

COMPETITION AS A DISCOVERY PROCEDURE

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I.

It would not be easy to defend macroeconomists against the charge that for 40 or 50 years they have investigated competition primarily under assumptions which, if they were actually true, would make competition completely useless and uninteresting. If anyone actually knew everything that economic theory designated as “data,” competition would indeed be a highly wasteful method of securing adjustment to these facts. Hence it is also not surprising that some authors have concluded that we can either completely renounce the market, or that its outcomes are to be considered at most a first step toward creating a social product that we can then manipulate, correct, or redistribute in any way we please. Others, who apparently have taken their notion of competition exclusively from modern textbooks, have concluded that such competition does not exist at all.

By contrast, it is useful to recall that *wherever* we make use of competition, this can only be justified by our *not* knowing the essential circumstances that determine the behavior of the competitors. In sporting events, examinations, the awarding of government contracts, or the bestowal of prizes for poems, not to mention science, it would be patently absurd to sponsor a contest if we knew in advance who the winner would be. Therefore, as the title of this lecture suggests, I wish now to consider competition systematically as a procedure for discovering facts which, if the procedure did not exist, would remain unknown or at least would not be used.

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It might at first appear so obvious that competition always involves such a discovery procedure that this is hardly worth emphasizing. When this is explicitly underscored, however, conclusions are immediately obtained that are in no way so obvious. The first is that competition is important *only* because and insofar as its outcomes are unpredictable and on the whole different from those that anyone would have been able to consciously strive for; and that its salutary effects must manifest themselves by frustrating certain intentions and disappointing certain expectations.

The second conclusion, closely associated with the first, is methodological in nature. It is of particular interest in that it has reference to the principal reason why, during the last 20 or 30 years, microeconomic theory—the analysis of the fine details of the economy’s structure which alone can teach us to understand the role of competition—has lost so much of its reputation, and indeed as a result appears not at all to be understood anymore by those calling themselves economic theorists. For this reason I would like to begin here with a few words about the methodological particularity of every theory of competition that makes the conclusions drawn from it appear suspicious to all those who habitually decide, on the basis of an excessively simplified criterion, what they are prepared to recognize as scientific.

The only reason we use competition at all has as its necessary consequence the fact that the validity of the theory of competition can never be empirically verified *for those cases in which it is of interest*. It is of course possible to verify the theory on preconceived theoretical models; and in principle we could also conceivably verify the theory in artificially created situations in which all the facts that competition is to discover are known to the observer in advance. In such a situation, however, the outcome of the experiment would be of little interest, and it would probably not be worth the cost of conducting it. When, however, we do not know in advance the facts we wish to discover with the help of competition, we are also unable to determine how effectively competition leads to the discovery of all the relevant circumstances that could have been discovered. All that can be empirically verified is that societies making use of competition for this purpose realize this outcome to a greater extent than do others—a question which, it seems to me, the history of civilization answers emphatically in the affirmative.

The curious fact that the merits of competition cannot be empirically verified in precisely those cases in which it is of interest is also shared by the discovery procedures of science in general. The advantages of established scientific procedures cannot themselves be scientifically demonstrated; they are recognized only because they have actually provided better results than alternative procedures.¹

¹See the interesting discussion of these problems in M. Polanyi, *The Logic of Liberty* (London, 1951), in which the author is led from a study of the methods of scientific research to that of economic competition. See also K.R. Popper, *Logik der Forschung*, 2d. ed. (Tübingen, 1966), p. 16.

The difference between economic competition and the successful procedure of science is that the former exhibits a method of discovering particular temporary circumstances, while science seeks to discover something often known as “general facts,” i.e., regularities in events, and is concerned with unique, particular facts only to the extent that they tend to refute or confirm its theories. Since this is a matter of general and permanent features of our world, scientific discoveries have ample time to demonstrate their value, whereas the usefulness of particular circumstances disclosed by economic competition is to a considerable extent transitory. It would be as easy to discredit the theory of scientific method by noting that it does not lead to verifiable predictions regarding what science will discover, as it has been to discredit the theory of the market by noting that it does not lead to predictions about particular outcomes of the market process. By the nature of things, however, the theory of the market is unable to accomplish this in all those cases in which it is reasonable to make use of competition. As we shall see, the predictive power of this theory is necessarily constrained to a prediction of the type of structure or abstract order that will result; it does not, however, extend to a prediction of particular events.²

II.

