CHARACTERISTICS AND TYPES OF PRICE DISCRIMINATION

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THE literature on price discrimination is widely scattered over the different fields of economics, and the references to problems of discrimination made by various specialists have long remained uncoordinated. We find these references in discussions of rate-making problems in Transportation and Public Utilities; antitrust problems in Industrial Organization; problems of unfair competition in Marketing; dumping in International Trade; basing-point and delivered-price problems in Government Control of Business; problems of output determination in Pure Economic Theory. An attempt will be made here to draw some of these separate studies together in a more comprehensive picture.

1. *The Essential Characteristics of Price Discrimination*

TO BEGIN with definitions and conceptual arguments is sometimes inexpedient, and usually uninspiring. Our present task, however, will be clearer if we do not defer an attempt to define our subject.

THE DEFINITION

PRICE discrimination is sometimes defined as the practice of a firm selling a homogeneous commodity at the same time to different purchasers at different prices. Almost every word of this definition needs to be qualified.

1. "Selling to different purchasers": We ought to add "buying from different sources of supply" (because there is price discrimination in buying as well as in selling) and "leasing and hiring."

2. "Commodity": This should include services as well as goods, productive factors as well as products.

3. "At the same time": This means "under given conditions." The transactions surely need not be simultaneous; indeed, there is temporal discrimination, such as between Sunday rates and weekday rates, matinee and evening prices, peak rates and off-peak rates, season and off-season prices.

4. "Homogeneous": The commodities need not be homogeneous; they may be differentiated in many ways and, indeed, in several types of price discrimination differentiation is of the essence.

5. "At different prices": To sell different qualities or products with different marginal cost at the same price, or to buy different qualities or factors of different efficiency at the same price, is also discriminatory. And while there may be price discrimination without price differences, there may be differential pricing that is not discriminatory.

6. "Firm": We may have to take a group of firms, perhaps an entire industry, into account to establish the existence of price discrimination. For example, a single firm may participate in a discriminatory scheme by serving different consumer groups through different (subsidiary) distributor firms to whom it sells at a uniform price but whom it induces to resell with different markups. Or several railroads may set combined through-rates which are discriminatory in comparison with other rates charged by the same or other lines.

A comprehensive definition must be somewhat vague to avoid excessive clumsiness. Price discrimination may be defined as the practice of a firm or group of firms of selling (leasing) at prices disproportionate to the marginal costs of the products sold (leased) or of buying (hiring) at prices disproportionate to the marginal productivities of the factors bought (hired). The chief vagueness in this definition lies in the word "disproportionate." We shall not now attempt to be more specific, but merely to clarify the case of a discriminating seller. Most firms produce several products (or at least several product qualities) and can sell them at discriminatory prices. That is, they discriminate in favor of the buyers of some products and against the buyers of others if the prices of the latter include a higher markup over marginal cost than the former. In the process of this discrimination a multiproduct firm will "switch" some of its productive capacity from the production of the relatively higher-priced to the production of the relatively lower-priced products—just as a single-product firm which practices price discrimination in the sale of a homogeneous commodity "switches" some of its output from the less-favored to the more-favored markets.[1] This "switching" of the use of capacity or of output produced is, of course, merely metaphoric, that is, descriptive of an imagined transition from a situation in which no discrimination is practiced to one that involves discrimination; the "switching" is a metaphor used to picture a comparison between two situations.

[1] The market that is charged the higher price is, for that reason, called less favored although the firm will surely "favor" (in the sense of prefer) sales to this market.

Extension of the concept of price discrimination from the pricing of homogeneous products—or, at least, of technologically similar products—to the pricing of altogether different products whose only relationship with one another lies in the fact that they are produced under the same management or control, will probably be protested as an illegitimate departure from tradition. I submit that it is a logical step. The explanation of price making for "different" products follows exactly the same principles as the explanation of price making for the same or "similar" goods that can be sold to separate groups of buyers. To confine the concept of discrimination to homogeneous products has one great advantage: their marginal cost may be supposed to be the same, so that price differences are sufficient evidence of discrimination. But once we decide to treat "slight" differences in the products under the heading of price discrimination—and of course we must then take account of cost differences—there is no analytical reason for drawing lines between various degrees of technological differences and of cost differences. Rational price determination for the different products of a multiproduct firm facing markets with different demand elasticities is price discrimination in the wide sense of the word proposed here.

Not much depends, however, on the acceptance or rejection of the extension of the concept proposed here. Only a question of classifying and labeling is involved. This paper, of course, would be shorter if I had been satisfied with the narrower concept of price discrimination, but I shall save much space by confining myself to selling price discrimination and leaving buying price discrimination for another occasion.

MONOPOLY POWER AS A PREREQUISITE

The fact that price discrimination has at times been used by strong concerns to kill off weaker rivals, or at least to prevent their growth, has led to the widespread belief that discrimination is essentially a method used "to create a monopoly." To believe that price discrimination could create monopoly power where none had existed before is to overlook the fact that it is the existence of at least some degree of monopoly (in the wider sense of the word) that makes discrimination possible. Even in the simplest cases of price discrimination, the basic fact is that the seller accepts orders that leave him different net prices;[2] some prices are satisfactory to him, others

[2] A businessman selling to different places with different transport cost, in different kinds of packing, with different discounts, etc., can compare these prices

are less so or are even unsatisfactory, made perhaps only to spite a rival. A higher degree of competition would make every seller run after the good orders and refuse the bad ones—until the good ones would be less good and the bad ones better. Where this does not happen the market is "imperfectly competitive," that is, monopolistic.

A seller can of course make special prices to his friends or to poor people even if he is in a position of pure competition. But is there any use speaking of price discrimination if a farmer gives away some of his eggs or milk to poor children in the village? Acts of friendship, charity, patriotism, etc., may take the form of special pricing, but we may omit them in this discussion.

2. *Classifications of Price Discrimination*

NEITHER an analysis nor even an elementary description of price discrimination can do without some classification. For economic analysis a classification according to the *purposes* for which sellers practice price discrimination, another according to the *techniques* they use, and a third according to the *degree of discriminating power* are most helpful. This is, however, too much for this survey. We shall describe more than twenty types of price discrimination, grouped according to techniques employed, but distinguished also by purposes served, effects achieved, or special conditions required. The selected types are named with their suggestive catchwords to convey their character.

THREE MAIN CLASSES

THE techniques of price discrimination are grouped into three main classes: personal discrimination, group discrimination, and product discrimination.[3] Personal discrimination makes differences between individual customers the basis for extending differential treatment to them. Group discrimination differentiates not between individuals as such but between categories or classes of customers. Product discrimination selects neither individual customers nor customer groups for different treatment but allows customers to choose freely among different products (qualities) offered at discriminatory prices.

only by deducting the differential expenses, that is, by reducing them to a common basis. Thus he computes his "net prices."

[3] Ralph Cassady, Jr., "Techniques and Purposes of Price Discrimination," *Journal of Marketing*, Vol. 11, 1946, pp. 135-143.

PERSONAL DISCRIMINATION

WITH one important exception, personal discrimination is by its very nature an unsystematic form of discrimination. Prices may be differentiated according to the seller's appraisal of the individual customer's bargaining strength, of his eagerness to buy, of his income, or of the use he intends to make of the product and the consequent earning power it may have for him.

An extreme example of this class is the *haggle-every-time* type which appears only in a relatively unorganized market. The buyers are not regular customers with constantly recurring demand but a fluctuating group of varying composition. The seller tries to size up each buyer's ability to pay, urgency of demand, and knowledge of the market and then drives as hard a bargain as he can. This type of discrimination is interesting more for the art of personnel selection and for studies in buyer psychology than for economic analysis. It occurs chiefly in certain types of retail trade—for example in antique dealings—or at time in parts of the automobile market by way of trade-in allowances. But it may also occur in other types of trade or industry. The concessions made to a strong bargainer may be in terms of price or method of payment or in terms of extra costs (freight) assumed by the seller. The seller, while not adopting any systematic policy of discounts or freight absorption, may be influenced in his dealings with a particular customer by the terms upon which this customer claims he can buy the goods from a rival and bargaining may take place over price, terms, extra services, and delivery costs.

A similar kind of individual bargaining exists also in markets where the buyers are regular customers with constantly recurring demand. The sellers in considerable number, but none of dominant size, offer a little differentiated product in an unorganized and imperfect market in which transactions are secret and "knowledge of the market" is based chiefly on rumors—so that buyers can play one seller against the other. Each deal is separately negotiated and sellers are sometimes willing to make special concessions in competing for particular hard-to-get orders. This *give-in-if-you-must* type of discrimination is practiced chiefly in a buyers' market, where business is slack and producers have a difficult time keeping their plants busy. (The theorist who is anxious to fit the case to his given set of tools might discuss the weakness of the seller vis-à-vis the hard-bargaining buyer in terms of a high elasticity of that separate portion of the demand.)

The *let-him-pay-more* type is a more systematic but not very important type of personal discrimination. Sellers who for the greater part of their business are in a fairly competitive position with little control over price may have a few customers whom they can consistently "overcharge." These may be the "nice" customers who do not take the trouble to shop around, or customers who, although they have free access to a more competitive market, are located so near the particular producer and so far from the central market that they fare better at a high discriminatory price than at the uniform market price. "Let them pay more," thinks the seller and exacts higher prices. To the seller these discriminatory sales are merely some toothsome morsels, the bulk of his business being done in a competitive market. (It would be a different type of discrimination if a larger part of the output could be sold in the discriminatory fashion.)

