents a gallon for oil, people would be more economical in the use of it."

Id., at 890. See also id. at 917–18. Cooke, a Government witness, testified that the effect of Standard's Capital City Wagons was to force peddlers to charge reasonable prices to consumers.

[168] This, of course, ignores certain moral issues. Economics is not a particularly useful tool for dealing with them.

[169] In arguing against the Defendant's motion for adjournment to prepare its case, Government Counsel may have admitted what I have concluded:

> "What is there, then, to prepare for in this case? Simply the question of unfair competition. The Examiner can see from the testimony that has already been taken that that is not a great task; that it won't take any particular time for them to prepare to meet that testimony." Vol. 6, at 3333.

crimination. The issue of whether the monopoly should have been dissolved is quite separate.

I think one further observation can tentatively be made. If the popular interpretation of the *Standard Oil* case is at all responsible for the emphasis that anti-trust policy places on "unfair" and "monopolizing" business practices, that emphasis is misplaced.[170] This limited study suggests that what businessmen do *to* one another is much less significant to monopoly than what they find it useful to do together to serve their common interest.

[170] The Standard Legend may also be responsible for the strained analogy often drawn between business and war. Analogies to chess strike me as being equally weak. Chess is a competitive game which one player wins, while the other loses. Successful quasi-monopoly seeks to avoid the competitive game, since all players lose as soon as they begin playing it.