Although this will lead me even further from my main topic, I should like to add a few words about the consequences of the disappointment in microeconomic theory caused by using fallacious methodological criteria of scientism. Most of all, this disappointment was probably the major reason why a great number of economists rejected it in favor of so-called macroeconomic theory, which, since it aims to predict concrete events, appears to correspond better with the criteria of scientism. In reality, however, it seems to me much less scientific—indeed, in the strictest sense, it can make no claim to the name of a theoretical science.

The basis for this point of view is the conviction that the coarse structure of the economy can exhibit no regularities that are not results of the fine structure, and that those aggregates or mean values, which alone can be grasped statistically, give us no information about what takes place in the fine structure. The notion that we must formulate our theories so that they can be *immediately* applied to observable statistical or other measurable quantities seems to me to be a methodological error which, had the natural sciences followed it, would have greatly obstructed their progress. All we can require of theories is that, after an input of relevant data, conclusions can be derived from them that can be checked against reality. The fact that these concrete data are so diverse

²See my essay “The Theory of Complex Phenomena” in *The Critical Approach in Science and Philosophy*, M. Bunge, ed. (London and New York, 1964). Reprinted in my *Studies in Philosophy, Politics, and Economics* (Chicago and London, 1967).

and complex in our area of inquiry that we can never take them all into account is an unchangeable fact, but not a shortcoming of the theory. A result of this fact is that we can derive from our theories only very general statements, or “pattern predictions,” as I have called them elsewhere;³ we cannot, however, derive any specific predictions of individual events from them. Certainly, however, this does not justify insisting that we derive unambiguous relationships among the immediately observable variables, or that this is the only way of obtaining scientific knowledge—particularly not if we know that, in that obscure image of reality we call statistics, in aggregates and averages we unavoidably summarize many things whose causal meaning is very diverse. It is a false epistemological principle to adapt the theory to the available information, so that the observed variables appear directly in the theory.

Statistical variables such as national income, investment, price levels, and production are variables that play no role in the process of their determination itself. We might be able to notice certain regularities (“empirical laws” in the specific sense in which Carl Menger contrasted them to theoretical laws) in the observed behavior of these variables. Often these regularities apply, but sometimes they do not. Yet using the means of macrotheory, we can never formulate the conditions under which they apply.

This should not mean that I regard so-called macrotheory as completely useless. About many important conditions we have only statistical information rather than data regarding changes in the fine structure. Macrotheory then often affords approximate values or, probably, predictions that we are unable to obtain in any other way. It might often be worthwhile, for example, to base our reasoning on the assumption that an increase of aggregate demand will in general lead to a greater increase in investment, although we know that under certain circumstances the opposite will be the case. These theorems of macrotheory are certainly valuable as rules of thumb for generating predictions in the presence of insufficient information. But they are not only not more scientific than is microtheory; in a strict sense they do not have the character of scientific theories at all.

In this regard I must confess that I still sympathize more with the views of the young Schumpeter than with those of the elder, the latter being responsible to so great an extent for the rise of macrotheory. Exactly 60 years ago, in his brilliant first publication,⁴ a few pages after having introduced the concept of “methodological individualism” to designate the method of economic theory, he wrote:

If one erects the edifice of our theory uninfluenced by prejudices and outside demands, one does not encounter these concepts [namely “national income,” “national wealth,” “social capital”] at all. Thus we will not be further concerned with them. If we wanted to do so, however, we would see

³See my above-cited essay, “The Theory of Complex Phenomena.”

