Antitrust Implications in Prescription Drug Promotion: A Meprobamate by Any Other Name . . .

I. INTRODUCTION

Prescription drugs have an especially important role to play in the course of modern medical care and are used increasingly by the physician in the diagnosis and treatment of the diseases and conditions that afflict modern man. Prescribed drugs also have major economic consequences for the American consumer. For example, in 1971, prescribers in the United States ordered some 1,113,811,000 individual new or refilled prescriptions, for which the American public spent an estimated $4,367,381,000.[1] Moreover, in recent years, consumers have been paying steadily increasing prices for prescription drugs.[2] There have been increasing complaints as to unfair overpricing of these prescription drugs. Senator Gaylord Nelson, on September 29, 1972, stated before the United States Senate: "For many years the American people have been forced to pay high and discriminatory prices. These prices are borne by those people in our society who are least able to afford them — the sick, the poor, and the aged."[3] Dr. Richard Burack, professor of pharmacology at Harvard Medical School, has stated: "The drug industry is run by businessmen who have been more successful at making profits than all other businessmen on the American manufacturing scene. They make so much profit and manage to do it with so little risk that they have been called the last of the robber barons."[4]

The prescription drug market is peculiar in the realm of consumer products in that the actual consumer of drugs determines neither the demand nor the choice of the products he will purchase and use. The prescriber determines when a prescription drug is needed, how much

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[1] AMERICAN DRUGGIST 60, April 3, 1972.
[2] Hunt, *The Great American Medicine Show*, MODERN MATURITY (May 1972). For persons over 65, for instance, the average annual per capita prescription drug bill rose from $40.47 in 1967 to $52.49 in 1971. *See also* Firestone, *Trends in Prescription Drug Prices*, AMERICAN ENTERPRISE INSTITUTE FOR PUBLIC POLICY RESEARCH 23 (1970).
[3] 118 CONG. REC. S16336.
[4] R. BURACK, NEW HANDBOOK OF PRESCRIPTION DRUGS 21 (1971).

of it is needed, and which particular brand is to be used. It is the physician, therefore, and to some extent other prescribers, with whom both the consumer of drugs and the manufacturer of drugs are especially concerned; he is the key individual in the decision-making process involving the sale of prescription drugs.

Necessarily, prescribers' decisions must be based primarily on the effectiveness and relative performance of particular types of drugs, and only secondarily on price considerations. Large drug firms are sensitive to the factors that influence prescribers' choices. Promotional activities of these firms stress purported differences in quality between competing products.[5] Rarely are differences in prices mentioned, however.[6] Rivalry among firms can be intense, but only in the form of attempting to persuade doctors as to relative qualities, and not relative prices.[7]

Promotionally-achieved differentiation (which occurs in the marketplace, as opposed to chemically-achieved differentiation which occurs in the laboratory) is developed through extensive programs of personal contact with physicians by members of a highly-trained sales force, known as "detail men" and extensive advertising and other promotional campaigns intended to make prescribers aware of the products that the companies sell.[8] Drugs sold by these companies are differentiated from the products of competitors by means of trademark-promotion activities. The principle purpose is to promote brand-name identification and thereby displace the official generic names in the prescriber's mind.[9] The goal is to induce the prescriber

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[5]L. Ash, *Drugs, Detail Men and Doctors*, 4 J. BEV. HILLS B. ASS'N. 14 (February 1970) [hereinafter cited as Ash]. *See also* H. Steele, *Laws Regulating the Prescription Industry*, 6 HOUSTON L.R. 666, 716-718 (1968-69) [hereinafter cited as Steele].

[6]*Id.*

[7]Spokesmen for the drug industry have claimed substantial qualitative differences between drugs manufactured by larger firms and allegedly inferior drugs manufactured by smaller firms. However, these claims have been regularly refuted by experts, particularly in the light of strict Federal Drug Administration drug-efficacy controls over all drugs. *See, e.g.*, H. Simmons, M.D., M.Ph., *Brand v. Generic Drugs, It's Only a Matter of Name*, 7 FDA CONSUMER 5-7 (March 1973).

[8]*See supra* note 5.

[9]There are three names given to each drug: a chemical name, a generic name, and a trademark name. A drug's chemical name is descriptive of its chemical structure, based on rules of standard chemical nomenclature. An example is 2-methyl-2-propyl-1,3-propanediol dicarbamate, which is a tranquilizer. A generic name is the official scientific name, usually an abbreviated form of the chemical name. The tranquilizer mentioned above carries the generic name of meprobamate. Trademarks are those names companies give their own product in order to distinguish that product from competitive products which have the same generic name and the same active ingredients. Examples of different trademarks for meprobamate are Miltown and Equanil. U.S. DEPT. OF HEALTH, EDUC. AND WELFARE, TASK FORCE ON PRESCRIPTION DRUGS, DRUG MAKERS AND DRUG DISTRIBUTORS 8 (Dec. 1968).

to habitually use their trademark names in prescriptions.[10] Pharmacists cannot substitute other firms' products when trademark names are so used.[11]

Generally, trademarked drugs tend to be considerably higher-priced than other versions of the same drug sold under generic names.[12] Since smaller firms usually cannot and do not engage in the extensive promotional activities of the larger firms, they seek sales, for the most part, by competing with the large companies on the basis of price alone, selling under generic names.[13] However, evidence indicates that such firms do not secure any significant portion of the market, despite enormous price differences among competing products.[14] Small firms hoping to compete for sales on a price basis face a variety of market barriers, making such competition difficult to bring about. Smaller firms usually lack the resources, such as a large detail force or advertising capital, to mount a campaign necessary to make prescribers aware of the existence of competing products.[15] By excluding smaller firms from the market, the larger firms insure that the premium for trademarks is maintained, through lack of cross-elasticity.

The practice on the part of larger firms of promoting drugs by

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[10]This displacing of generic names and inducement to use trademarks exclusively is frequently further enhanced by overly complicated generic names. Drug companies are often given the responsibility of coining the generic names for the drugs they create. But often the names they coin are long, complex and unpronounceable and are difficult, if not impossible, for doctors to remember and spell. Ideally, generic names should be common, nonproprietory abbreviations of the longer scientific name (*see* note 9, *supra*). But before the Kefauver Subcommittee on Antitrust and Monopoly, Dean Charles Wilson of the School of Pharmacy of Oregon State College cited numerous instances in which a multiplicity of hopelessly confusing generic names had been assigned. For example, he told of a popular pain-killer with the generic name of acetaminophen, but for which all of the following chemical names had also been assigned as generic names: N-acetyl-P-aminophenol, p-acetylaminophenol, acetylaminophenol, N-p-hydroxylacetamide, p-hydroxyacetanilid. *Hearings on S.52 Before the Subcommittee on Antitrust and Monopoly of the Senate Judiciary Committee*, 87th Cong., 1st Sess., pt. 14, 7838-40 (1960).

[11]This is so in every state by statute. F. FLETCHER, MARKET RESTRAINTS IN THE RETAIL DRUG INDUSTRY 284 (1967) [hereinafter cited as FLETCHER]. In California, for example, such substitution is prohibited by 16 CAL. ADMIN. CODE § 1716.

[12]*See, e.g.*, note 58 and accompanying text; *also:* Joseph Campbell, then Comptroller General of the United States, in February, 1965, in a report to Congress on the Veteran Administration's "hometown medical care program," reported 17 examples of disparities in price between tradename drugs and generic drugs. The contrasting prices were given as follows, with the brand-name price given first in each case: $17 or $0.92; $13.50 or $1.87; $15.68 or $5.54; $7.48 or $2.14; $7.26 or $3.20; $4.50 or $0.62; $1.65 or $0.68; $2.56 or $1.70; $0.85 or $0.08; $3.55 or $3.12; $0.85 or $0.45; $0.40 or $0.10. None of the drugs were identified. MORTON MINTZ, BY PRESCRIPTION ONLY 342, n. 2 (1967).

[13]DRUG MAKERS AND DRUG DISTRIBUTORS, *supra* note 9, at 40.

[14]*See, e.g.*, notes 60 and 61 and accompanying text.

[15]DRUG MAKERS AND DRUG DISTRIBUTORS, *supra* note 9, at 40.

trademarks perpetuates the market positions of the original firms, despite the existence of lower-cost alternative versions of such drugs. The proliferation of these names no doubt makes the prescriber's task of sorting out competing products more difficult. Evidence suggests that, rather than sort out the names and claims of competing products, prescribers often find it much easier simply to continue writing prescriptions using the trademark for the product of the original manufacturer with which they have had a long-term experience.[16] Hence, the effectiveness of trademark names as barriers to competition: physicians tend to remain with particular trademark drugs through loyalty borne out of habit, convenience, experience with known quantities, and uncertainties regarding the quality or performance of seemingly identical products.[17] Generally speaking, these are the same factors that compete with price considerations in most other consumer product market areas. But in the case of drugs, the influence of these non-price factors in the product-selection process is coupled with a practical elimination of price consideration (due to the fact that he who chooses the product is not the one who pays for it). The result is a deprivation to the consumer of the economic benefits of reasonable price competition.