The *size-up-his-income* type of discrimination is often practiced by doctors and lawyers. In rendering their bills, they ask themselves how much the particular patients or clients can afford to pay for their professional services. Doctors may treat impecunious patients for much less than wealthy patients. Middle-class patients are charged "moderate" fees, not so much out of kindheartedness as in consideration of the greater elasticity of demand for medical treatment of this class of people. In charging little to the poor, the doctors may be motivated by sheer philanthropy and generosity. Their ability to make their rich patients make up for it will depend on their quasi-monopolistic position in the field, a position supported by the strict code of ethics which effectively reduces competition in the medical profession.[4]

The *measure-the-use* type of discrimination is, in contrast to the other types of personal discrimination, a very systematic way of adjusting the price approximately to the profits which the buyer makes from using the sold or leased article. The monopolistic position of the seller or lessor in these cases must be well protected, for example through patents or copyrights. Patented machines are often

[4] One of the most famous examples of the *size-up-his-income* type of price discrimination is reported in our history books dealing with the fifteenth and early sixteenth century: "indulgences for sins" and promises to remit punishment in purgatory were sold by the Church on a sliding scale of prices adjusted to the sinner's means. The grossness of the sin was another factor in determining the price.

leased to users whose rentals are fixed per unit of output produced on the machines or in percentages of sales of fabricated goods. The exhibitors of motion pictures usually pay for the copyrighted films on the basis of their actual or prospective box office success in their theaters. A newspaper usually pays for the use of syndicated columns, comic strips, and news services in rough proportion to the size of its circulation. The underlying theory of all these schemes is that the prices charged should be at least roughly in accordance with the earning power which the acquired rights provide to the buyer.

GROUP DISCRIMINATION

GROUP discrimination is in a sense semi-personal. It depends on differences between different groups of buyers and aims at taking advantage of these differences in such a way that the buyers cannot easily evade the discriminatory prices. Prices, for example,[5] may be differentiated according to the age of the customer (half fares for children, children's haircuts); the sex of the customer (reduced admission for ladies at ball games); the military status of the customer (reduced theater tickets for men in uniform); membership in certain organizations (sales to members of clubs or associations); the public nature of the buyer (transportation for the government). Discrimination between functional or occupational categories of buyers is often found in subscription rates for papers and magazines, in selling prices of books (educational rates, trade and college editions), and in advertising rates (manufacturers' advertisements in newspapers). Social welfare schemes of public authorities to assist specified groups in the community by the use of discriminatory pricing may also come into this category (the Food Stamp Plan).

Group discrimination may also be based upon the location of the customer (goods sold at uniform delivered prices in all markets or at different zone prices, or surpluses sporadically dumped in a market geographically separated from the seller's regular market); upon the patronage status of the customer (special rates for new customers, or quantity and volume discounts to large ones); and upon the use to which the product is put (fluid milk for consumption and for industrial purposes, railroad transportation for high-valued finished goods and for low-valued raw materials, or postal service for letters and for parcels).

[5] Almost all the examples are taken from Cassady's classification cited in note 3.

The most important types of group discrimination come under the headings just indicated—consumer location, patronage status of the customer, and product use—and we shall select them for more detailed discussion. We shall find, however, that the techniques involved are less significant than the purposes they are intended to serve. For example, several methods of separating different buyer groups exploit differences in the "squeezability" of the separate groups—their ability to stand higher prices. Discrimination according to the patronage status of the customer may be used to develop new clientele, reward cooperating customers and punish disobedient ones, or strengthen strong distributors or fabricators at the expense of weaker ones. Discrimination based upon the consumer's location—"locational" or "geographic" discrimination—may be used to squeeze more money out of the market, it may be part of a scheme of predatory competition, or it may not have any direct or conscious purpose but be merely an incidental by-product of a particular pricing practice.

CONSUMER LOCATION

THIS section briefly describes seven types of geographic discrimination. In some of these the discrimination lies not in price differentials, but rather in price uniformities or price similarities in the face of cost differences. Thus, only comparisons of net prices realized after deducting the costs "absorbed" by the seller can reveal the price discrimination.

The *forget-the-cost-difference* type of discrimination consists of a failure to adjust selling prices exactly to the existing cost differentials, a failure arising from an inclination "not to bother" or to "forget about it." The cost differentials may be too small in relation to the cost—clerical or other—of differentiating the prices accordingly.

For example, if a retail store charges fifteen cents for local delivery regardless of the distance, this will imply discrimination against nearby customers in favor of more distant customers. It would not pay to calculate delivery charges on the basis of miles and pounds. If goods are delivered without extra charge, the cash-and-carry customers are discriminated against. If the manufacturer of a nationally advertised article finds it desirable to have it sold at the same price everywhere all over the country, he absorbs the freight differences and thus discriminates against the buyers near his plant.[6]

[6] It is interesting to observe that delivered prices or "freight allowed" systems (i.e. systems under which the seller absorbs all freight costs) are often practiced

By way of digression we may note here that price discrimination through the neglect of small cost differences is not always geographic discrimination: instead of transportation costs some other expenses may be absorbed by the seller. The underlying principle is the same. For example, if charge account sales are made at the same prices as sales to cash customers the latter pay part of the cost of credit to the former.

In all these instances, the failure to take account of certain cost differentials and to have them reflected in the selling prices may be due to the desire to save the effort or cost of figuring and charging adequate price differentials or to the desire to gain and maintain customer loyalty by avoiding any "annoying" charges.[7] There are other instances, however, in which the seller has altogether different reasons for absorbing cost differences. In several "freight allowed" systems of pricing, the seller is not motivated by convenience. Instead he tries to maintain resale prices by a pricing system which discourages interzonal competition among distributors.

Under this *keep-them-in-their-zones* type of price discrimination the seller quotes his prices "f.o.b. factory, freight allowed." This means that the manufacturer will ship the product to the wholesaler's establishment and permit him to deduct the freight from the bill. What this seller calls his "f.o.b. factory price" is really a delivered price, every distributor getting the product at exactly the same price c.i.f. destination. While the manufacturer thus absorbs the freight to the distributors or to destinations within their zones, any further freights must be paid by the distributors. The distributor in Zone A pays for shipments into his zone the same delivered price that the distributor in Zone B pays for shipments into B. If the Zone A distributor tried to sell in Zone B, a territory not assigned to him, he would have to pay the freight from his zone to the other and the goods would therefore cost him more than they

for the nationally advertised brands while they are not practiced for the unadvertised brands of the same commodities. The greater degree of competition in the more standardized commodities makes it unprofitable to practice the geographic price discrimination which is inherent in freight absorptions. For example, unadvertised brands of tea, coffee, cocoa, canned soups, and crackers are sold f.o.b. shipping place without freight absorption. Advertised brands of the same goods are sold at uniform delivered prices or with "freight allowed." See Saul Nelson and Walter G. Keim, *Price Behavior and Business Policy*, Temporary National Economic Committee, Monograph 1, 1940, pp. 298-300.

[7] A United States Circuit Court once concluded that where freight differences were small, charging uniform prices was economical and convenient. *United States* v. *Corn Products Refining Co.*, 234 Fed. 994 (1916).

cost the appointed zone distributor. Distributors are thus discouraged from invading each other's territories and the manufacturer avoids what he calls "demoralization" of his market.

The motives of sellers who absorb freight under systematic freight equalization schemes are of a different nature. The *match-the-freight* type of price discrimination is practiced if a seller, in an attempt to overcome the competitive disadvantage of being located farther away from a customer than some of his competitors, offers to absorb any excess of the actual freight over the lowest freight from any competitor's plant to the destination. Thus he matches the freight charges from but not the price quoted by competing firms. Delivered prices quoted by competing sellers would be identical if all competitors not only offered to match the lowest freight charges but also to quote identical f.o.b. mill prices or use identical base prices. Freight equalization alone would not, therefore, imply identical delivered prices. Freight equalization—a system of meeting lower freight charges, but not lower prices—is discriminatory in that the seller absorbing a difference in freight costs accepts a lower mill net price; but the scheme does not exclude price competition.

Price competition is excluded under a system where sellers systematically meet the lowest quoted prices as well as freight charges. Such a scheme, ensuring equal delivered prices quoted by all firms, is not only inherently discriminatory, because the mill net prices which a seller realizes from sales to buyers in different locations ordinarily must vary considerably, but is also inherently collusive, because it involves a common course of action with regard to prices. In view of the collective or cooperative character of the pricing scheme we may speak of the *play-the-game* type of price discrimination.[8] The official name is the basing-point system.

Under a single-basing-point system, every seller quotes delivered prices by adding to the openly announced base price the calculated freight cost from the common basing point to the destination, no matter whether he is located at the basing point or elsewhere. A

[8] The catchwords "play-the-game" (or cooperative) discrimination are borrowed from Frank A. Fetter, *The Masquerade of Monopoly* (Harcourt, Brace, 1931), p. 310. We ought to distinguish: (1) price agreements which *intend* to secure a certain scheme of discriminatory prices and (2) price agreements which result *incidentally* in a scattering of discriminatory prices. The latter is the type discussed now as the play-the-game type. It results when a geographical pricing scheme is adopted by all firms in the industry and the firms "play-the-game 100 percent" in order to avoid "tearing down the price structure." These phrases were used by the U.S. Supreme Court in *Federal Trade Commission* v. *The Cement Institute,* 333 U.S. 683 (1948).

seller located at the basing point will realize the base price from all his shipments, whereas a seller at another location will realize different net prices from shipments to different destinations.

Under a multiple-basing-point system each seller quotes as his delivered price the cheapest combination of any of the announced base prices and the freight costs from basing point to destination. For each bid the seller ascertains which of the basing points is applicable for the particular destination point and adds to the relevant base price the freight from the applicable basing point to the destination. A mill located at a basing point uses it as a basis for calculating delivered prices only for destinations within what is called its own "natural market territory." For other destinations other base prices are applicable. If four basing points are established for a certain product made by twenty different mills in the country there will be in effect four territories, in each of which all delivered prices are calculated as the sum of the base price announced for the governing basing point and the railroad freight from that basing point to the destination, regardless of the actual point of shipment. A nonbase mill located closer to a certain destination than to the basing point collects unspent freight on its shipments to that point. On its shipments to destinations closer to any of the basing points than to its own location, the nonbase mill has to absorb freight, that is, it collects a mill net price lower than the relevant base price. A base mill shipping into areas governed by other basing points collects a mill net price less than its own base price.