⁴J. Schumpeter, *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie* (Leipzig, 1908), p. 97.

how greatly they are afflicted with obscurities and difficulties, and how closely they are associated with numerous false notions, without yielding a *single* truly valuable theorem.

III.

Returning now to my actual topic after having shared my concerns with you on this matter, I should like to begin with the observation that market theory often prevents access to a true understanding of competition by proceeding from the assumption of a “given” quantity of scarce goods. Which goods are scarce, however, or which things are goods, or how scarce or valuable they are, is precisely one of the conditions that competition should discover: in each case it is the preliminary outcomes of the market process that inform individuals where it is worthwhile to search. Utilizing the widely diffused knowledge in a society with an advanced division of labor cannot be based on the condition that individuals know all the concrete uses that can be made of the objects in their environment. Their attention will be directed by the prices the market offers for various goods and services. This means, among other things, that each individual’s particular combination of skills and abilities—which in many regards is always unique—will not only (and not even primarily) be skills that the person in question can recite in detail or report to a government agency. Rather, the knowledge of which I am speaking consists to a great extent of the ability to detect certain conditions—an ability that individuals can use effectively only when the market tells them what kinds of goods and services are demanded, and how urgently.

This suggestion must suffice here to clarify the kind of knowledge I am speaking of when I call competition a discovery procedure. Much more would have to be added if I wanted to formulate this outline so concretely that the meaning of this process emerged clearly. What I have said, however, should be sufficient to point out the absurdity of the conventional approach proceeding from a state in which all essential conditions are assumed to be known—a *state* that theory curiously designates as perfect competition, even though the opportunity for the *activity* we call competition no longer exists. Indeed, it is assumed that such activity has already performed its function. Nonetheless, I must now turn to another question about which even more confusion still exists, namely the meaning of the claim that the market spontaneously *adjusts* the plans of individuals to the facts thus discovered; in other words, the question of the purpose for which the information thus discovered is used.

The confusion that prevails here can be ascribed above all to the false idea that the order which the market brings about can be regarded as an *economy* in the strict sense of the word, and that the outcome must therefore be judged according to criteria that in reality are appropriate only for such an individual economy. But these criteria, which hold for a true economy in which all

effort is directed toward a uniform order of objectives, are to an extent completely irrelevant for the complex structure consisting of the many individual economies that we unfortunately designate with the same word “economy.” An economy in the strong sense of the word is an organization or an arrangement in which someone consciously uses means in the service of a uniform hierarchy of ends. The spontaneous order brought about by the market is something entirely different. But the fact that this market order does not in many ways behave like an economy in the proper sense of the word—in particular, the fact that it does not in general ensure that what most people regard as more important ends are always satisfied before less important ones—is one of the major reasons people rebel against it. It can be said, indeed, that all socialism has no other aim than to transform catallaxy (as I am pleased to call market order, to avoid using the expression “economy”) into a true economy in which a uniform scale of values determines which needs are satisfied and which are not.

This widely shared wish raises two problems, though. First, as far as the management decisions of a genuine economy or of any other organization are concerned, it is only the knowledge of the organizers or managers alone that can have any impact. Second, all members of such a genuine economy—conceived of as a consciously managed organization—must serve the uniform hierarchy of objectives in all their actions. Contrast this with the two advantages of a spontaneous market order or catallaxy: it can use the knowledge of all participants, and the objectives it serves are the particular objectives of all its participants in all their diversity and polarity.

The fact that catallaxy serves no uniform system of objectives gives rise to all the familiar difficulties that disturb not only socialists, but all economists endeavoring to evaluate the performance of the market order. For if the market order does not serve a particular rank ordering of objectives, and indeed if, like any spontaneously created order, it cannot legitimately be said to have definite objectives, neither is it then possible to represent the value of its outcome as a sum of individual outputs. What do we mean, then, when we claim that the market order in some sense produces a maximum or an optimum?

