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REFLECTIONS ON EVOLVING COMPETITIVE
ASPECTS IN MAJOR INDUSTRIES

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by

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BACKGROUND OF THIS PAPER

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INTRODUCTION

Economic Analysis

Economic theory is a way of looking at the world of scarce resources and the ways they can be used to result in maximum satisfaction.

Economics is not a complete way of looking at the world, since psychological and institutional considerations, as well as conditions outside of human control, cause men to make decisions other than those which would be made if the only concern was to allocate scarce resources for maximum satisfaction. For example, the wants and satisfactions of a person or firm do not necessarily coincide with those which are thought to be best for the public welfare according to any of several different views. This fact complicates the economic problem and throws it into the political arena.

For ease in analysis and for theoretical necessity, two divisions of economics have been set up: microeconomics and macroeconomics. Both, in a sense, deal with the allocation of inputs and the securing of maximum income, defined rather narrowly to mean money values. The micro system, as the name indicates, deals with the small unit, the firm or the family, while the macro system is the larger unit, the whole economy or a very large segment of the economy.

Microeconomic theory occurs in a setting. The setting is not always stated by the practitioners of the discipline, but it is nevertheless

important because it restrains the individual firm in its allocating of inputs to secure given outputs. The theorist assumes that the technology is constant; or if it is not constant, he acknowledges the availability of only a limited and known number of technologies. He also assumes that the factors of production, as he uses them as inputs, have certain stable characteristics. For example, labor has a given skill, or the firm is able to buy components which are made up by combining labor skills, natural resources, and technology.

Microeconomic theorizing is an abstract but suggestive way of looking at the world. It is clearly not intended to be an image of the world. To clarify the metaphor, economic theorizing, in the micro sense, assumes that the forces and factors determining the economic decisions of the firm are known, that a market is there to be exploited, and that the characteristics of the market are as well known as the characteristics of the firm. As the setting changes, the firm's policy changes, and the analysis becomes "dynamic" or a "process."

The conventional way of applying economic theory is through so-called supply and demand analysis, which concerns itself with the relation between marginal costs (incremental costs) and marginal revenues (incremental receipts). The point at which these are equal determines the ideal position of the firm if it desires the greatest possible income. The output set by the marginal equalities maximizes the firm's net receipts.

The use of atomistic competition is obviously merely a logical or methodological device which in itself has no empirical validity. A

stable equilibrium system for an entire industry requires perfect competition with divisibility of factors, easy entry and exit, and full knowledge of the market. Industry equilibrium, then, is again a methodological device rather than an empirically valid percept.

One could assert that equilibrium in an industry means equality between marginal costs and marginal revenues. But this would not be a very useful analytical dodge, because it would not tell us very much about the conditions of equilibrium, about any particular firm, or about degrees of oligopoly or other market imperfections. Indeed the concept of a marginal cost curve for an industry is a logical device, not an empirical reality.

Supply and demand analysis, that is, the marginal conception, is not the only means which economists have devised to analyze the short-run behavior of the firm or industry. Systems of alternative costs and alternative yields, of institutional economics (basing economic behavior on custom, technology, and the law), linear and nonlinear programming -- to mention the most obvious -- have been devised, and each has an analytic content of its own. We must, in any discussion of theoretical economics, revert to Marshall's dictum that economics is an engine of analysis.

Macroeconomics, more recent in its development, is designed to provide a general theory of employment and income, with small concern about the micro units. The attempts of nineteenth-century and early twentieth-century economists to develop a system of total micro

equilibrium as the basis for a macro system have proved more suggestive than operational.

A high level of income in the macro system, which is of course related to a high level of employment, implies that the micro units are likely to have, and indeed on the average must have, a high level of income and high level of employment. The units in the macro system, labor in general and investors in general, tend to be generic classes of businessmen, consumers, savers, and investors. In other words, if one were to disaggregate the macro system, the result is not the traditional micro system, but rather, the factors of production with their Keynesian propensities and motives.

The Keynesian aggregate approach on which modern fiscal policy is based is not the only way to look at the governmental aspects of the macroeconomic system. Again we can look at macro system regulation from an institutional and historical point of view, as well as from the one made popular by Mr. Friedman in recent years -- the monetary point of view.

It should be pointed out, however, that neither the micro system nor the macro system -- in other words, neither of the theoretical modes of economic analysis -- is anything more than a set of tools and conceptions. In and of themselves they tell one nothing about the actual world. The brute facts of life, the empirical data, can be arranged, analyzed, and explained by economic theorizing; but no economic theory at either the macro or micro level tells us everything about the policies

to follow if we want an ideal world. Nor is economic theory an adequate guide to economic behavior unless one imposes on the theoretical system his political and social preferences. This point has been made over and over again by Milton Friedman and his criticism of the Federal Reserve System, and by all protagonists of policy.

Any realistic discussion on the goals of a firm or the goals of the whole society seems to the present writers to require not only a statement of a complex set of private or public ends to be secured, but also of the admissible means by which this complex of ends may be attained. Further, a hierarchy of ends must be devised, because trade-offs between goals, both at the level of the firm and at the national level, are inevitable. The most discussed trade-off is between employment changes and price changes, but it is only one of the many trade-offs which constantly occur in a world in which we have a limited set of means to manipulate limited resources to secure complex and multi-dimensional purposes. (An example, in the appendix to this section illustrates the limited but analytically necessary value of abstract theory in devising public policy. We shall use the monopoly analysis.)

In this study, we propose to analyze the automotive industry in two ways. We shall consider it as an industry, which is to say as a micro element, although a mighty one, in an even mightier macro system. We shall also analyze its effects on the macro system. Later in this discussion we shall touch on what we call externalities.

The study is planned as a rather straightforward and traditional explanation of the patterns of production, if any are to be found, in the automotive industry. Following the discussion of patterns of production, and their genesis, the patterns of distribution and the nature and location of markets will be analyzed. Wage, price, and production policies, as well as relations with suppliers and sellers will be reviewed. Finally the role of the automotive industry in the American economy will be explored.

In the discussion, we will try to make the analysis comparative. That is to say, characteristics or behavior patterns of the automobile industry will be compared to those of other large industries. Any similarity or dissimilarity will be noted, and attempts will be made to explain such relations.

The series of tentative propositions or hypotheses listed here are only a selection of the many that may be examined. These propositions grew out of discussions and are based upon no special investigation. They may ultimately prove irrelevant or quite to the point. Other propositions will undoubtedly arise as the study progresses.

1. The production of automobiles increases at a faster rate than the population and the national income.
2. Price changes in automobiles, in general, have been less marked than changes in the general price level since World War II.

3. Output has not fully utilized existing or potential technology because of the costs involved, and because of consumers' resistance to change and acceptance of the status quo. Technological changes occur as a flood rather than as a steady flow.
4. The earnings of labor and the conditions of work are high in the automotive industry compared to earnings and conditions in similar large-scale industries.
5. The present transportation of people and goods in the United States is effected with moderate efficiency by means of automobiles and trucks, although these are complementary to railroad, bus, and aircraft transport. Currently no equilibrium or balance has been reached among the alternative modalities of travel and transport.
6. The size of the total automobile industry and of individual firms is limited by the size of the market and present technology, but the distribution of activity within the industry is limited by changes in consumers' choices and preferences and by the industry's fear of antitrust activity by the federal government.
7. All divisions in a given firm in the industry are not equally profitable, but to meet competition and gain acceptance of a firm's product in the market the firm must have a multiplicity of lines, even though some entail a loss.

8. Divestiture of subsidiary firms or product lines would not appreciably affect costs. Instead it might actually increase costs and reduce service.
9. The several firms making up the industry compete with each other sharply, as is always the case when firms are in imperfect competition. But the subsidiary parts of individual firms also compete very sharply among themselves, especially in the short run.
10. The opportunities of suppliers increase as automobile firms attempt to limit their inventories.
11. Suppliers to the automobile industry are, in truth, an extension of the industry and should be included in any consideration of it.
12. The population and the pattern of industrial location in the United States, created in part by the vast number of automobiles, is now such that without this great number of automobiles it would be impossible to carry on business and private life in America. A thesis that the demographic structure of the United States is related to the volume of automobiles is not unreasonable.
13. The geography of the United States and the present technology require a personal transportation system.
14. The firms in the automobile industry represent conglomerate activities, and they are often important producers in other industries than transportation.

15. The automobile industry represents the largest self-investing industry in the United States. As such it has a marked effect upon capital accumulation and allocation in the United States.
16. Research and development has grown but slowly, because consumers have shown no pressing expectations. But public anticipations are likely to cause an acceleration in the rate of research and development, especially since problems of urbanization have concerned the federal government as well as many leading citizens and pressure groups.
17. Consumer satisfaction and price advantages are enhanced by large-scale activity and the multiplicity of product lines.

Appendix to the Introduction

The simplest proof assumes a monopolist, an assumption which would include conspirators acting in some joint, unified fashion (Fig. 1).

