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LERNER ON THE ECONOMICS OF CONTROL

MILTON FRIEDMAN

The recent book by A. P. Lerner, *The Economics of Control*, is an analysis of the problem of maximizing economic welfare.[1] It deals with a wide range of the substantive topics requiring attention: the organization of production and allocation of resources under given conditions; the distribution of income; the role of investment and the adaptation of society to investment; unemployment and the business cycle; and foreign trade. On each topic it seeks to derive the formal conditions for an optimum and to propose institutional arrangements adapted to achieving these conditions.

Most of the book is devoted to the formal analysis of the conditions for an optimum. The institutional problems are largely neglected and, where introduced, treated by assertion rather than analysis. This disparity in the attention devoted to the formal and institutional problems is, however, obscured by an intermingling of the formal and institutional analysis. Formal analysis takes on the cast of institutional proposals, and conclusions about institutional arrangements seem to be derived from the formal analysis and supported by it, though, in fact, the formal analysis is almost entirely irrelevant to the institutional problem.

The result is that not only the title and the introduction but even a first reading somehow generate the expectation and the illusion that the book contains a concrete program for economic reform. "In this way we shall be able to concentrate on what would be the best thing that the government can do in the social interest—what institutions would most effectively induce the individual members of society, while seeking to accomplish their own ends, to act in the way which is most beneficial for society as a whole" (p. 6). An attempt to set down the explicit details of the program dispels the illusion. Much of what at first reading sounds like a concrete proposal, particularly about the general structure of society, turns out to be simply an admonition to the state that it behave correctly and intelligently.

The hortatory character of the proposals is foreshadowed in Lerner's initial discussion of "the rationally organized democratic state," which he names "the controlled economy":

[1] Abba P. Lerner, *The Economics of Control*. New York: Macmillan Co., 1944. Pp. xxii+428.

> The fundamental point of the controlled economy is that it denies both collectivism and private enterprise as *principles* for the organization of society, but recognizes both of them as perfectly legitimate *means*. Its fundamental principle of organization is that in any particular instance the means that serves society best should be the one that prevails [p. 5].

Now surely it is no principle of organization that society do what is best for society. At most, it is an objective of society, though even as an objective it is obviously question-begging.

To illustrate more fully the difference between Lerner's formal analysis and his institutional proposals, we turn to his discussion of some of the major problems facing the "controlled economy." Three such problems occupy a central place in Lerner's analysis: (1) the optimum organization of resources under given conditions, (2) the optimum division of income, and (3) the dynamic problem of unemployment and fluctuations in economic activity.

I. THE ORGANIZATION OF RESOURCES UNDER GIVEN CONDITIONS

A. THE FORMAL CONDITIONS FOR AN OPTIMUM

Practically all economists, Lerner included, who have worked on the static problem of the organization of resources and who have regarded the welfare of the individual (rather than that of the "state" or some special class of individuals) as dominant and his ends as supreme have started with much the same assumptions and therefore reached much the same conclusions about the appropriate utilization with given techniques of given resources for given ends. Certain special problems have received rather more attention from some than from others (e.g., Lerner is especially attracted by problems associated with "indivisibilities" and neglects almost entirely problems raised by "unpaid costs" and "inappropriable services"). These special problems aside, the major and well-known result is that, given the distribution of the available resources among individuals, an optimum exists when any small change in the application of resources leads to a combination of decrements and increments in the output of various goods such that there is no system of barter exchanges whereby individuals would voluntarily accept the increments as compensation for the decrements.

Much of *The Economics of Control* is devoted to presenting the formal reasoning underlying this broad result and to developing in detail its implications for various sectors of the economy—the allocation of goods among consumers, the allocation of resources among industries, the utilization of resources within industries, foreign trade, and so on. Early in the analysis Lerner demonstrates the advantage of using a monetary system in place of barter, and thereafter the discussion is in money terms rather than in the physical terms in which the basic result is stated above. This enables him to give a fairly thorough exposition of current price theory along with his analysis of the optimum utilization of resources.

This part of the book is novel in exposition, though not in substance. Motivated by the question how society ought to work rather than how it does work, Lerner puts primary emphasis on the human wants and technical possibilities to which society must adjust rather than on the market expression of these wants and possibilities. The result is a highly unusual organization of topics. For example, demand and supply curves are first introduced on page 151 and then only in a footnote explaining that the elasticities of demand and supply are

concepts analogous to the elasticity of substitution.