The point of departure for an answer must be the insight that, although the spontaneous order was not created for any particular individual objective, and in this sense cannot be said to serve a particular concrete objective, it can nonetheless contribute to the realization of a number of individual objectives which no one knows in their totality. Rational, successful action by an individual is possible only in a world that is to some extent orderly; and it obviously makes sense to try to create conditions under which any randomly selected individual has prospects of pursuing his goals as effectively as possible, even if we cannot predict which particular individuals will benefit thereby and which will not. As we have seen, the results of a discovery procedure are necessarily unpredictable, and all we can expect by employing an appropriate discovery procedure is that it will increase the prospects of unspecified persons, but not the prospects of any particular outcome for any

particular persons. The only common objective we can pursue in choosing this technique for the ordering of social reality is the abstract structure or order that will be created as a consequence.

IV.

We are accustomed to calling the order brought about by competition an equilibrium—a none-too-felicitous expression, since a true equilibrium presupposes that the relevant facts have already been discovered and that the process of competition has thus come to an end. The concept of order, which I prefer to that of equilibrium, at least in discussions of economic policy, has the advantage of allowing us to speak meaningfully about the fact that order can be realized to a greater or lesser degree, and that order can also be preserved as things change. Whereas an equilibrium never really exists, one can nonetheless justifiably claim that the kind of order of which the “equilibrium” of theory represents a sort of ideal type is realized to a great extent.

This order manifests itself first of all by virtue of the fact that the expectations of particular transactions with other persons, upon which the plans of all the economy’s participants are based, are to a considerable extent realized. This mutual adjustment of individual plans is brought about by a process that we have learned to call negative feedback ever since the natural sciences have also begun to concern themselves with spontaneous orders or “self-organizing systems.” Indeed, as even well-informed biologists are now aware,

long before Claude Bernard, Clark Maxwell, Walter B. Cannon or Norbert Wiener developed cybernetics, Adam Smith perceived the idea just as clearly in his *Wealth of Nations*. The “invisible hand” that regulates prices appears to express this idea. Smith says in essence that in a free market, prices are determined by negative feedback.⁵

It is precisely through the disappointment of expectations that a high degree of agreement of expectations is brought about. This fact, as we shall see later, is of fundamental importance in understanding the functioning of the market order. But the market’s accomplishments are not exhausted in bringing about a mutual adjustment of individual plans. It also provides that every product is produced by those who can produce it more cheaply (or at least as cheaply) as anyone who does not in fact produce it, and that goods are sold at prices that are lower than those at which anyone could offer the goods who does not offer them. This does not of course prevent some people from extracting large profits above their costs, as long as these costs are considerably lower than those of the next best potential producer of the good. It

⁵G. Hardin, *Nature and Man’s Fate* (New York and London, 1959). Mentor Edition, 1961, p. 54.

means, however, that of the combination of different goods that is actually being produced, as much is produced as we can manufacture by any method that is known to us. That is of course not as much as we could produce if in fact all the knowledge that anyone possessed or could acquire were available at a central point and from there could be entered into a computer. The cost of the discovery procedure that we use is considerable. But it is unfair to judge the performance of the market in a certain sense “from the top down,” namely by comparing it with an ideal standard that we are unable to attain in any known way. If we judge the market’s performance “from the bottom up” (which seems to be the only permissible way), i.e., by comparison with what we could attain by means of any other method available to us, and in particular by comparison with what would be produced if competition were prevented—for example, if a good could be produced only by those the authorities allowed to do so—the market’s performance must be judged as most considerable. We need only recall how difficult it is in an economy with effective competition to discover ways of providing consumers with better or cheaper goods than is presently the case. If, for a moment, we believe we have discovered such unrealized opportunities, we generally find that government authority or a highly undesirable exercise of private power have hitherto prevented their exploitation.