The proliferation of trademark use in the prescription drug market perpetuates disproportionately high prices in two significant ways. First, the use of trademarks entails extensive promotional activities by the larger firms in order to make trademark use more effective. These large promotional campaigns make up the largest single expense in the operating costs of the drug-manufacturing firms.[18] These expenses are passed on to the consumer in the form of higher prices of retail drugs. Second, the extensive promotional campaigns are beyond the financial capabilities of smaller firms. This bars these smaller firms from effectively competing with the larger firms. As a result, competition on a price basis is practically non-existent and retail drug prices become unnaturally inflated.

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[16] MINTZ, *supra* note 12, at 341-2.

[17] On December 19, 1973, Casper Weinberger, then U.S. Secretary of the Dept. of Health, Education and Welfare announced that HEW plans to limit drug reimbursements under Medicare and Medicaid to "the lowest cost at which the drug is generally available unless there is a demonstrated difference in therapeutic effect." The goal, Mr. Weinberger said, was to induce physicians to consider and prescribe generic-named drugs more frequently. San Francisco Chronicle, Dec. 20, 1973, § 1, at 1, col. 1; *see also* The National Observer, Jan. 12, 1974, § 1, at 8, col. 2.

[18] In 1968, the 17 leading drug manufacturers spent 35% of their sales dollars on marketing and general selling expenses. Moody's Investors Service, Inc.; Standard & Poor Corp.; Merrill Lynch, Pierce, Fenner & Smith, Inc.; FDC Reports (April 15, 1968). (The seventeen firms were: Abbott, Baxter, Lilly, Mallinckrodt, Merck, Parke-Davis, Robins, Schering, Smith Kline & French, Searle, Syntex, Upjohn, Bristol-Myers, Carter-Wallace, Pfizer, Richardson-Merrell, Warner-Lambert.)

The use of trademarks in product promotion seems to contain strong implications of restraint of trade and effective price competition. We look therefore to the Sherman Antitrust Act to determine the possibility of violation of antitrust laws in the prescription drug industry.

II. THE SHERMAN ANTITRUST ACT AND ITS APPLICATION TO THE PRESCRIPTION DRUG INDUSTRY

Section Two of the Sherman Antitrust Act of 1890 provides:

> Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor . . . [19]

The United States Supreme Court has defined this concept of monopoly as "the power to control prices or exclude competition."[20]

The Supreme Court has bifurcated this offense into two necessary elements:

"The offense of monopoly . . . has two elements: (1) the possession of monopoly power in the relevant market, and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historical accident."[21]

We shall now consider each of these elements, monopoly power and the intent to monopolize, separately and examine their application to the business practices found within the prescription drug manufacturing industry.

A. MONOPOLY POWER

The initial decision that must be made in determining whether there is a monopoly violative of Section Two is whether the firm concerned possesses effective monopoly power. Analysis of the degree of power exerted by a particular firm depends upon a determination of the parameters and structure of the relevant market within which that power is exerted.[22] The relevant product market has been defined as that range of products which are interchangeable in sales to the extent that an increase in the price of one will cause a certain number of purchasers to change to the others.[23] But the

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[19] 15 U.S.C. § 2 (1970).
[20] United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 391 (1956); *see also* United States v. Aluminum Co. of America, 148 F.2d 416 (2d Cir. 1945).
[21] United States v. Grinnell Corp., 236 F. Supp. 244 (D.R.I. 1964), *aff'd except as to decree*, 384 U.S. 563 (1966).
[22] Bernard Food Industries, Inc. v. Dietene Co., 415 F.2d 1279 (7th Cir. 1969), *cert. denied* 397 U.S. 912 (1970).
[23] Times-Picayune Publishing Co. v. United States, 345 U.S. 594, 612 (1953).

cross-over must have a degree of substantiality:

> For every product, substitutes exist. But a relevant market cannot meaningfully encompass that infinite range. The circle must be drawn more narrowly to exclude any other product to which, within reasonable variations in price, only a limited number of buyers will turn; in technical terms, products whose "cross-elasticity of demand are small."[24]

1. RELEVANT PRODUCT MARKET

The prescription drug market is demonstrably finite, the drug consumer being a "captive audience" in a much truer sense than consumers in most other product markets.[25] If the price of television sets becomes too high, the consumer may buy a stereo instead; or he may buy nothing at all. But not so with prescription drugs: the consumer assumes that he *must* buy the drug, regardless of price, if he is to recover his health. Such a consumer is not likely to decide that the drug is simply too high priced, and that he will instead make no purchase at all. Thus, while relevant product markets are finite in any area, such finiteness is more readily seen in the prescription drug market. Such captivity of the prescription drug consumer militates toward a more restricted view of the relevant drug market.

> Every manufacturer is the sole producer of the particular commodity it makes, but its control . . . of the relevant market depends upon the availability of alternative commodities for the buyers . . . [T]his interchangeability is largely gauged by the purchase of competing products for similar uses considering the price, characteristics and adaptability of the competing commodities.[26]

For the prescription drug buyer, the extent of the relevant product market is limited by several factors. First, each consumer is confined within the boundaries of particular therapeutic categories, *e.g.*, antibiotics.[27] Second, even within such categories, the drugs are not necessarily allowable substitutes for each other: drugs in a single therapeutic category, but in different qualitatively-similar subgroups, may differ in terms of potency, toxicity, and the number and nature of adverse reactions associated with them. Often times, several drugs containing the same active ingredients may affect a patient differently, depending upon the non-active ingredients contained therein and

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[24] *Id.* The exclusion of products with small cross-elasticity necessitates a good deal of subjective interpretation. *See, e.g.*, United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377 (1956), where the court was apparently less restrictive in making this value judgment than in *Times-Picayune.*

[25] Dr. J. Green, *Welfare Losses From Monopoly: The Oklahoma 'Antisubstitution' Law*, 5 ANTITRUST L. & ECON. REV. 97, 105 (Spring 1972) [hereinafter cited as Green].

[26] United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 394 (1956).

[27] Green, *supra* note 25, at 101.

the particular idiosyncratic reactions of a given patient to those ingredients.[28]

A third factor limiting the relevant market is created by the drug producers. Within a particular therapeutic category, physicians tend to demonstrate continued preference for certain select preparations, as discussed earlier. This is due to habit, fear of using drugs with which they have little experience, and, often, ignorance of other preparations in the particular therapeutic category, as well as the high-cost promotional campaigns.[29] Hence, the cross-elasticity is further weakened even within therapeutic categories, due to prescribers' reticence in substituting one preparation for another within such categories. Successful product promotion has the effect of further limiting the parameters of the relevant market by persuading doctors that no other company's drug can be substituted for the drug being promoted.[30] Also, detail men, the product promoters, disparage generic-named drugs as a class as being inferior to trade-name drugs and thereby attempt to segregate trade-name drugs in a market of their own.[31]

Thus the relevant product market of prescription drugs is at best the individual therapeutic categories, and very arguably limited even within such categories.

Once the relevant market has been determined, the extent of monopoly power within that market must be examined. The courts have considered a number of factors in determining such power, including the relative size of the firm within that market,[32] the price elasticity of demand within that market,[33] barriers to entry of new competition and restraint of existing competition,[34] and the existence of unnaturally high profit margins.[35]

2. *RELATIVE SIZE, CONCENTRATION RATIOS*

The relative size of a firm within the relevant product market is measured in terms of concentration ratios.[36] This concentration

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[28] Distinction must be made between functional interchangeability and reasonable (reactive) interchangeability. For products to be classified in the same market they must be interchangeable in both ways. *See* Note, *The Market: A Concept in Antitrust*, 54 COLUM. L. REV. 580 (1954). *See also*, United States v. Chas. Pfizer Co., 246 F. Supp. 464, 468-9 (E.D.N.Y. 1965).

[29] Green, *supra* note 25, at 102.

[30] *See supra* note 11.

[31] Ash, *supra* note 5, at 14-21.

[32] American Tobacco Company v. United States, 147 F.2d 93 (6th Cir. 1944), *aff'd* 328 U.S. 781 (1946).

[33] United States v. Chas. Pfizer, 281 F. Supp. 837, 846 (S.D.N.Y. 1968).

[34] National Wrestling Alliance v. Myers, 325 F.2d 768 (8th Cir. 1963). *See also* Gamco, Inc. v. Providence Fruit and Produce Bldg., 194 F.2d 484 (1st Cir. 1952), *cert. denied* 344 U.S. 817 (1952).