If all mills were base mills, that is, if every production point were a basing point, this would not eliminate the discriminatory differentials in mill net prices which each mill would realize from different sales, inasmuch as each mill would serve customers at points governed by different basing points. This would not be so if each mill were to use only its own location as its basing point for all its sales—but then the industry would no longer have a basing-point system; it would be under a general f.o.b. mill price system, resulting in uniform net realizations by each firm and not in identical delivered prices quoted by different competitors. It is the very essence of the basing-point system that each seller accepts the base prices announced by his competitors as the basis for his own delivered price quotations in their territories. This may achieve two results: first, it eliminates effective price competition among the sellers and, second, it may allow the powerful firms in the industry to control the sales volumes, and thus check the potential growth, of the smaller firms. Because of these possible effects the basing-point system of pricing—which has been used not only by the steel industry but also by the cement, pulp, sugar, and lead industries among others—has been vigorously attacked as one of the worst forms of monopolistic pricing. Its discriminatory nature, however, although inherent, is not intentional but merely incidental. There is no intention of favoring some buyer groups or harming others. Since near-by buyers are discriminated against in favor of distant buyers but each buyer may be distant from some producer, it is conceivable that the discriminations practiced by all sellers will cancel out. In practice some regions will be harmed by the way the system actually works, but the discriminatory price differentials received by sellers need not reflect the effects of the discriminations upon buyers, localities, or regions.[9]

When the play-the-game type of price discrimination is used to hold down smaller firms it becomes a type of local price cutting by giant firms, similar to the *kill-the-rival* type of discrimination. This type achieved greatest notoriety and raised issues which furnished strong arguments for the early trust-busting campaigns in the United States. For the most part it is of lesser interest to the economic theorist than to the economic historian and the lawyer. The kill-the-rival or oppress-the-rival type of discrimination was made unlawful in the United States by the Clayton Act, which (in Section 2) declares it to "be unlawful . . . to discriminate in price between different purchasers of commodities of like grade and quality . . . where the effect of such discrimination may be substantially to lessen competition. . . ."

Competition was indeed lessened if, through local price cutting by the financially powerful concern, smaller competitors were killed off—either forced to close down or to sell out to their stronger opponent. Competition was also lessened when the competitors came to terms, when they stopped ambitious attempts to draw more business from the larger concern, or when they became willing to fall into line with the policies of the leader. In these latter cases the rivals were not eliminated as other sources of supply but were eliminated as factors disturbing the exercise of the stronger firm's control over price.

The best-known illustrations of the kill-the-rival type of price discrimination are the cases discussed before the courts in the suits

[9] Fritz Machlup, *The Basing-Point System* (Blakiston, 1949), esp. pp. 151-156, 233-247.

leading up to the dissolution in 1911 of the Standard Oil Co. of New Jersey and the American Tobacco Co. In the records of the Standard Oil case we can read that the "defendants have pursued a system of unfair competition against their competitors, whereby the independent companies selling and marketing petroleum have either been driven out of business or their business so restricted that the Standard Oil Company has practically controlled the prices and monopolized the commerce in the products of petroleum in the United States. This system has taken the form of price cutting in particular localities while keeping up high prices, or raising them still higher, in other localities where no competition exists; of paying rebates to customers as a part of said system of price cutting, . . ."[10]

While it is easy to describe the kill-the-rival or oppress-the-rival type of price discrimination, it is difficult to prove that a particular situation in reality is of this type. Local price cutting may be practiced for different reasons and intent can rarely be proved. Hence one will have to search for criteria by which to distinguish instances of local price discrimination that look alike but are different in purpose as well as in effect.

The sixth type of geographic discrimination to be included in this survey is sufficiently different from the others to be clearly set apart. The *dump-the-surplus* type of price discrimination is characterized by its unsystematic and sporadic nature. In order to move his surpluses without spoiling his regular market a seller may dispose of them in a different territory at lower prices. Such dumping is often highly disturbing to other sellers whose regular market becomes the occasional dumping ground for goods withheld from their usual outlets. But in spite of the numerous complaints which this type of sporadic discrimination arouses in international and interregional trade, it does not offer difficult problems for economic analysis.

Permanent dumping—charging lower net prices for exports than for domestic sales—differs from any of the six types of geographic price discrimination thus far discussed. It is not of the sporadic nature which characterizes the dump-the-surplus policy. It is not designed to stabilize existing market conditions as are the keep-them-in-their-zones and play-the-game policies. It is not used to

[10] *United States* v. *Standard Oil Co.*, 1909, *Brief for the United States*, Vol. 1, pp. 187-188.

eliminate a competitor as is the kill-the-rival policy. And it is not as incidental to the techniques of freight-cost absorption as are the forget-the-cost-difference and match-the-freight policies. Its purpose is to exploit the differences in elasticity between the demands of different regions or countries in order to squeeze more revenue out of the total market without attempting to influence the existing market conditions. Geographic price discrimination of this sort is one of the cases of discriminatory pricing to which the theoretical model of price determination for the purpose of profit maximization is most directly applicable. (The principle involved resembles closely the principle of charging-what-the-traffic-will-bear that has been employed in discussions of railroad rate setting.) We may call this seventh type of geographic price discrimination the *get-the-most-from-each-region* type of discrimination.

Examples of this type could be found in the domestic and export price policies of many large concerns—if information were available. One instance that became known from the congressional investigation of, and the court case against, the glass container industry is the geographic discrimination in the sale of milk bottles. The combination of protection under restrictive patent licenses with the geographic separability of the market allowed a manufacturer to sell his milk bottles in Texas at much higher net prices than elsewhere.[11]

Much illustrative material could probably be found in the files of various European cartels with centralized selling organizations. Probably the price differentials these cartels fixed for exports to different countries distinctly reflected the differences in the elasticities of demand resulting from national tariff policies and domestic competition within the various countries.[12]

[11] *Investigation in the Concentration of Economic Power*, Hearings before the TNEC, 1939, Part 2, pp. 611-612.

[12] The writer was at one time connected with the Austrian cardboard cartel. This cartel practiced geographic price discrimination, charging the highest prices for exports to Turkey and the lowest prices for other overseas exports. All markets except the last were protected by tariffs and by international agreements (sometimes involving concealed preferential tariffs). This case of discrimination was unusual in that the domestic market was not charged the highest price; the elasticities of demand in the Hungarian and Italian markets were lower than that in the domestic Austrian market, and they were therefore charged higher prices. Prior to the formation of the cartel as well as after its dissolution, geographic discrimination was impossible because of the sharp competition among the Austrian producers who thus received the same net prices from sales in the domestic and the various export markets.

CUSTOMER STATUS

WE HAVE referred to three different purposes for which group discrimination based upon the patronage status of the customer may be practiced. New customers, large customers, or cooperating customers may be the groups selected for more favorable treatment in the seller's pricing policy.

In the *promote-new-custom* type of discrimination, the existing demand that the seller can attract by discriminatory price cutting does not currently provide enough business to warrant his price policy. But the seller expects that this demand will grow—that people will develop a taste for the product or will acquire complementary appliances needed for additional consumption—and that the new demand (pictured by the economist as a new demand curve) will then provide the business and the profits for which he strives. He may then continue his low price or, more likely, he may raise it. Promotional rates or prices—promotional discrimination—will be needed only for development of the demand, not for its continued service.

On the other hand, the seller may wish to favor groups of especially important old customers. The *favor-the-big-ones* type of price discrimination is best characterized by a quantity discount in excess of the economies connected with dealing with large buyers. There are many economies involved in large-quantity business: economies in producing big lots and in selling, handling, transporting, recording and collecting large items. Quantity discounts, rebates, allowances or other forms of price differentials in favor of large buyers do not constitute price discrimination as long as, and to the extent to which, they merely reflect the savings in outlays, risk or trouble.[13] In fact, however, quantity discounts and volume discounts (the latter are allowed on a customer's total purchases over a year regardless of the size of his single orders) are often primarily devices to favor the large and handicap the small customers.

Favoritism shown to large buyers is not always desired by the seller; indeed he may feel that he is being "robbed," a victim of the violence of an important customer. The yielding seller "just could

[13] When the Goodyear Tire & Rubber Co. delivered automobile tires to Sears, Roebuck and Co. under a contract which had been effective from 1926 until 1937, the gross price discrimination as compared with sales to smaller retail sellers varied between 29 and 40 per cent. The net price discrimination after due allowance for cost differentials was computed to range from 11 to 22 per cent. See *Report on Monopolistic Practices in Industries*, Federal Trade Commission, 1939, Part 5A, pp. 2311-2312.

not afford to lose the customer." (Where the discrimination is in favor of an individual buyer, not of large buyers in general, the case is really one of the "give-in-if-you-must" type.) Legislation that prohibits price discrimination may in such cases be welcomed by the seller as a substitute for his lack of strength or backbone.

In contrast to these instances in which the discriminatory scheme in favor of large buyers is imposed upon a weak seller, there are many others in which it is a deliberate policy of a strong seller trying to improve his monopolistic position by creating a more monopolistic position for his chief customers. The degree of competition in the market in which his customers have to sell—that is, in the selling market of the distributors or processors of his product—will be reflected in the prices he can obtain in the long run. He may therefore be greatly interested in helping his customers to improve their market position by cleaning out excessive competition among them. Price discrimination against the small fry can be very effective in establishing such an increased degree of monopoly for his favored customers in their respective markets.[14] It was primarily this type of price discrimination that the Robinson-Patman Act of 1936 made unlawful when the effect was "to substantially lessen competition."

We often hear large retailers protest that a certain manufacturer would not give them the same wholesale allowance he was granting to much smaller wholesale houses. This looks like a policy of favoring the little ones; but the manufacturer undoubtedly discriminates against the large buyers, not because of their size but rather because they are retailers selling to the ultimate consumer while the favored small buyers are middlemen selling to retailers. He probably believes that the middlemen fulfill a useful function and should not be squeezed out of the market. This policy may be called the *protect-the-middleman* type of price discrimination. It is practiced by a manufacturer who regards it as "healthier" in the long run if

[14] The FTC has made the following statement concerning this type of price discrimination: "The Commission considered that a manufacturer, under the Clayton Act, . . . may not make his bargains according to his own interest by discriminating as he pleases, however honest and justifiable such courses might be from the standpoint of commercial principles. Large industrial companies, through price discrimination, can control competitive business conditions among their customers to the extent of enriching some and ruining others. . . . If it were left to a manufacturer to make the price solely on account of quantity, he could easily make discounts by reason of quantity so high as to be practically open to the largest dealers only, and in that manner might hand over the whole trade in his line of commerce to a few or a single dealer." *Ibid.*, p. 2312.

he protects the middlemen by removing some of the advantages a large retailer would find in by-passing them. His concern for a healthy situation may of course have a great deal to do with his interest in resale price maintenance.