Of course, we must also not forget that the market can provide no more than an approximation of any point on the n-dimensional surface by which pure theory describes the range of possibilities that could conceivably be attained in the production of any combination of goods and services; but the market allows the particular combination of various goods and their distribution among individuals to be decided essentially by unforeseeable circumstances and in this sense by chance. As Adam Smith realized,⁶ the situation is somewhat like agreeing to play a game based partly on skill and partly on luck. The rules of the game ensure that at the price such that each individual’s share is left more or less to chance, the real equivalent of each individual’s share, depending partly on chance, becomes as large as possible. In modern terminology we can say that we are playing a non-zero-sum game whose rules have the objective of increasing the payoff but leave the share of the individuals partly to chance. A mind endowed with full information could of course choose every point on the n-dimensional surface that appeared desirable to him and then distribute as he saw fit the product of the combination he chose. But the only point on (or at least somewhere near) that surface we can reach using a procedure known to us is the one we reach when we leave its determination up to the market. The so-called “maximum” we achieve in this manner cannot of course be defined as a sum of certain quantities of goods, but only by the opportunity it affords unspecified persons to receive as large an equivalent as

⁶See A. Smith, *Theorie der ethischen Gefühle*, W. Eckstein, trans. (Leipzig, 1926), vol. 2, pp. 396, 467.

possible for a share determined partly by chance. The fact that this outcome cannot be evaluated on the basis of a uniform value scale of desired concrete objectives is one of the main reasons it seems so misleading to me to consider the outcome of the market order or catallaxy as if it had anything to do with an economy in the proper sense.

V.

The consequences of this erroneous interpretation of the market order as an economy whose task is to satisfy the various needs according to a given rank ordering are reflected in political efforts to correct prices and income in the service of so-called “social justice.” Notwithstanding the various meanings with which social philosophers attempted to invest this concept, in practice it has had virtually only one: protecting some groups of people from having to descend from the absolute or relative lifestyle they have heretofore enjoyed. Yet this is a principle that cannot be implemented in general without destroying the foundations of the market order. Not only continuous growth, but under certain circumstances even the preservation of the average income level attained depends on processes of adjustment that require a change not only of the relative shares but also of the absolute shares of individual persons and groups, even though such persons and groups are not responsible for the necessity of that change.

It is useful to recall at this point that all economic decisions are made necessary by unanticipated changes, and that the justification for using the price mechanism is solely that it shows individuals that what they have previously done, or can do now, has become more or less important, for reasons with which they have nothing to do. The adaptation of the total order of human action to changing circumstances is based on the fact that the compensation of the various services changes without taking into account of the merits or defects of those involved.

In this connection the term “incentives” is often used in a way that easily lends itself to misunderstanding, namely as though their primary purpose were to induce individuals to exert themselves sufficiently. The most important function of prices, however, is that they tell us *what* we should accomplish, *not how much*. In a constantly changing world, merely maintaining a given level of welfare requires constant adjustments in how the efforts of many individuals are directed; and these will only occur when the relative compensation of these activities changes. Under relatively stationary conditions, however, these adjustments—which are needed simply to maintain the income stream at its previous level—will not generate a surplus that could be used to compensate those who are disadvantaged by the price changes. Only in a rapidly growing economy can we hope to prevent an absolute decline in the material level of particular groups.

Today, customary treatments of these problems often overlook the fact that even the relative stability of the various aggregates that macroeconomics treats

as data is the result of microeconomic processes in which relative price changes play a decisive role. It is an outcome of the market mechanism that someone is induced to fill the gap that arises when someone else does not fulfill the expectations on the basis of which a third party has made plans. In this sense all the collective supply and demand curves that we use so happily are not really data, but rather outcomes of the constantly ongoing process of competition. Thus, statistical information can never disclose to us what price or income changes will be needed to bring about the necessary adjustment to an unavoidable change of the data.

The decisive point, however, is that in a democratic society it would be completely impossible, using commands that could not be regarded as just, to bring about those changes that are undoubtedly necessary, but the necessity of which could not be strictly demonstrated in a particular case. In such a system, a conscious direction of the economy would always have to aim for prices that are considered fair, and in practice that can only mean preservation of the existing price and income structure. An economic system in which everyone received what others felt he deserved could not help but be a highly inefficient system, quite apart from the fact that it would also be an unbearably tyrannical one. For the same reason, it is also to be feared that any "incomes policy" would tend more to prevent than to facilitate those adjustments in the price and income structure required by the adaptation to unanticipated changes in conditions.

