

THE UNIVERSITY OF CHICAGO PRESS

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THERE are signs of increasing awareness among economists that what they have been discussing in recent years under the name of "competition" is not the same thing as what is thus called in ordinary language. But, although there have been some valiant attempts to bring discussion back to earth and to direct attention to the problems of real life, notably by J. M. Clark and F. Machlup, the general view seems still to regard the conception of competition currently employed by economists as the significant one and to treat that of the businessman as an abuse. It appears to be generally held that the so-called theory of "perfect competition" provides the appropriate model for judging the effectiveness of competition in real life and that, to the extent that real competition differs from that model, it is undesirable and even harmful.

For this attitude there seems to me to exist very little justification. I shall attempt to show that what the theory of perfect competition discusses has little claim to be called "competition" at all and that its conclusions are of little use as guides to policy. The reason for this seems to me to be that this theory throughout assumes that state of affairs already to exist which, according to the truer view of the older theory, the process of competition tends to bring about (or to approximate) and that, if the state of affairs assumed by the theory of perfect competition ever existed, it would not only deprive of their scope all the activities which the verb "to compete" describes but would make them virtually impossible.

^{*}This essay reproduces the substance of the Stafford Little Lecture delivered at Princeton University on May 20, 1946.

^{1.} J. M. Clark, "Toward a Concept of Workable Competition," *American Economic Review*, Vol. XXX (June, 1940); F. Machlup, "Competition, Pliopoly, and Profit," *Economica*, Vol. IX (new ser.; February and May, 1942).

If all this affected only the use of the word "competition," it would not matter a great deal. But it seems almost as if economists by this peculiar use of language were deceiving themselves into the belief that, in discussing "competition," they are saying something about the nature and significance of the process by which the state of affairs is brought about which they merely assume to exist. In fact, this moving force of economic life is left almost altogether undiscussed.

I do not wish to discuss here at any length the reasons which have led the theory of competition into this curious state. As I have suggested elsewhere in this volume,2 the tautological method which is appropriate and indispensable for the analysis of individual action seems in this instance to have been illegitimately extended to problems in which we have to deal with a social process in which the decisions of many individuals influence one another and necessarily succeed one another in time. The economic calculus (or the Pure Logic of Choice) which deals with the first kind of problem consist of an apparatus of classification of possible human attitudes and provides us with a technique for describing the interrelations of the different parts of a single plan. Its conclusions are implicit in its assumptions: the desires and the knowledge of the facts, which are assumed to be simultaneously present to a single mind, determine a unique solution. The relations discussed in this type of analysis are logical relations, concerned solely with the conclusions which follow for the mind of the planning individual from the given premises.

When we deal, however, with a situation in which a number of persons are attempting to work out their separate plans, we can no longer assume that the data are the same for all the planning minds. The problem becomes one of how the "data" of the different individuals on which they base their plans are adjusted to the objective facts of their environment (which includes the actions of the other people). Although in the solution of this type of problem we still must make use of our technique for rapidly working out the implications of a given set of data, we have now to deal not only with several separate sets of

^{2.} See the second and fourth chapters.

data of the different persons but also—and this is even more important—with a process which necessarily involves continuous changes in the data for the different individuals. As I have suggested before, the causal factor enters here in the form of the acquisition of new knowledge by the different individuals or of changes in their data brought about by the contacts between them.

The relevance of this for my present problem will appear when it is recalled that the modern theory of competition deals almost exclusively with a state of what is called "competitive equilibrium" in which it is assumed that the data for the different individuals are fully adjusted to each other, while the problem which requires explanation is the nature of the process by which the data are thus adjusted. In other words, the description of competitive equilibrium does not even attempt to say that, if we find such and such conditions, such and such consequences will follow, but confines itself to defining conditions in which its conclusions are already implicitly contained and which may conceivably exist but of which it does not tell us how they can ever be brought about. Or, to anticipate our main conclusion in a brief statement, competition is by its nature a dynamic process whose essential characteristics are assumed away by the assumptions underlying static analysis.

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That the modern theory of competitive equilibrium assumes the situation to exist which a true explanation ought to account for as the effect of the competitive process is best shown by examining the familiar list of conditions found in any modern textbook. Most of these conditions, incidentally, not only underlie the analysis of "perfect" competition but are equally assumed in the discussion of the various "imperfect" or "monopolistic" markets, which throughout assume certain unrealistic "perfections." For our immediate purpose, however, the theory of perfect competition will be the most instructive case to examine.