Discrimination in favor of customers who obey and against those who do not obey the seller's resale price maintenance or similar schemes may be called the *hold-them-in-line* type of price discrimination. It serves to control policies of the customers, and to enforce price maintenance and compliance with the seller's wishes by granting discounts to those who "behave" and by excluding those who do not. The procedure is either to grant the discount to all buyers except those on a black list or to grant the discount exclusively to buyers who are on a white list. The latter procedure is, from the point of view of legality, much safer and therefore more common. One way of doing this type of business is to give the discount to all buyers who are members in good standing of a certain organization or association; but, of course, there are many other ways of doing it. For example, through refunds distributed through the association of the "behaving" customers, or through free services rendered or other forms of preferential treatment accorded to the behaving customers.

PRODUCT USE

DISCRIMINATION based upon the use made of the product is the most interesting type for economic analysis because the differences in eagerness to buy and ability to pay, and the profits made through exploiting them, are the basis and *raison d'être* of the discriminatory pricing. (All but one of the types of group discrimination thus far discussed have been practiced for other reasons.) A seller's profit will surely be higher if he can squeeze each group to just the right extent, exacting high prices from groups that can stand them and conceding low prices to groups that could not afford to use much of the product at higher prices. The seller will be able to do this if the market can be divided by objective criteria and the buyer groups thus separated respond very differently to various price levels for the product. In other words, the elasticities of demand of the separate groups must be different if price discrimination is to yield increased revenues.

The classical application of this principle has been in the railroad industry. It became known there as the charge-what-the-traffic-will-bear principle of freight rate making and we shall speak therefore of the *charge-what-the-traffic-will-bear* type of price discrimination.

The phrase "charge what the traffic will bear" can easily be misunderstood. First of all, it certainly does not mean that the highest possible price is charged without consideration of its effect on sales. Secondly, if it were taken to mean nothing else but that a maximum net revenue is extracted from the business, then this principle would obviously be applicable to every type of business, not merely to discriminating monopolies. The seller in a purely competitive market will also charge what the traffic will bear—but the traffic will not bear more than the uniform market price. And, likewise, the seller with great control over the price of his product but without being able to discriminate between his customers will charge what the traffic will bear—but it will be one uniform price, rather than a set of different prices, that will bring the highest possible net revenue. We prefer, however, to use the phrase not in this all too general sense, but only in connection with the problem of discrimination. Although the phrase is often applied by way of analogy to other industries, we shall reserve it for its original and historical meaning in the discussion of railroad rates.

Traditionally three kinds of discrimination are distinguished in the field of railroad transportation: personal discrimination (which was always unlawful), local discrimination (one phase of which was prohibited by the famous long-and-short-haul clause[15]) and commodity discrimination (which was always regarded as legitimate). Commodity discrimination is applied between groups of users of the transportation service according to the commodities they ship.[16] This kind of discrimination is generally practiced by railroads and is condoned by the regulatory agencies of the government; indeed, it has been considered indispensable for railroad operation on a paying basis.

Thus, while the law—chiefly the Interstate Commerce Act—for-

15 The long-and-short-haul clause is a provision of the Interstate Commerce Act of 1887 and of its amendment of 1910, forbidding a greater charge for a short than for a long haul over the same line if circumstances were substantially similar.

16 On first thought one may be inclined to interpret commodity discrimination in transportation as a type of product discrimination instead of a type of group discrimination. Product discrimination, however, refers to different products or product qualities offered by a seller at discriminatory prices. Commodity discrimination in railroad transportation, on the other hand, refers to one product —transportation service which the railroad offers at discriminatory prices to different groups, namely persons using the service for different commodities.

bids rate differentials giving particular *shippers* or particular *localities* an undue advantage over others, it permits differentials giving particular *industries* substantial advantages over others. Incidentally, it is often overlooked that discriminatory rates for various commodities may imply discriminatory treatment of the localities or regions in which the different industries are located. The rates for transportation per ton-mile are much higher for expensive materials like silk than for cheap materials like coal or gravel. (Expensive and cheap refer here to value per unit of weight.) The rates for copper are higher than those for steel, the rates for fluid milk higher than those for gasoline. Since railroad rates are under government regulation it is difficult to state whether or not the approved rate structure is really all that the traffic will bear in the opinion of the railroad management. The inflexibility of court decisions and commission rules, the emphasis on the fair return theory, and perhaps the insertion of various social and political objectives, make it doubtful that both level and structure of rates conform fully to the principle of maximization of net revenues. The approved rate *levels* are possibly lower in prosperity periods and higher in depression periods than some alert managements would set them if they were entirely free to charge what the traffic could bear. The rate differentials—that is, the essentially discriminatory rate *structure*—probably tally more closely with the managements' views about the relative elasticities of different segments of the demand for transportation than the rate level tallies with their views about the combined elasticities of the total market.

The application of the charge-what-the-traffic-will-bear principle to industries other than transportation may be called the *get-the-most-from-each-group* type of price discrimination. It is often practiced by public utilities (although also modified by public regulation of rate making). Electric current for household consumption is usually sold at much higher rates than the current for industrial use. And even these two markets are sometimes subdivided according to the amount or kind of use made of the electricity. In some communities electric current for hot-water heating or space heating in households is cheaper than for lighting; current for very large industrial users, who might find it cheaper to produce their own power, is sometimes cheaper than for small industrial users.

For several reasons we know of relatively few illustrations of the get-the-most-from-each-group type of discrimination for manufactured products. First, discrimination in railroad and utility rates is socially approved and publicly regulated, while discrimination in industrial pricing is usually under suspicion and often in danger of being construed as unlawful. Secondly, it is difficult to divide the market into distinct groups of users, while such separations are easy in utilities and transportation. A domestic household can hardly purchase electric current in the disguise of a factory, and milk cannot very well travel in the disguise of gasoline, whereas in the case of manufactured goods the purchasers who are supposed to buy at higher prices may succeed in securing their supply at the lower price, either by "sneaking in" with the preferred group or by having someone else do the buying for them. Thirdly, it is almost impossible to discover the presence of discrimination for manufactured products where there are actual or alleged cost differentials. The extra cost of transporting bulky articles, or the differences in the cost of transporting in tank cars, box cars, and platform cars, can be much more easily proved or disproved than cost differences in the production of innumerable varieties of manufactured goods. No public commission digs into the cost accounts of manufacturing companies in order to compare costs with selling prices. Finally, an enduring system of price discrimination requires a degree of monopoly which is not so easily achieved in manufacturing industry, unless the government helps to reduce competition through special legislation, patent and copyright laws, or similar devices.

The examples we have of price discrimination practiced by manufacturing industry in the United States usually come from court cases or congressional hearings. In the glass container industry, under the protection of patents which were used for the organization of a tight cartel through licensing contracts, instances of discrimination between groups of users became notorious. Exactly the same kinds of glass container were sold at higher prices as "domestic fruit jars" than as "packers' ware."[17] The elasticity of demand for jars for household use was apparently smaller.

A case of discrimination between different groups of users that achieved much notoriety concerned a chemical product. Manufacturers of plastics, protected by patents and patent license agreements, sold a certain material for use in dentures at a price many times higher than the price they charged for the same material for industrial use.[18] In the dental use the cost of the material was only

[17] *Investigation in the Concentration of Economic Power*, as cited, pp. 572-574, 591.

[18] The price differential was further increased by markups—protected by price

a negligible fraction of the cost of the complementary highly skilled labor and, therefore, the elasticity of derived demand was so much smaller that it could stand the strikingly increased price. The manufacturers were of course anxious to prevent the material bought at low prices by industrial users from being diverted to dental use. In order to make sure that such diversion would not occur they advertised that the material sold to industrial users might contain ingredients injurious to a patient's health.[19] This slight "differentiation" of the product might make us wonder whether the case should not be discussed as one of product discrimination, rather than group discrimination, since the seller offered two different products, allowing buyers to choose between a cheap material apparently unfit for dental use and an expensive one that could be so used. The case demonstrates that the lines drawn between classes of phenomena are arbitrary and anything but watertight.[20]

Two other cases that might be classified either under product discrimination or user group discrimination may be cited. The Aluminum Corp. of America used to sell aluminum ingots at a higher price per pound than it sold aluminum in cable form.[21] Effective competition from copper cables was the obvious reason for the lower price on aluminum cables. This segment of the aluminum market would not stand the higher price that was charged for ingots, the less fabricated product. Similarly, producers of plate glass charged a much higher price per square foot for large pieces than for small pieces, although all plate glass is produced in large sheets. The differential was at times more than 100 percent of the price for small sizes. The elasticity of demand for plate glass in small pieces was high because of the heavy competition of ordinary window glass; in large pieces plate glass had no serious substitutes in its chief uses and the producers took advantage of the lower demand

maintenance arrangements—of the distributors. "Thus methyl methacrylate when marketed for ordinary commercial purposes sold for 85 cents per pound, but when sold for denture purposes costs the dental profession approximately $50 per pound." *Patents*, Hearings before the Senate Committee on Patents, 77th Cong., 2d Sess. (1942), Part 2, p. 719.

19 *Ibid.*, p. 721.

20 I chose to discuss the case as one of user group discrimination rather than product discrimination because the differentiation of the product was only a device for preventing the diversion of the substantially identical product from the favored users to those held up for the higher price.

21 The buyers of aluminum cable had to agree not to melt it. "Report on the Aluminum Industry" (mimeographed), National Recovery Administration, 1935, p. 14.

elasticity.[22] Patent protection and patent contracts enabled them to practice this discrimination without disturbance either from insiders' defection or outsiders' invasion.

User group discrimination in the marketing of agricultural products is practiced either under governmental plans or by agricultural cooperatives aided by governments. The scheme of the Surplus Commodities Administration, distributing surplus commodities at reduced prices to relief families (the so-called Food Stamp Plan) was price discrimination with a partly social objective—and thus may not belong to the type under discussion—but conceivably a monopolistic seller of these commodities might, if he could, choose the same system in trying to get the most from each group.