The exposition is novel not only in organization but also in style. Most of it is entirely abstract, yet Lerner uses graphs sparingly and mathematics not at all. He uses words, abbreviated substitutes for words, and simple arithmetical examples. The resulting exposition seems to the reviewer to have most of the disadvantages of a strictly mathematical exposition—it is abstract and artificial and requires sustained attention and retention of symbols—and none of the advantages—it is neither brief nor rigorous.[2]

B. INSTITUTIONAL ARRANGEMENTS TO ACHIEVE AN OPTIMUM

Granted that the optimum allocation of resources requires that marginal social benefit equal marginal social cost, to use Lerner's terms, what institutional arrangements will lead to the closest possible satisfaction of this condition? Lerner's answer to this question is imbedded in his analysis of the meaning and implications of the formal conditions, and some measure of exegesis is therefore required to extract it.

The one common principle of economic organization underlying his answer seems to be the use of the price mechanism for organizing economic activity. Lerner's acceptance of the price mechanism does not, however, mean acceptance of the particular institutional arrangements with which the price system is historically associated, namely, a free-enterprise exchange economy characterized by private ownership of the means of production. In such an economy, prices perform five related but distinguishable functions: (1) they are a means of transmitting information about changes in the relative importance of different end-products and factors of production; (2) they provide an incentive to enterprises (*a*) to produce those products valued most highly by the market and (*b*) to use methods of production that economize relatively scarce factors of production; (3) they provide an incentive to owners of resources to direct them into the most highly remunerated uses. Prices are enabled to perform functions (2) and (3) because they are also used (4) to distribute output among the owners of resources. And, finally, prices serve (5) to ration fixed supplies of goods among consumers.[3]

Lerner places major emphasis on the first function. He recognizes clearly, and states effectively, the enormous difficulty that would be involved in any attempt to control directly the allocation of resources.

> In a collectivist economy this [the allocation of resources] might be attempted directly by the Ministry of Economic Planning, and many writers have proposed that it be done this way, even claiming that such centralization would be very efficient in planning everything to fit into everything else. This would require a centralized knowledge of what is going on in every factory, what are the changes from day to day in the demands and supplies at all possible prices of all goods and services and factors of production at all places in the economy, as well as the latest changes in technical knowledge in all branches of production. Obviously this calls for the Universal Mind of LaPlace, as Trotsky has suggested, and this is not practical. . . . Again the solution is to call in the price mechanism [p. 119].

[2] Lerner's discussion on pp. 81–82 of the relation between marginal and average measurements is a simple illustration of what is meant by the statement that his exposition is not rigorous. He gives a numerical example, states "irrespective of the figures in any particular example we can see," and then indicates the general relationship. He does, of course, state the relationship correctly; but the intuitive leap from example to general result is an unsatisfactory substitute for rigorous derivation.

[3] See F. H. Knight, *The Economic Organization* (University of Chicago, 1933), pp. 6–13, 31–35.

Lerner recognizes, of course, both the interdependence of the various functions of the price mechanism and the efficiency and desirability of the price mechanism in providing incentives to individuals to adjust to the information transmitted by the price mechanism. "In private enterprise under conditions of perfect competition . . . . the incentive is of exactly the right intensity" (p. 84). The reason he rejects exclusive reliance on price incentives is that individuals, in seeking to maximize their own incomes, will make the adjustments that are socially desirable (i.e., will bring about the satisfaction of the formal conditions for an optimum discussed above) only if they have no appreciable influence on the prices they pay or receive, i.e., are operating under competitive conditions. The presence of monopoly power means that private and social interests diverge.

Lerner would therefore use the private-enterprise exchange system only for the competitive sector of the economy. For another sector, he would use a device he entitles "counterspeculation" to eliminate any influence of sellers or buyers on price. By "counterspeculation," Lerner means a government guaranty to purchase an unlimited amount at a fixed price from sellers who would otherwise be monopolists or to sell an unlimited amount at a fixed price to buyers who would otherwise be monopsonists. The effect would be to replace a sloping segment of the demand curve for the monopolist's product (or of the supply curve facing the monopsonist) by a horizontal segment. If the price guaranteed by the government were equal to the competitive price, it could sell what it purchased (or buy what it sold) in the open market without loss.[4] Despite such comments as that cited above about the difficulties of centralized organization of economic activity, Lerner is quite sanguine about the ability of the Board of Counterspeculation to estimate what the competitive price would be. Counterspeculation will not, however, work if the monopoly arises from indivisibilities sufficient to lead to declining costs throughout the relevant range of output, since a price equal to marginal cost would mean that firms would go bankrupt. For such monopolies, Lerner would use government ownership and operation. Lerner would also include in the collectivist sector some industries for which he regards counterspeculation as feasible, though he nowhere specifies the principles on the basis of which he would choose between counterspeculation and government ownership when both are feasible. Similarly, he nowhere discusses how to distinguish in practice between those industries that are sufficiently competitive to be left alone and those that are not.