3. Particularly the assumptions that at all times a uniform price must rule for a given commodity throughout the market and that sellers know the shape of the demand curve.

While different authors may state the list of essential conditions of perfect competition differently, the following is probably more than sufficiently comprehensive for our purpose, because, as we shall see, those conditions are not really independent of each other. According to the generally accepted view, perfect competition presupposes:

- 1. A homogeneous commodity offered and demanded by a large number of relatively small sellers or buyers, none of whom expects to exercise by his action a perceptible influence on price.
- 2. Free entry into the market and absence of other restraints on the movement of prices and resources.
- 3. Complete knowledge of the relevant factors on the part of all participants in the market.

We shall not ask at this stage precisely for what these conditions are required or what is implied if they are assumed to be given. But we must inquire a little further about their meaning, and in this respect it is the third condition which is the critical and obscure one. The standard can evidently not be perfect knowledge of everything affecting the market on the part of every person taking part in it. I shall here not go into the familiar paradox of the paralyzing effect really perfect knowledge and foresight would have on all action.4 It will be obvious also that nothing is solved when we assume everybody to know everything and that the real problem is rather how it can be brought about that as much of the available knowledge as possible is used. This raises for a competitive society the question, not how we can "find" the people who know best, but rather what institutional arrangements are necessary in order that the unknown persons who have knowledge specially suited to a particular task are most likely to be attracted to that task. But we must inquire a little further what sort of knowledge it is that is supposed to be in possession of the parties of the market.

If we consider the market for some kind of finished consumption goods and start with the position of its producers or sellers, we shall find, first, that they are assumed to know the lowest cost at which the commodity can be produced. Yet this knowledge which is assumed to

^{4.} See O. Morgenstern, "Vollkommene Voraussicht und wirtschaftliches Gleichgewicht," Zeitschrift für Nationalökonomie, Vol. VI (1935).

be given to begin with is one of the main points where it is only through the process of competition that the facts will be discovered. This appears to me one of the most important of the points where the starting-point of the theory of competitive equilibrium assumes away the main task which only the process of competition can solve. The position is somewhat similar with respect to the second point on which the producers are assumed to be fully informed: the wishes and desires of the consumers, including the kinds of goods and services which they demand and the prices they are willing to pay. These cannot properly be regarded as given facts but ought rather to be regarded as problems to be solved by the process of competition.

The same situation exists on the side of the consumers or buyers. Again the knowledge they are supposed to possess in a state of competitive equilibrium cannot be legitimately assumed to be at their command before the process of competition starts. Their knowledge of the alternatives before them is the result of what happens on the market, of such activities as advertising, etc.; and the whole organization of the market serves mainly the need of spreading the information on which the buyer is to act.

The peculiar nature of the assumptions from which the theory of competitive equilibrium starts stands out very clearly if we ask which of the activities that are commonly designated by the verb "to compete" would still be possible if those conditions were all satisfied. Perhaps it is worth recalling that, according to Dr. Johnson, competition is "the action of endeavouring to gain what another endeavours to gain at the same time." Now, how many of the devices adopted in ordinary life to that end would still be open to a seller in a market in which so-called "perfect competition" prevails? I believe that the answer is exactly none. Advertising, undercutting, and improving ("differentiating") the goods or services produced are all excluded by definition—"perfect" competition means indeed the absence of all competitive activities.

Especially remarkable in this connection is the explicit and complete exclusion from the theory of perfect competition of all personal rela-

tionships existing between the parties.⁵ In actual life the fact that our inadequate knowledge of the available commodities or services is made up for by our experience with the persons or firms supplying them—that competition is in a large measure competition for reputation or good will—is one of the most important facts which enables us to solve our daily problems. The function of competition is here precisely to teach us who will serve us well: which grocer or travel agency, which department store or hotel, which doctor or solicitor, we can expect to provide the most satisfactory solution for whatever particular personal problem we may have to face. Evidently in all these fields competition may be very intense, just because the services of the different persons or firms will never be exactly alike, and it will be owing to this competition that we are in a position to be served as well as we are. The reasons competition in this field is described as imperfect have indeed nothing to do with the competitive character of the activities of these people; it lies in the nature of the commodities or services themselves. If no two doctors are perfectly alike, this does not mean that the competition between them is less intense but merely that any degree of competition between them will not produce exactly those results which it would if their services were exactly alike. This is not a purely verbal point. The talk about the defects or competition when we are in fact talking about the necessary difference between commodities and services conceals a very real confusion and leads on occasion to absurd conclusions.