A two-price and sometimes three-price system has been created in the distribution of milk, with very substantial price differentials according to the use to which it is put. The highest price is charged for milk for fluid consumption, a much lower price for milk for industrial uses (cheese and ice cream), and sometimes a medium high price for milk separated as cream. The monopolistic organizations needed for the maintenance of these price differentials were provided by producers' cooperatives and large-scale distributors, but it soon became necessary to give the scheme governmental support. Various laws and regulations prohibit competition in this field in order to secure the operation of the system which enables the producer to collect a high price for fluid milk for direct consumption and to dispose of all surplus milk at lower prices for industrial purposes.

PRODUCT DISCRIMINATION

PRODUCT discrimination does not depend upon a separation of buyers in such a way that they cannot evade the demarcation lines, but upon a differentiation of the products in such a way that the buyers will separate themselves and buy at discriminatory prices. A seller may do this by differentiating his products as to design, label, quality, time of sale, or distribution channel having a different appeal to different consumers—or by offering different products.

The *appeal-to-the-classes* type of price discrimination is based on a systematic attempt to divide the market according to the ability (or willingness) to pay of different customer groups, not by discriminating between buyers locally, personally, or through any seller-determined criterion, but merely by offering the good or

22 Myron W. Watkins, *Industrial Combinations and Public Policy* (Houghton Mifflin, 1927), p. 170.

service in slightly differentiated grades or classes among which the buyers may choose. Cases in point are Grade A and Grade B milk in New York City and many other places (with only a small difference in quality or cost); standard and deluxe models of automobiles (with price differences larger than cost differences); railroad fares in pullman parlor cars and day coaches (with a relatively small difference in the cost of the service); expensive and cheap seats in theaters and concert halls (with no difference in cost to the management); goods in fancy containers and the same goods without containers (with price differences far in excess of the cost of packing); books in deluxe binding and in ordinary or even paper binding (with price differentials greater than cost differentials); dining room service and coffee shop service in the same restaurant (with no or only a trivial difference in the cost of the service); and many other goods which come in high grades and cheaper ones (with no cost differentials accounting for the price differentials).

Most instances of the appeal-to-the-classes type of price discrimination are considered as perfectly legitimate business practices. In some of these instances the service to the buyer who pays the higher price is really superior in quality, even if its short-run marginal cost to the seller is not higher than that of the service sold at lower price. (An orchestra seat at a play is certainly *better* than a seat in the rear section of the balcony.) In other instances the inherent class implication is worth its price to the buyer (as in the case of services to people who purchase the distinction with the higher price).

This relatively unobjectionable type of price discrimination is different from the *make-them-pay-for-the-label* type, where the whole differentiation lies in the brand or label of the article and is designed to deceive the buyer by making him believe he is acquiring a more durable or more hygienic or otherwise technologically superior good.

The Federal Trade Commission reported the case of a feather bed pillow manufacturing company which "marketed their products under the five brand names 'Princess,' 'Progress,' 'Washington,' 'Puritan,' and 'Ideal.' In its advertising the manufacturer represented that these products were of different grades in the order named and correspondingly different prices were charged for each. The Commission found, however, that all these five brands were of the same quality, and that the material price differential between the 'Princess' and the 'Ideal' brand reflected a difference in the label only."[23]

[23] Quoted from Nelson and Keim, *op. cit.*, p. 80. The case is Docket No. 1129 of the FTC.

The make-them-pay-for-the-label type of price discrimination is definitely obnoxious when it is combined with deceptive advertising and misrepresentation, as in the case just described. Where differences in quality are not falsely claimed but merely indirectly suggested through different names or labels, the practice is not so offensive. It has become customary for certain producers to sell the same quality of goods at higher prices under a nationally advertised name or label and at lower prices under other names or labels. Certain chemical substances, cosmetics, toothpastes, etc. are sold under nonproprietary names much more cheaply than under proprietary names.[24] The wholesale price difference for nationally advertised hosiery and the same merchandise under private label was, before 1938, up to $1.25 a dozen.[25]

A seller may also differentiate his product in the *clear-the-stock* type of price discrimination by presenting it at special times or, in the case of retail trade, in special parts of his store. In this type the seller disposes of stock on hand in order to make room for new stock. The best-known example occurs in the inventory sales of retail stores, where customers may buy regular stock at much reduced prices either at times especially advertised by the seller or in special parts (for example, the basement) of the store.

The temporal discrimination which is involved in the clear-the-stock type of price discrimination may be sporadic or periodic. In any event the seller does not want his bargain sales to encroach to any large extent on his regular sales. The less business is switched from regular prices to bargain prices, the more nearly is his objective fulfilled. There is a different type of temporal discrimination which a seller practices precisely in order to switch some of the demand for his services from busy to slack periods during the day, the week, or the year. The *switch-them-to-off-peak-times* type of price discrimination is practiced in public utility rates (rates for off-peak electricity; night-and-Sunday rates for long-distance telephone calls) in street-car fares (lower fares for travel between rush hours), in hotel rates (lower off-season rates in resorts), in theater tickets (matinee prices in theaters), and probably other instances in which the demand for services tends to be concentrated at particular time intervals, leaving capacity underutilized at other times. In some of these instances differential pricing need not be discrim-

24 According to *ibid.*, p. 81, the saving for such purchases under nonproprietary names averaged 76 per cent in 1938.

25 See *Knit Goods Weekly*, January 3, 1938, p. 8.

inatory pricing. For there would be differentials even if these services were supplied by pure competitors without any control over prices. Price differentials are called discriminatory only if they are "administered" and deviate from those that would have emerged under purely competitive conditions. Of course, in practice such a comparison may not be possible.

In most types of pricing described in this section the exercise of discrimination against some buyers is based upon their own decisions. The segregation of the buyers is voluntary, for it is up to each buyer whether to choose the cheaper or the more expensive product or service. In some cases, to be sure, particularly where prices are differentiated according to the time the product or service is acquired, the buyer's choice may not be entirely free. (For example, long-distance business calls can usually be made only during business hours; and certain industrial users of electricity could not possibly confine their operations to off-peak hours.) In other cases the choice may be a matter of mere convenience; again in others, a matter of comparative costs. Where quality appeal is the basis of the price differential, the buyer's belief in the higher quality of the higher-priced good or service is the reason for his preference. In other instances it may be the discrimination itself for which he deliberately pays: he may want to be in the more exclusive division, in the company of others who choose to distinguish themselves by getting the more expensive variety. (The parlor car passenger pays chiefly for the pleasure of traveling with "better-class" people; the dining room guest wants to eat in an environment more distinguished than the cheaper coffee shop.)[26]

All types of product discrimination thus far discussed referred to differentiated products, that is, to products not sufficiently dissimilar to call them different products. To be sure, no hard and fast line can be drawn between differentiated and different products. Different shapes of aluminum—ingots and cables—may with equal justification be regarded as differentiated aluminum or as different aluminum

[26] The determination of the most profitable price differentials in cases of product discrimination is an interesting problem in theory as well as in practice. It is a difficult one because the elasticities of demand for the separate varieties are interdependent. That is to say, the demand for the separate varieties is not given in the sense that it depends only on the price charged for the particular variety. It depends also on the prices charged for the other varieties. Economic theory has nice solutions for the determination of the optimum set of discriminatory prices under the assumption of independent demand curves. A solution for interdependent demand curves requires a more complicated apparatus than that traditionally employed in geometric price analysis.

products. Likewise one may look either way at different glass containers, different steel products, different plastic materials, etc. But the line of products sold by a firm may be so diversified that the various items cannot without excessive strain be called differentiated types of one product but must be regarded as different products. Yet the different products sold by one firm may have something in common: materials or parts produced by the firm, processes carried out with its equipment, hence, a productive contribution of some sort; and it will then be possible to make a calculation reducing the different products to their common components. The net prices received for the common components sold in the form of the different products can be ascertained by deducting from the selling price of each of the products all cost elements that are not related to the common components. This will reveal the extent of price discrimination practiced in the sale of the different products of the firm. We may call it the *get-the-most-for-each-product* type of discrimination.[27]

We shall not here go into the possible complications in analysis which arise from the possibility that the various products of the firm may be technologically complementary or substitutable in the sense that an increase in the output of one product may reduce or increase the cost of making the others. The most manageable case for our purpose is that of two products which up to a certain stage of production are only one product but differ in their further career toward completion. The units of output are still homogeneous at the end of a certain number of productive processes and then part company to undergo different treatment of processing, fabrication, or finishing, at costs which are separate and independent. The deduction of these costs from the prices at which the products are sold permits the comparison of the net prices of the part which they have in common. For example, a manufacturer of electric appliances may sell the same electromotor in an electric fan and in a vacuum cleaner and, if account is taken of the separate costs of each of the two products, it may perhaps be seen that the motor is sold cheaper to those who want to sit under cooler air than to those who want to sit on a cleaner couch. The manufacturer would

[27] In the case of merchandising the firm may be regarded as a seller of "merchandising service." It sells this service in conjunction with a very large number of goods; that is, the contribution of the marketing organization of the firm is the common component of all items sold. By deducting from the selling price of each item its purchase price and all separate or differential cost elements attributable to it, one can arrive at the net price at which the firm sells "merchandising service in connection with the particular item.

find it profitable to do this if at a uniform price the derived demand for electromotors were more elastic in the electric fan business than in the vacuum cleaner business, as it may well be if the former is more competitive than the latter.

3. *Essential Differences between Types*

A CLASSIFICATION that distinguishes between different types will be really helpful only if it also furnishes the criteria by which they can be recognized. How, for example, can we safely distinguish local price discrimination of the get-the-most-from-each-region type from local price discrimination of the kill-the-rival type? Are the differences between the two manifest enough to permit a diagnosis? And if the promote-new-custom type happens to result in local price discrimination, can it be safely kept apart from a kill-the-rival policy? How can we avoid confusion between different kinds of meeting competition, for example, between the seller who "gives in if he must" in order to capture an order and the seller who "plays the game" of quoting the same prices as his competitors? Some tentative comments on these questions will be offered here.