[35] United States v. General Electric Co., 82 F. Supp. 753 (D.N.J. 1949).

[36] That is, the percentage of the business controlled. United States v. Columbia

ratio is viewed as a principal piece of evidence to be analyzed in determining monopoly power.[37] Courts have never formulated an absolute standard to determine the degree of concentration necessary to indicate monopoly power; the percentage of concentration sufficient to give such power has varied from case to case.[38] In *United States v. Aluminum Company of America*,[39] the Court held that 90% was sufficient to constitute a monopoly but doubted that 60% would be sufficient. In *United States v. United Shoe Machinery Corporation*,[40] the court held that 75% was sufficient.[41]

Traditionally, the courts have applied concentration ratios to individual firms within an industry, as opposed to groups of firms within that industry. However, there is a strong argument for, and some evidence of, a shift toward applying concentration ratios to small groups of firms that together exercise monopoly power in oligopolistic industries. Most significant was the 1953 Supreme Court decision of *Federal Trade Commission v. Motion Picture Advertising Service Company*.[42] In this case, M.P.A.S.C. produced and distributed advertising films. Many of its contracts with exhibitors contained exclusivity clauses. M.P.A.S.C., the biggest company in the industry, had one-year-or-more exclusive contracts with about 40% of the exhibitors in its area of operation. Justice Douglas, speaking for a 7-2 majority of the Supreme Court, held that this was an illegal restraint of trade, making much of the fact that when M.P.A.S.C. was considered together with the next three largest companies in the indus-

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Steel Co., 334 U.S. 495, 527 (1948).

[37] *See, e.g.*, United States v. Grinnell Corp., 384 U.S. 563 (1966); United States v. Von's Grocery Co., 384 U.S. 270 (1966); United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377 (1956); American Tobacco Co. v. United States, 328 U.S. 781 (1946); United States v. Aluminum Co. of America, 148 F.2d 416 (2d Cir. 1945).

[38] The market share required for violation of Section Two is generally much greater than that required for other antitrust violations, such as regards mergers and tie-ins; however, in *United States v. Grinnel Corp.*, the Supreme Court relied heavily upon the merger cases to define the relevant market. This may indicate the court's willingness to hold that a lower market share satisfies the Section Two requirement.

[39] 148 F.2d 416 (2d Cir. 1945).

[40] 110 F. Supp. 295 (D. Mass. 1953), *aff'd per curiam*, 347 U.S. 521 (1954).

[41] But it is doubtful whether any such mathematical formulations are useful: "The courts (including Judge Hand himself) have preferred a strictly practical approach to the question. Instead of trying to decide on economic or other grounds, whether 50% or 75% is the right figure to measure dominant power, they have looked to questions of fact; for example, whether those who might have wanted to enter the industry or increase their share of the market could be prevented from so doing, or whether the suspected monopolist was able to set his own price on his product without too much regard to competition." NEALE, THE ANTITRUST LAWS OF THE UNITED STATES OF AMERICA 120 (1970) [hereinafter cited as NEALE]. *Also:* "The most cogent evidence that they had this power is the fact, everywhere apparent in the record, that they exercised it." United States v. Addyston Pipe and Steel Co., 175 U.S. 211 (1899).

[42] 344 U.S. 392 (1953).

try, the four companies together controlled, through exclusive contracts, 75% of the industry. There was no suggestion that the four firms were acting in concert. Justice Douglas said:[43]

> Due to the exclusive contracts, respondent and the three other major companies have foreclosed to competitors 75% of all available outlets for this business throughout the United States. It is, we think, plain from the Commission's findings that a device which has sewed up a market so tightly for the benefit of a few falls within the prohibitions of the Sherman Act and is therefore an unfair method of competition within the meaning of Section 5(a) of the Federal Trade Commission Act.[44]

Thus the court held that an individual firm's restrictive conduct may be violative of the Sherman Act when such conduct, in conjunction with the conduct of other leading firms of the industry, though not in collusion, works to button up the market. It appears now to be settled law that where exclusive contracts and other types of tying devices are concerned, the restraint of trade is to be judged from the point of view of the small or new competitor trying to make his way into the industry.[45] Thus, where similar tying devices are adopted by a number of leading firms, the courts will tend now to look to their aggregate effect in foreclosing the market against outside competition.[46]

Moreover, as the Sherman Act looks to substance rather than form,[47] it may well be argued that the existence of exclusive contracts or tie-ins is not a prerequisite to this type of violation of the

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[43] *Id.* at 395.

[44] *Id.* The court was dealing with the offense here primarily as a violation of the Federal Trade Commission Act. This would seem to make their gratuitous reference to the Sherman Antitrust Act particularly striking.

[45] NEALE, *supra* note 41, at 160.

[46] Another important case in this concern is United States v. General Motors Corp., 121 F.2d 376 (7th Cir. 1941), *cert. denied* 314 U.S. 618 (1941), where the court found an illegal restraint of trade in G.M.C.'s restraining the trade of its own product, through tying arrangements for financing, in what constituted a separate "part of commerce." The significance of the case comes from what followed: Having won the criminal case, the Department of Justice started civil litigation against G.M.C. for equity relief. This case was settled by a consent decree of detailed regulations. In civil actions already begun, both Ford and Chrysler companies agreed to be bound by the same injunctions as General Motors. Thus the three leading firms in the oligopolistic automobile industry were each separately held to be in violation of the Sherman Act for restraining trade in each of their own segments of the market, even though there was no question of their working together in this. This is particularly striking in that the Chrysler company, the smallest of the three, could account for only a very small portion of the entire trade. Although these cases arose in a criminal suit under Section I of the Sherman Act, they clearly come within the field of monopolistic practices. NEALE, *supra* note 41, at p. 156.

[47] ". . . when the Sherman Act is involved the crucial fact is the impact of the particular practice on competition, not the label that it carries." Federal Trade Commission v. Motion Picture Advertising Serv. Co., 344 U.S. 392, 397 (1953), *citing* United States v. Masonite Corp., 316 U.S. 265, 280 (1942).

Sherman Act. The Sherman Act is concerned with unreasonable restraint of trade and the courts should not concern themselves with the label attached to the means by which the restraint of trade is brought about. Neale, in Antitrust Laws in the U.S.A., states the argument as follows: "[M]ight it not be argued that the method by which an appreciable segment of commerce is foreclosed or monopolized cannot be decisive, since the Sherman Act looks to substance, not to form?"[48] Provided that the three or four leading firms in a given industry are each found to have shown some element of purposive drive to get and keep their oligopoly position, could they not each individually be charged with monopolizing their own segment of the market? There would be no difficulty in establishing intent and purpose, for evidence could be brought to show that an industry sewn up so tightly for the benefit of three or four leading firms necessarily reduces competitive opportunities.[49] "What could be more exclusionary in effect than for each of the three leading firms in a concentrated industry progressively to embrace each new opportunity in its own segment of the market and face every newcomer with new capacity already geared into one of the three great organizations?"[50]

There seems to be growing momentum for this argument. The Federal Trade Commission is currently litigating a suit involving this innovation, applying the Federal Trade Commission Act to nonconspiratorial "shared" monopoly.[51]

In any case, to find monopoly power in the retail prescription drug industry, one need not resort to so broad an argument. For in the drug industry, there is an effective equivalent of the exclusive contract: trademark and trademark promotion.[52] That is, the use of trademarks in causing the prescriber to remain ignorant of other, generic-named, drugs has an effect equivalent to that of an exclusive or tie-in contract: in the words of Justice Douglas, "a device which has sewed up a market . . . tightly for the benefit of a few." As with

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[48] NEALE, *supra* note 41, at 160.
[49] *Id.*
[50] *Id.*
[51] F.T.C. v. General Mills, ANTITRUST & TRADE REG. REP., BNA A-22 (Jan. 15, 1974).
[52] The FTC has dealt significantly with industries in which brand competition has been attacked as a form of unfair competition. In Bailey's Bakery, Ltd. v. Continental Baking Co., 235 F. Supp. 705 (D. Hawaii 1964), the Ninth Circuit indicated that a plaintiff who had alleged excessive advertising and brand proliferation was unsuccessful only because he had failed to establish proximate cause and specific intent necessary for intent to monopolize. Other cases provide support for the commission's power to declare unlawful product differentiation supported and maintained by extravagant advertising and brand proliferation, if it has become an unreasonable barrier to entry. *See, e.g.*, In the Matter of Goodyear Tire and Rubber Co., *et al.*, Doc. No. C-1957 (1972), based wholly on an oligopoly theory.

exclusive contracts, trademark promotion in the drug industry effectively prevents prescribers from dealing with other firms and forecloses the market to aspiring competitors.