Monopolists would have a total cost function (TC) which would rise, and in the simplest case it would be concave to the X axis. The total receipts curve (TR) would rise and would be con-

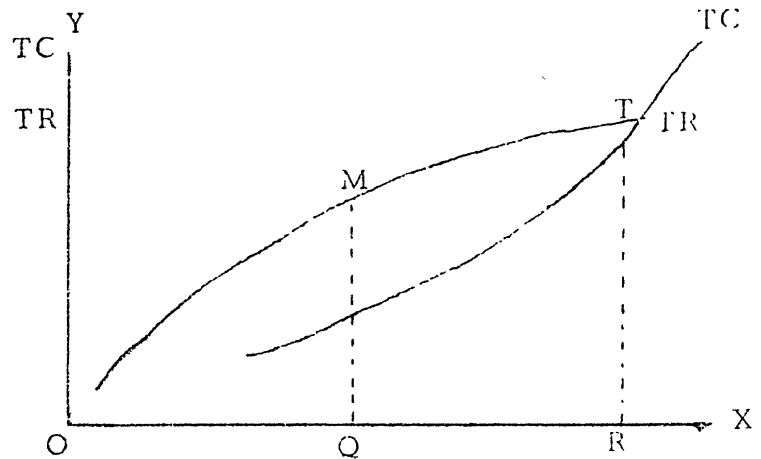


Figure 1.

vex to the X axis. If the output to be produced were determined by the crossing of the two curves, costs and receipts would be equal and there would be no pure profits. This is what happens in pure competition. But the monopolist would produce only as much as would maximize the difference between total receipts and total costs, i. e., marginal costs will equal marginal revenue.

It can easily be shown that the price per unit for the smaller output will be higher than the price per unit of the larger output.

This simple argument is not satisfactory, however, because it rests on the assumption that the technical organization of the monopolist or conspiratorial monopolist is identical to or at least no more efficient

than the technical organization of the competitive firm. We include in technical organization the production and marketing mechanisms. It is likely that the technical organization of a large-scale producer -- monopolists in our case -- is more effective than that of any smaller-scale firms; that is, it is less costly per unit. If this is so, the cost function of the monopolists and of the competitive units would be quite different. The argument hence has no simple conclusion but depends upon the nature of the cost functions in question. (The demand-receipts functions are assumed to be the same for both cases.)

The obvious advantages of large-scale units in the operations of public utilities gave rise to the notion of regulation of ownership, because the crucial question is technical efficiency rather than maintenance of competition. Another and strange possibility arises as we follow the American practice of regulation, rather than the more general practice throughout the world of government ownership of public utilities. Under present regulations applying to the American public utility, it may be to the advantage of the utility to increase its costs by technical organizational practices and claim reimbursement through an appropriate rate structure set by the Public Service Commission. Such a rate structure may mean that output is restricted to a volume below the least-cost capacity of the plant, although the Public Service Commission has, or should have, as its goal the increase of output and the lowering of unit costs, even though total costs and total receipts would rise (Fig. 2).

We have, therefore, a bargaining range between the output which

maximizes net receipts
and the output which
produces no net receipts
but in which receipts
merely cover costs. The
shaded area of Figure 2
represents the area over
which the haggling may

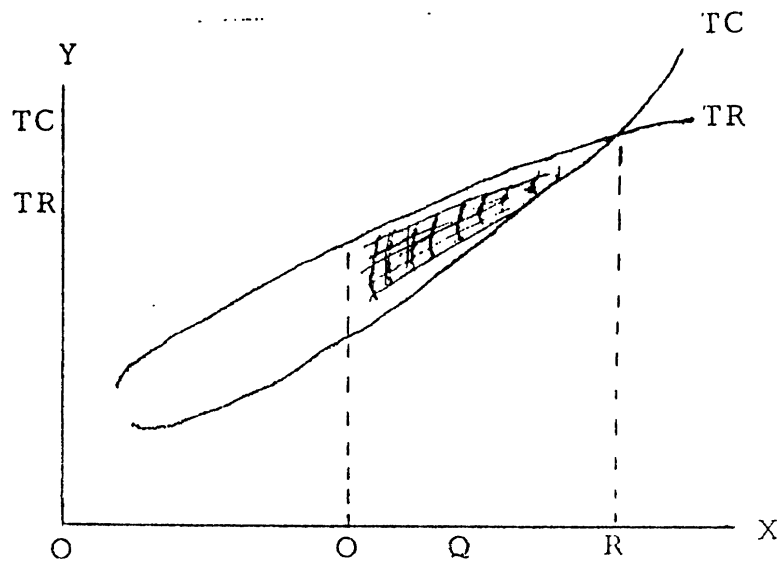


Figure 2.

occur between the public utilities and the Public Service Commission.

Even this argument, however, is too simple, because again it depends upon the nature of the cost curve, which is to say, the nature of the technical structure of the monopoly. It is easy to imagine a public utility having a choice of sizes of plants to build and choosing plant sizes which will assure a higher net revenue than plants of any other size. It may also be imagined that the plants not built might have been more desirable than the others from the viewpoint of the consumer now or in the future.

Since our major interest is in large-scale industrial and commercial activity, one may ask how utilities have come into this discussion. The important consideration which relates the regulated public utility to the unregulated large-scale firm is that the success of each depends upon the technical, organizational, and marketing or distributing mechanism. Like public utilities, the industrial firms are building for the future, and in this task the question of size of plant is a most urgent one.

Large -Scale Industries and Performance Criteria

Some Views on Large -Scale Industry

Much of our theoretical and legislative concern with large -scale industrial and commercial activity automatically falls into mental pigeonholes labeled antitrust, monopoly, or oligopoly. Once this taxonomic decision is made, the economic implications of the argument become pretty straightforward. For if the large -scale unit is equated in our thinking to a monopoly or an oligopoly, or if we have visceral reactions against large -scale activity, we see a sinister design which equals conspiracy.

Arbitrary or unconscious classification of bigness leads to a rather obvious conclusion, namely that power in the market tends to produce a smaller output than would be produced in competition, and the output will be sold at a higher unit price than would be true in competition.

Probably the most common view among American economists, with respect to the regulation of large -scale industry, is that the more competitive the structure, the greater the likelihood of higher output at lower prices.^{1/} This structuralist view is probably most notably

^{1/} The degree of competition is determined by the power of a single firm over price and output, the ease of ingress and egress of other, potentially competing firms, and the availability of knowledge.

associated with Professor George Stigler, and before him with the great Professor Henry Simons, both of the University of Chicago. In our opinion at least, such a stand fails to take sufficiently into account the efficiencies of size made possible by technology, not only in production, but also in organization and distribution. The argument of Simons -- that if a firm enjoys economies of scale so great that it is a natural monopoly then policy indicates its nationalization -- is too pat and too foreign to American ideology.

Legislation and the Control of Bigness

One finds few theoretic, much less practical and consistent, guidelines in the legislation and the court decisions on the control of bigness. The question of how to control monopoly and tendencies toward monopoly, or the question of what to do to maintain competition -- in other words, socially desirable behavior -- are answered ambiguously, because "monopoly" and "tendency toward monopoly" are defined neither legislatively nor judicially in a way that bears on operational matters. Furthermore, analyzing the relation between what the structural economists have said about competition, output, and prices, and what the courts have said does not prove any more fruitful.

Neither the antitrust legislation of the United States nor indeed any possible regulatory legislation can control, restrain, or regulate all phases of business and all the new business techniques, some of which were undreamed of when the law was passed and were beyond the experience of the judges sitting at the time. Great discretion must be

left to the courts. Indeed, the courts have quite properly assumed discretion in interpreting the Sherman and the Clayton Acts, as well as the other related acts, since they too are aware of the changing nature of markets, technology, and societal pressures and organization. One might say that, armed only with "sword in hand and God o'er head," they try to make decisions that reconcile the written law with the living world.

Nevertheless, there has been at least some point of agreement between the structural economists and the Supreme Court decisions. This hinges on structure. If the structure is somehow competitive or "substantially" competitive, the effects of economic activity are considered to be beneficial to society at large. The reasoning is that when monopoly or a tendency toward monopoly is absent, firms can enter industry if the chances of profits are especially great, or leave if they are small. If the market is attractive enough to induce outsiders to enter the market, competition increases; and the result is increased output at lower prices. Conversely, firms can cut their losses by leaving the industry. According to the argument, consumers benefit by and large from the competitive structure and the workings of competition. The court which protected competitors in the Brown Shoe case illustrated this line of thought when it outlawed a merger, although the move might well have benefited consumers.

Performance as a Test of Economic Behavior

An other view, although never well represented in American

economic thought and probably not in American judicial thought, is nonetheless a strongly held tenet of American ideology. This view is simply that performance is, or should be, the ultimate test of economic behavior.

If a big firm produces more and at a lower price than a number of small firms, then the big firm should be allowed to continue its activity, even though all the conditions of "substantial" competition are not met. On the other hand, if for any reason this firm relaxes its standards of efficiency, including price efficiency, then government is justified in "doing something about it." The something to be done may vary from divestiture, the most extreme penalty, to merely requiring changes in certain practices.