MAKE-THE-MOST VERSUS KILL-THE-RIVAL

LET US assume that complaints of local price cutting are received and we should decide whether it is a case of predatory or of fair competition. The similarities between situations of a kill-the-rival type and of the get-the-most-from-each-region type may easily deceive the observer. In both situations there may be a large firm charging lower prices in the localities served by a competitor than it charges elsewhere. The essential difference, unfortunately, cannot be observed: the immediate intent of the discriminating seller. In the one case his objective is to drive the competitor out of business by cutting prices to a level at which he cannot cover his costs. In the other case the seller resorts to local price cutting in order to "meet competition in good faith," that is, in more technical language, in order to raise his revenue by taking account of the greater elasticity of demand for his product where he is faced with the competing supply. A higher price, so he might reason, would surrender the bulk of the local business to the competitor, while a lower price would secure him as much of the local business as appears worth taking.

To the confusion of the observer, low prices in these more competitive markets—in the markets with greater elasticity of demand—may be below cost, just as in the case of predatory price cutting. When can local price cutting, which in both cases involves selling below cost, be identified as predatory policy, designed to kill off the rival, and when as a fair-though-tough competitive policy, designed to meet competition and to make the most of a weaker market? It is of no avail to examine who started the price cutting. And it is less than satisfactory to wait for the demise of some firms as evidence of the oppressive character of the survivor's price policy. If it was his intention to eliminate competitors, it is too bad that he could not have been stopped before he succeeded. On the other hand, the exit of less efficient competitors is by no means any evidence of the survivor's intent to kill. If they were inefficient they ought not to be able to stay in business.

Preliminary to a solution of the problem is the recognition of the fact that selling below cost can pay even where there is no hope that market conditions will change. If the particular sales add more to total revenue than to total costs, they will be lucrative and it may be bad business to miss such an opportunity of increasing one's profit, or reducing one's loss, merely because the selling prices are below average total unit cost. As long as the additional revenue derived from the sales at discriminatory low prices is not below the *additional* cost (this additional cost may, of course, be much below the *average* cost), the sales are directly remunerative and the discrimination can be explained as a part of a get-the-most-from-each-region policy. If, however, the business at cut prices is not only below average cost but does not even cover the added cost which it entails, then it is not directly remunerative and the objective must be found on another plane.

This other plane may possibly be one of extra-economic motivations. For example, the policies of the seller may rest on his desire for prestige, political ambitions, philanthropy, resentment, vengeance, etc. If the motivation is economic, his policies of discriminatory price cutting, where the additional business does not cover its additional cost, must be oriented on anticipated effects to be realized in the future. The kill-the-rival type of discrimination is a case in point, but so would be promotional price cutting. Between these types of discrimination and the get-the-most-from-each-region type of discrimination we have found an essential difference. The latter is good business under existing demand conditions and would remain good business, from the seller's point of view, even if conditions never changed and the seller had to continue forever to serve the favored market at a price below average cost.[28]

KILL-THE-RIVAL VERSUS PROMOTE-NEW-CUSTOM

If we find that the local price cutting and selling below cost is not a get-the-most-from-each-region policy, there may still be either the predatory kill-the-rival or the fair promote-new-custom type of competition.

Both these policies are nonremunerative under existing market conditions but look forward to a change which they are supposed to effect. The price cutter, in the kill-the-rival case, anticipates that his policy will eliminate some of the competition and that, as a result, the demand for his products will be either greater or less elastic in the future. Thus it is the expected change of the selling opportunities (i.e. demand curve) that makes economic sense of the currently unprofitable cut-rate business. The same is true of the promote-new-custom type of price discrimination. The price cutting to new customers does not provide enough business under given demand conditions to warrant the price policy. It is the expectation of new demand conditions which justifies the price cutting.

In the kill-the-rival case, the price cutter anticipates raising prices to the now favored customers when his competitor is knocked out. In the promote-new-custom case he may raise prices to the now favored customers when they have become attached to his product, or he may figure that at the eventually increased sales volume his costs will be so much reduced that he would make profit even if he kept his prices at the now unprofitably low level. If the price cutter's hopes of creating for himself a new clientele and a higher business volume should not be fulfilled, his price cutting would turn out to be bad business. But so would the predatory price cutting if it did not succeed in eliminating the competitors.

We can solve our problem by examining (a) who the injured competitors are and (b) whether the product or service offered by the seller who practices local price discrimination is essentially different or substantially the same as that offered by the injured competitors. Let us first assume that the products or services are substantially

[28] That local price discrimination of the get-the-most-from-each-region variety is regarded as good business from the producer's point of view does not necessarily imply that it is desirable for society to tolerate it. Its consequences for total output, growth, and allocation of productive resources cannot be inferred merely from the fact that the policy appears profitable to a seller with monopoly power and the power to discriminate.

alike. From where is the additional business for the price cutter to come? Is it to come from one or two particular competitors who would not be able to stand the loss of clientele, or is it to come from a larger number of competitors, each of whom would not suffer badly enough to be forced out of business?

It is interesting to reflect on the different evaluation that society puts on the two policies designed to effect changes in the demand conditions facing a seller. The "disreputable" kill-the-rival policy and the "respectable" promote-new-custom type of price discrimination have in common that they involve selling below cost (not only in the usual sense of selling below average total cost but also in the narrow sense of selling below marginal cost) and that they are used to increase the demand for the seller's product at some time in the future. Trade is to be diverted in the one case from *definite* sources of supply and in the other from *indefinite* ones. The new custom to be fostered by promotional discrimination will not seriously injure the trade of any particular rival seller; the newly promoted business will compete with a multitude of products and services supplied by a multitude of different producers. On the other hand, the trade which the predatory price cutter acquires after his rivals have succumbed to his cut-throat competition is all inherited from the particular victims of his attacks.

Thus, one may say that discriminatory pricing which diverts trade from many unknown sellers is called promotional and considered respectable; discriminatory pricing (of substantially equal products) which diverts trade from a few known sellers is regarded as predatory and obnoxious. This may sound rather arbitrary, as if based on the fact that we know the injured businessmen in the one instance and do not know them in the other. The real moral behind the different evaluation, however, derives from the consumer's interest. His interest is furthered by the increased competition and by the enlarged scope of his freedom of choice which result from promotional discrimination; but it is harmed by the eventual reduction of competition and the restricted scope of his freedom of choice which result from predatory discrimination.

The proposed criterion for distinguishing promotional from predatory discrimination—injury to unknown versus known competitors—does not, however, fit all instances of promotional discrimination. A seller may wish to promote a new type of product and know full well who will be the competitors harmed and perhaps eliminated by his competition. He may wish to introduce in a certain locality an improved kind of product or service and may feel it necessary to resort to local price discrimination in order to overcome consumer conservatism. Sellers of the "old-fashioned" product or service that will be replaced by the novel one, may be severely damaged; we and the public at large may know these sellers as well as the newcomer does; and yet his discriminatory practice may not be disapproved or regarded as predatory. The criterion which in this case distinguishes promotional from predatory price discrimination is the fact that it is a modern and better product or service which is offered to the buyers and that, if certain sellers should be forced out of business, the public will nevertheless be served better than before.

GIVE-IN-IF-YOU-MUST VERSUS PLAY-THE-GAME

To REDUCE a price quotation in order to meet a competitor's price is a practice generally accepted as fair and sound even if it is discriminatory. But price discrimination with the intention of meeting competition is not always of the give-in-if-you-must type. The seller who participates in a pricing scheme which the industry has adopted in order to reduce competition is also wont to say that he quotes the same price as his competitor because he must "meet the competition." How can we find out whether he merely "plays the game" or whether he "gives in" to the customer because he needs his order and cannot land it otherwise? How can we find out whether he meets competitors' prices to maintain a scheme of regulated competition—nonprice competition—or rather to take business away from them?

A firm is not always equally anxious to get more orders; at one time it has a backlog of orders, at other times it is in need of more business. If the firm is not a party to a pricing scheme, it will sometimes ask higher prices than the competitors, sometimes undercut them. There is no reason for quoting always the same prices as the competitors—unless this is a rule of a game that they all play.

A firm which meets a lower price quoted by a competitor, and does so because it badly needs more business and must fight for it, will not always just meet the price but will also undercut it. If the firm earnestly means to compete, it will not allow an order to go to the competitor when it can afford another slight concession that might clinch it. But to lose the order rather than do a little more than meet the competitor's price makes sense if the firm "plays the game."

A firm which engages in price competition and fights for business for delivery to very distant places, and does so by absorbing plenty of freight and meeting the competitors' prices, will also fight for the business of its near-by customers. But to leave this more profitable near-by business to its competitors without a fight, to let them take the most desirable orders and to make no attempt to fight back by offering a slight price concession—in other words, to compete for bad orders with high freight charges but not to compete for good orders unburdened by high freights—this makes sense only for a party to a collusive scheme.[29]

A firm which practices the give-in-if-you-must type of price discrimination acts in secrecy; a firm quoting discriminatory prices as it "plays the game" has a policy of open prices. The former engages in price competition, the latter observes price maintenance. The former reduces prices paid by consumers, the latter increases freights paid to railroads.

The discriminatory pricing of the give-in-if-you-must type is the result of individual bargaining in the course of which the seller realizes that he cannot get the order at the price he first asked and reluctantly gives in to the buyer's arguments. The discriminatory pricing of the play-the-game type is a matter of systematic list-price quoting, the seller sticking by the list and the buyer realizing that negotiations for concessions would be of no avail.

There are probably still more differences between the two types of discriminatory pricing. It should not be difficult to keep the two types apart. Any confusion that may exist about the matter arises from the attempt by counsel of formula-price quoters to explain their pricing system in terms of "meeting the price of a competitor." The attempt is understandable because, if successful, it would make a collusive practice appear as if it were one of vigorous price competition.

4. *Discrimination and the Public Interest*

CLASSIFICATIONS and descriptive discussions of the classified types are not sufficient preparation for appraisals. Evaluations of the effects of the various types of discrimination can be made only after careful analysis. But most people are impatient and prefer hasty generalizations and tentative conclusions now to promises of well-reasoned generalizations and judicious conclusions later. They want

29 Machlup, *op. cit.*, pp. 177-180.

to know now whether the Robinson-Patman Act should be given more extensive or more restricted interpretation and whether certain legal prohibitions may possibly hit socially desirable forms of competition worse than the harmful practices against which these prohibitions were primarily directed. Perhaps we can make concessions to the impatient and comment on some possible presumptions regarding particular types of price discrimination.