On the basis of this more limited argument, coupled with the holding of *Federal Trade Commission v. Motion Pictures Advertising Service Company*, it is proper, then, to discuss concentration ratios in the drug industry in terms of the small groups of the largest producers in the relevant markets. As discussed before, the relevant product market in the drug industry, at its widest parameters, is the particular therapeutic category into which a given drug falls. Antibiotics, a therapeutic category of medicine, and one of the major individual relevant product markets in the prescription drug field, provides an excellent basis for analysis.

TABLE A[53]

MARKET SHARES FOR THE FIVE LARGEST PRODUCERS OF ANTIBIOTICS

1944		1950		1956	
Pfizer	37%	Lederle	27%	Lederle	28%
Comm'l. Solvents	20%	Pfizer	12%	Pfizer	23%
Squibb	20%	Merck	11%	Lilly	12%
Heyden-Chem.	07%	Lilly	11%	Parke-Davis	07%
Merck	04%	Squibb	11%	Merck	07%
Total	88%	Total	72%	Total	77%

As indicated by Table A, the antibiotic market is highly concentrated. In antitrust and economic terms, it is a type one structural oligopoly.[54] Moreover, during the years surveyed, the combined market share of Pfizer, Lederle and Squibb never fell below 50 percent. This makes the market very highly concentrated even for a type one structural oligopoly. This degree of concentration bestows a good deal of market power on the leading firms, and fits well within the concentrations the courts have considered to create monopoly power.[55] The concentration ratios in the antibiotics category are indicative of ratios found in most other therapeutic categories in the prescription drug industry today.

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[53] FEDERAL TRADE COMMISSION, ECONOMIC REPORT ON ANTIBIOTICS MANUFACTURE 94-6 (1958).

[54] Varying degrees of concentration are analyzed as follows: Within the general classification of structure oligopoly a distinction is made between two subclasses. In what is called a type one structural oligopoly, the first eight firms have at least 50% of total market sales and the first 20 firms have at least 75% of total market sales. Type two structural oligopoly is defined by a market share of 33% for the eight largest sellers, with the rest of the market relatively unconcentrated. KAYSEN AND TURNER, ANTITRUST POLICY 27 (1959).

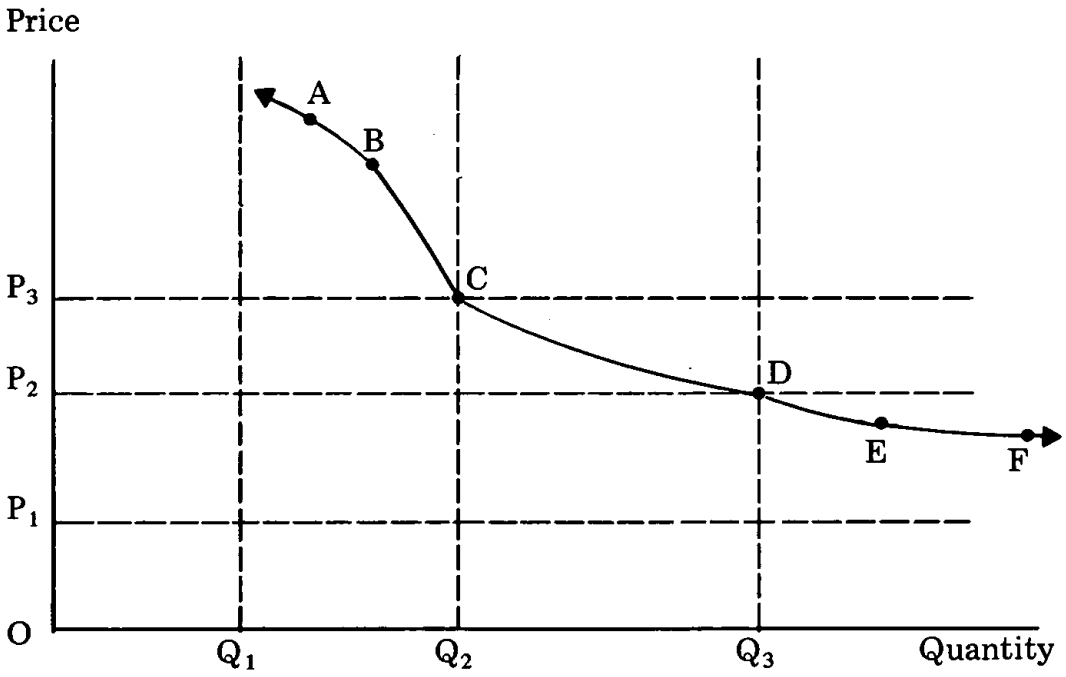
[55] *See, e.g., supra* notes 38 and 41 and accompanying text.

3. PRICE ELASTICITY OF DEMAND[56]

Another factor considered in analyzing market power is the relationship of demand to price, referred to by economists as price elasticity of demand. This factor is not normally considered separately by courts; "unreasonably high" prices are not in themselves condemned by the Sherman Act.[57] However, such high prices, spawned by inelasticity of demand, may indicate to the court a lack of competition that lends support to other indicators of monopoly power.[58]

The quantity of a product which can be marketed (the demand for that product) varies in an inverse ratio to the per-unit price of that product. For example, Curve AF in Figure 1 represents a possible demand curve of a product:

FIGURE 1



From Figure 1, several conclusions can be drawn:

First, if the product is selling at P_3, then quantity of output, demand, is Q_2 and total revenues on the sale of the product are P_3CQ_2O. If the price curve is elastic enough revenue may be increased by reduction of price to P_2, then obtaining P_2DQ_3O in revenue. The more elastic the curve is, the more the producer stands to gain in price reduction.

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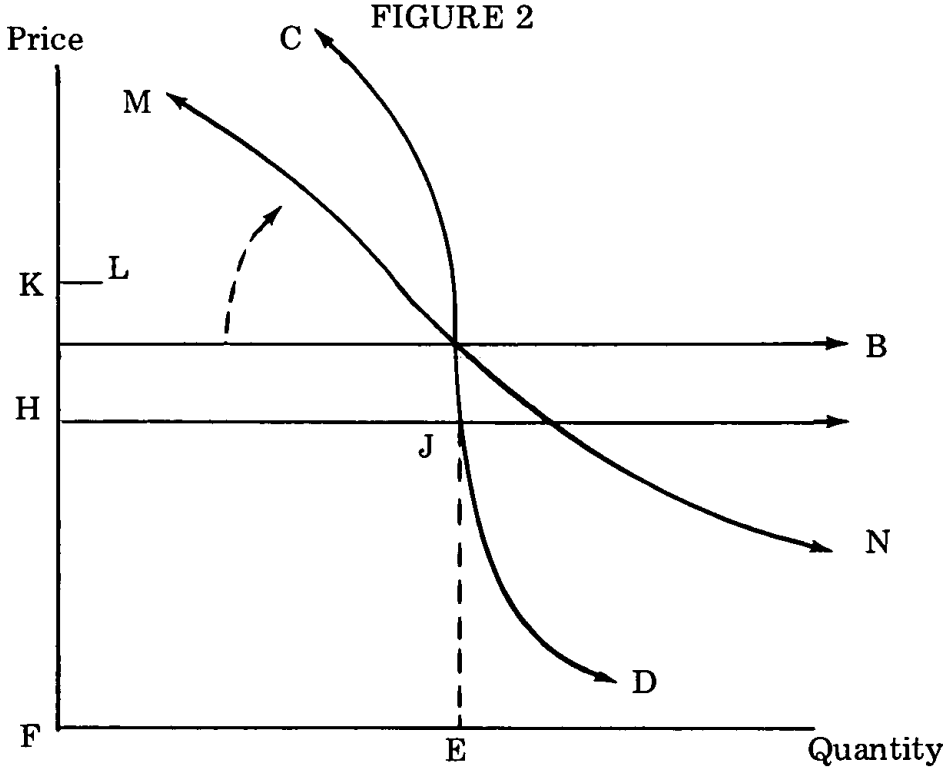
[56] For a more detailed analysis of price elasticity, *see* P. SAMUELSON, ECONOMICS 379-386 (1973).
[57] United States v. Chas. Pfizer, 281 F. Supp. 837, 846 (S.D.N.Y. 1968).
[58] *Id.* at 846.

Second, as the curve becomes more horizontal, as in the EF segment of the curve, the price becomes very attractive and quantity more plentiful.

Third, as the curve becomes more vertical, represented by the BC segment, the demand approaches price inelasticity. As vertical orientation increases, price becomes immaterial, the demand being so steady for the product that it does not vary at all, regardless of price.