How to compare an existing firm's behavior with that of a number of hypothetical firms is of course a vexatious question. The notion of discretion -- administrative discretion -- is necessary, however, if the administration and courts are to act according to either law or microeconomic policy. This dilemma illustrates the futility of even attempting to analyze theoretically any "real" business actions. It will be recalled that when the Clayton Act was in committee, the committee had determined to regulate specific antisocial business acts which smacked of restraint of trade. This regulation was found to be impossible. The act, as passed, did not reflect the initial intentions, which were well meant but which hindsight showed to be quite impossible to fulfill.

Up to this point we have posited two measures of performance: price and quantity. To be realistic, we must consider other measures, not only economic measures but those that test a firm's performance in relation to political and social effects.

Economic dimensions of performance. The first set falls into the general category of economic criteria. These have to do with price, including its stability, the quality of goods, technical change, quantity and steadiness of output, and employment, including conditions as well as volume of employment. All the economic aspects that one considers in analyzing a firm or industry must or should be included in the criteria of performance. Trade-offs between variables are taken for granted, even if the relevant political and social values are not given. Employment criteria must be traded off against technological or quality criteria. Investment criteria must be traded off against government policy. For example, a firm faced with losses may have to lay off people or buy better equipment, in spite of a government policy against unemployment or inflation. Or a firm's performance may be high even though the quality of its product is falling, the reason being that the public requires a lesser degree of quality than is technically possible. One thinks immediately of planned obsolescence and adjustments to rapid technological change which suggest public and private policy trade-off. The economic criteria that can be used to test performance are clearly many and complex.

Political and social dimensions of performance. As we have said, a second dimension must be considered, the political and social aspects of performance. A firm or industry may satisfy the relevant economic criteria through political or social behavior. That is to say, the firm or industry in question may interfere in the politics of the society to gain an economic advantage. This political ploy may sometimes count as poor performance. On the other hand, an industry or a firm might be so large that it provided upward social mobility for many young people who, under other circumstances, would not enjoy such mobility. This would be a mark of good performance, yet its manifestation is social rather than economic.

Neither the economic dimensions nor the political-social dimensions of performance are easily defined or comprehended. The point should be clear, however, that the performance criteria applied to firms or industries must take into account the social setting and the political circumstances. One cannot of course furnish an exhaustive list of all the economic and social-political measures of performance. Rather, individual cases must be analyzed and evaluated in the light of some generally agreed upon criteria, with the understanding that these standards are often conflicting and that not all of them can be completely attained.

The Differing Significance of Industrial Classes

The Productive Process and Its Segmentation

In the preceding discussion we treated industry and commerce as if they were homogeneous. For certain theoretical arguments this might be a valid assumption. Our discussion is concerned, however, with specific forms of behavior and with specific firms or kinds of firms, and the assumption of homogeneity is therefore not useful.

As the outset we should separate commerce from production. As a result of this separation, the distributive process, including selling and advertising, as well as phases of finance, will be omitted from our discussion so that we can concentrate on the productive process. We should bear in mind, however, that the production is intimately connected with merchandising. We shall probably also find that the financing of production cannot be meaningfully separated from the technical aspects of production.

Let us resort to taxonomy to simplify and clarify the implications of large-scale production in economic activity. Economic activity covers a range in which the exploitation of natural resources is at one extreme and the production of goods for the direct satisfaction of consumer wants is at the other. This broad spectrum can be and has been divided into segments, in each of which there is at least a superficial homogeneity, largely a functional homogeneity. In respect to one important characteristic, durability, products within each segment vary widely.

At the one extreme of the spectrum we have the industries producing raw material, e. g., coal, iron, steel, and oil. At the next stage the raw materials undergo manufacture; that is, they are worked upon in such a fashion that they become heterogeneous products which have value only insofar as further production is concerned. We will call these products intermediate goods. This is a loose classification because the length of this intermediate stage varies a great deal. Some intermediate goods, such as refined oil, cured lumber, or grey goods have a very short life before the next manufacturer receives them. Even a durable machine, which is usually viewed as an intermediate good with a fairly long life, may have parts whose useful life is so short that the manufacturer counts on a replacement market as soon as the machine is sold. For our purposes, however, we can make this classification of intermediate goods.

Consumer goods are at the other extreme from raw materials. Some of these goods are clearly durable, others have a very short life, and still others fall somewhere in between. For example, once a piano reaches the consumer, it may last a hundred years or a house sixty years, but a suit of clothes may be used up in two years and a loaf of bread in five minutes.

This classification by segments is made because the economic consequence of large-scale firms at various points in the spectrum may have quite different economic and social implications. Monopoly of electric power is clearly different from monopoly of toothpicks,

because the electric power industry is significant to all phases of the economy, while toothpicks are of relatively minor significance. Even those addicted to their use can easily find substitutes. To be sure, substitutes for electric power are also available, but it would be very costly to adjust and change a whole technical process which was designed to use electric power. For this reason there is regulation of the public utility industry.

Legal Recognition of Industrial Classes

Anyone so inclined can find decisions of the Supreme Court which recognize that similar or related actions by firms and industries will differ in importance according to the place they occupy in the productive-distributive structure. The A & P case, with its provision for divesting A & P of the wholesaling of produce, is different in its logic from the Dupont-GM case, with its stock separation. Older cases also recognized this difference. The U.S. Steel decision of 1920, concerning a "basic" industry, is quite different from the Maple Flooring or Masonite decisions, where intermediate industries were involved. This recognition of the different social and economic significance of different classes of industries explains, in part, the behavior of the courts, including the Supreme Court of the United States, in respect to antitrust actions.

It is our view that actions involving conspiracy, market sharing, artificial obstacles to entry, or other practices agreed upon by the

members of an industry, as well as all other actions which are monopolistic or tend toward monopoly are not to be confused with bigness per se. We are concerned with the growth of firms through such traditional and legal means as merger and acquisition or the development of product lines and markets, the result being an oligopolistic market structure, but one quite free of collusion and conspiracy.

Determination of the market involved

Before the court can decide on the propriety of a merger or acquisition, or indeed of a complaint, it must first determine what market is involved.^{2/} David D. Martin points out, for example, that in the Cellophane case the entire market for wrapping goods was not necessarily the relevant one to consider in the decision. As the court stated, there were subcategories related to "the product's peculiar characteristics, unique production facilities, distinct customers, distinct prices, such as price change, price changes to specialized vendors. All may be given judicial notice in determining the market." Furthermore, in the Brown Shoe case, the court's conception of market control certainly differed from that in, let us say, the Alcoa case or the U. S. Steel case. To be sure, between the U. S. Steel case of 1920 and the Brown case of 1962 the antitrust laws themselves had

^{2/} "Statement of David D. Martin," in Industrial Organization and Public Policy, ed. by Werner Sichel (Boston, Mass.: Houghton Mifflin Co., 1967), pp. 159 ff.

undergone some changes, but upon reflection these changes seem relatively minor. Probably of greater significance than legislative reform are the changes that have taken place in the facts of economic life and the experience of the judiciary. The judicial mind has improved its understanding of the world, recognized the interdependency of the several parts of the social system, and noted the new values of the Congress and the general public.

Determination of appropriate behavior

For better or worse, and in our opinion it is for the better, the courts do attempt, to a certain extent, to define each case on the basis of the facts pertinent to that case. They also attempt to consider the unique or at least the moderately peculiar relations of the case to the market in question. In other words the courts, of necessity, rely on some performance criteria in determining the appropriateness or inappropriateness of economic behavior. This is as it must be, because the particular behavior of a firm, or of any number of firms, cannot be directed, restricted, controlled, or tested by legislation prior to the firms' actions.

Behavior, or behavior and intent are more meaningful in this context than organization and size. The court must be allowed discretion, given certain social goals; and discretion implies that the courts set up different categories for various types of firms or cases, and apply different criteria of appropriate or inappropriate action according to the case and the circumstances. It is impossible to define in any detail

the specific actions which Congress would consider improper, because of the wide range of behavior open to industrial managers, and because of the ingenuity of the human mind.

Determination of performance criteria

Performance criteria are equally difficult to agree upon, or, in some instances, even to measure. The former Dean of the Littauer School, Edward Mason, and Professors Turner and Kaysen have made heroic but for the most part unsuccessful attempts to devise some listing of performance criteria. It should be pointed out that, in our view, the social and political behavior of a large-scale enterprise, though neglected by most other authors, should be included in considering performance criteria, even if a specific checklist cannot be drawn up.

Stability, for example, may be a poor criterion in a world which is undergoing rapid technological change. High quality also becomes a less meaningful standard, as planned obsolescence becomes more desirable because of changing technology. Investment criteria must be judged in the light of the structural effectiveness of capital markets and of public policy. Mergers and acquisitions for technological reasons may be beneficial to consumers; others, accomplished for financial reasons, may be harmful to consumers and competitors. The only way to judge the efficiency and social morality of a firm or industry thus seems to be by means of some criteria of performance which include external circumstances.

We know that no one has worked out an acceptable, foolproof, logically consistent system of performance criteria. To expect this would be as foolish as to expect that legislation passed in 1913 or 1914 would in one fell swoop outlaw all the antisocial, undesirable, uneconomic, and downright wicked behavior of business which would occur in the 1960s. In 1914 the Congress could not even define wickedness in business.