While on a first glance the assumption concerning the perfect knowledge possessed by the parties may seem the most startling and artificial of all those on which the theory of perfect competition is based, it may in fact be no more than a consequence of, and in part even justified by, another of the presuppositions on which it is founded. If, indeed, we start by assuming that a large number of people are producing the same commodity and command the same objective facili-

^{5.} Cf. G. J. Stigler, *The Theory of Price* (1946), p. 24: "Economic relationships are never perfectly competitive if they involve any personal relationships between economic units" (see also *ibid.*, p. 226).

ties and opportunities for doing so, then indeed it might be made plausible (although this has, to my knowledge, never been attempted) that they will in time all be led to know most of the facts relevant for judging the market of that commodity. Not only will each producer by his experience learn the same facts as every other but also he will thus come to know what his fellows know and in consequence the elasticity of the demand for his own product. The condition where different manufacturers produce the identical product under identical conditions is in fact the most favorable for producing that state of knowledge among them which perfect competition requires. Perhaps this means no more than that the commodities can be identical in the sense in which it is alone relevant for our understanding human action only if people hold the same views about them, although it should also be possible to state a set of physical conditions which is favorable to all those who are concerned with a set of closely interrelated activities learning the facts relevant for their decisions.

However that be, it will be clear that the facts will not always be as favorable to this result as they are when many people are at least in a position to produce the same article. The conception of the economic system as divisible into distinct markets for separate commodities is after all very largely the product of the imagination of the economist and certainly is not the rule in the field of manufacture and of personal services, to which the discussion about competition so largely refers. In fact, it need hardly be said, no products of two producers are ever exactly alike, even if it were only because, as they leave his plant, they must be at different places. These differences are part of the facts which create our economic problem, and it is little help to answer it on the assumption that they are absent.

The belief in the advantages of perfect competition frequently leads enthusiasts even to argue that a more advantageous use of resources would be achieved if the existing variety of products were reduced by *compulsory* standardization. Now, there is undoubtedly much to be said in many fields for assisting standardization by agreed recommendations or standards which are to apply unless different requirements

are explicitly stipulated in contracts. But this is something very different from the demands of those who believe that the variety of people's tastes should be disregarded and the constant experimentation with improvements should be suppressed in order to obtain the advantages of perfect competition. It would clearly not be an improvement to build all houses exactly alike in order to create a perfect market for houses, and the same is true of most other fields where differences between the individual products prevent competition from ever being perfect.

3

We shall probably learn more about the nature and significance of the competitive process if for a while we forget about the artificial assumptions underlying the theory of perfect competition and ask whether competition would be any less important if, for example, no two commodities were ever exactly alike. If it were not for the difficulty of the analysis of such a situation, it would be well worth while to consider in some detail the case where the different commodities could not be readily classed into distinct groups, but where we had to deal with a continuous range of close substitutes, every unit somewhat different from the other but without any marked break in the continuous range. The result of the analysis of competition in such a situation might in many respects be more relevant to the conditions of real life than those of the analysis of competition in a single industry producing a homogeneous commodity sharply differentiated from all others. Or, if the case where no two commodities are exactly alike be thought to be too extreme, we might at least turn to the case where no two producers produce exactly the same commodity, as is the rule not only with all personal services but also in the markets of many manufactured commodities, such as the markets for books or musical instruments.

For our present purpose I need not attempt anything like a complete analysis of such kinds of markets but shall merely ask what would be the role of competition in them. Although the result would, of course, within fairly wide margins be indeterminate, the market would still

bring about a set of prices at which each commodity sold just cheap enough to outbid its potential close substitutes—and this in itself is no small thing when we consider the unsurmountable difficulties of discovering even such a system of prices by any other method except that of trial and error in the market, with the individual participants gradually learning the relevant circumstances. It is true, of course, that in such a market correspondence between prices and marginal costs is to be expected only to the degree that elasticities of demand for the individual commodities approach the conditions assumed by the theory of perfect competition or that elasticities of substitution between the different commodities approach infinity. But the point is that in this case this standard of perfection as something desirable or to be aimed at is wholly irrelevant. The basis of comparison, on the grounds of which the achievement of competition ought to be judged, cannot be a situation which is different from the objective facts and which cannot be brought about by any known means. It ought to be the situation as it would exist if competition were prevented from operating. Not the approach to an unachievable and meaningless ideal but the improvement upon the conditions that would exist without competition should be the test.