FIGURE 2



In Figure 2, curve CD represents the demand curve of the product on an industry-wide basis. This curve will normally be relatively inelastic (vertical). As can be seen in curve CD, it will become slightly more horizontal at either end of the curve (*e.g.*, if the price of antibiotics becomes $10,000, no one will buy. Similarly, if such antibiotics are given away for free, many additional consumers will take them.) The curve of the individual producer will be more elastic. In Figure 2, such curve is represented by AB. In a normal market, such curve, as here, will be horizontal: the individual producer will sell his product at the going rate, and at that rate, he can sell everything. If he lowers his price, he will only reduce his revenue (in Figure 2, from AGEF to HJEF). If he raises his price, he will have little or no quantity (except for long-time customers, etc.) and his curve won't extend beyond KL, making his revenue minimal.

What happens in the prescription drug industry is this: the promotional activities, along with the non-substitutability of drugs in prescription forms, cause the individual producer's demand curve to

rotate, as his individual price becomes less sensitive to demand. The result is the curve MN above. As promotional activity increases, the individual producer's curve becomes more vertical and it approaches price inelasticity.

Such price inelasticity of demand in prescription drugs is borne out by strong evidence. Consider, for example, the prices of two popular drugs, reserpine and sodium secobarbital. As Table B below demonstrates, very large variations in prices exist for identical versions of drugs offered by different manufacturers:

TABLE B[59]

RESERPINE, U.S.P. (1,000 0.25 mg. TABLETS)

American Pharmaceutical	$2.60
Carroll	1.15
CIBA (Serpasil)	39.50
Columbia Medical	1.30
Consolidated Midland	11.95
Corvit	2.50
Darby	.59
Interstate Drug Exchange	.60
Kasar	1.50
Lannett	2.80
Lilly (Sandril)	9.12
Modern Medical Supply	.58
Parke-Davis (Serfin)	10.80
Penhurst	1.25
Pennex	.85
Premo	2.40
Rondex	1.40
Smith Kline & French (Eskaserp)	46.00
Stanlabs	2.50
Supreme	1.50
Upjohn (Reserpoid)	22.38
West-Ward	2.00
Wolins	.59

[59] Insofar as list and actual prices for these drugs change constantly, this chart is only intended to show the extent of the variations found in the market place. These charts are from R. BURACK, M.D., THE NEW HANDBOOK OF PRESCRIPTION DRUGS 284-323 (1970). *See also*, for numerous other examples of such price differentials, *Testimony Before the Select Committee on Small Business, United States Senate Subcommittee on Monopoly; Competitive Problems in the Drug Industry: Present Status of Competition in the Pharmaceutical Industry*, 90th Cong., 1st Sess., 1111, September 13, 14, 29 and October 13, 1967 [hereinafter cited as *Subcommittee Hearings*].

SODIUM SECOBARBITAL, U.S.P. (1,000 100 mg. CAPSULES)

American Pharmaceutical	$12.36
Carroll	6.25
Columbia Medical	5.55
Darby	4.60
Interstate Drug Exchange	4.75
Kasar	5.25
Lannett	6.20
Lilly (Seconal)	18.30
Modern Medical Supply	4.00
Pennex	4.45
Premo	8.10
Rondex	5.25
Supreme	6.96
West-Ward	5.85
Wolins	4.85

These tables, coupled with other data presented by Dr. Burack, Professor of Pharmacology at Harvard Medical School, showed further that generally those products marketed under trade-names (usually produced by the larger pharmaceutical houses) tended to be priced higher than those products sold under generic-name designations by the smaller firms.[60]

In a market energized by price competition, one would expect to find that given such wide disparities in prices as indicated in Table B above, firms selling drugs at several times the prices of other manufacturers would have an extremely difficult time attempting to compete for sales. The evidence, however, indicates the contrary: companies selling their drugs at considerably higher prices have little to fear from competitors offering the same products at the lower prices. Price differentials alone have little to do with the relative popularity of the products in the retail marketplace.[61] Consider, for example, the prices listed above for sodium secobarbital. Several firms market the product, prices ranging from $4.00 by Modern Medical Supply to $18.30 by Lilly, under the trademark Seconal. One would expect Lilly to face stiff competition for the sale of Seconal, considering its retail price in relation to that of others. But according to its vice-president for corporate affairs, Lilly accounts for approximately 95% of all retail sales for sodium secobarbital in the United States.[62] Price elasticity of demand is non-existent in the sale of sodium seco-

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[60] *Subcommittee Hearings, supra* note 59, at 1111.
[61] BURACK, *supra* note 4, at 284-323.
[62] *Subcommittee Hearings, supra* note 59, at 991.

barbital — the portion of the market a firm is able to secure bears no correlation to its product's price. Moreover, Lilly's dominance in the sodium secobarbital market is not a unique story. Evidence presented before the United States Senate Subcommittee on Monopoly indicates that in the case of other drugs only a few firms, usually larger companies selling under popular trademarks obtain the largest shares of available retail sales for particular pharmaceuticals even though other, far less costly, drugs are also on the market.[63]

Another striking example of how little price has to do with demand in the retail sales of products is presented in a study of the drug known as prednisone. Prednisone was introduced by the Schering Corporation in the 1950's, and is now available from dozens of American pharmaceutical houses. According to the Subcommittee on Monopoly, for 100 five-milligram tablets, prednisone prices varied from $0.59, charged by the Wolins Corporation, to $17.90, asked by Schering Corporation for its trademarked product, Meticorten.[64] Other major companies selling the drug included Upjohn, charging $2.25 for its Deltasone; Merck, $2.20 for Deltra; and Parke-Davis, $17.88 for Paracort. Thus, patients who received Paracort or Meticorten could pay as much as 30 times the prescription costs over what they would pay if Wolins' product were used.

Parke-Davis officials testified before the Subcommittee on Monopoly to the following:[65] Parke-Davis, a licensee of Schering, began offering Paracort in 1957. The company made a serious effort to establish the product in the market by promoting it directly to the medical profession. They did not succeed, however, in wresting away from other firms already selling prednisone — including the market leader, Schering — any significant share of the sales. Indeed, by 1966, Parke-Davis was no longer actively promoting the drug in the retail market area. Company sales for Paracort during that year accounted for less than 1% of the industry's entire prednisone sales. The retail list price for Paracort nevertheless remained at $17.88 for one hundred tablets.[66]

When asked by the Subcommittee to explain why the company failed to obtain any significant portion of the sales of prednisone, Mr. Harold W.H. Burrows, President of Parke-Davis answered:

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[63] *Subcommittee Hearings, supra* note 59, at 990-1111.
[64] *Subcommittee Hearings, supra* note 59, at 616.
[65] *Subcommittee Hearings, supra* note 59, at 602.
[66] Drug industry spokesmen often argue that such list prices are not significant, since discounts and large-quantity purchasers effectively lower the prices. However, such discounts and incentives operate generally only for institutional buyers, where price competition is more evident than in retail areas. The retail consumers are nonetheless required to pay the retail list prices as stated above. *Subcommittee Hearings, supra* note 59, at 608-612.

> As I noted previously in my statement, several of our competitors already were on the market before we entered the market, and that gave them quite a competitive advantage, inasmuch as we could not claim for our product attributes which were superior to the products already on the market. The first one on the market with an effective drug has quite a competitive advantage.[67]

Nevertheless, Parke-Davis made no effort to reduce its retail price as a means of increasing its sales of prednisone.[68] This suggests recognition by Parke-Davis that the lack of price competition in the market would have precluded such price reduction from affecting sales volume.

In terms of retail sales for prednisone, Schering Corporation continued to dominate retail market sales. Total annual sales for prednisone at the time of the Subcommittee hearings were estimated to be about $3,000,000, of which Schering's share was $1,000,000 (no other firm having a share as large as that of Schering).[69] Dominance in the retail prednisone market was maintained by Schering, despite the fact that the price for Meticorten was the highest in the entire field and more than thirty times the prices charged for some of the competing products. This indicates that prices charged for prednisone had little or nothing to do with determining which version of the drug would be prescribed by the physician to be purchased by retail consumers.

Thus the examples of sodium secobarbital and prednisone suggest largely vertical price-demand curves, as depicted in Figure 2, *supra*. As indicated previously, such inelasticity is considered by courts to be a factor that militates toward the existence of the monopoly power requisite for determination of violation of Section Two of the Sherman Act.[70]

4. BARRIERS TO ENTRY

Courts also look to barriers to entry of new competitors in a relevant product market as indications of monopoly power.[71] Such competitive barriers have substantial deleterious effects. They limit the consumer's alternatives within the relevant market; they insure the dominant companies of long-term monopoly power and profits; they discourage proper zeal for efficiency in production.[72]

> Without [ease of entry], it is idle to expect effective competition. The entry and withdrawal of firms, whether new firms or existing firms from other market areas, or other industries, or other stages of

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[67] *Subcommittee Hearings, supra* note 59, at 603.
[68] *Subcommittee Hearings, supra* note 59, at 602.
[69] *Subcommittee Hearings, supra* note 59, at 623.
[70] *See, e.g., supra* notes 57 and 58 and accompanying text.
[71] *See supra* note 34 and accompanying text.
[72] J. BAIN, BARRIERS TO NEW COMPETITION (1956).