For better or worse, one must rely upon the discretion of administrators who are sensitive to change and adjustment. Of course administrators, by which we mean those officials of the Department of Justice, the Federal Trade Commission, and the courts, need general guidelines to what constitutes appropriate business activity. The Supreme Court of the United States makes the final legal decision. But practice, convention, industrial necessity, and public acceptance ultimately determine how business shall be administered and what is legitimate. This view is not in conflict with what John R. Commons wrote two generations ago in his Legal Foundations of Capitalism.

The decision-making process of a firm involves forecasts of market size, plant size, consequences of make-or-buy policies, possible actions of competitors, the state of the nation, and so on. Such decisions make the firm what it is. In other words, a firm develops in response to economic forces, but within a framework of law and convention. Law and convention, in their turn, must adjust to the economic necessities, and in the end they do so.

A hypothetical example may clarify what we mean. Let us assume that ideally a given product should be merchandised on a larger scale than would be possible with one plant, but on a scale too small to warrant another plant. But in this case the ideal in merchandising conflicts with ideal production. That is to say, a second plant cannot be limited to producing a fraction of what a single plant produces and still be technically efficient. In such a dilemma, the manufacturer can choose to build one, two, or three plants similar to the first, or he can settle the question by adopting a make-and-buy solution. On the other hand the firm might decide that it can use its merchandising structure more effectively by acquiring a plant which produces somewhat similar or wholly dissimilar products. This decision may lead to merger or acquisition as it did in the Brown Shoe case. As this example shows, a major question in economic and social theorizing, and hence in public policy, is to treat complaints over business policy, not verbally and according to a microeconomic ideology but operationally and from a broader point of view.

The comments we have made thus far indicate the frequent irrelevance of the theoretical structuralist's position with respect to competition. Economic theory typically, if not universally, makes the assumptions that a firm is producing a single product, that technology is constant or changing within a known range, and that, in general, the future is homogeneous with the present and past. When products are jointly produced or distributed, when engineering is

undergoing constant change, and when markets of sale and purchase are not constant or not changing in a given way, theory aids us little in appraising the pricing policy or even the production policy of a firm.

If a firm's actions are to be evaluated in the light of restraint of trade or tendency toward monopoly, we have to go on its performance, viewing performance broadly, rather than relying on some received doctrine which is irrelevant to the issues at hand.

Summary and Conclusions

A Brief Summary

We have now arrived in our discussion at a point where a brief summary of the argument appears useful. First, we have argued that the industrial structure of the United States is not one in which every part is like every other part. Or, to put it another way, the parts of the structure are not homogeneous. Second, we have also asserted that structure, a specific aspect of performance, is not as significant as general performance. In other words, there are more ways to kill a cat than by choking it on butter. Third, we have argued that in the spectrum of American industries, if structural similarities exist, they are likely to exist because of technology. Fourth, we have suggested that the internal economies resulting from scale and organization are generally important in judging the success or failure of a firm. But we have also argued that the external economies and diseconomies (externalities) vary broadly, since they include not only the economic costs

or benefits to other industries and communities, but indeed the general social benefits to or costs imposed upon the society and the body politic.

Conclusion

This leads us to the conclusion that structural criteria are not sufficient to develop public policy. Satisfactory general criteria of performance have not been adduced, although several writers have attempted to suggest such broadly useful yardsticks.

A dilemma

We have thus an apparent dilemma. Structure turns out to be a poor criterion for determining public policy, for structure per se is not the ultimate goal of policy in the "real" world. Nor are universal criteria of performance useful, because the sum of the criteria may be irrelevant to particular sectors of the economic and social worlds.

Therefore, general, rigid criteria do not seem likely to help very much in measuring either what the structuralists value or what the advocates of performance as a standard would value, judging performance by, for example, a high output of good quality and at relatively low prices; and steady employment with a minimum of pressure on competitors, potential competitors, and buyers.

Structure is subordinate to performance in the sense that, at best, it is the means of achieving a certain performance. It is nonsense to make structure by itself the basis for public policy.

Suggestions about performance criteria

Our suggestion is that performance criteria cannot be general but must be devised for given cases or kinds of cases. The consideration of externalities would, in our view, make performance evaluation more flexible by adding a dimension which has not usually been considered in judgments about industrial bigness. Nevertheless performance, broadly conceived, must still remain the measure by which we can see whether industrial bigness is good or bad. Granting this necessity, instead of setting up detailed, specific criteria of performance, it would be wiser to set up general rules of performance, applying them where they are appropriate, but going beyond mere technical economic structure in our test of the legitimation of bigness.

Our argument suggests that the antitrust laws might be amended to provide rather general criteria of performance based on both internal and external considerations. All the mechanisms for relief would be continued. If a firm's actions currently accord with the conception of proper policy, because it meets high standards of performance or other criteria, but if there is a possibility and indeed a probability in the minds of the court, government, or affected parties that such performance may not persist, then the firm may be put under a court order to continue for say, five, seven, or ten years, at the end of which the case will be reviewed by the Department of Justice or the courts.

Performance criteria and corporate action

Even in the light of the present legal structure, it seems that performance criteria of the sort we have mentioned might legitimate certain actions of large corporations. One hurdle to be jumped by any firm accused of monopoly or tendency toward monopoly (excluding, of course, behavior that in itself violates the antitrust law) would be to justify its size. Justification here must or should rest on technological considerations, including sales and organization, rather than on financial considerations.

Another hurdle would be to justify the necessary connections between the financial and technological, always stressing the primacy of technology in determining size, the primacy being shown by both the internal and external advantages accruing because of size.

If the number of producing units, regardless of ownership but acting to minimize cost and maximize output per, let us say, million population, has increased or is constant, a case may be made on the grounds that internal competition within a firm leads to internal and external benefits. The externalities in such cases would be the significant consideration. Our point is that the number of competing firms may be less significant than the number of competing units in determining the performance of a firm or industry.

In the next section, we suggest a number of propositions or hypotheses related to large-scale firms. To suit the general approach

of this discussion, these are expressed in a positive fashion. In each case empirical investigation should be undertaken to test the propositions or hypotheses.

II

REFLECTIONS ON THE BACKGROUND OF REGULATION OF BIGNESS

Goals and Their Achievement

Each society has a generally, if vaguely, accepted bundle of goals that express its values. Among the different means of gaining these ends, the lines between what is acceptable behavior and what is not are better defined. In most pursuits, business, love, or academic endeavors, one can get away with a "fast one" if it is done with grace and gentility. Although law is the formal expression of social ends and law enforcement the formal means of achieving them, as everyone knows, the informal, often extra-legal, means and ends are relied on most commonly. These extra-legal modes and goals of behavior sometimes conflict with the formal ones. To some extent this divergence is tolerable, but if the gap between the actual and the approved, or legitimated, means and ends becomes too great, society will not bear it. A judge releases the son of a colleague on a technicality, although the charge is serious and fairly well substantiated. In this instance the community is up in arms. Yet a speeding ticket is fixed, and the community sympathizes with the speeder. The story of prohibition in the 1920s and early 1930s is well known; and in the 1960s and 1970s

marijuana may well follow the course of alcohol.

Similarly, the attitude of the public and the courts toward the stock market, including purchases on margin, and on minimum wages, social security, "upstream" loans, mergers, and retained earnings, or profits -- to name only a few means and ends of social behavior -- has changed mightily in a generation. The changes continue and call forth new adjustments, which in themselves generate new changes. Indeed, the Constitution is not only amended by law, but also by courts as we have seen in the Adkins case, the U. S. Steel case, and the Brown Shoe case.

Thus, a change like those taking place in technology, although coming from outside the economic system, creates legal and organizational changes within the system, and on both sides these react, one on the other, to destroy any assurance that a stable equilibrium will occur. Indeed, with such exogenous forces as technology or new trade relations, the internal adjustive changes are continuous and often of great magnitude. This is why long-range forecasting is so suspect.

Ideology

The bundle of formally and informally approved goals and the variety of generally acceptable means that constitute the ideology of the society -- are not wholly accepted by everyone. To a greater or lesser extent everyone is a social critic. Nor do all those who agree with the ideology interpret it the same way. The neo-Nazi's ideal of "Americanism" is quite different from that of the left wing liberal.

The value of a merger is often seen differently by the Department of Justice from the way it appears to those involved in the merger. The courts, themselves organized institutions of the ideology and hence subject to changing values, are the agencies that determine the validity of new or disputed forms of behavior. But the ultimate formal legitimation in a democracy is through the vote.

In reality, however, many and indeed most values and behavioral forms are advanced and given sanction outside the law and politics. The final judges are the public with their interests and pressures. Fashions, manners, amenities, and the like are sometimes made subject to law, but public opinion is stronger. Imagine a girl wearing a bikini in 1920, or a large, national firm adopting a policy of training and rapidly upgrading black employees in 1935. Even those outside the "ideological system," for example, thieves and other deliberate law-breakers, accept part of the ideology and are also often restrained by a particular ideology or behavior pattern. The thief may be good to his mother, and a hand sign binding among commodity brokers.