In such a situation how would conditions differ, if competition were "free" in the traditional sense, from those which would exist if, for example, only people licensed by authority were allowed to produce particular things, or prices were fixed by authority, or both? Clearly there would be not only no likelihood that the different things would be produced by those who knew best how to do it and therefore could do it at lowest cost but also no likelihood that all those things would be produced at all which, if the consumers had the choice, they would like best. There would be little relationship between actual prices and the lowest cost at which somebody would be able to produce these commodities; indeed, the alternatives between which both producers and consumers would be in a position to choose, their data, would be altogether different from what they would be under competition.

The real problem in all this is not whether we will get given com-

modities or services at given marginal costs but mainly by what commodities and services the needs of the people can be most cheaply satisfied. The solution of the economic problem of society is in this respect always a voyage of exploration into the unknown, an attempt to discover new ways of doing things better than they have been done before. This must always remain so as long as there are any economic problems to be solved at all, because all economic problems are created by unforeseen changes which require adaptation. Only what we have not foreseen and provided for requires new decisions. If no such adaptations were required, if at any moment we knew that all change had stopped and things would forever go on exactly as they are now, there would be no more questions of the use of resources to be solved.

A person who possesses the exclusive knowledge or skill which enables him to reduce the cost of production of a commodity by 50 per cent still renders an enormous service to society if he enters its production and reduces its price by only 25 per cent—not only through that price reduction but also through his additional saving of cost. But it is only through competition that we can assume that these possible savings of cost will be achieved. Even if in each instance prices were only just low enough to keep out producers which do not enjoy these or other equivalent advantages, so that each commodity were produced as cheaply as possible, though many may be sold at prices considerably above costs, this would probably be a result which could not be achieved by any other method than that of letting competition operate.

4

That in conditions of real life the position even of any two producers is hardly ever the same is due to facts which the theory of perfect competition eliminates by its concentration on a long-term equilibrium which in an ever changing world can never be reached. At any given moment the equipment of a particular firm is always largely determined by historical accident, and the problem is that it should make the best use of the given equipment (including the acquired capacities

of the members of its staff) and not what it should do if it were given unlimited time to adjust itself to constant conditions. For the problem of the best use of the given durable but exhaustible resources the long-term equilibrium price with which a theory discussing "perfect" competition must be concerned is not only not relevant; the conclusions concerning policy to which preoccupation with this model leads are highly misleading and even dangerous. The idea that under "perfect" competition prices should be equal to long-run costs often leads to the approval of such antisocial practices as the demand for an "orderly competition" which will secure a fair return on capital and for the destruction of excess capacity. Enthusiasm for perfect competition in theory and the support of monopoly in practice are indeed surprisingly often found to live together.

This is, however, only one of the many points on which the neglect of the time element makes the theoretical picture of perfect competition so entirely remote from all that is relevant to an understanding of the process of competition. If we think of it, as we ought to, as a succession of events, it becomes even more obvious that in real life there will at any moment be as a rule only one producer who can manufacture a given article at the lowest cost and who may in fact sell below the cost of his next successful competitor, but who, while still trying to extend his market, will often be overtaken by somebody else, who in turn will be prevented from capturing the whole market by yet another, and so on. Such a market would clearly never be in a state of perfect competition, yet competition in it might not only be as intense as possible but would also be the essential factor in bringing about the fact that the article in question is supplied at any moment to the consumer as cheaply as this can be done by any known method.

When we compare an "imperfect" market like this with a relatively "perfect" market as that of, say, grain, we shall now be in a better position to bring out the distinction which has been underlying this whole discussion—the distinction between the underlying objective facts of a situation which cannot be altered by human activity and the nature of the competitive activities by which men adjust themselves to the

situation. Where, as in the latter case, we have a highly organized market of a fully standardized commodity produced by many producers, there is little need or scope for competitive activities because the situation is such that the conditions which these activities might bring about are already satisfied to begin with. The best ways of producing the commodity, its character and uses, are most of the time known to nearly the same degree to all members of the market. The knowledge of any important change spreads so rapidly and the adaptation to it is so soon effected that we usually simply disregard what happens during these short transition periods and confine ourselves to comparing the two states of near-equilibrium which exist before and after them. But it is during this short and neglected interval that the forces of competition operate and become visible, and it is the events during this interval which we must study if we are to "explain" the equilibrium which follows it.

