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### THE NOTION OF INVOLUNTARY ECONOMIC DECISIONS<sup>1</sup>

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The Keynesian definition of involuntary unemployment has given rise to much controversy. According to this definition it is useless to discuss problems of involuntary unemployment within a consistent economic model if one of its equations is the classical supply function of labor, because there can be no involuntary unemployment within such a model. Similar problems arise whenever one tries to demonstrate the possibility of involuntary individual economic decisions *within a given model* of economic behavior. It is the contention of the present writer that the notion of involuntary economic decisions, to become meaningful, must be derived from a comparison *between alternative economic models*, or frameworks, under which society may collectively choose to operate.

#### 1. INTRODUCTION

IN SPITE of all modern writings on "the Age of Plenty" and "the Problems of Effective Demand" the basic problems of economic science remain the same. They are the problems that have their origin in the universal and ever-present shortage of goods and services in relation to human wants. For the same reason it is hardly ever possible to speak of voluntary economic action or decision in any absolute sense; for if there were no obstacles to economic choice, we should certainly experience that economic decisions generally would be different from what they are, or have been, in any society. In an absolute sense, therefore, most economic decisions could properly be classified as "involuntary." If this were what the economists are thinking of when they use the phrase "involuntary," then not much more could be said on the subject. However, it is obvious that the phrase "involuntary" action, or decision, etc., when used in economic theory, is meant to cover concepts that are more specific, and less trivial.

Here is not the proper place to enter into a lengthy philosophical or philological discussion of the types of human action that should rightly be called "involuntary." But, as economists, we do want to know rather precisely what we mean when we talk about "involuntary unemployment," "involuntary saving," or the like. Such notions have played—and are playing—an important part in economic discussions, discussions which probe deeply into the substance of economic theory. Quarreling

<sup>1</sup> This article will be included in Cowles Commission Paper, New Series, No. 38.

about words, usually a rather sterile activity, here becomes of some importance because of the powerful influence that a suggestive, colorful phrase may have upon the shaping of views with regard to economic policy. If words must have such effects, it seems wise to use them in such a fashion that they do not camouflage the real issues. In the paragraphs below an attempt will be made to develop the notion of involuntary economic decisions in a direction which, it is hoped, will prove useful in discussions on basic economic policies.

2. THE CONCEPT OF INVOLUNTARY ECONOMIC DECISIONS IS RELATED TO THE COMPARISON OF ALTERNATIVE ECONOMIC SYSTEMS, AND NOT TO THE DECISIONS WITHIN A GIVEN SYSTEM

The statement in this heading is not, of course, meant as a "theorem" to be "proved," in any logical meaning of that phrase. It is merely a proposal of an interpretation which we hope to make plausible and which we think will be helpful. In order to give clarity and meaning to a definition built on such a broad idea it is evident that we have to adopt a simplified and somewhat abstract description of the economic society about which we are talking.

Consider a society made up of a certain number of distinct groups or sectors. The function of any one of these groups is to make economic decisions—optimal from the point of view of the group—under certain choice-restricting constraints. Such decisions we shall call *individual economic decisions* of a group.

We assume, also, that the society has a machinery for *collective* action. We shall suppose that collective actions consist in invoking or maintaining a certain *system* or organizational form of the society as far as the economic aspects of society are concerned. By a "system,"  $S$ , we shall mean the totality of rules—adopted collectively, either explicitly or by silent agreement—under which the individual groups must operate. We shall have to consider alternative systems. For this purpose it is necessary to suppose that a "system,"  $S$ , can be described in such a way that it makes sense to talk about two systems,  $S'$  and  $S''$ , being equal or different.

Let us assume that the economic welfare of the various groups depends on  $n$  economic variables,  $X_1, X_2, \dots, X_n$ , each of which is supposed to affect the welfare of at least one of the groups. Let  $x_1, x_2, \dots, x_n$  be a set of values of these variables. For the sake of brevity we call such a set "the point  $x$ ." Any point  $x$  that is not excluded under the organizational and technological constraints we call a "market point  $x$ ."

It seems reasonable to assume that general economic welfare in the society will depend not only upon the market point  $x$ , but also upon the system,  $S$ , under which  $x$  is obtained. These two things together,  $S$  and

$x$ , may be called "the economic situation,"  $(S, x)$ , in the society, under given technological constraints.