The economic aspects of behavior

The economic aspects of appropriate formal, or legally approved, behavior and informal, or socially approved, behavior have two dimensions which are of special interest insofar as social change is involved. They are (1) the externalities,^{1/} that is, the effects that

^{1/} An externality, good or bad, is something one gets without paying for it.

an internal action of the firm has outside the firm, for example, the effects on other firms, buyers, sellers, or the political and social systems; and (2) the requirements of technology. Technology may also be viewed as a basis of change in general, those outside the firm being the recipients of a spinoff.

Technology

Technology and externality may restrain or support each other. The direct force of industry, if we can leave aside the financial aspects, lies in its technology. Technology, including organization, makes purposeful, efficient action possible. Generally speaking, the application of technology is approved when it is market oriented, that is, when it reduces costs, improves the product, or increases demand. But the costs of technology -- in this context both the social and financial costs -- are its restraints. Financial costs are of course direct money costs to the firm, and the social costs are the external effects of the technology. Smoke pollutes, but what is its cost-benefit trade-off, and who gains? The doctrine of a cost-benefit trade-off may in some instances be an empty concept. If so, other measures must be adduced.

A firm or industry might refrain from a particular application of technology because of its external effects. That is, it causes unemployment, it makes people ill, or it is a pollutant. Such considerations are becoming more relevant in economic analysis and in public policy than in the past. A product that is low in quality or ugly ("illth" in Ruskin's vocabulary) also poses a problem to industry, because it conflicts with

the values of the industry itself or the values of the market, formed according to general political and social ideals.

The reformer or the cynic -- and reformers are cynical about the ideological purity of business -- rely on legislation to restrain business action that is offensive. Yet in the long run informal or moral restraints are probably more effective ideological forces.

The dimensions of ideology

This brings up the idea of "social contradiction" which Marx made much of, and which the Marxists tend to misunderstand. Ideologies, legitimated either by law or by convention and custom, are not of a single piece, an unbroken unity. Hence any break occasioned by contradictory values destroys the structure. Values and behavior patterns are complicated and contradictory. Sometimes they are unrelated to each other, sometimes complementary, that is, supportive and related. The ethic or morality of dog-racing or watering whiskey has little to do with the care of children or of the indigent; administered prices may or may not be related to turning out a fine product; planned obsolescence may not be closely related to collusive activity. These are all judged according to independent values, in other words, on their own merits. As persons and as a society we make judgments about the specifics more often than we try to form a general, abstract ethical system from the total ideology. In any case, this is not possible, except on a most tentative basis.

The specific evaluations we make, although they have an ideological core, are not in themselves an ideology. That is, the judgments, evaluations, or criticisms we make are designed to test, deny, or affirm the ideological legitimacy of a particular action. They are not necessarily placed in the context of the whole ideology or even a large part of it. The view is microscopic, or often microeconomic. Quite different conclusions about ideological legitimacy or social value might be adduced, if the dimensions of the investigation were made larger and new dimensions were added to the discussion.

It is in this wider and multidimensional context that we must consider the social values and costs, including benefits foregone, of large-scale industry -- in brief, the externalities -- if we wish to test it ideologically and affirm its legitimacy. Focusing on the microeconomic system through the structural approach is only one of the available and useful means of analysis and evaluation. Widening of the scope of our inquiry and multiplying the tools of analysis will yield, we feel certain, interesting and relevant results that would otherwise be overlooked.

III

SUGGESTED ISSUES AND TENTATIVE HYPOTHESES FOR THE BIG BUSINESS STUDY

The Autonomous Industry

Monopoly, oligopoly, and competition are divisions on the spectrum of economic analysis. Oligopoly calls to the mind two words which have a sinister sound, oligarchy and monopoly; and this association leads one to take a moral stand against the word and its implications. Therefore, let us use a more neutral expression -- autonomous industry. By autonomous industry we mean, as Solo suggests, that the decisions of the firms and industry are made by the decision makers. The limit from size and span of control is frequently the skill and competence of the managers, surely one of the rare resources of any society. Neither the anticipations that influence the decisions of autonomous industry nor the decisions themselves are made essentially by the market, as they are in the case of a firm in pure and perfect competition; in other words, the firm in competition acts mechanically in response to price and quantity signals.

The two extremes -- monopoly and competition -- have little relevance to any realistic, that is to say operational, investigation

concerned with market behavior. The example of competitive industry most often cited is agriculture. But we know that agriculture in America is subsidized; and in effect the price of the product is not permitted to vary while at the same time output is restricted or increased by government decision. At the other extreme we have the concept of monopoly, a figment to provide a limit to the kinds of industrial organization. In a monopoly the single producer controls price or quantity but not both; the only exceptions are public utilities, which are regulated. Regulated industry, that is, industry whose output and prices are controlled by public agencies, is not considered in this inquiry. We are concerned with what the economists called oligopoly -- what we shall call autonomous industries -- and also with cases of imperfect competition. In technical terms, we will be interested in those industries whose firms have a slope to their demand curves -- that is, those in which price and sales are functionally related -- and in which the number of producers is relatively small. Thus, we are really examining the economic and social implication of concentrated production.

Decision Making in an Autonomous Industry

Firms within an autonomous industry can make discrete decisions about price, output, nature of product, and any other economic and business matter. Competitive firms and monopolistic firms act in a different fashion. Firms in pure and perfect competition, which exist only in theory, simply react to the signals of the market, because knowledge of the market and the appropriate technique is universally

available. The theoretical monopolist, on the other hand, reacts to the signal of maximization of profit, again a theoretical and abstract notion, without any concern for the market.

Each firm in an autonomous industry, however, makes its own decisions regarding price, quantity of output, nature of output, technology, organization, and, to some degree, prices for inputs in the light of what the other firms in the same autonomous industry might do and are doing. The goal of the firm in the autonomous industry is not maximization of profit. It is to secure an acceptable level of profit based on a price structure that gives the firm a high, or at least an acceptable, degree of plant utilization, enables it to maintain some preconceived share of the market, and, above all, assures its continuation in the business. The goal is not simple. It is a complex of several variables, whose relative significance changes with time and with differing circumstances.

A high degree of concentration in the manufacturing industry may not be general if one measures concentration by the number of firms; but it is the rule if the measures are value of production, employment, and value added by manufacturing. In brief, the economic significance of concentration is overwhelming in manufacturing.

The Span of a Firm in an Autonomous Industry

An economic definition of an autonomous industry

The legal definition of a firm in an autonomous industry is not likely to be congruent with a realistic economic definition. In economic

theory, firms are assumed to buy factors of production or resources. Realistically, this is only a half-truth. Large-scale firms buy labor as a factor of production, but generally they do not buy many other factors of production. Rather they buy specialized capital. That is to say, large-scale producers -- especially in the durable goods industries, and more particularly in the industries producing durable consumer goods -- tend to be assemblers. Components are bought and assembled into the final product. Assembly is the popular conception of manufacturing. The components which are assembled may be bought from suppliers, manufactured by the firm in separate divisions, or manufactured by subsidiaries; sometimes all three of these sources supply components. Thus, in any economic or analytical sense, the firm includes suppliers, divisions, and subsidiaries producing items not normally identified with the ultimate product of the particular firm.

Two initial hypotheses

This leads to our first proposition, or hypothesis:

(1)

For large-scale firms producing durable goods, particularly consumer goods, the major industrial action is the assembly of parts either purchased from independent suppliers or obtained through some intrafirm arrangement, from divisions or subsidiaries at competitive prices, that is, prices covering costs plus a normal profit.

The economic meaning of this hypothesis is that the division of labor occurs both inside and outside the firm as defined by law, and this division of labor is a justification for large size. Since size is, in part at least, determined by economic efficiency, the economic efficiency criterion, if one is to be adduced, must incorporate more than the efficiencies of the firm itself and include the efficiencies of the suppliers.

This proposition is interesting, because the supplier will in many instances be supplying assemblers in different industries or in the same industry. Consequently we propose a second hypothesis:

(2)

When the components to be supplied can best be produced through a large-scale operation, the suppliers themselves become large scale. They then, whenever possible, contract for supplies from their own complement of sources. An example of such a secondary source is the rubber industry.

If these hypotheses are verified, then it would appear that producers in autonomous industries support, in their train, industries which are sometimes no less autonomous. In a sense, the reliance of the large-scale unit on the suppliers makes large-scale units dependent upon each other. A bilateral monopoly might result. However, if suppliers are small, they may under special circumstances

be protected against bad economic weather by the umbrella of the large buyer. In contrast, there is also the chance that the small supplier may face a monopsony, if the product in question is easy to obtain.

Autonomous Industry and Its Suppliers

To learn if the size or concentration of an industry is an instrument used to oppress or assist small suppliers, a comparison of the forms this oppression and assistance have taken would be an interesting and valuable exercise. Such a study would investigate the frequency of instances in which suppliers deal with certain large-scale buyers, and the effects of such dealings. The proposition or hypothesis offered here is:

(3)

Large-scale corporations in autonomous industries tend to attach suppliers to themselves. The effect is that the suppliers are treated as if they were a subsidiary or division of the large corporation. Frequently this is to the advantage of the supplier, since it puts him in a protected position that permits him to risk the loss of customers among firms competitive to his major buyer.