For the collectivist sector, it is obviously necessary to provide a substitute for the price (i.e., profit) incentives operative in the private sector. Two things are required: (1) instructions to managers how to use the information transmitted by prices; (2) means of assuring that the instructions are followed. Lerner would instruct the managers to pretend that they are operating under conditions of perfect competition and to play at private enterprise. His instructions would take the form of the *Rule:*

> *If the value of the marginal (physical) product of any factor is greater than the price of the factor, increase output. If it is less, decrease output. If it is equal to the price of the factor continue producing at the same rate. (For then the right output has been reached.)* [P. 64.]

[4] To be effective, the government would not only have to guarantee to purchase an unlimited amount from putative monopolists at a specified price, but it would also have to make its price the price ceiling for private sales; and, similarly, it would have to make its price the price floor on private purchases by monopsonists.

This sounds simple enough. The simplicity is, however, deceptive. The rule is a purely formal statement that conceals all the difficulties. Casual observation of the divergent fate of entrepreneurs in a highly competitive industry (like agriculture, retail trade, or manufacturing of furniture or clothing) is enough to indicate the difficulty of the problem, since they are trying to follow the rule and have an incentive "of exactly the right intensity" to do so.

It is therefore important not only to formulate instructions but also to specify effective means of assuring that they are followed. Lerner hardly discusses this problem at all. About all he says is that

> some incentives in the form of rewards (and punishment too perhaps) will have to be developed for the manager who is subjected to the Rule, and there will be a delicate problem of making them neither too weak nor too strong. . . . . It may seem strange to some that incentives to efficiency could be too strong, but this can be very serious. It can lead to a tyrannous disregard for the welfare of the workers and an inhuman red-tapism that would ultimately mean less and not more efficiency [p. 84].

But this is only part, and probably the least difficult part, of the problem, as the example of competitive entrepreneurs indicates. The manager's intentions must not only be good; he must be able to translate his intentions into practice. The higher administrators (who themselves need both incentives and tests of performance) must have some means of determining the extent to which the manager has been successful in his attempt to follow the rule. Under private enterprise, profits are not only an incentive but also a criterion of performance and determine the entrepreneur's ability to get command over resources. They cannot serve these other functions in the collectivist sector, since Lerner seeks to collectivize precisely those industries for which he regards private profits as an inadequate test of social performance.

II. THE DIVISION OF INCOME

A. FORMAL CONDITIONS

The distribution of resources among individuals, which is taken as one of the given conditions in analyzing the organization of resources, cannot, of course, be taken as given in fact, since the distribution can be modified by appropriate collective action.

Lerner does not consider directly the distribution of resources among individuals, but rather the associated problem of the distribution of income. The brief chapter dealing with this problem is extremely interesting. It presents a formal analysis leading to the conclusion that "if it is desired to maximize the total satisfaction in a society, the rational procedure is to divide income on an equalitarian basis" (p. 32). The analysis as given is not rigorous, primarily because of appeal to "equal ignorance."[5] It requires only a slight modification of the argument, however, to eliminate this appeal and to make Lerner's conclusion a rigorous implication of his assumptions, of which the following five are essential: (1) "It is not meaningless to say that a satisfaction one individual gets is greater or less than a satisfaction enjoyed

[5] E.g.: "The possibility of an increase in gain offsets the possibility of the diminution of gain since they are *equally likely to occur* in any particular case. There remains the net gain that is seen by itself in the case of equal capacities but which becomes only a *probable* gain on account of the possible increase or diminution of the gain which arises with unequal capacities" (pp. 29–30). (First italics mine.) "Such a blind shift from an equal division of income is *just as likely*, then, to increase as to diminish total satisfaction. . . . . This would leave us indifferent as to the distribution of income . . . . but for one other thing that tips the scale. Although the probability of a loss is *equal* to the probability of a gain, every time a movement is made away from an equalitarian division the *probable size* of the loss is greater than the *probable* size of the gain" (pp. 31–32). (All italics mine except *size*.)