> production and marketing, is the basic mechanism of the market for achieving its economic results. The cost of entry into the competitive area ahould not be impracticably high.[73]

In the prescription drug industry, very significant barriers to entry of new competition exist in the form of substantial promotional and advertising expenditures which, first, raise costs of drug production, and second, create market entry barriers for potential new firms hoping to compete on a price-competition basis.[74] (We have seen previously, as with the example of Paracort, that, given the capacity for extensive promotion, such promotion may nevertheless be ineffective against entrenched competitors. But the importance of the prohibitiveness of promotional costs to smaller firms must nevertheless not be minimized. It is still significant in that it precludes the possibility of promotional success whatsoever by smaller firms, even in a situation where the smaller firm is first on the market with a new therapeutic drug.) Such competitive barriers were explained by Dr. Willard Mueller, then Chief Economist for the Federal Trade Commission, to the Subcommittee on Monopoly:

> Product differentiation refers to the distinguishing of substitute products from one another by advertising and the like. Whereas buyers of homogenous products regard the output of any particular seller as identical in all respects to that of all other producers of that product, the seller of a "differentiated" product enjoys a favored position over its rivals, in that the buyers consider it a superior product and are willing to pay a "premium" price for it rather than accept substitutes offered by those rivals. Since new entrants must frequently accept a lower price than established firms are able to get for a product of equal quality and cost, this advantage is said to constitute a "barrier to entry", one that permits established firms to charge a supercompetitive price without attracting new entry.[75]

Dr. William Comanor of Harvard University Medical School states:

> High advertising outlays create effective entry barriers through a number of routes. In the first place, high current levels of advertising expenditures create additional costs for new entrants which will generally exceed those for established firms. Because of buyer inertia and brand loyalty, more advertising messages per prospective customer must be supplied to induce brand switching as compared with repeat buying . . . A further disadvantage faced by new entrants is that they must spend nearly as much in total advertising and other forms of promotion as existing firms if their products are to compete with established and well-known products . . . Finally, the need to spend considerable funds on advertising will raise the amount of capital required for entry into the market . . . For all of these reasons, heavy advertising expenditures serve to create substantial

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[73] REPORT OF THE ATTORNEY GENERAL'S NATIONAL COMMITTEE TO STUDY THE ANTITRUST LAWS 18 (1955).
[74] *Subcommittee Hearings, supra* note 59, at 1800-2055.
[75] *Subcommittee Hearings, supra* note 59, at 1811.

> entry barriers. They act as an important restriction on competition and permit established firms to charge high prices and earn high profit rates without fear of the competitive consequences.[76]

Thus, to gain the attention of prescribers and cause them to switch to new products, insofar as price competition is ineffective in the drug market, new firms must resort to extensive promotional wars with established firms. Whether such wars are successful or not, the resulting substantial costs must be borne, ultimately, by the consumers in higher drug prices. And at the same time, these promotional wars, as pointed out by Mr. Mueller and Dr. Comanor above, create barriers to the price competition that would benefit the consumer.

Thus the promotional practices of the industry contribute significantly to minimizing more intensive price competition in many retail prescription drug markets. And not only is the consumer adversely affected by the absence of such competition, he is asked to "foot the bill" — in the form of the prices he pays for the drugs — for the very barriers which may deny him lower drug costs.

5. HIGH PROFIT MARGINS

Another indication of monopoly power is the ability to sustain unnaturally high profit margins within the industry.[77] In a free enterprise system, it is obvious that a company must make a profit. Unless it achieves this primary goal, it cannot remain in business. There is ample evidence available to demonstrate that the drug industry has been able to stay in business, maintaining annual profits substantially above those of other major industries. As the following chart demonstrates, the American drug industry has consistently ranked either first or second among all United States industries in terms of median rates of return on stockholder's equity and on sales in the last decade:

TABLE C[78]

RETURN ON EQUITY AND ON SALES, INDUSTRY MEDIANS, 1961-1971

Year	Return on Equity			Return on Sales		
	All Industry (Percent)	Drug Industry (Percent)	Rank	All Industry (Percent)	Drug Industry (Percent)	Rank
1961	8.3	15.8	2d	4.2	10.5	2d
1962	8.9	16.2	2d	4.2	10.5	2d

[76] *Subcommittee Hearings, supra* note 59, at 2050-2051.
[77] *See supra* note 36 and accompanying text.
[78] *The 500 Largest U.S. Industrial Corporations*, ANNUAL REPORTS, FORTUNE DIRECTORY (1972).

1963	9.1	14.7	2d	4.4	10.6	1st
1964	10.5	16.3	1st	5.0	10.8	1st
1965	11.8	18.0	1st	5.5	10.3	2d
1966	12.7	18.4	1st	5.6	10.2	2d
1967	11.3	18.0	1st	5.0	9.6	2d
1968	11.7	17.9	1st	4.8	9.0	2d
1969	11.3	19.1	1st	4.6	9.2	2d
1970	9.5	15.5	2d	3.9	9.3	2d
1971	9.1	15.1	2d	3.8	9.1	2d

These statistics indicate very substantial profits in the prescription drug industry. The picture is even more dramatic when the profits of relevant markets of certain drugs are examined. An example is seen in the drug prednisolone:

TABLE D[79]

PREDNISOLONE — 5 mg. TABLETS

Computed cost based on bulk price transactions and contract processing charges

1. Bulk price at which Upjohn sold to Schering in 1958 at $2.37 per gram material for 1,000 tablets. 5 x $2.37[a]	$11.85
2. Allowance for wastage (5%)	.62
3. Tableting cost	2.00
4. Bottling cost	1.20
Total	$15.67

[a] As reported by Upjohn and by Schering

Comparison between computed cost and actual price:

	Per 100	Per Tablet Cents
Computed cost, excluding selling and distribution costs	$ 1.57	1.6
Actual prices:[b]		
To druggists	17.90	17.9
To consumers (list)	29.83	29.8

[b] Upjohn (Delta-Cortel) from catalogue; Merck (Hydeltra), Pfizer (Sterane), Schering (Meticortelone), Parke-Davis (Para-

[79] *Hearings on Administered Prices Before the Subcommittee on Antitrust and Monopoly of the Senate Committee on the Judiciary*, 86th and 87th Congs. (1959-1962), pt. 14, at 7856 (exhibit no. 1).

cortol) from 1959-1960 edition "American Druggist Blue Book" (Parke-Davis consumer prices one cent higher per bottle than others).

Spokesmen for the prescription drug industry assert that the disparity between prices and costs, as seen in Table D, is justified by necessary expenditures for research and development and by the need to overcome the high risk factor in the industry and to attract investment capital.[80]

Drug industry officials take pride in their industry's research efforts and contributions.[81] However, many critics charge that, particularly in recent years, product research efforts by larger firms have changed direction and now emphasize the development of "me-too" drugs.[82] "Me-too" drugs are substances which are not significantly different from other drugs, nor significantly better, and represent little or no improvement to therapy, but which are sufficiently manipulated in chemical structure to win a patent. New chemical entities represent only ten to twenty percent of all new products introduced each year, the remainder consisting of minor modifications or combination products.[83] In 1968, the Task Force on Prescription Drugs to the Senate Subcommittee on Monopoly found the following:

> . . . to the extent the industry directs a share of its research program

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[80] *Subcommittee Hearings, supra* note 59, at 1420-21, 1747 and 1784.

[81] Mr. C. Joseph Stetler, the president of the Pharmaceutical Manufacturers Association, testified as follows:

> "Constant striving for discovery and excellence has resulted from competitive rivalry in the marketplace, and through such competition has come the strength and viability of the drug industry which has contributed so much to medical progress over the years . . . From 1940 to 1966, an amazing total of 823 new single chemical entity drugs were introduced as prescription drugs in the United States . . . the United States originated 502 of the 823 new weapons against disease and suffering . . . in the last 27 years . . . Of the United States discoveries, the laboratories of American manufacturers were responsible for 87 percent."

Subcommittee Hearings, supra note 59, at 1416-1417.

[82] Dr. Leonard Schifrin, economist from the College of William and Mary stated:

> "It is apparent that the industry exaggerates its research and development effort, perhaps to convey an impression of extreme risk, or competitiveness, or exceptional enterprise, with the purpose of justifying high profits . . . Not only does the industry overestimate the quantity of this activity, but many critics, including a large number within the medical profession, have questioned its nature and direction. There are serious allegations that most research activity is not related to product improvement but is imitative in nature, so as to generate specialties that are not really needed, or is directed toward the acquisition of patent protection."

Subcommittee Hearings, supra note 59, at 1895.