It is only in a market where adaptation is slow compared with the rate of change that the process of competition is in continuous operation. And though the reason why adaptation is slow may be that competition is weak, e.g., because there are special obstacles to entry into the trade, or because of some other factors of the character of natural monopolies, slow adaptation does by no means necessarily mean weak competition. When the variety of near-substitutes is great and rapidly changing, where it takes a long time to find out about the relative merits of the available alternatives, or where the need for a whole class of goods or services occurs only discontinuously at irregular intervals, the adjustment must be slow even if competition is strong and active.

The confusion between the objective facts of the situation and the character of the human responses to it tends to conceal from us the important fact that competition is the more important the more complex or "imperfect" are the objective conditions in which it has to operate. Indeed, far from competition being beneficial only when it is "perfect," I am inclined to argue that the need for competition is nowhere greater than in fields in which the nature of the commodities or services makes it impossible that it ever should create a perfect market

in the theoretical sense. The inevitable actual imperfections of competition are as little an argument against competition as the difficulties of achieving a perfect solution of any other task are an argument against attempting to solve it at all, or as little as imperfect health is an argument against health.

In conditions where we can never have many people offering the same homogeneous product or service, because of the ever changing character of our needs and our knowledge, or of the infinite variety of human skills and capacities, the ideal state cannot be one requiring an identical character of large numbers of such products and services. The economic problem is a problem of making the best use of what resources we have, and not one of what we should do if the situation were different from what it actually is. There is no sense in talking of a use of resources "as if" a perfect market existed, if this means that the resources would have to be different from what they are, or in discussing what somebody with perfect knowledge would do if our task must be to make the best use of the knowledge the existing people have.

5

The argument in favor of competition does not rest on the conditions that would exist if it were perfect. Although, where the objective facts would make it possible for competition to approach perfection, this would also secure the most effective use of resources, and, although there is therefore every case for removing human obstacles to competition, this does not mean that competition does not also bring about as effective a use of resources as can be brought about by any known means where in the nature of the case it must be imperfect. Even where free entry will secure no more than that at any one moment all the goods and services for which there would be an effective demand if they were available are in fact produced at the least current⁶ expenditure of resources at which, in the given historical situation, they can be produced, even though the price the consumer is made to pay for them

^{6. &}quot;Current" cost in this connection excludes all true bygones but includes, of course, "user cost."

is considerably higher and only just below the cost of the next best way in which his need could be satisfied, this, I submit, is more than we can expect from any other known system. The decisive point is still the elementary one that it is most unlikely that, without artificial obstacles which government activity either creates or can remove, any commodity or service will for any length of time be available only at a price at which outsiders could expect a more than normal profit if they entered the field.

The practical lesson of all this, I think, is that we should worry much less about whether competition in a given case is perfect and worry much more whether there is competition at all. What our theoretical models of separate industries conceal is that in practice a much bigger gulf divides competition from no competition than perfect from imperfect competition. Yet the current tendency in discussion is to be intolerant about the imperfections and to be silent about the prevention of competition. We can probably still learn more about the real significance of competition by studying the results which regularly occur where competition is deliberately suppressed than by concentrating on the shortcomings of actual competition compared with an ideal which is irrelevant for the given facts. I say advisedly "where competition is deliberately suppressed" and not merely "where it is absent," because its main effects are usually operating, even if more slowly, so long as it is not outright suppressed with the assistance or the tolerance of the state. The evils which experience has shown to be the regular consequence of a suppression of competition are on a different plane from those which the imperfections of competition may cause. Much more serious than the fact that prices may not correspond to marginal cost is the fact that, with an intrenched monopoly, costs are likely to be much higher than is necessary. A monopoly based on superior efficiency, on the other hand, does comparatively little harm so long as it is assured that it will disappear as soon as anyone else becomes more efficient in providing satisfaction to the consumers.

In conclusion I want for a moment to go back to the point from which I started and restate the most important conclusion in a more

general form. Competition is essentially a process of the formation of opinion: by spreading information, it creates that unity and coherence of the economic system which we presuppose when we think of it as one market. It creates the views people have about what is best and cheapest, and it is because of it that people know at least as much about possibilities and opportunities as they in fact do. It is thus a process which involves a continuous change in the data and whose significance must therefore be completely missed by any theory which treats these data as constant.