by somebody else" (p. 25). This is taken to mean that numerical utilities can be assigned to the satisfactions enjoyed by individuals; and the values assigned to different individuals can appropriately be added. (2) "Each individual's satisfaction is derived only from his own income and not from the income of others" (p. 36). This means that the utility to an individual of any given income is not a function of the income of other individuals. (3) When incomes are unequal, the amount of income an individual receives is statistically independent of his capacity for enjoying it, i.e., if individuals were classified by capacity to enjoy income, the probability distribution of income would be the same for all such classes. (4) The marginal utility of money income to an individual diminishes as income increases. (5) The total amount of income is unrelated to its distribution.[6]

Lerner recognizes, of course, that the fifth assumption is invalid and therefore concludes that "the principle of equality would have to compromise with the principle of providing such incentives as would increase the total of income available to be divided" (p. 36). The difficulty here is that the distribution of income is itself in considerable measure a resultant of the process of satisfying the mathematical conditions for an optimum utilization of given resources. Analytically, therefore, the distribution of income is not an independent "given" that can be manipulated without affecting the rest of the analysis. This difficulty could have been largely avoided by considering instead the distribution of resources. This point is of more than formal interest, since it suggests that measures to reduce inequality by altering the distribution of resources (such as social investment in the training of individuals, inheritance taxation, etc.) may interfere less with the optimum utilization of resources than measures that seek to redistribute income directly.

Lerner uses his analysis of the optimum distribution of income to convert equality from an end in itself to a means to a more fundamental and presumably more obviously desirable end—namely, the maximization of total satisfaction in a society. For reasons stated in the next two paragraphs, Lerner's analysis seems to the reviewer rather to discredit the

[6] Lerner's problem is closely analogous to a rather common problem in the theory of statistical inference, and his reasoning to the inverse probability reasoning that was initially used in statistics. The revolution in statistics during the last few decades has been associated with a replacement of the loose and inexact inverse probability reasoning by an exact, operationally defined, reasoning that makes no appeal to "equal ignorance." Precisely the same substitution will make Lerner's argument rigorous.

The problem is to determine the distribution of income that will maximize the arithmetic sum of the utilities received by the individuals in the society subject to the assumptions listed in the text.

Consider any initial unequal distribution of income. Conceptually classify the individuals by their (unknown) capacities for satisfaction. Each such "satisfaction class" will contain only individuals who have identical capacities, i.e., have identical utility functions. By assumption (3) the average income of the persons in each such class is the same for every class. Furthermore, any redistribution of income among classes would invalidate assumption (3), so only redistributions within these classes will be consistent with the assumptions. Moreover, by assumption (2), changes in any one class will not affect any other class, so the problem reduces to the simpler problem of maximizing the aggregate utility of each satisfaction class separately.

For a particular satisfaction class, it is clear, given assumptions (1), (2), (4), and (5), that an equal distribution will maximize aggregate utility. If a dollar is taken from an individual with a larger income and given to an individual with a smaller income, the former loses less utility than the latter gains, by assumption (4); the aggregate income to be distributed is unaffected, by assumption (5), and the utility schedules of the two individuals, which were the same before the transfer, remain the same after, by assumption (2). This completes the proof, since equal distribution within each class, given equal mean incomes of different classes, implies equal income throughout the society.

maximization of total satisfaction as a desirable end and to suggest that equality is much the more fundamental of the two.

An essential step in Lerner's analysis is the introduction of ignorance. Granted, says Lerner, that individuals differ in their capacities to enjoy satisfaction, that they are not equally efficient pleasure machines, there is no method of determining how efficient they are as pleasure machines and therefore no hope of adjusting the amount of income to the individual's efficiency. Any actual unequal division of income must therefore involve a random association of income with innate efficiency as a pleasure machine (assumption [3] above). Since the mistake of giving too much to an individual is more serious (because of the assumed diminishing marginal utility of income) than the mistake of giving too little, an unequal division of income yields a smaller total satisfaction than an equal division.