[83] U.S. SENATE SELECT COMMITTEE ON SMALL BUSINESS, TASK FORCE ON PRESCRIPTION DRUGS, REPORT AND RECOMMENDATIONS, 90th Cong., 2nd Sess., 12 (Aug. 30, 1968) [hereinafter cited as TASK FORCE].

> to duplicative, non-contributory products, there is a waste of skilled research manpower and research facilities, a waste of clinical facilities, needed to test the products, a further confusing proliferation of drug products which are promoted to physicians, and a further burden on the patient or taxpayer, who, in the long run, must pay the costs.[84]

The costs of pharmaceutical research appear to be expenses legitimately borne by the consumer. However, when research costs result from development of imitative drugs developed for the sole purpose of circumventing patents, the consumer derives no correlative benefit in product improvement and should not be required to bear the added financial burden.[85]

Moreover, research costs as a justification of wide disparities between list prices and actual manufacturing costs seem questionable in light of the relative expenditures for research made by the leading pharmaceutical houses. The following table shows the extent of the research expenditures made by the larger firms of the industry for three consecutive years.

TABLE E[86]

ESTIMATED RESEARCH EXPENDITURES, 1969-1971
(DOLLAR AMOUNTS IN MILLIONS)

	1969		1970		1971	
Company	Expended	% of Sales	Expended	% of Sales	Expended	% of Sales
Abbot	$24.2	6.0	$26.9	5.9	$28.8	6.0
Baxter	7.6	4.7	10.0	5.3	12.5	5.0
Bristol-Myers	34.0	3.7	37.7	3.8	40.0	4.0
Johnson & Johnson	35.6	4.0	41.1	4.0	46.7	4.0
Lilly	54.8	10.2	16.0	10.3	67.5	9.0
Merck	60.3	9.3	69.0	9.2	70.5	8.0

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[84] TASK FORCE, *supra* note 83, at 12.

[85] In United States v. United Shoe Machinery Corp., 110 F. Supp. 295, 345 (D. Mass. 1953), *aff'd per curiam* 347 U.S. 521 (1954), the court considered a similar defense of research expenditures as justification of market controls:

> "Defendant seems to suggest that even if its control of the market is not attributable exclusively to its superior performance, . . . nonetheless, United's market control should not be held unlawful, because only through the existence of some monopoly power can the thin shoe machinery market support fundamental research of the first order, and achieve maximum economies of production and distribution. To this defense the shortest answer is that the law does not allow an enterprise that maintains control of a market through practices not economically inevitable, to justify that control because of its supposed social advantage."

[86] STANDARD & POOR'S INDUSTRY SURVEYS: BASIC ANALYSIS; DRUGS, MEDICAL CARE AND COSMETICS, June 22, 1972, at H-14.

Morton-Norwich	8.4	2.8	8.4	2.6	9.7	3.0
Pfizer	26.7	3.3	30.6	3.5	37.2	4.0
Richardson-Merrell[a]	15.5	4.6	16.8	4.4	18.0	4.0
Schering-Plough	17.8	8.3	21.4	5.3	25.1	6.0
Smith Kline & French	29.1	9.2	31.3	9.0	35.1	10.0
Syntex[b]	9.5	11.3	10.7	12.0	11.6	11.0
Upjohn	37.0	10.0	42.1	10.6	45.3	10.0

[a] Fiscal year ended June 20.
[b] Fiscal year ended July 31.

Source: Annual Reports

Research expenditures, between 1969 and 1971, varied among the firms from 3% to 12% of sales. This does not seem to explain the wide gap discussed previously between costs and prices.

This gap has also been justified on the basis of the high risks inherent in the drug industry due to sustained product innovation and the rapid rate of product obsolescence.[87] However, according to figures compiled by economists Irving Fisher and George Hall of the Rand Corporation, risk accounts for a very small portion of the high profits, only 1.68% in risks, matched against 18.32% return of profits.[88] They concluded that the risk factor was very low in the drug industry and not an explanation of the industry's high profits.[89]

Losses, or even low profits, are practically unheard of among large

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[87] Mr. C. Joseph Stetler, president of the Pharmaceutical Manufacturers Assoc. testified:

> "In this high-risk industry, a high rate of profit is essential to attract the capital and other resources necessary to achieve further breakthroughs in medical progress . . . We agree that the profitability of the drug industry is above average. We say this is not a unique phenomenon. It is one which characterizes rapidly growing industries generally where there is a high rate of product innovation."

Subcommittee Hearings, supra note 59, at 1420-1421.

[88] I. Fisher and G. Hall, *Risk and Corporate Rate of Return*, paper presented before the Econometrics Society, December 29, 1967 [hereinafter cited as Fisher and Hall]. Comparing the drug industry's risk adjusted rate of return to that of other industry groups, the author prepared the following table:

ESTIMATES OF AVERAGE INDUSTRY RISK PREMIUMS
(in percent)

Industry Group	Average observed rate of return	Risk-adjusted rate of return	Average risk premium
Drugs	18.32	16.64	01.68
Aerospace	15.70	13.35	02.45
Chemicals	14.09	11.31	02.78
Petroleum	11.47	10.26	01.21
Rubber	10.96	10.21	00.75
Food	10.72	09.15	01.57

[89] FISHER AND HALL, *supra* note 88.

drug companies.[90] Moreover, the high profits of the industry, as seen, do not appear to be justified by the inherent risks of the industry or by the expenditures toward research development. The continuity of high profit ratios in the drug industry may be the most dramatic evidence of all of the absence of price competition in the drug industry. In a truly competitive system, retail prices so disproportionate to actual production costs would be eliminated by the undercutting prices of aspiring competitors. Competition would force the price down to a level close to production costs, with a profit ratio more in accord with those of other industries. Such has not occurred in the drug industry, and one must suspect the existence of monopoly power.

The retail prescription drug industry, then, contains strong indications of monopolistic practices. The demand for relevant products is highly price-inelastic. As a result, prices are maintained at unnaturally high levels. Moreover, promotional activities of the larger, established, firms create difficult barriers to entry into the market by those who wish to compete. It would seem, then, that the first element of a Sherman Act Section Two offense, effective monopoly power, is present in the retail prescription drug market: a small group of pharmaceutical houses retains the "power to control prices or exclude competition,"[91] in each of the various relevant product markets.

The courts have generally applied Section Two only to single-firm monopolies and conspiracy-directed oligopolies;[92] but distinction between these forms of competitive restraint and the form found in the prescription drug industry seems artificial: groups of firms acting similarly although not in conspiracy can have the same effect on competition and consumers as single-firm monopolies (particularly in light of the similarities to exclusive contracts presented by product differentiation promotions). The effect of the competitive restraints in the prescription drug industry on the consumer is exactly the same as it would be if the monopoly power were exerted by a single firm or by a group of firms conspiring together. The prescription drug consumer has lost the benefits of a free competitive system and pays unnaturally high prices as a result. Substance should rule over form here: Section Two is designed to preserve a free competitive system and thereby protect the consumer from the evils of exploitative

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[90] *Subcommittee Hearings, supra* note 59, at 1819-1820 (testimony of Dr. Mueller).

[91] *See* note 20, *supra* and accompanying text.

[92] United States v. Aluminum Co. of America, 148 F.2d 416 (2d Cir. 1945). This section has also, however, been applied to semi-oligopoly situations, where no express conspiracy existed. *See, e.g.*, American Tobacco Co. v. United States, 328 U.S. 781 (1946).

monopolistic practices. The effect on the consumer should be the controlling issue, and determination of the existence of monopoly power should be considered in that light.

B. INTENT TO MONOPOLIZE

The second element of the offense of monopolization, under Section Two, is the intent to monopolize. Mere possession of monopoly power is not sufficient to constitute a violation of Section Two; some act or acts beyond such possession are required to demonstrate that the alleged monopolizer's acquisition or maintenance of monopoly power was willful and not inevitable.

If the monopolist utilizes predatory or other coercive methods which were themselves violations of antitrust laws, then there is sufficient intent to monopolize.[93] In addition, however, Judge Learned Hand has indicated that something less than such conduct could suffice: One who acquires and exercises monopoly power is guilty of monopolization, unless he can show that he attained his position "by virtue of his superior skill, foresight, and industry."[94] The Supreme Court has since endorsed the Hand opinion[95] and has defined intent to monopolize as the "willful acquisition or maintenance of [monopoly] power in the relevant market, as distinguished from growth or development as a consequence of a superior product, business acumen, or historical accident."[96]

The acquisition of monopoly power in the prescription drug industry cannot be said to be innocent in this sense. As we have seen, monopoly power in the drug industry results largely from very restrictive barriers to entry of new competition into the market. These barriers are largely in the form of large expenditures by the larger pharmaceutical houses for product promotion and imitative research which prove prohibitive to smaller, aspiring pharmaceutical firms. Potential competitors are eliminated because they cannot sustain the continued high costs of advertising at the levels the established firms maintain. Such extensive advertising by the larger firms is not an exercise of superior skill, business acumen, or historical accident. Nor is it an inevitable result of business management; rather it is a continued, deliberate conduct on the part of the established firms that results in the prevention of the introduction of competition of the smaller or would-be pharmaceutical firms.