Given the system  $S$  and the prevailing technological constraints, the individual economic actions of the various groups will presumably lead to some unique point  $x$ . Under given technological conditions the market point  $x$  will therefore be a function of  $S$ . It would seem reasonable to say that the economic decisions of the various groups, leading to the market point  $x$ , are *voluntary*, except for the technological constraints and the constraints under  $S$ .

Consider a situation with given technological constraints and a prevailing system  $S'$ , leading to a market point  $x'$ . Let  $S''$  be an alternative system under the same technological constraints, and let  $x''$  be the corresponding market point. Suppose that *if* the two situations  $(S', x')$  and  $(S'', x'')$  were presented for collective decision, the decision would be in favor of  $(S'', x'')$ . *In that case we shall say that the society is involuntarily operating under the system  $S'$ .* We might then also say that the market point  $x'$  is involuntary as compared to  $x''$ , but this description would be incomplete.

Why should one call the maintenance of the system  $S'$  involuntary if that system is not in fact being discarded in favor of  $S''$ ? Should not this be called "irrational" rather than "involuntary"? The crucial point here is the following. Each group operating under the system  $S'$ , may, from that group's point of view, be acting in the most rational and consistent fashion. The eventual decision to change the system  $S'$  is of an entirely different nature. It requires collective action. The *posing* of the alternative  $S''$  for collective action requires a *way of thinking* and a *power to act* which are outside the functional sphere of any individual group as such.

The failure to take collective action in the case indicated may be due to a number of circumstances. For example, the relation between  $S''$  and  $x''$  may not be known ("one does not know what the new system will lead to"). The conviction may prevail that  $x'$  under  $S'$  is unfavorable only temporarily; or because the various groups, acting under  $S'$ , are "stupid"; or the apparatus of collective actions may be too infantile and feeble even to put the question on the agenda, so that we have a situation where "everybody thinks that something should be done, but nobody does anything about it."

One cannot expect that the order of collective preference as between different economic situations  $(S, x)$  will remain invariant over time. First of all, there is the question of the set of alternatives  $(S, x)$  that are within the horizon of the collective, policy-deciding body at any given time. This depends on technological developments, on the state of knowledge with respect to the functioning of the economy, and also on tradition and general experience in reaching collective decisions. Next, there

are the changing attitudes towards the question of social justice, individual freedom, etc. And, finally, there is the problem of possible changes in taste and behavior of the individual groups and, therefore, changes in the market point  $x$  chosen under a given system  $S$  and given technological constraints.

The notion of involuntary economic decisions as developed above, vague and complicated though it may be, does help to bring out some of the main problems involved in decisions upon economic policy. Consider for example a simple statement like this: "Production is too low compared with the amount that people are willing to produce." If this is to be more than a loose phrase, we have to ask why it is that such a situation can prevail. In general, it is of little use to argue that the actions of the individual groups are irrational or erroneous. Instead we shall have to pose the following question. The present situation being  $(S', x')$ , is it possible to propose another feasible and practical system  $S''$  such that  $x''$  involves more production than  $x'$  and such that a collective decision would be in favor of  $S''$ ?

These ideas do not, of course, imply that economists and other experts should study or propose only systems that *today* have a good political chance of being adopted. Quite the contrary. The broader the selection of practical, feasible systems and the more widespread the knowledge about the working of such systems, the better, presumably, is the chance of obtaining wise decisions.

To test the use of the definition of "involuntariness" as developed above, let us compare it with the definition of "involuntary unemployment" as given by Lord Keynes. He describes a state of involuntary unemployment as a situation in which more labor would be forthcoming at the prevailing wage than the amount of labor actually employed.<sup>2</sup> It would seem natural, according to this description, to define the amount of involuntary unemployment as the difference between the amount of labor that would be offered at existing wages and the amount actually employed. But then one has the following problem: If  $(S', x')$  is the existing economic situation, is it possible to devise a feasible and acceptable system  $S''$ , leading to a new situation  $(S'', x'')$  in which  $x''$  involves the same wage rate as  $x'$ , but where  $x''$  differs from  $x'$  with regard to employment by an amount equal to the amount of "involuntary unemployment" implied in the Keynesian definition? Clearly it is trivial to compare the prevailing situation with something that might not be logically possible or practically feasible or collectively acceptable. That would be as trivial as to say that people are "involuntarily" consuming less than they want because there are not enough goods and services for everybody.