Eliminate the assumption of ignorance and the same analysis immediately yields a justification of inequality if individuals do differ in capacity to enjoy satisfaction. And we must clearly be prepared to eliminate the assumption of ignorance. The talk about capacity to enjoy satisfaction is just empty talk unless there is at least a conceptual possibility of determining the relative efficiency of individuals as pleasure machines. One could hardly take the position that an analysis based on the capacity to enjoy satisfaction is relevant if it is impossible to determine an individual's capacity, but irrelevant if it is possible to do so. Suppose, then, that a feasible technique is devised to determine each individual's capacity to enjoy satisfaction. Suppose, further, that it is discovered by this technique that a hundred persons in the United States are enormously more efficient pleasure machines than any others, so that each of these would have to be given an income ten thousand times as large as the income of the next most efficient pleasure machine in order to maximize aggregate utility. Would Lerner be willing to accept the resulting division of income as optimum even though it were entirely consistent with all other objectives (such as maximization of the total to be divided)?[7]

B. INSTITUTIONAL ARRANGEMENTS

There is little discussion, and that not systematic, of techniques for achieving the equalization of income that Lerner takes as the relevant formal condition for an optimum. Though Lerner does not explicitly say so, it is a reasonable inference that he would, in the main, retain the existing techniques for distributing income via payments to owners of resources for the services of those resources. The only basic change would be that ownership of capital resources employed in the collectivist sector would be transferred to the government, and returns to these, as well as the corresponding entrepreneurial income (positive or negative), would accrue to the government. The primary distribution to individuals for the use of their resources might be modified by a "social dividend" and by a personal income tax, which Lerner looks on with favor "where taxation is necessary" (p. 234), though even the income tax "can interfere with the use of resources" (p. 235). "If it is desired to take measures for the equalization of income, it might be better to deal

[7] This argument is essentially taken from Henry C. Simons, *Personal Income Taxation* (Chicago: University of Chicago Press, 1938), pp. 5–15.

with that through an inheritance and gift tax" (p. 236).

III. UNEMPLOYMENT AND FLUCTUATIONS IN ECONOMIC ACTIVITY

A. FORMAL CONDITIONS

The possibility of changing the amount of resources available to society by investment raises directly the problem of the appropriate amount of investment; indirectly it leads into the dynamic problem of maintaining a stable high level of output in a world in which technological development requires continual change in the method of utilizing resources. Lerner dismisses the problem of the appropriate amount of investment as a "political" problem. He devotes considerable attention to the dynamic problem of fluctuations in output and investment. The analysis is strictly Keynesian and entirely concerned with the danger of general equilibrium at a low level of output and employment. Though much of it is worded in terms of the "trade cycle" or "business cycle," there is no real discussion of the business cycle. The explanation of "the fundamental cause of the business cycle" on pages 296 and 297 is a masterful evasion of the problem. The "fundamental cause" turns out to be (1) the possibility of a stable long-run level of low output and employment and (2) the fact that there is a business cycle.[8]

Lerner therefore states the formal condition for maintaining a stable high level of output and employment as the maintenance of adequate aggregate demand. This is nowhere spelled out in fuller detail, nor is there any systematic discussion of the criteria in terms of which "adequacy" is to be judged. It is implied that the level of employment is the primary general criterion and "full" employment the chief objective. It is implied also, however, that there is little or no danger of rising prices or inflation so long as full employment has not been attained, giving the impression that Lerner considers stability of prices an equally good criterion of the adequacy of aggregate demand.

B. INSTITUTIONAL ARRANGEMENTS

Lerner would handle the problem of maintaining adequate aggregate demand through "functional finance," which is defined as "the principle of . . . . judging

[8] "The fundamental cause of the business cycle is the inadequacy of demand" (p. 296). "At an income corresponding to full employment the gap between income and equilibrium consumption is very large. . . . . This level of income can be maintained only if there is sufficient investment to fill the gap. But this tremendous level of investment is very much more than it is profitable to maintain for very long. *If such a position of full employment should be reached*, the opportunities of investment would soon begin to be used up and investment would decline. This sets in motion the cumulative processes of crisis and depression. . . . . With little investment going on for a long time, *opportunities for investment accumulate* that are profitable even at the very low income level. *When some investment starts*, this raises income and so . . . . we now have a cumulative movement upward. . . . . The impetus of the expansion may carry it up to full employment or it may stop before that level is reached" (p. 297). (Italics mine.) The inadequacy of demand alone would explain a continued low level of income; the italicized statements are clearly crucial to the conversion of the low level of income into cyclical fluctuations. The first simply starts the analysis going; the other two do no more than to assert that there is a cycle. In terms of Lerner's analysis alone, one would expect the "crisis and depression" to stop at the low level of employment that can be permanently maintained in light of the inadequacy of demand. If this occurred, no opportunities for investment would accumulate, since current investment would exploit all the limited opportunities for investment currently becoming available. In order to get a cycle it is essential that the decline be "cumulative" and go further than the low level of employment that the inadequate demand would permanently support. But clearly the inadequacy of demand is no explanation why this should occur. Note that even the "inadequacy of demand" is supported only by adjectives—"very large," "tremendous." The numerical example Lerner gives—which presumably suggests what these adjectives mean to him—indicates very much larger savings than statistical evidence suggests as reasonable in peacetime.