It is one of the paradoxes of our age that the communist countries, in this regard, are probably less burdened by ideas of "social justice" than are the "capitalistic" and democratic countries, and are thereby more prone to allow those who are disadvantaged by development to suffer. In at least some of the Western countries the situation is as hopeless as it is precisely because the ideology that determines policy renders impossible those changes that would be necessary to improve the situation of the working class quickly enough to make that ideology disappear.

VI.

If even in highly developed economies competition is important primarily as a discovery procedure whereby entrepreneurs constantly search for unexploited opportunities that can also be taken advantage of by others, then this is true of course to an even greater extent as far as underdeveloped societies are concerned. I have intentionally begun by considering the problems of maintaining an order in societies in which most techniques and productive forces are generally known, but also an order that requires continuous adjustment of activities to unavoidable small changes simply to maintain the previously attained level. At this point I do not wish to inquire into the role played by competition in the progress of available technology. I would like to emphasize, however, how much more important competition must be wherever the primary objective is to discover the still unknown possibilities in a society where

competition was previously limited. While for the most part false, it might not be completely absurd to expect that we can predict and control the development of the structure of a society that is already highly developed. But it seems incredible to me to hold that we can determine in advance the future structure of a society in which the major problem is still to find out what kinds of material and human productive forces are present, or that we should be in a position, in such a country, to predict the particular consequences of a given measure.

Quite apart from the fact that there is still so much more to discover in such a country, it seems to me that there is another consideration making the greatest possible freedom of competition much more important here than in more highly developed countries. The fact I have in mind is that the necessary changes in habits and customs will occur only when those who are ready and able to experiment with new procedures can make it necessary for the others to imitate them, with the former thereby showing the way; but if the majority is in a position to prevent the few from conducting experiments, the necessary discovery procedure will be frustrated. The fact that competition not only shows how things can be improved, but also forces all those whose income depends on the market to imitate the improvements, is of course one of the major reasons for the disinclination to compete. Competition represents a kind of impersonal coercion that will cause many individuals to change their behavior in a way that could not be brought about by any kind of instructions or commands. Central planning in the service of any some “social justice” may be a luxury that rich countries can afford, but it is certainly no method for poor countries to bring about the adjustment to rapidly changing circumstances on which growth depends.

It might also be worth mentioning in this connection that the more the available opportunities of a country remain unexploited, the greater its opportunities for growth; this often means that a high growth rate is more a sign of bad policies in the past than of good policies in the present. It also seems that one cannot in general expect a country that is already highly developed to have as high a growth rate as a country whose full use of its resources has long been rendered impossible by legal and institutional barriers.

Having seen what I have of the world, it appears to me that the proportion of people who are prepared to try out new possibilities that promise to improve their situation—as long as others do not prevent them from doing so—is more or less the same everywhere. It seems to me that the much-lamented lack of entrepreneurial spirit in many young countries is not an unchangeable attribute of individuals, but the consequence of limitations placed on individuals by the prevailing point of view. For precisely this reason, the effect would be fatal if, in such countries, the collective will of the majority were to control the efforts of individuals, rather than that public power limits itself to protecting the individual from the pressure of society—and only the institution of private property, and all the liberal institutions of the rule of law associated with it, can bring about the latter.

VII.