Autonomous Industry and Its Buyers

To balance the above discussion we should consider the relation of large corporations to their buyers. This relationship occurs on two levels: primarily it involves large corporations and their distributors; second, it concerns the relation of the distributors to the ultimate buyers.

With respect to the first, we would offer the following proposition or hypothesis:

(4)

Large-scale techniques of distribution are required by the large-scale production, but the very success of the techniques of distribution in their turn reacts upon investment, requiring large-scale investments.

By this proposition, we mean that the social requirement of distribution is that it be widespread and that it supply services, especially for consumers' durables. The technique of distribution by franchise or any other second-party method creates, in a sense, a high degree of competition, since in densely populated areas the buyer is likely to have a large choice of markets in which to buy. This is true in the appliance industry, in the automobile industry, and in the liquor industry. For very large buyers it is true even in such industries as steel.

Since prices and conditions of sale are easily ascertained by the ultimate buyer, he can shop around; and, if the market is lively

enough he can be certain that with enough others shopping around each seller will reduce his price to approximately the same price as the other sellers. In brief, the demand curve for each distributor would be a band showing a rather narrow dollar range with no slope. If the product is desirable and easily available, the total (sloped market) demand of the product may move to the right as income rises; that is, the product will have a high income elasticity. Such a condition may in turn require more investment or output by the corporate producer. This is probably one reason why many firms overbuild when their industry is stable and has good advertising and marketing mechanisms and when the population is growing.

Autonomous Industry and Middlemen

Our next proposition is related to the previous one:

(5)

Large corporations in an autonomous industry have to protect the ultimate buyer by seeing that the middlemen provide adequate service. If necessary, they must assist in providing such service.

The obvious case is the automotive industry, but the proposition applies also in general to the appliance industry.

Large producers haven't always been successful in this aim, but their very lack of success has caused them to make attempts toward

improving the relations between buyers and middlemen. Examples are the training of automotive mechanics by the automobile industry and the training of TV repairmen by the television manufacturing industry. The greater the competition among the middlemen handling goods, the better off is the consumer, and incidentally the producer. The middleman becomes to some extent akin to a seller in pure competition, one whose decisions are made by the market rather than in response to his own needs.

The social cost in such cases might be an investment in distribution, and possibly in advertising far beyond what would be required to sell a reasonable volume of the product, and hence prices would be raised by the advertising and distribution costs. Whether or not this happens is certainly worthy of investigation. Therefore, we would offer the following proposition and hypothesis:

(6)

Distributors of the goods of large-scale producers in autonomous industries tend to be in highly competitive positions in which profits are about normal. They are also likely to receive assistance from their suppliers.

Autonomous Industry in the Social Complex

Unquestionably industry, especially large-scale industry affected by endogenous factors, is a significant link in the chain determining

the level of income and employment. The multipliers and accelerators operate through both the money mechanism and the "real," or business, mechanism. To argue, however, that depressions are caused by the policies of large-scale firms reacting to market forces is to mistake the nature of decision making. All industry, large or small, operates in terms of anticipations formed according to the signals of the market. These anticipations are thus the product of forces which, in the main, are exogenous to the firm in question. If a firm expects prices to rise, interest rates to fall, or skilled labor to be scarce it will act in one set of ways. If, on the other hand, it expects prices, employment, and interest rates to follow some different course, the firms will decide to act in a correspondingly different fashion.

Interest rates, levels of employment, availabilities, and all the other conditions which are considered in decision-making are beyond the control of even the largest firms in the United States. No reputable thinker would argue that the firms deliberately choose to follow diabolically dysfunctional programs. Even the revolutionary critics of capitalism argue that the nature of capitalism, not the nature of a firm, causes depression or other untoward circumstances.

Government policy

Some fiscal and monetary policies of the government are adopted to correct dysfunctional situations; but in fact they might cause dysfunction or intensify already awkward circumstances. For example, a tight money policy designed to restrict price increases may, in truth,

cause businessmen to make more inventory purchases in the fear that the policy will continue for some time. As a result interest rates will be even higher or credit less available than at the present. To be sure, the large-scale industries have a greater effect than the smaller ones in such circumstances; but, whatever the effect, both the large- and the small-scale industries will be responding to an external stimulus or set of stimuli, and they cannot be held answerable for it.

This leads to the following proposition or hypothesis:

(7)

Traditional fiscal and monetary policies of government, insofar as they are designed to restructure the money, labor, or capital markets, may be frustrated by the rational and often defensive policies of business.

Yet the converse is also true. Where a government policy is viewed as viable, socially essential, and conducive to the well-being of either industry or communities, large-scale firms in autonomous industries might and often do undertake parallel actions that are oriented toward social rather than internal goals. Some examples will illustrate. During World War II firms in Detroit pooled their labor force instead of hoarding it. At present universities receive gifts, grants, and fellowships from firms which have no assurance that they will directly benefit from their gifts. The present concern with social and racial discrimination has led industry to undertake training programs which,

although often subsidized by the government, are nevertheless costly to the firms. We must recognize distinctions in the policies of autonomous industry when we discuss their social aspects. Some may be defensive and thus to some extent frustrate the government policy, or they may be in support of government policy.

One might hypothesize that the attempts to frustrate government policy -- for example, forward buying because of fear of tight money in the future -- are usually short run. If they are persistent, then the wit and wisdom of the Congress and of administrators are brought into play in an effort to reduce the countereffect. At any rate, government policy is and can be frustrated by either large firms or small firms, or by both consumers and producers. There is hence no general justification for government interference to control industrial size. This, of course, does not argue that there is never any justification for governmental interference, but rather that particular instances of interference may not be appropriate.

A proposition or hypothesis that is the converse of the preceding one would be:

(7a)

Government policy may be supported, strengthened, and extended by the actions of autonomous industry, when the policy has a social aim that is considered vital.

Externalities

A frequent criticism of concentrated industry -- autonomous industry in our language -- has been that it erects barriers preventing entry by potential competitors. Professor Joe Bain, probably the country's leader in this field of analysis, finds that the greatest barrier to entry is the sheer size of the investment needed even to start a large-scale business. We will accept Bain's finding on this point and go on to look at the other barriers that he mentions. Granting that they are less significant, they are nevertheless important.

Advertising and sales promotion

The other great barriers to entry that are associated with concentration, according to Bain, are created by advertising and sales promotion. He starts with the premise, derived from previous study, that in many industries the actual size of plants exceeds the optimal size. In other words, many plants are larger than is necessary to achieve the lowest unit cost. One may criticize this analysis, in our opinion at least, on the grounds that Bain did not give sufficient weight to the firms' anticipations and to peculiarities in the market which might have caused them to build beyond the minimum size necessary for optimum output at the time. (In passing, we should assert that economic theory analysis generally tends to underestimate the significance of the future in present decisions.)

Nevertheless, to follow Bain's argument, he goes on to assert that large advertising campaigns to build up national sales of consumers'

goods confer significant and persistent advantages to the advertiser. Such advertisers are concerned with nationwide promotion, generally through national media, and as a rule they also enjoy nationwide distributive and servicing outlets. Bain writes,

There is yet a third sphere -- in our sample, over a third of the industries examined -- in which the interaction of the exploitation of nationwide sales promotion opportunities and of economies of scale of nationwide distribution confers lower promotion plus distribution costs on very large firms, and in which deconcentration might well be an uneconomical operation unless the institutional basis of sales promotion were seriously and directly altered. Deconcentration, per se, in this area will be a questionable operation; deconcentration together with alterations of the bases of product differentiation and sales promotion would, if feasible and desired, probably be economical. 1/

The obverse of Bain's argument is that if the large-scale firms in autonomous industry have effective nationwide sales promotion and distributive systems, the possibility of entry by a new competitor is relatively small, because the competitor would have to face an entrenched and efficient combination of products which, for one reason or another, have a wide public acceptance. Any change in public policy here would not be based on questions of efficiency. Economic by-gones are by-gones, and the history of how firms developed distributive, promotional, and productive facilities is beside the point. If

1/ Business Organization and Public Policy, ed. by Harvey G. Levin, p. 172.

present efficiency would not justify intervention, then intervention must be justified because of some novel concept of public policy and public propriety.

A proposition or hypothesis which can be offered on the basis of this discussion is:

(8)

Government intervention to secure some degree of deconcentration in an autonomous industry which has an effective promotion and sales mechanism, and an effective and efficient productive mechanism, would require other than an economic justification. However, where a new firm's freedom of entry is restricted for reasons other than the large investment necessary for efficient production and distribution -- e. g. , collusive agreements, patent restrictions, or control over some essential raw material -- then the barrier may be considered artificial or uneconomic, and the government might very properly take steps to reduce such barriers in the interest of efficiency.