fiscal measures only by their effects or the way they *function* in society" (p. 302 n.). Lerner's discussion of functional finance is a brilliant exercise in logic. It strips governmental fiscal instruments to their essentials: taxing and spending, borrowing and lending, and buying and selling; and throws into sharp relief the function of each. In the process it throws into discard conventional patterns of expression, verbal clichés which at times embody valid implications of more subtle reasoning but which, taken by themselves, muddle analysis of the effect of governmental actions. Reading Lerner's discussion of functional finance is almost sure to induce a much-required reorganization of the mental filing-case that one has been using to classify the factors involved in governmental fiscal operations. But for our present purpose the relevant question is whether the discussion of "functional finance," besides being a logical exercise, is also a prescription for public policy. The answer, it seems to this reviewer, is clearly negative. Once again, what looks like a prescription evaporates into an expression of good intentions:

> The government decides on the buying and selling that is socially desirable for all sorts of particular reasons. Then it undertakes such taxation and pays out such bonuses as are justified by special particular circumstances. . . . . If there is insufficient total demand, so that there is unemployment, the government will lend money (or repay debt) to lower the rate of interest until the rate of investment is at the level it considers proper, and it will reduce taxes or increase bonuses until the level of consumption is enough, together with the investment, to produce full employment [pp. 314–15].

To make this into a prescription to "produce full employment," Lerner must tell us how to know when there is "insufficient total demand," whether this insufficiency is a temporary deficiency in the process of being corrected or the beginning of an increasing deficiency that, if left alone, will lead to drastic deflation. He must tell us how to know what medicine to use when a diagnosis has been made, how large a dose to give, and how long we may expect it to take for the medicine to be effective. The casual reader of Lerner's book—or, for that matter, of the majority of works on the control of the business cycle—might suppose that these are simple questions. A glance at a few monthly time series depicting the movement of important economic magnitudes, preferably subdivided regionally and by industries, and a brief review of attempts at retrospective identification, current diagnosis, and forecasting suggest that they are anything but simple.

As Burns and Mitchell say:

> Our examination of business indexes, and less definitely of business annals, forbade us to think of business cycles "as sweeping smoothly upward from depressions to a single peak of prosperity and then declining steadily to a new trough." On the contrary, the expansion and contraction of many cycles seem to be interrupted by movements in the opposite direction, and some cycles apparently have double or triple peaks or troughs.[9]

Not all economic activities participate in what, after the event, may be judged a cyclical expansion or contraction, and those that do, participate in uneven measure and with variable timing. Serious investigators seeking to establish a chronology of business cycles from past records agree in the main about the movements they regard as cyclical but differ in not unimportant detail in the dates they set for peaks and troughs.[10]

[9] Arthur F. Burns and Wesley C. Mitchell, *Measuring Business Cycles* (New York: National Bureau of Economic Research, 1946), p. 7. Quotation within quotation from Mitchell, *Business Cycles: The Problem and Its Setting* (New York: National Bureau of Economic Research, 1927), p. 329.

[10] See Burns and Mitchell, *op. cit.*, chap. iv, esp. pp. 91–114.