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[93] Standard Oil v. United States, 221 U.S. 1 (1911).
[94] United States v. Aluminum Co., 148 F.2d 416 (2d Cir. 1945). Examples of "innocently acquired" monopolies include small-town newspapers (market could only support one paper) and professional football teams (town could only support one team). American Football League v. National Football League, 323 F.2d 124 (4th Cir. 1963).
[95] American Tobacco Co. v. United States, 328 U.S. 781, 812-14 (1946).
[96] United States v. Grinnell, 384 U.S. 563, 570-1 (1966).

It is important to emphasize here that no element of immorality or illegality need be found for there to be sufficient intent to monopolize. Indeed, no showing of intent is required beyond "the mere intent to do the act."[97] What is crucial in the determination of intent to monopolize is that the acts in question worked necessarily to eliminate healthy competition. Note, for example, the words of Judge Wyzanski in *United States v. United Shoe Machinery Corp.*:

> The lease-only system of distributing complicated machines has many "partnership" aspects . . . In one sense, the leading system and the miscellaneous activities . . . were natural and normal, for they were . . . "honestly industrial" . . . They are the sort of activities which would be engaged in by other honorable firms. And, to a large extent, the leasing practices conform to long-standing traditions in the shoe machinery business. Yet, they are not practices which can be properly described as the inevitable consequences of ability, natural forces, or law . . . They are contracts, arrangements, and policies which, instead of encouraging competition based on pure merit, further the dominance of a particular firm. In this sense, they are unnatural barriers; they unnecessarily exclude actual and potential competition; they restrict a free market . . . The Sherman Act is now construed by superior courts to forbid the continuance of effective market control based in part upon such practices . . . United's power does not rest on predatory practices . . . That those policies are not immoral is irrelevant.[98]

Thus, intent to monopolize need not be clouded with evil motive. All that is necessary is that it be manifested by business conduct and practices that are not inevitable and strictly necessary and that tend to exclude potential competition and thereby restrict a free market.

Similarly, in the drug industry: high promotional expenditures of large firms may or may not be considered predatory, but this is unimportant. What is decisive is that these practices further the dominance of particular firms in the industry as a consequence, not of superior product or ability, but of greater financial resources. The practices work not to encourage healthy competition based on merit, but rather to restrict and exclude competition. For this reason, there is sufficient intent to monopolize in the prescription drug industry to satisfy Section Two of the Sherman Antitrust Act.

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It is arguable, then, that the retail prescription drug market contains a situation violative of Section Two of the Sherman Antitrust Act.[99] Both the elements of such violation, monopoly power and

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[97] United States v. Aluminum Co. of America, 148 F.2d 416, 432 (2d Cir. 1945).
[98] 110 F. Supp. 295 (D. Mass. 1953), *aff'd per curiam* 347 U.S. 521 (1954).
[99] Recognition of such a violative situation seems to be growing in the Federal Trade Commission, which has begun an extensive new inquiry to determine whether it should impose additional regulatory restraints on the prescription drug industry. The Commission has begun the inquiry at the behest of newly-

intent to monopolize, seem to exist here. Assuming, therefore, that a situation offensive to Section Two does exist, we proceed by considering what possible remedy might best eliminate the violation.

C. REMEDY

The equity powers of a court in an antitrust suit (in civil proceedings) are as broad as the wrong to be remedied.[100] Once a court has determined that there is an antitrust violation, the court is free to order what amounts to a detailed legislative ruling, regulating the future conduct and practices of the parties to the litigation.[101] These regulations, of course, are based on what appears to be the most efficient means of remedying the violative situation.

In the prescription drug industry, excessive promotional expenditures by the large firms and, more specifically, the use of trademarks in product differentiation, seem to account to a large degree for the monopolistic situation. A remedy of this situation, therefore, ought to take into account the effect of trademark usage.

It has been recommended by several critics that the use of trademarks in the drug industry be abolished.[102] Trademarks in the drug industry are said to serve no other purpose than to suppress competition and inflate prices.[103] Moreover, the use of trademarks initiates substantial confusion on the part of the prescriber.[104] Elimination of

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appointed commissioner Mayo J. Thompson, who declared that the entire drug industry is a competitive disaster that needlessly overcharges consumers by millions of dollars each year. ANTITRUST & TRADE REG. REP., BNA AA-1 (Oct. 30, 1973).

[100] Standard Oil Co. v. U.S. 221 U.S. 1, 77-79 (1910).

[101] *Id.*

[102] *See, e.g., Subcommittee Hearings, supra* note 59, at 5125-6 (testimony of Dr. John Adriani, Chairman of American Medical Assoc. Council of Drugs; *see also* Steele, *Monopoly and Competition in the Ethical Drug Market*, 5 J.L. & ECON. 162-3 (1962); *see also Subcommittee Hearings, supra* note 59, at 1888 (testimony of Dr. L. Schifrin).

[103] C. Mueller, *Sources of Monopoly Power: A Phenomenon Called 'Product Differentiation,'* 2 ANTITRUST L. & ECON. REV. 59-96 (Summer 1969).

[104] *See, e.g., Subcommittee Hearings, supra* note 59, at 290-91 (testimony of Dr. Walter Modell, Director of Clinical Pharmacology, Cornell University Medical College):

> "... there is a real danger, a danger in confusion, when trade names are used because often these names of drugs are utterly without meaning. Many of the names are made up by Madison Avenue before the drugs are discovered. They have no connection with the meaning of the action or the chemical nature of the drug. Use of trade names is just support of a practice of ignorance and intellectual laziness ... Some drugs, for example, methamphetamine, are sold under 30 to 35 different trade names. It would be quite a feat of memory for a physician to remember amongst all the other things that he has to remember, all the trade names for methamphetamine if he had a patient who was sensitive to it and had to be properly warned."

See also Subcommittee Hearings, supra note 59, at 530-1 (testimony of Dr. Solomon Garb, a professor of pharmacology at the University of Missouri Medi-

trademarks would thereby serve to alleviate some of this confusion now involved in prescribing and also some of the barriers to price competition of smaller firms.

Considering the practically unlimited scope of equitable relief available to the court in an antitrust remedy, such an abolition of trademarks does not seem impossible. If analogy may be made to remedies in antitrust actions involving patents, several court opinions have recognized the possibility of ordering a patent to be dedicated to the public if such dedication will help to alleviate a situation violative of antitrust laws.[105] Such a remedy should be likewise available in the case of trademarks.

This writer, then, recommends as a remedy in antitrust litigation, the elimination of the use of trademarks in the promotion of prescription drugs.[106] It should be noted that this is not seen as an all-encompassing solution to the problems of monopoly within the prescription drug industry, but only as one workable alternative in remedying that problem.

Whether this particular remedy or another is most effective, however, it is suggested that the Antitrust Division examine anew the retail prescription drug industry for competitive abuses, viewed through the eyes of the consumer, and take appropriate action.[107]

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cal School):

> "First, let us consider the number of drug names. Let's assume that there are 100 drug manufacturers, each making the same 50 drugs. If prescriptions are written in the meprobamate (Wyeth) fashion, the physician needs to know only 100 plus 50, or 150 names in order to prescribe any combination of any drug made by any company . . . However, if prescriptions are written by private product name, for example Equanil — the physician must know 100 times 50, or 5,000 names in order to prescribe any drug made by any company . . . The fact is that doctors cannot possibly keep up with the flood of private product names, and this situation leads to poor medical practice."

[105] Hartford Empire Co. v. U.S., 323 U.S. 386 (1945), *modified* 324 U.S. 570 (1945) (Dissenting opinion of Justice Black). *See also* United States v. General Electric Co., 95 F. Supp. 165 (D.N.J. 1950). *See also* United States v. Glaxco Group Ltd., ____ U.S. ____, 93 S. Ct. 861 (1973).

[106] A workable substitute for tradenames might be for the manufacturer to use simply the generic name, followed by only the manufacturer's name. This would eliminate much of the confusion of the prescriber in remembering countless tradenames. It would also alleviate the psychological advantage trademark drugs now have over generic drugs in that the similarities between the two would not be as camouflaged. And for the prescriber who still preferred a particular manufacturer's product over others, he could continue to refer to that particular product by using the manufacturer's name in the prescription.

[107] This is not to rule out other remedies possible, outside of antitrust litigation. Such other remedies include appropriate legislative measures, such as statutory prohibition of the use of drug trademarks or a statutory requirement that physicians prescribe strictly by generic names.