<sup>2</sup> J. M. Keynes, *General Theory of Employment, Interest and Money*, New York: Harcourt, Brace and Co., 1936, pp. 10-15.

This is not saying that the possibilities of policy changes that could improve upon economic welfare are more limited than visualized by the majority of economists. On the contrary, the possible gains by collective policy decisions and by providing economic knowledge as a basis for such decisions are probably underestimated. But we need to be clear on the point that all alternatives worth considering must represent consistent and workable systems and that in addition there is a question of choosing between them, which choice is not decided solely by consideration of the location of a market point  $x$ . The choice also depends on  $S$ .

### 3. THE IDEA OF "OVERDETERMINED" ECONOMIC SYSTEMS<sup>3</sup>

The notion of involuntary economic decisions, of which the Keynesian definition of involuntary unemployment is an example, is—stated generally—that a market point  $x'$  entails involuntary action to the extent that it differs from another "more desirable" market point  $x''$ .

We have argued that this is probably not a very fruitful approach, unless the point of comparison,  $x''$ , be derived from a workable and acceptable system  $S''$ . And this requirement would take us back to the notion of involuntary action which we have suggested in the foregoing, and according to which the "involuntariness" consists in maintaining  $S'$  when  $S''$  would be collectively preferred.

Even more complex is the idea of "overdetermination" of the "voluntary" market point. The idea seems to be as follows. Consider the individual groups acting under given technological constraints and a given system,  $S$ , of organizational rules or constraints. Suppose that each of the groups thinks that a certain mode of action is "natural" or "desirable" under the conditions given. It may be possible to describe such a complex of modes of action by a system of simultaneous equations between the variables  $X$ , incorporating the technological and organizational constraints as interpreted by the various individual groups. We may easily conceive of such a system of equations as being logically contradictory, or "overdetermined." This means that there exists *no* market point  $x$  satisfying the "desired" system of equations. In that case the individual groups obviously have to do *something else*. Thus, from the knowledge of such a logically contradictory system we can say something about what the individual groups can *not* do. But obviously this does not in general determine what they *will* choose as the alternative. All we can say is this: The market point  $x$  must by its very nature be a unique observable point at any time. *Therefore, if we choose to say*

<sup>3</sup> See, for example, Ragnar Frisch, "Overdeterminateness and Optimum Equilibrium," *Nordisk Tidskrift for Teknisk Ökonomi*, No. 37 (1-4), 1948, pp. 95-105, and Don Patinkin, "Involuntary Unemployment and the Keynesian Supply Function," *The Economic Journal*, Vol. 59, September, 1949, pp. 360-383.

that the market point  $x$  is determined by a system of simultaneous equations, this system must permit the solution  $x$ .

One could perhaps conceive of an "overdetermined" system as a link in a virtual process of mental trials and errors by which the individual groups approach the problem of *finding a workable mode of action*. This mental experiment is in fact exactly similar to the one that we sometimes use in order to understand how the individual groups, by mutual trials and errors, find the *form* of a system of behavior relations that actually does permit of a solution. It does not seem very fruitful—at least not from the point of view of economic policy—to define the change-over from a set of mutually contradictory modes of action to one that is not contradictory as "involuntary," for clearly there is no collective decision that could fully gratify the wishful thinking that is involved in a contradictory system of economic relations.

A few more comments may be added regarding the possible operational meaning of the processes of trial and error that were mentioned above. When we consider such processes, we usually think of them as a *chain*, one trial suggesting what the next should be. This being the case, one could think of a much wider set of rules of behavior, always consistent, and describing the following process. First, a virtual process of trials and errors running through systems of behavior equations and converging infinitely fast and uniquely upon one having a solution  $x$  permissible under the prevailing technological constraints and the existing organizational system; next, a reconsideration, by each group individually, whether, from its individual point of view, it has actually chosen a mode of action which is in the group's own interest; then a new process of choice of behavior patterns converging upon some other system of relations that has a solution, and so forth. In this way it may be that, under a given system  $S'$ , a market point  $x'$  is established such that all the groups think they are acting in their own best interest. Still the market point  $x'$  may be very bad from the point of view of economic welfare compared to what might be obtainable under some alternative system  $S''$ . That is to say, the system  $S'$  is involuntarily maintained because collective action is lacking.