I should like to warn, however, that my classification, not being based on principles relevant to public policy but rather on an eclectic combination of criteria designed to include most of the discriminatory pricing practices found in business, is not the best framework for a discussion of policy. After all, the sellers' motives or techniques were given as much attention as their possible effects. But I submit that an indiscriminate catalogue of discriminatory practices has at least one advantage: the issues are less likely to be prejudged by the selection.

THE FAVORED AND THE ILL-TREATED

DISCRIMINATION is always against some buyers and in favor of others, and the former often complain. There are no accepted standards for determining whether the buyers who pay the relatively high prices are being exploited by the seller or whether the seller is being exploited by the buyers who pay the relatively low price. Both complaints may be made at the same time and there is no safe ground on which to decide the issue.

In some instances it can be shown that the less-favored buyers are not put to any real disadvantage by the more favorable treatment of others. Indeed, they may even be better off in consequence of the discriminatory policy. For example, the price they have to pay may be high relative to the price paid by others and yet, at the same time, lower than the price they would have had to pay in the absence of discrimination. This may be so because discriminatory price reductions may permit the sale and production of a larger output and resulting economies may permit this increased output to be produced at lower marginal cost. One must not assume, however, that this is a frequent case, although much is made of it even where it cannot possibly apply.

Very often buyers do not know whether they are beneficiaries or victims of price discrimination. Sometimes the discrimination is in favor of those who pay the higher price while the ones who pay less are actually discriminated against. This is the case when a cost differential would justify (and, under competitive conditions, create) a larger price differential than the seller charges. For example, he may fail to charge the full fabricating cost to the buyers of a more fabricated product because their demand is more elastic than the demand for less fabricated products. Or, a seller of season and off-season services, or peak and off-peak services, would discriminate against off-season or off-peak consumers if he did not charge them sufficiently less to account fully for the fact that a portion of the firm's fixed capacity was installed only to serve the season or peak consumers, who alone ought to be charged for its cost. The ill-treated consumers believe they are favored by a lower rate while in fact they pay part of the cost of the service to other consumers.

The buyer under the let-him-pay-more type of discrimination is also quite satisfied with the treatment that he receives. For while the price he pays is an extraordinarily good one for the seller—who therefore discriminates against this buyer—it is also a very good one for the buyer, who is getting the product more cheaply than if he had to buy it through the ordinary channels of trade.

Promotional price discrimination is probably resented by the old customers who must pay the regular price while new customers are favored by introductory offers. If the practice relates to retailed consumers goods, the old customers may easily get into the group of new buyers. But the old subscribers of journals and magazines are sometimes irritated and feel like suckers because they must pay so much more than the new subscribers. The same is true sometimes when buyers pay the regular price for merchandise which they could have bought a few days earlier or later at a stock clearing sale. But the irritation is not serious because they know that next time they may be the beneficiaries of this type of discrimination.

Sometimes the victim of discriminatory pricing will readily concede the fairness of a higher charge. For example, when a newspaper with large circulation has to pay much more for permission to print a syndicated feature, column, or comic strip than a paper with small circulation, there will be scarcely any recriminations on anybody's part. The "ability to pay" principle of taxation is carried over with all its connotations of fairness and justice into the field of exploiting intellectual property protected by copyright.

There are tricky cases of discrimination where it is hard to find out whether a buyer gains or loses by the practice. Consider the case of the buyer of a product, priced under a multiple-basing-point system, who is located in some outlying region. He pays a delivered price which of course is higher than the delivered price paid by more centrally located buyers; but, in terms of the mill-net prices received by a seller shipping from a mill far from the applicable basing point, the buyer appears to be the beneficiary of a price discrimination implied in the freight absorption by the seller; yet the operation of the system may have been responsible for a location of industry which works to the disadvantage of this same buyer in that the establishment of a mill in his region may have been prevented in consequence of this pricing practice. Thus, he pays a higher gross price, is favored by discrimination in terms of net prices, and is injured in terms of long-run supply prices under the resulting location of industry.[30]

Predatory price discrimination has several peculiar aspects. Most of the buyers who are discriminated against will not be aware of it, inasmuch as the local price cutting takes place in a different locality. The buyers whom this price cutting favors will benefit from it while it lasts, but may pay for it later if and after it removes local competition. The complaints against this kind of discrimination, however, arise not from sympathy with the consumers who may be exploited when prices are put up at some time in the future, but rather from partiality for the local competitors who lose money because of the low prices charged by the perpetrators of the discrimination.

PRIVATE VERSUS PUBLIC INTEREST

COMPLAINTS about injured interests of special groups in the economy are rarely safe guides to sound appraisal of the public interest. If society were to prohibit all instances of price discrimination against which the interested parties have protested, and were to condone those about which the interested parties have been silent or satisfied, the economic welfare of society would probably be reduced. I am not suggesting that private complaints should be overlooked. They must of course be investigated. I merely submit that injury to the public interest is not correlated with the presence or loudness of private protests.

Every instance of price discrimination implies two distinct deviations from the competitive norm. Since discrimination is based on the exercise of some degree of monopoly, it reveals the presence of monopoly and thus points to the likelihood of distortions in the allocation of resources among the various lines of production. Dis-

[30] *Ibid.*, pp. 151-156, 241-247.

criminatory pricing, secondly, implies distortions in the distribution of the products in question. The second distortion may either alleviate or aggravate the first. For example, while the exploitation of a monopoly position would imply a restriction in the production of a certain set of products, the application of price discrimination might, in the particular case, tend to raise production above the volume most profitably sold under nondiscriminatory pricing. However, the two effects may just as well be additive and the combined result would then be worse than that of monopoly without price discrimination.

One way of appraising instances or types of price discrimination would be to take the existence and degree of monopoly for granted and to ask whether the application of discrimination would more likely increase or further restrict the volume of monopoly output. This way of appraising, however, would be shortsighted for it would neglect the effects of discriminatory pricing upon the maintenance, fortification, or relaxation of the underlying monopoly positions. These effects may be more important, in the long run, than the direct effects upon the output of the monopolized products. Under certain circumstances price discrimination tends to induce a monopolistic seller to sell more than he would sell at a uniform price; but at the same time the practice of discrimination may be important for the maintenance of his monopoly position. If so, the fillip that discrimination might give to the current production volume would be small compensation indeed if society had to forego the expansion of the industry that might come with a gradual weakening of the monopolistic positions involved.

An examination of types of price discrimination cannot enable us to form judgments upon the output-expanding or restricting effects of the discriminatory practices. Such judgments presuppose investigations of the circumstances of each case, particularly of the elasticity estimates of the separated markets and of the cost conditions of the firms in question. It is possible, on the other hand, without studying the precise circumstances of each individual situation, to come to a tentative judgment of effects which discrimination of certain types tends to have upon the maintenance, fortification, or relaxation of the underlying monopoly position. If it is an accepted principle of public policy to combat private monopoly wherever it is found to be serious and avoidable at a reasonable social cost, and to prohibit practices the effect of which may be to lessen competition, an attempt to judge discriminatory practices from this point of view is undoubtedly in order.

THE EFFECTS UPON COMPETITION

LET us then review the types of price discrimination that were included in our classification and size up the contribution they are likely to make either toward maintaining and reinforcing or toward weakening the monopolistic positions of the firms concerned. We shall distinguish four categories: (1) where the presumption is strong that the practices will aid in maintaining or strengthening monopolistic positions or in reducing competition; (2) where the presumption is strong that the practices will tend to invigorate competition; (3) where there is no strong presumption either way and the effects more likely are either neutral or harmless; and (4) where nothing can be said without a more careful analysis of the circumstances of the case.

1. *Aiding monopoly, injuring competition*: The keep-them-in-their-zones type and the hold-them-in-line type of price discrimination are devices by which a monopolistic seller may regulate or restrict competition among his distributors or fabricators, devices used in the enforcement of all sorts of monopolistic arrangements, such as division of territory and resale price maintenance. The protect-the-middleman type of discrimination, if not combined with zoning or black-list arrangements, may be a mild policy with similar purposes.

The favor-the-big-ones type of discrimination likewise can be used to reduce competition in the markets in which the distributors, processors, or fabricators sell. But this policy need not always be injurious to competition and may even invigorate it, at least in the short run. Only if the small distributors, processors, or fabricators are squeezed out of the market will the long-run effects of this practice be unfavorable to competition. This difference between short and long run must be observed also with the kill-the-rival type of discrimination, for only if the rival is eliminated will competition be injured. If the policy, though pursued with this end in mind, turns out to be unsuccessful, if competitors are merely squeezed but not squeezed out, the effects may be favorable to competition. It is very difficult, if not impossible, to legislate a prohibition of these types of discrimination in such a way that it applies only to those instances in which competition is really injured. The danger is great that legal prohibitions are too extensively interpreted and through the discouragement of competitive discrimination reduce competition more seriously than it would be reduced by any of the practices designed to get rid of weak customers and weak competitors.

The play-the-game type of price discrimination is unquestionably harmful to competition, not on account of the discrimination but rather through the collusive scheme that is involved. Nevertheless, participants of the "game" have been prosecuted for charging discriminatory prices rather than for conspiracy in restraint of trade—just as offenders of all kinds have been prosecuted for income tax evasion.

2. *Aiding competition*: Among the practices which often invigorate competition are the give-in-if-you-must type and, in some of its forms, the forget-the-cost-difference type of price discrimination. It would be too bad if these were prohibited or even discouraged. Likewise, the dump-the-surplus and clear-the-stock types of discrimination provide outlets for the competitive spirit where it may be under restraint in the ordinary business. Again, legislatures should be careful lest some sellers be kept from resorting to these methods of competing.

The promote-new-custom type of price discrimination may invigorate competition in the short run as well as in the long run.

3. *Neutral or harmless*: Among the neutral or harmless types of price discrimination are the haggle-every-time, the let-him-pay-more, and the appeal-to-the-classes types. Harmless though seriously irritating is the make-them-pay-for-the-label type.

The switch-them-to-off-peak-times type of discrimination is probably neutral in that it will hardly make the public utilities that practice it more monopolistic or the theaters or hotels less competitive—if indeed the rate differentials in question can properly be called discriminatory in view of the cost differentials that are usually involved, though visible only to the sophisticated analyst.