Contemporary interpreters of the course of business have notoriously failed not only to predict the course of business but even to identify the current state of affairs. It is not at all abnormal for some to assert that we are in the early stages of deflation and others that we are entering into an inflation.[11]

An easy answer to these difficulties is to say that they are irrelevant; that the government should act on its best estimate of the state of affairs and should take measures of whatever magnitude seems appropriate; and that errors in these actions are unimportant since they can be corrected quickly. If deflationary action is taken, and turns out to have been unnecessary, the government can simply reverse itself and turn on the inflationary spigot; if the action was too drastic or not drastic enough, the government can then turn down or up the appropriate spigot. This answer is, of course, too easy. It conflicts with the hard fact that neither government action nor the effect of that action is instantaneous. There is likely to be a lag between the need for action and government recognition of this need; a further lag between recognition of the need for action and the taking of action; and a still further lag between the action and its effects. If these time lags were short relative to the duration of the cyclical movements government is trying to counteract, they would be of little importance. Unfortunately, it is likely that the time lags are a substantial fraction of the duration of the cyclical movements. In the absence, therefore, of a high degree of ability to predict correctly both the direction and the magnitude of required action, governmental attempts at counteracting cyclical fluctuations through "functional finance" may easily intensify the fluctuations rather than mitigate them. By the time an error is recognized and corrective action taken, the damage may be done, and the corrective action may itself turn into a further error.[12] This prescription of Lerner's, like

[11] This has clearly been true during much of 1946 and 1947. An interesting earlier case, called to my attention by Arthur F. Burns, is the 1920–21 contraction. The National Bureau of Economic Research sets January, 1920, as the peak of the cycle and September, 1921, as the succeeding trough (Burns and Mitchell, *op. cit.*, p. 78). Yet in May, 1920, the National City Bank said in its monthly letter on *Economic Conditions, Governmental Finance, United States Securities:* "General trade is good in all parts of the country," and in June: "It would be a mistake to assume that we are on the eve of immediate deflation on a large scale." As late as September, 1920, the letter reported: "The general business situation in our opinion has been developing in a satisfactory manner during the past month. .... The general trend is toward normal and permanent conditions..... The recession of industrial activity which is under way is not severe enough to be alarming." In October: "General business is moving along in a reasonably satisfactory manner..... There is good reason to think that in the industries that have been most disturbed the price reductions have gone about as far as they will in the near future." Not until the November, 1920, letter was there explicit recognition of the existence of a serious recession. That letter reported: "The expectations indulged in during the summer that the state of depression which was affecting certain of the industries would disappear with the opening of the fall season has not been realized; on the contrary, business is generally receding and there is no longer room for doubt that the country has passed the crest of the post-war boom." The December, 1920, letter said: "The downward movement of prices of which the first signs appeared last May, and which became quite evident in October, has become more general and precipitate in the last month. The hopes that had been entertained that the descent to a lower level would be accomplished .... gradually .... have proven illusory. Rarely, if ever, has there been so great a decline in commodity prices in so short a time."

One of the leading and best-informed observers of current business conditions thus failed to recognize the existence of one of the sharpest contractions on record until it was almost half over.

[12] There is much confusion on this point, largely because of an erroneous application of the statistical "law of large numbers" which leads to the belief that government needs to guess right only a little more than half the time to achieve some success in mitigating cyclical fluctuations. This is incorrect. If a number of random disturbances, each varying by about the same amount, are added, their mean tends to fluctuate less than any one of the disturb-

others, thus turns into an exhortation to do the right thing with no advice how to know what is the right thing to do.

IV. THE RELATION BETWEEN THE FORMAL CONDITIONS FOR AN OPTIMUM AND INSTITUTIONAL ARRANGEMENTS

The chief general criticism implicit in the preceding sections is that Lerner writes as if it were possible to base conclusions about appropriate institutional arrangements almost exclusively on analysis of the formal conditions for an optimum. Unfortunately, this cannot be done. It has been long known that there are alternative institutional arrangements that would enable the formal conditions for an optimum to be attained. Furthermore, the institutional arrangements adopted are likely to have important noneconomic implications. So it is necessary both to make a choice and to introduce additional criteria in making the choice.

Some fifty years ago, Pareto pointed out that the equilibrium allocation of resources in a freely competitive society based on private property is identical with the allocation that should be sought by a socialist state striving to achieve a maximum of "ophelimity" and that, on the formal level alone, totalitarian direction might achieve the same allocation of resources as a free price system (i.e., both might solve the same equations).[13] More recently, Taylor, Lange, Lerner, and others have outlined the form of organization for a socialist society, discussed briefly above, in which the individual productive units would "play" at competition and thereby reproduce the results of a competitive-enterprise economy.[14] Another arrangement that would accomplish the same end, given sufficient information, is to impose taxes and grant bounties so devised as to induce monopolists to set prices at the levels that would prevail under competition. Lerner in this book adds yet another device, counterspeculation, and it would doubtless be possible to construct still other institutional arrangements that, judged solely on a formal level, would permit the conditions for an optimum to be satisfied.