Although competition is by and large a quite resilient specimen as far as private firms are concerned—one that continues to resurface in the most unexpected manner after efforts to suppress it—its usefulness with respect to the one omnipresent factor of production, namely human labor, has been rendered more or less ineffective throughout the entire Western world. It is a generally known fact that the most difficult and indeed the apparently insoluble problems of present-day economic policy, which have occupied economists more than all other problems, are the result of the so-called rigidity of wages. This means in essence that the wage structure as well as the wage level has become increasingly independent of market conditions. Most economists consider this situation as an irrevocable development that we cannot change and to which we must adapt our policies. It is hardly an exaggeration to say that for the past 30 years, discussions of monetary policy in particular have dealt almost exclusively with problems of circumventing the difficulties created by inflexible wages. I have long since had the impression that this was a mere treatment of symptoms. For the moment, we might thereby cover up the fundamental difficulties, but this is not only a mere postponement of the moment at which we must directly confront the primary problem, but it also makes the eventual solution of the latter increasingly difficult. This is because accepting these rigidities as unavoidable facts not only results in increasing them, but also confers an aura of legitimacy on the antisocial and destructive practices that they cause. I must confess that as a result, I myself have lost all interest in the ongoing discussions of monetary policy, which was once one of my major areas of research, because this avoidance of the central issue seems to me to load the burden onto the shoulders of our successors in a most irresponsible manner. In a certain sense, of course, we are harvesting here only what the founder of this fashion has sown, since we are naturally already in that “long run” in which he knew he would be dead.

It was a great misfortune for the world that these theories arose from the very unusual and, indeed, perhaps unique situation of Great Britain in the 1920s—a situation in which it appeared obvious that unemployment was the result of too high a real wage *level*, and that the problem of rigidity of the wage structure thus had limited significance. As a result of Great Britain’s return to the gold standard after years of war inflation at the parity of 1914, it could be claimed with some justification that all real wages in that country were too high relative to the rest of the world to achieve the necessary volume of exports. I am not convinced that this was really true even then. Even at that time, to be sure, Great Britain had the oldest, most deeply rooted, and most all-encompassing trade union movement, which through its wage policy had succeeded in conserving a wage structure that was determined much more by considerations of “justice” than of economic appropriateness. This meant by and large that the time-honored relationships between the different wages were maintained, and that any such change in the relative wages of the various groups as was required by changed circumstances had become effectively

impossible. As things stood then, full employment could doubtless have been attained only by bringing some real wages—possibly those of numerous groups of workers—down from the level they had reached as a result of deflation. It is not certain, however, that this would necessarily have meant a decrease in the average level of real wages. Perhaps the adjustment of the structure of the entire economy brought about by the wage changes would have made this unnecessary. In any event, the emphasis that was customary, then as now, on the average real wage *level* of all a country's workers prevented this possibility from even being considered seriously.

It is perhaps useful to consider the problem from a broader perspective. It seems to me impossible to doubt that the productivity of a country's labor, and thereby the wage level at which full employment is possible, depend on the distribution of workers among the various branches of industry, and that this distribution is in turn determined by the wage structure. But if this wage structure has become more or less rigid, this will prevent or delay the economy's adjustment to altered circumstances. It is thus to be assumed that, in a country where the relationships between the various wages have been kept rigid for a long period of time, the real wage level at which full employment can be attained will be considerably below what it would be if wages were flexible.

It appears to me that a completely rigid wage structure would prevent adjustment to changes in other conditions, particularly without the rapid technological progress we are used to today. This also concerns especially the adjustment to those changes that must occur simply in order to keep the income level constant. A completely rigid wage structure is therefore liable to lead to a gradual decrease in the level of real wages at which full employment can be realized. Unfortunately, I am not familiar with any empirical investigations of the relationship between wage flexibility and growth. I would expect such investigations to disclose a high positive correlation between these two variables—not so much because growth leads to changes in relative wages, but above all because such changes are the necessary preconditions for that adjustment to changed conditions that is required by growth.