Distribution of income

Every society faces the problem of the distribution of income. It is argued by some that the distribution of income in the United States,

skewed as it is to the wealthier, represents a social burden. According to these people, a more nearly equal distribution, that is, a smaller spread between minimum and maximum and a greater concentration about the middle, would be desirable. The counterargument, of course, is that income is distributed in accordance with productivity, and the wealthier are in fact more productive than the less wealthy. But this point loses some of its force when one considers that inheritance and chance events improve the economic circumstance of some and not others. Those who argue for a lessening of the inequalities in income are often motivated by compassion as well as by the belief that higher incomes for people in the lower brackets gives their children a better chance to become educated and to acquire the skill and confidence that will enable them to earn still higher incomes.

These arguments, by themselves, have no direct bearing on the concentration of large firms, unless it can be shown that large firms, as a matter of policy or operational necessity, skew the income distribution to the wealthy and deny it to the poor. The effect of large corporations on income distribution would be an interesting and rewarding subject for research.

A priori it would seem that if large corporations have any effect at all on the distribution of income, it is to reduce the spread for their employees, and hence for society at large. First of all, most large corporations bargain collectively with unions, or they pay wages equivalent to union wages. Union rates tend to be approximately

20-25 per cent higher than rates to people outside unions who are in similar occupations or have similar skills, so the effect of collective bargaining is generally to raise the lower income group's position in the income hierarchy. Despite the fact that a few high officials in large corporations receive enormous incomes from salaries as well as stock options and other bonuses, the main tendency is toward equalization because the number of people in these preferred positions is small, and the amount of their income is small in relation to total income. Nor is there any a priori evidence which suggests that top management's incomes -- defining income in its broadest sense -- are smaller when the companies are smaller. This, too, would be an interesting area to investigate.

We offer the proposition or hypothesis:

(9)

The effects on income distribution attributable to large-scale firms in autonomous industries are to reduce the national income spread and to raise the level of the lower-income fraction of the population.

It should be noted that the progressive personal income tax is an effective mechanism for reducing the disposable income of those who receive very high incomes. More sophisticated legislation with respect to bonuses, stock options, and the like would have the same effect.

Racial discrimination

A social problem even more significant than income distribution in recent years has been the charge of racial discrimination. Unlike income distribution, racial discrimination poses questions that cannot be solved or greatly affected by law or unionization. If income distribution is not agreeable to the values of the Congress, that body can tax and transfer wealth, and so redistribute incomes. The Congress is powerless, however, to distribute or redistribute good will or public acceptance of minority groups. Nonetheless it can lay out general policies, and it can more easily enforce these policies among large units of society than small units. To put it bluntly, it is probably more likely that a large firm will obey a congressional mandate regarding nondiscrimination, and easier to ensure its compliance, than when the same mandate confronts small firms, that is, companies with possibly 500 to 1,000 employees. Among autonomous industries the mechanisms for enforcing social legislation are probably similar, because the impersonality of their relations with their employees is similar. The social climate is probably the telling factor when firms behave differently in different regions.

For Adam Smith the invisible hand grasped the welfare of the society while reaching for the benefits provided by the firm. What he called the invisible hand, of course, is what we call the externalities. As we know, some are beneficial to society while some are detrimental; some are beneficial to parts of the society while some are detrimental to

other parts. In essence, the externalities are effects of actions by an agent over whom the recipient of the effects has no control. A firm decides on a certain process which requires a great deal of water, and the sewers increase the waste thrown into a lake or stream and so cause pollution which affects the entire local population. The pollution is an externality. On the other hand, to improve its economic position, a firm sets up a training program. Many young people who are thus trained are able to go to other shops in other cities and earn good wages. These young people -- and society -- enjoy an advancement, not a regression.

Adverse externalities

Sometimes a firm realizes that a certain decision will have unpleasant effects on society and the community but proceeds to carry it out anyway. For example, a firm uses a smokestack without providing proper safeguards to prevent the ash from being blown into the air. This ash is an external cost to the society -- not necessarily a dollar cost, but a social cost. On the other hand, a real estate developer might build a road with the expectation that houses, factories, or stores will be built beside the right of way. The road will thus benefit new investors, but it will also benefit many others, the people who invest, trade, or are employed in the vicinity of the road.

Only government can ultimately control the harmful externalities by prohibiting them, or by requiring that those responsible pay for the hardship they caused. The concentration of the steel industry in

Pittsburgh clearly benefits the community and the individual citizens of Pittsburgh. Nevertheless, a point was reached some years ago where the external costs -- the social costs of producing steel -- were simply too great for the community to bear. It is interesting that many of the industrial leaders also led in the movement to clean the air of Pittsburgh and keep it clean without driving the steel industry from Pittsburgh. To a great degree this movement has been a success.

On the other hand, other cities have borne without murmur the adverse externalities of large firms, because these were large employers of labor and generators of taxes and people feared that such firms would move away. Many cities either have no effective laws for smoke control or do not enforce whatever laws they have. If all communities acted against adverse external effects of business decisions and business behavior by imposing restraints, the offending firms would have no place to hide, or rather to produce, and they would accordingly modify their actions.

Competition between local governments might very well operate, although its influence is probably exaggerated, to affect industrial location and behavior. It is certainly the role of any government -- local, state, or federal -- to attempt to control adverse externalities. It is also the role of government to create externalities which are beneficial to industry and consumers. The inducements offered to industry to locate in certain communities and regions of the country provide a case in point.

Industry is composed of people who have motives beyond that of legal necessity. Ideology and morality also play enormous roles. The leaders of industry could exert great influence through their relations with buyers, sellers, consumers, governments, labor, and all the other groups with whom they have contact. If they established certain conventions which were agreeable to all concerned and undertook to follow them, it is probable that most of the others in industry would soon fall in line rather than risk exposure and the loss of public favor. It is obvious that some small producers, the "chiselers" and fringe operators, would shirk the common effort and then use the advantage thus gained to undersell those who had borne the cost of what commencement orators call "good citizenship." This is a small matter, and it may be taken care of in legal ways. It does not alter our conviction that the behavior of industry in general is regulated more by convention, ideology, and institution than by law.

In this connection the proposition or hypothesis whose study could yield great value is:

(10)

Positive externalities, that is, costless benefits, often result from the actions of autonomous industries. Negative externalities, or harmful effects that are unplanned and unavoidable, offset the positive ones. The former are desired, the

latter unwanted. The ultimate control over the existence, nature, and quantity of externalities is through government policy.

Large firms with their complex personnel and industrial relations organizations, their dealings with unions, their exposed position in the public eye, and their reliance on a host of customers whose "loyalty" is to self, are likely to obey the law not only as a matter of form but also to reduce the disharmony and antagonism that are bad for business, and to avoid an embattled stand that would make them vulnerable to public and government evaluation. Therefore, we can offer as a proposition or hypothesis:

(11)

Firms in autonomous industries will tend to reflect public policy and enforce legal mandates as a matter of internal policy and self-interest.

A study of externalities in their many ramifications would be of extraordinary value in clarifying and improving government-business relations and public policy.

Some More Subtle Externalities

The question of divestiture

If a drastic program of divestiture occurred in an autonomous industry, would it result in lower prices or increased output, or both of these? If the divested firms all operated in the same market, and

if all could reach at least the minimum size for optimal efficiency, then costs would not rise -- provided that all the firms operated at lowest cost. If output were to increase at different rates for different firms, costs might exceed those prevailing before divestiture because full utilization of the entire complement of industry would no longer be possible. In any event, the selling costs would be likely to rise, and this would deny the consumer some benefits. If selling costs should fall, then the consumer would gain. But why should these costs fall? If the market to be influenced has not changed, and if product lines overlap, as they do in the auto industry, there is no a priori reason for lower costs.

On the other hand, each divested firm might carve out a given geographical or product-line market, and such action would lower the selling costs. But to offset this gain, each divested firm would be acting as a monopolist. If more than one firm attempted to dominate a segment of the entire market, duopoly or autonomy on a smaller-scale would result. The directions of the price-output results cannot be logically prognosticated. The proposition or hypothesis one might make is:

(12)

Given divestiture in an autonomous industry
such as the automobile industry, the effects
on price and output cannot be foreseen because

of the alternative decisions that would be open to the divested firms under the new industrial structure.

The question of socioeconomic mobility

One of the nondiscriminatory beliefs about public policy is the vague but common notion that everybody in the society should have the chance to move upward socially and economically. In the great American myth, such upward mobility is usually achieved by a person's becoming a success in business. Ideally he should organize his own show, and get ahead by right living and straight shooting. If one believes the myth, individual success comes mainly from high morals, a sterling character, and natural intelligence. If one observes the real world, however, success comes in great part from education, connections, and chance.

Most successful persons operate and secure upward mobility in some social organization. It is true that people can achieve a high place by writing poetry or music, and these are one-man operations. But, barring the occasional genius, most people who achieve success in writing reach their goal through magazines or newspapers, and success in music most often comes through association with orchestras or broadcasting companies.

Given the impetus of education, chance, and personal capacity, a person seeking business success will also find it most easily in an established organization. A competent, trained man with a good

business head can probably move ahead farther and faster in terms of money, prestige, and authority by going to work for a large firm than by starting his own business or working for a small firm. To be sure, some people can start their own business and become successful, but these are in the smallest imaginable minority. It is so small a minority that a young man who becomes successful on his own is written up in Fortune magazine, or is on the cover of Time. And frequently the man who makes a good thing of a small business is a member of a family firm by inheritance or marriage.