None of these arrangements will, of course, operate perfectly in practice. The most that can be expected is a reasonable approximation to the economic optimum. They must, therefore, be judged in part by (1) the practical administrative problems entailed in so operating them as to approximate the economic optimum and (2) as a corollary, the extent to which they lend themselves to abuse, i.e., the ease with which they can be used for objectives other than the general welfare. Economic institutions do not operate in a vacuum. They form part, and an extremely important part, of the social structure within which individuals live. They must also be judged by (3) their noneconomic implications, of which the

ances, and in this sense, the errors tend to cancel out; but their sum tends to fluctuate more than any one of the disturbances, and the larger the number of disturbances added, the larger the fluctuations in the sum. The effects of countercyclical actions of government are added to, not averaged with, the economic movements that would otherwise take place. If the countercyclical actions of government were entirely random disturbances, unrelated in any systematic fashion to the other movements, they would tend to increase the amplitude of cyclical movements. A slight ability to guess correctly would, therefore, serve only to mitigate or eradicate this undesirable effect, and a considerable ability to guess correctly would be required to convert government action into a stabilizing influence.

[13] Vilfredo Pareto, *Cours d'économie politique* (Lausanne, 1897), Vol. II, Book II, chap. ii, pars. 717–24, pp. 84–95. Pareto, of course, went further and discussed also some of the nonformal considerations appropriate to the choice.

[14] Oscar Lange and Fred M. Taylor, *On the Economic Theory of Socialism*, ed. Benjamin E. Lippincott (Minneapolis: University of Minnesota Press, 1938).

political implications—the implications for individual liberty—are probably of the most interest and the ethical implications the most fundamental.

As already noted, Lerner neither discusses nor even appears to recognize the first two bases for judging the appropriateness of economic institutions. He clearly recognizes the importance of the third—indeed, he states in the Preface that recognition of the importance of political implications was largely responsible for leading him to alter the character of the book from a discussion of a completely collectivist society to a discussion of a society which retains large elements of private property and free enterprise—but he explicitly rules out systematic discussion of political implications. "In this study we shall not go into the merits of this political issue. We shall assume a government that wishes to run society in the general social interest and is strong enough to override the opposition afforded by any sectional interest" (p. 6). The only other comment of any substance on this issue is a brief discussion of "the significance of private enterprise as one of the guarantees of the freedom of the individual." There is a sound basis, he says,

> for this argument even if it is often distorted by fanatical capitalists who identify the freedom of the individual with the license of the capitalist millionaire or even with the economic powers of giant corporations. . . . . The liberty of the individual obtained its first start in modern times with the freeing of private enterprise and . . . . the possibility for the individual of finding a means of livelihood outside of employment by the state can be a check on undue subservience to the employers who represent the state. Of course this is one only of many forces that must be developed and maintained if democracy is to be preserved and by itself it can not guarantee democracy, but anything that may contribute to the safeguarding of democracy is of great value.
>
> The controlled economy may consider that even some sacrifice of efficiency in the allocation of resources is worth while as a contribution to the safeguard of democracy, though the kind of government that would take this into account could put up adequate safeguards even if it were 100 per cent collectivist [pp. 84–85].

(But would it or could it stay the same government if it became 100 per cent collectivist?)

It would be unfair to Lerner to end without stressing again that the distribution of space in this review is very different from the distribution of space in the book. The book is at one and the same time (1) an elementary text in economic principles written from a novel point of view and emphasizing formal analysis rather than descriptive material, (2) a tract for the times advocating a "controlled economy." Most of the book is devoted to teaching principles, though the tone of a tract permeates it all. Most of this review is devoted to the tract.

The proposals in the book have considerable suggestive value and may stimulate others to useful and important work in developing them. The book throughout reveals Lerner's very considerable gifts—his acuteness as a theorist and dialectician, his skill and patience in exposition, his flexibility of mind, his profound interest in social welfare, and his willingness to accept and courage to state what seems to him right social policy, regardless of precedent or accepted opinion. In the reviewer's judgment, however, these gifts have been imperfectly realized because they have been employed in a vacuum and have not been combined with a realistic appraisal of the administrative problems of economic institutions or of their social and political implications.

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