But the main point, I believe, is that if it is correct that the real wage level at which full employment is possible depends on the wage structure, and if the ratios among the various wages remain unchanged as conditions change, then the real wage level at which full employment comes into existence will either fall continuously or will not rise as rapidly as would otherwise be possible. This means that manipulating the real wage level by monetary policy offers no way out of the difficulties caused by the rigidity of the wage *structure*. Nor can a way out be offered by any practically possible "incomes policy." Rather, as things turn out, it is precisely the rigidity of the wage structure brought about by the wage policy of the trade unions in the supposed interest of their members (or of any notion of "social justice") that has become one of the greatest obstacles to an increase in the real income of workers as a whole; in other words, if the real wages of individuals are prevented from

falling absolutely or at least relatively, the real wage level of workers as a whole will not rise as quickly as would otherwise be possible.

The classical ideal that John Stuart Mill described in his autobiography as “full employment at high wages to the whole labouring population” can be realized only by an economic use of labor, which in turn presupposes freely fluctuating relative wages. In the place of this ideal, the great man whose name will probably go down in history as the gravedigger of the British economy has popularized decreasing the level of real wages through a decrease of the value of money as a method of attaining full employment while recognizing the rigidity of the nominal wage structure. In my view, however, the experience of recent years clearly shows that this method offers only temporary relief. I believe we should no longer delay attacking the root cause of the problem. We cannot go on much longer closing our eyes to the fact that the interest of labor as a whole demands that the power of individual trade unions to maintain the relative position of their members against other workers be removed. The most important task at present appears to be convincing labor as a whole that removing the protection of the relative position of individual groups not only does not threaten the prospects for a rapid increase in the real wages of labor as a whole, but in fact enhances those prospects.

I will certainly not dispute here that for the foreseeable future it will remain politically impossible to restore a truly free labor market. Any such attempt would probably lead to such great conflicts that it could not be seriously considered—at least as long as employers do not collectively guarantee to maintain their employees’ average real income. But precisely such a guarantee, I believe, is the only way of restoring the market to its function of determining the relative wages of the various groups. Only in this way, it seems to me, could we hope to induce individual groups of workers to give up the security of their particular wage rates, which has become the main obstacle to a flexible wage structure. Such a collective agreement between employers as a whole and employees as a whole seems to me a transitional measure deserving serious consideration, because the outcome would probably show workers how much they could gain from a truly functioning labor market. This would in turn create the prospect of subsequently eliminating the tedious and complicated apparatus that would initially have to be created.

What I have in mind is a general contract in which employers as a whole would promise workers as a whole, initially for a year, their previous real wage total plus a share of increased profits. Each individual group or individual worker, however, would receive in his monthly paycheck only a certain part, say five-sixths, of his previous wage. The rest (together with the agreed-upon share of the increased total profits of all enterprises) would be distributed in two additional monthly payments—at the end of the year and after the books are closed—to the employees of the various firms and branches of the economy, in proportion to the change in profits that results on the basis on the five-sixths of wages distributed. I have proposed five-sixths as the share of continuous payments, since this would make possible the payment of a Christmas

bonus at the average level of a month's income on the basis of a preliminary estimate of profits, and of a second vacation bonus of approximately the same amount when the books are closed for the calendar year. For the subsequent year the average wages of the first year would again be guaranteed, but by the end of the year every group would be paid only five-sixths of the total amount paid in the previous year, plus a supplement at the end of the year for each group based on profits realized in the corresponding industry or firm, and so on.

Such a procedure would have somewhat the same effect as a restoration of the free labor market, except that labor would know that its average real wages could not decrease, but only increase. I would expect that such an indirect re-introduction of the market mechanism for determining the distribution of workers among industries and firms would bring with it a considerable acceleration of the increase of the level of average real wages, along with a stepwise decrease in the real wages of individual groups.

You will believe me when I say that I do not make so unusual a proposal lightly. But some measure of this kind, I believe, is today the only remaining way out of the increasing rigidity of the wage structure. This rigidity seems to me not only the major cause of the increasing economic difficulties of countries like Great Britain. It also drives such countries deeper and deeper into a planned and thereby still more rigid economic structure by misleading them into dabbling with the symptoms through "incomes policies" and the like. It seems that labor can only gain from such a solution, but I realize of course that trade union officials would lose through it a large part of their power and would therefore reject it completely.