By and large, ours is an organized society. It is a huge organization made up of organizations of all sizes. Upward mobility is most likely to occur in large organizations. In the last twenty-five years there has been an enormous freeing of the restraints on upward mobility in the American business and social system generally. Anti-semitism, while it still exists, is less powerful than it was. Xenophobias in general, opposition to this or that ethnic or religious group, have diminished markedly since World War II.

During that war the high demand for skilled and reliable workers at every level was so great that the restrictions which until then had been traditional were reduced and to some extent even removed. The WASP is still an important figure in American economic life, but he is no longer the only prototype of success. To be sure, business and other social organizations in America are still not completely neutral with respect to color, religion, or ethnic background, but there has been improvement in that direction.

We may then offer the following proposition and hypothesis:

(13)

Large corporations offer more upward social mobility now than in the past, and they are likely to offer even more in the future. This is partly a result of the impersonality and market commitment of such corporations.

Retained earnings

Another set of problems not unrelated to those discussed so far involves the right of a corporate administration to engage in corporate activity that will affect someone who is not part of the corporation, activity which creates what we call an externality. Since World War II there has been a growing tendency in America for corporations to restrict the transfer of net profits into dividends through the vehicle of retained earnings. Retained earnings then become free funds for investment by the corporation.

Some economists have argued that such funds are or may be invested without regard to market considerations. Thus, some may be invested to yield less than the market rate of return. Furthermore, the argument runs, the rate of return in the market without the retained earnings is different from what it would have been if the retained earnings in the first instance had been paid to the shareholders, and if the shareholders had then allocated to investment the fraction which they chose. The group immediately affected are the shareholders, who

are in many instances pleased with the withholding procedure, because it improves their tax liability position enabling them to pay taxes on capital gains rather than income tax.

The proponents of corporate self-investment argue that any shareholder who desires funds, can always sell some of his securities. This is not a realistic argument, since a shareholder, whether small or large, clearly cannot sell one or two shares to compensate for the increase in security values due to retained earnings. It is true that more and more large nonprofit institutions, such as universities, are selling off part of their annual capital gains and using the money for current operating expenses. But there is a great difference between large universities with millions, even hundreds of millions, of dollars in investments and a small shareholder with an investment of a few thousand dollars.

The argument may be carried even farther. Let us suppose that some small or growing firm desires funds from the capital market but cannot borrow because of shortages brought about because the profitable corporations have withheld funds through retained earnings. Does this retention of earnings create a barrier against the expansion of small firms? Such a question and other related questions could most profitably be examined to discover the effect of large corporations on capital markets and the growth of small firms.

The proposition or hypothesis we offer regarding this would run:

(14)

In spite of the retention of earnings by large corporations, small growth companies have not been denied funds in the postwar period. Furthermore, if such restrictions exist, they are amenable to legislative correction.

This proposition is stated positively; but might with just as much reason make the contrary assertion that small growing firms have been denied funds. In point of fact, we feel no one really knows what the situation has been during the past twenty years. It is clear, however, that the peculiar policy of this country regarding the corporate profit tax, the personal income tax, and the capital gains tax not only entails frequent double taxation, but also involves transfers and shifting of funds with no obvious rationale.

Determination of economic activity

Another problem related to the financial points in the previous discussion, and referred to earlier in a slightly different context, is whether or not large corporations, by their decisions, determine the general level of economic activity.

The level of investment of a firm is determined by the resources available to the firm and its expectations of the future. Whether smaller firms make better guesses than larger firms is open to question, since guesses from all sides are available: from other firms, as well as from universities, government, and paid tipsters for both large and small companies to use. Indeed, many of these prognostications

reflect each others' points of view. It is entirely probable that to some degree at least, prognostications are self-serving. That is to say, if enough people believe that something is going to happen, it happens; at least it happens in the economic world.

If this argument is valid, then it would seem to follow that roughly the same forces determine the level of investment of large-scale corporations and smaller firms, therefore size confers no net benefit. The benefits occur when particular tax or subsidy inducements are offered to one kind of firm and not to another, e. g. , tariffs; extremely profitable military contracts, often for research, and subsidies for training. The influence of the government in assisting or hindering a particular firm in an autonomous industry is an interesting question, and to know more about it would be most useful. We might offer this proposition or hypothesis:

(15)

Tax and subsidy arrangements of the federal government have different effects within large-scale industries, and the benefits are not so much related to the size of the industry as to the government's interest in a particular kind of product.

Relations between large buyers and small suppliers

Related to the preceding discussion is the problem of whether large-scale firms and autonomous industry have an adverse or beneficial

effect on their suppliers. We also adverted to this question earlier and in a slightly different context. In the present context we would ask these questions: Do large-scale firms take advantage of their suppliers? Are their suppliers typically small-scale operators and dependent upon particular buyers? Are the suppliers allowed the freedom to grow and make contacts with other suppliers in similar or identical industries?

We are of the opinion that in many instances large suppliers give technical assistance to their small buyers in matters of engineering, and that they even occasionally assist them in matters of finance by filling their order books so that the small supplier can secure loans from a bank. On the other hand, we believe that the small suppliers are sometimes taken advantage of by larger buyers. Investigations seem to indicate that the relations between buyers and suppliers are not at all uniform. It would be worthwhile, we think, to examine the relations of suppliers to large buyers, and we would offer the following hypothesis or proposition:

(16)

The relations between large buyers and small buyers vary, but the net relation is symbiotic, or mutually beneficial.

Internal operations of a firm

Intrafirm competition among divisions, and the competition between divisions of a firm and the market, where the make-or-buy problem

arises, are commonplace in large-scale industry. Also the number and location of the plants of a large-scale firm are determined as strategically as possible.

The proposition or hypothesis these conditions suggest is:

(17)

Where an autonomous industry with large-scale firms follows a policy of make-or-buy, or make-and-buy, that is, when the firm relies on competition or a competition test for its internal operations, and where the number of supplying units, either divisions of the firm or independent suppliers per unit of population rises or has not fallen, there is the likelihood that price-output considerations approach those of pure competition, regardless of the total size of any producer.

Labor

Large-scale firms in autonomous industry tend to be large employers of labor and to use absolutely large quantities of capital. By law and convention, collective bargaining has become a settled institution in American life. The following proposition or hypothesis is well founded:

(18)

Wages and conditions of employment in large-scale firms have improved at a faster rate than the national growth.

It would require little study to affirm further:

(19)

Union strength and benefits to labor are closely related to the profitability of autonomous industry. Moreover, union organization and behavior reflect the organization and behavior of autonomous industry.

This is a proposition or hypothesis which, if examined, would explain labor-management relations and union policies better than the assumption that unions and management represent opposing interests, rather than competitive interests.

Patents

Patents offer interesting aspects of the huge capital investment typical of large-scale industry. Are inventions the product of individuals or groups? How is research and development related to invention? Does large-scale industry bury patents for fear of reducing the value of its investment? Is it common to "invent around" a patent, and is the practice fair and socially desirable? These and other questions come up when patents are considered. Our opinion in such matters is somewhat less structured than on others, but we would offer the following proposition or hypothesis:

(20)

Given the free flow of information and the free movement of people from job to job, the

restrictive effects of patents are not very great. Industry, the consumer, and the inventor would benefit if investigation and a defined social policy led to a new set of statutes assuring the general availability of patents at reasonable fees.

Summary and Final Proposition

The recent past has seen a moderately high rate of national growth and employment. Unemployment among minority groups partly due to the attractions of urban life, has been a problem. Public interest has not concentrated exclusively on the Negro question, however; but has shifted to include a new set of problems concerning the physical environment. Of great public concern at present are the unavailability of pure water and fresh air, the ugliness of the cities, and the destruction and littering of the nonurban areas. The economic significance of these matters is also receiving current attention. Urbanization, industrialization, indifference to the balance of nature, and the lack of social concern among industrialists and corporate managers are often designated as causes of the ecological and environmental mess.

In our opinion few choose to act badly out of pure malice. Most people act badly because they are ignorant or because of the cost of acting otherwise is too high. Cost and returns, not only in money but in their generic sense, are powerful in controlling planned, rational

behavior. Ignorance and technical restriction are other significant forces. The ecological effects of industry, the social externalities, fall into this rubric of rationality. The pertinent questions are whose costs should the plans respect, whose benefits, whose unhappiness, and so on.

Industrial and business behavior reflect the conventions of time and place: the legal requirements, the technical resources available, and the many faces of the changing world. Changes in the conventions, in law, and in technology require changes in the behavior and values of industrial planners. Steps have been taken on a less than general basis to induce government, industry, and the amorphous public to seek current solutions to current problems, and long-range solutions to more persistent problems.

As a matter of self-interest we offer the following proposition or hypothesis:

(21)

Autonomous industry would benefit, as would the body politic, if we could develop national regional and local, and social, that is, noneconomic accounts, as suggested by Bertram Gross. By this means the level of social well-being and its changes could be known. An important use for such information would be to assist government and industry in allocating resources. Successful application of this knowledge would improve the social and ecological setting of the nation, the regions, and the localities.

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