These are the cumbersome lines of thought that one has to go through if one wants to visualize how "market equilibrium" is established in the field of *static* theory. Such reasoning may perhaps serve as a means of abstract interpretation of a market mechanism, but it is hardly a realistic description of the processes that actually take place. It represents no operational method of decision from the point of view of the acting economic groups. For a more realistic description of the modes of action under a certain economic system it is necessary to turn to the field of *dynamics*. A dynamic interpretation would be as follows.

Consider a given organizational system  $S'$  and given technological constraints. Let  $x(t)$  be any market point at time  $t$ , subject only to the organizational and technological constraints. Given this market point, the various individual groups may desire to take certain actions which are open to them to change the market point. How is it possible at the same time to accept a given market point  $x(t)$  and to desire to change it? In the static theory it seems hopeless to answer this question. But in a dynamic theory the answer is simple. In a dynamic theory the parameters of action of the individual groups need not be the components of the market point itself, but, for example, the rates of change, of various orders, of these components. If the rates of change that represent parameters of action of the individual groups are zero, this fact may be taken to mean that, within the alternatives of choice that are open to each group acting individually under the given technological and organizational constraints, there is no desire on the part of the individual groups to change the market point or the manner in which the market point is developing. However, even if the market point  $x(t)$  has this property for all values of  $t$ , it does not necessarily mean that the system  $S'$  is "optimal" in the sense of economic welfare. But changing the system  $S'$  requires *collective* action, which might not be forthcoming for reasons we have already explained.

The system  $S'$  and the technological constraints may be such that there is *no admissible market point* or market development,  $x(t)$ , for which all the rates of change that represent parameters of individual action *are zero* identically in  $t$ . In fact, the behavior of the individual groups acting—from their point of view—in their own best interest may lead to a development of the market point through time which only increases the individual desires and efforts to change it. Under such a process the market point itself may gradually become either more preferable or less preferable, for the efforts to change the market point will depend both on the market point itself and on the apparent further opportunities of changing it. Under such a development, the market point being in motion, it may be more difficult to get clear views on the eventual need for collective decisions to change the organizational system, unless the development goes steadily in such a bad direction that people become "fed up."

#### 4. THE PROBLEM OF OPTIMAL ORGANIZATIONAL SYSTEMS

We have seen that the technological conditions prevailing in a given situation and the organizational system under which the various groups must operate represent constraints upon the freedom of choice of the individual groups in their attempt to influence the market point  $x$  in the direction of their own best interest. Would it then not seem obvious that

the optimal organizational system would be one under which the individual groups could have all the freedom of action that the technological constraints permit? Or expressed in different words, are not the result of collectively chosen organizational constraints in general a loss in "average economic welfare," a loss found necessary merely in order to ensure certain standards of equalization and social justice? The weaknesses of such a conclusion are not difficult to detect. The conclusion is based upon the implicit assumption that the individual groups, given certain technological constraints and a collectively agreed upon organizational system, would somehow get together, or be led by Adam Smith's "invisible hand," to survey the opportunities of choice in order to make some sort of optimal decision. But this means in fact some sort of collective action, and it is precisely this sort of action which is external to the sphere of reasoning of the individual group as such.

A particular group acting under the prescribed constraints of a general organizational system is also faced with another set of constraints, viz. those involved in the known, or assumed, individual *response of the other groups*. These additional constraints, together with the technological and the collectively chosen organizational constraints, lead to the individual behavior patterns that determine the market point  $x$  and thus exhaust all the original degrees of freedom of the market point. In the final analysis it is, therefore, not a question of whether or not these are constraints upon the market point but rather a question of how these constraints have come about. To argue that the constraints that have, so to speak, "made themselves" in the market are optimal would certainly seem rather arbitrary. One need only think of such alternatives as that of having a police force to keep law and order compared to that of a more free and "natural" system of individual methods of protection.

Finding an optimal organizational system is, however, not a question of choosing collectively a system which at a given time could give the "best possible" market point. Nor is it a question of choosing an organizational system that seems the most "natural" or reasonable from the point of view of behavior of the individual groups. The choice must be based upon a survey of various feasible *economic situations* ( $S, x$ ). The choice will be influenced *both* by  $S$  and by  $x$ , and in a manner that cannot be expected to remain invariant over time.

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