The match-the-freight type of price discrimination may be listed among the neutral or harmless ones, with the warning that the systematic use of pricing formulas such as those euphemistically called freight equalization systems do not belong here. Freight matching is not price matching, and its occasional use in price competition is quite different from its systematic use in nonprice competition.

4. *Require case studies*: The other types of price discrimination cannot be evaluated without case studies. There is no presumption

that their practice tends either to strengthen monopolistic positions or to invigorate competition, but neither is there a presumption of their neutrality.

To be sure, there seems to be no obvious way in which the practice of the size-up-his-income type of discrimination, or of the measure-the-use type, could contribute to either monopoly or competition. Undoubtedly they could not be practiced were it not for the protected position of the seller, but the question is whether and how this protection might be affected by its exploitation. One might perhaps say that prolonged practice results in public acceptance and this tends to strengthen the social or legal arrangements on which the protection of the seller's position rests.

The four remaining types—get-the-most-from-each-region, charge-what-the-traffic-will-bear, get-the-most-from-each-group, and get-the-most-for-each-product—are the ones for which economic theory has developed its intriguing geometric and algebraic techniques of analysis, based on the assumption of a maximum squeeze of the buyers to attain maximum profit for the seller. One might argue that the optimal exploitation of a monopolistic position will *ipso facto* help toward its maintenance and reinforcement. But an argument of such generality will hardly be accepted as a sufficient basis for public policy. If public action be proposed against these discriminatory practices, the supporting argument will have to rest on other grounds and will presuppose more specific research and analysis. And if a good case can be made against these discriminatory practices, it may still be inexpedient to outlaw them and to embark on a hopeless task of enforcement; it may be more feasible to attack them indirectly by attacking the monopolistic positions that make them possible.

COMMENT

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MACHLUP describes with a wealth of picturesque detail the various forms which price discrimination can take and he places them within a classificatory framework. I do not propose to subject his classification or analysis to any close examination. My purpose is to indicate certain broad conclusions to which, I think, consideration of his paper should lead us.

Machlup's treatment shows that it is practically impossible to confine a serious discussion of the problem of price discrimination to the case of a single product sold at different prices in different markets. Early in his paper he refers to price discrimination as "selling (leasing) at prices disproportionate to the marginal costs of the products sold." He adds that if the "markup" over marginal cost varies from one product to another, there is discrimination.[1] Even in the simplest cases, Machlup tells us, the costs incurred in supplying different markets will not be the same and it is necessary to analyze the position in terms of "net prices." It is clear that, in most cases, a seller wishing to discriminate would differentiate his product, in part so that the consumers will sort themselves out into the various groups between which it is desired to discriminate, in part to conceal the existence of the discrimination. But this is by no means the whole story. The fact that for an undifferentiated product the elasticity of demand would not be the same for the various groups is likely to mean that the demand is not the same in other respects and that sellers will find it profitable to produce different products (or grades of product) for the various markets.

All this is recognized by Machlup. But he attempts, or so it seems to me, to handle these problems while retaining the simpler system of analysis. If I exaggerate, the reader can judge. But if it is agreed that we are in effect dealing with a multiproduct firm, it would appear to be an undue simplification not to take into account explicitly that the costs of and the demands for the various products will often be interrelated. Machlup does at one point explain that to take account of interdependent demands "requires a more complicated apparatus than that traditionally employed in geometric price analysis." But it is not so complicated as to be unmanageable, and in Machlup's case we can be sure that it was respect for tradition rather than a distaste for intellectual subtlety which led him to exclude from his analysis the problem of interrelated costs and demands.

A more serious objection to my argument might be that, if accepted, it would result in the problem of price discrimination being swallowed up in the general monopoly pricing problem. This is so. And I approve of it. If I may be allowed to speak softly so as not

1 I would observe that if prices are to be proportional to marginal cost, it is necessary that the markup over marginal cost should vary from product to product (except in the case in which marginal cost is equal to price and the markup is zero), and consequently there would appear to be an inconsistency in Machlup's criteria for price discrimination. However, he indicates that he is not using the word "proportionate" in a precise sense and he is no doubt aware of the difficulty.

to revive the marginal cost pricing controversy, we must recognize, it seems to me, that to make prices equal to marginal cost would have undesirable results and furthermore that not to make prices equal to marginal cost would also have undesirable results. Insofar as we are concerned with public policy, the question is always one of choosing out of the practical alternatives the one which *on balance* seems to give the best results. Which probably means that it is not possible to carry the analysis very far except on an industry by industry basis.

If we are to use our analysis as a guide to public policy, it is also necessary to take into account a point which Machlup brings out very clearly in the latter part of his paper. Situations which are alike from the point of view of formal analysis may be quite different when looked at from the point of view of public policy. We would all accept the fact that lowering the price of a product in the present may increase the demand for that product in the future, and it is a comparatively simple matter to analyze price determination in these conditions. But it makes a good deal of difference for public policy whether the increase in demand is due to the fact that new consumers attracted by the low price have acquired a taste for the product, or whether it is the result of driving away competitors (Machlup's "kill-the-rival"), or whether it is due to the fact that equipment installed as a result of the lower price in the first period makes it economical to consume more in the future than would otherwise have been the case. If we are interested in public policy, it is necessary to go behind the cost and demand schedules.

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MACHLUP'S paper on discrimination is essentially classificatory in character. A classificatory schema can be appraised in terms of two criteria: (1) its internal consistency; (2) its usefulness. I can find nothing lacking in the paper so far as internal consistency is concerned. Given the space limitations and the nontechnical language chosen by Machlup, the classificatory schema is both consistent and impressively inclusive. Concerning the usefulness of the classification of types of discrimination I have some serious misgivings. The usefulness of his schema can be appraised either from an analytical or from a public policy point of view. I am inclined to believe that it fails somewhat on both counts. In what follows I shall attempt to give the reasons for my dissatisfaction.

To begin with I do not wish to argue with the elementary categories of his schema (i.e. "let-him-pay more," "size-up-his-income," etc.). The failure of the classification lies, I believe, in the principle employed by Machlup for grouping these elementary categories into more inclusive sets. Machlup's three main classes, namely, "personal discrimination," "group discrimination," and "product discrimination," seem to have been chosen by him primarily on the grounds of expository convenience. This kind of major breakdown of discrimination types does not serve us well either in the formulation of public policy in regard to, or in the development of a unified analytical attack upon, the problems arising from discriminatory behavior. Machlup's presentation of discrimination types leads, in fact, to a rather complex jigsaw puzzle, which obstructs the emergence of a unified approach in both the analytical and the public policy dimensions of the problem. It seems to me that a somewhat more satisfactory basis for classifying types of discrimination can be founded on a threefold distinction among principles of behavior that may be adopted by firms. The three principles are: (1) the "make-the-most" or "independent maximization" principle; (2) the "play-the-game" or "collusion" principle; (3) the "kill-the-rival" or "predatory competition" principle. It does not matter for our purposes whether or not these principles are subservient to some more inclusive principle such as the maximization, the minimax, or some other over-riding principle.

Economic theorists have been primarily concerned with the discriminatory practices that arise in connection with the "make-the-most" principle. All this is too well known to require extensive discussion on my part. A few comments are in order, nevertheless. We may distinguish effectively, I believe, between cases of discrimination in which the seller is a price maker (in Scitovsky's sense) and discriminatory action arising in competitive bargaining situations. The competitive bargaining type of discrimination includes Machlup's "haggle-every-time" and "give-in-if-you-may" elementary categories. It is clear that no complex theoretical apparatus need be constructed to deal with cases of this sort. The discriminatory practices arising in cases where the seller is a price maker can be handled satisfactorily in terms of the Pigovian-Robinsonian models. A somewhat superior analytical model has been developed recently by Eli W. Clemens.[1] The Pigovian third-degree type of discrimination is

[1] Eli W. Clemens, "Price Discrimination and the Multiple-Product Firm," *Review of Economic Studies*, 1950-1951, pp. 1-11.

attacked by Clemens as a problem in *multiple-product* behavior. The other Pigovian degrees of discrimination are considered as problems in *splintering the market* in the process of maximizing profits. Clemens' analysis imparts a high degree of analytical unity to the treatment of discriminatory behavior by price makers (on the principle of "independent maximization"). The "splintering-the-market" process may be shown to include, by way of illustration, Machlup's "let-him-pay-more," "size-up-his-income," "measure-the-use," "promote-new-custom," "charge-what-the-traffic-will-bear," and "get-the-most-from-each-group" elementary categories. The "multiple-products" case may, in turn, be shown to include the "get-the-most-from-each-region," "appeal-to-the-classes," "make-them-pay-more-for-the-label," "switch-them-to-off-peak-times," "clear-the-stock," and "get-the-most-for-each-product" categories.

It is well known that public policy makers in the United States have not shown much concern over discriminatory practices that arise in the process of "making-the-most" except insofar as their effects on competitive structure and behavior may be similar to those obtaining under the "play-the-game" and "kill-the-rival" principles. In sharp contrast to the attitude of policy makers, the economists have expended substantial effort in appraising the welfare implications of discriminatory practices arising from the "make-the-most" principle. It must be stressed, nevertheless, that the economists' concern arises primarily from the fact that discrimination implies monopoly power, and it, in turn, implies a nonoptimal pattern of resource allocation.

The "play-the-game" and "kill-the-rival" principles of firm behavior lead to discriminatory practices that have been foremost in the thoughts of public policy makers. Our antitrust law comes to grip with discrimination only insofar as its effects can be anticipated on the basis of "kill-the-rival" and "play-the-game" principles of behavior. In sharp contrast to the public policy makers' interest in this type of discrimination, the economic theorists' interest has been rather mild. This is probably due to the fact that they have been unable to evolve a satisfactory approach to behavior in oligopolistic markets where the "play-the-game" and "kill-the-rival" principles are apt to be useful for purposes of prediction.

One final remark is in order in connection with Machlup's paper. His concepts have not been formulated in an operationally meaningful fashion, even though the section on "Essential Differences between Types" is devoted primarily to this task. Needless to say, Machlup cannot be blamed for this. Economists have been notoriously unable to develop operational definitions in this field of investigation. Without them the analytical results cannot be employed effectively either in the formulation of policy or in the tasks of prediction.