EMPTY ECONOMIC BOXES: A REPLY

Dr. Clapham's entertaining paper on Empty Economic Boxes in the September issue of the Economic Journal is evidently designed to provoke one of his friends, "some analytic great or small," to reply. For myself I am inclined to suspect that the boxes labelled "analytic" and "realitic"—if that is the corresponding term—among economists are themselves empty, and that nobody in the world really falls into either category. Still "analytic" is a charming word and, for the purposes of this paper, I am ready to accept it as a label. In revenge, however, for letting myself be boxed in this way I claim the right, proper among friends, to indulge in whatever "brilliances" at Dr. Clapham's expense the spirit of controversy may whisper to me.

The substantial content of his paper is contained in the following propositions. (1) There are difficulties in the conception of a rate of returns in industry, particularly of a rate of increasing returns. (2) There are difficulties in deciding which particular industries are at the present time being conducted under conditions of increasing or conditions of diminishing returns—difficulties which keep these economic boxes empty. (3) If we could fill the boxes, very little practical good would come of it. (4) Therefore the said boxes are useless, dangerous and ought to be abolished. The first of these propositions is obviously true. Since, however, Dr. Clapham does not display, or profess to display, any difficulties in the conception of returns additional to those that have been familiar to economists for the past quarter of a century, nothing further need be said about it. In the following pages, therefore, I shall confine attention to the other parts of his paper.

Let us begin by clearing the ground. There are two broadly distinguished sorts of knowledge: "pure" knowledge about implications, such as is sought in mathematics and logic; and realistic knowledge concerned with a subject-matter presumed to be actual, such as is sought by physicists. Within that second sort of knowledge must be further distinguished knowledge that cannot, and knowledge that can, give us direct help in the practical
conduct of affairs. This second distinction seems to be somewhat blurred in Dr. Clapham's mind: with the result that it is not clear how far his antipathy to the categories of increasing and diminishing returns is due to his belief that they cannot be given a concrete filling, and how far to his belief that they cannot show us the way to card wool or impose taxes. Thus, I cannot gather from his article whether or not he would enjoy the contemplation of these categories, provided they were given a complete concrete filling and yet could not help practice at all. This woolliness in his critique makes the task of reply a little embarrassing.

If he is to be interpreted literally, his argument is that the analysis of increasing and diminishing returns is not worth pursuing, because, even if these economic boxes could be filled, no help would be given thereby to practice. Let us grant, for the sake of argument, that the analysis does not touch practice at all. The conclusion that it is not worth pursuing does not follow. Dr. Clapham, as a historian, is debarred from contending that the only knowledge which has value is knowledge which can guide practice; for by far the greater part of the knowledge which history aims at is totally irrelevant to practice. Hence, knowledge may have a value for its own sake. But knowledge of implications is just as much knowledge as knowledge of matters of fact. That, if certain conditions as to increasing or diminishing returns prevail, and if a tax of so much is imposed on a given article, such and such an effect will follow, is a piece of truth, just as it is a piece of truth—if it is one—that a certain English king died from a surfeit of lampreys. The historian is interested in matters of fact; but the logician is interested in implications. What right has the one to condemn the other? On what metaphysical or other basis is he entitled to lay it down, that knowledge of the form, "If $X$, then $Y$," is inferior to the knowledge of the form, "In the year 1600, $X$"? There are many empty boxes, in Dr. Clapham's sense, in the kingdom of pure mathematics: will he invite the mathematicians to abandon them and join in his researches about lampreys? This kind of answer to the censor of "useless knowledge"—as followed by other people—is, I think, a perfectly legitimate one. Nevertheless, it is not one that, in the present connection, I wish specially to stress. For I do not myself judge that a knowledge of implications of the type that pure economics can provide has, in and for itself, any large value. To this extent I am really at one with Dr. Clapham, though, since I see no way in which a person who takes
a different view can possibly be confuted, I am less willing than he appears to be to dogmatise on the matter.

I suspect, however, that, though Dr. Clapham in words makes his valuation of different parts of economics depend on their practical usefulness, he would, in thought, be content with any schema, whether it had a bearing on practice or not, provided it could be given a realistic content. For I cannot imagine that a person, who thinks it worth while to study the economic conditions of the past for their own sake, should think it not worth while to study these conditions in the present except where it can be shown that practical applications result. Moreover, I am confirmed in this view by the curious complex from which Dr. Clapham appears to suffer in connection with general terms. The word "commodity," for instance, is a red rag to him. He prefers to talk of hats, not appearing to realise that, if I wish to say something which is true, not only of hats, but also of gold watches and of onions, to express the proposition in terms of hats alone is not to express it fully. When this complex is developed a little further, he will probably rebel at the statement that two and two make four, and will insist on substituting for it the statement, which is also true but is not the same statement, that two hats and two hats make four hats! This, however, is by the way. I merely refer to it because it strengthens a little my view that, in spite of his words, it is realism rather than practical usefulness that Dr. Clapham wishes to extol.

If I am right in this view, the point at issue is whether the concepts of increasing and diminishing returns are instruments of service in the construction of a realistic economic science. Dr. Clapham appears to hold that, provided, as boxes, they cannot be filled, it is self-evident they can serve no purpose of this kind. In that I venture to suggest that he is mistaken, that he has, in fact, misunderstood altogether the nature of the work that he is belittling. A central problem of economics, from the time of Adam Smith downward, has been to disentangle and analyse the causes by which the values of different things are determined. In the course of the prolonged attack that economists have made upon this problem it has been found convenient to distinguish influences acting from the side of demand and influences acting from the side of supply; and it has been found further, on the side of supply, that the relations between changes in aggregate output and changes in cost per unit differ according to the nature of the article and the period of time that we have in view. In studying the relation between aggregate output and
cost we naturally distinguish the group of conditions under which cost increases as aggregate output increases from the group of conditions under which it diminishes as aggregate output increases. Since it so happens that alterations in demand will produce effects of a different kind, and not merely of a different degree, according as one or other of these groups of conditions prevail, we are led to give the distinction between them a certain prominence. But the distinction itself is not the fruit for which we have been labouring. It is a mere incident in our general analysis of the problem of value—an analysis in which are brought to light the complex inter-relations of internal and external economies and those deep-seated difficulties, obscure to all economists before Dr. Marshall wrote, connected with the element of time. It is not to be judged by itself in isolation from the general analysis. To take the categories of increasing and diminishing returns out of their setting and to speak of them as though they were a thing that could be swept away without injury to the whole corpus of economics is a very perverse proceeding. It would be easy enough to drop the names; but does anybody seriously imagine that we could have any understanding at all of the influences governing economic values if the fact that aggregate output and supply cost have varying relations to one another were ignored?

But I am anxious to return to the question of practical usefulness, because I personally am inclined to go further in this matter than I think Dr. Clapham himself would go. Even a thoroughly realistic economic science would not, in and for itself, make any great appeal to me. Practical usefulness, not necessarily, of course, immediate and direct, but still practical usefulness of some sort, is what I look for from this particular department of knowledge. Without that, if there were hope of light alone, and not of fruit, from economic investigation, I should not trouble much about it. It is here, therefore, that Dr. Clapham’s paper chiefly interests me. He maintains three separate things: first, that his economic boxes, so long as they are empty, cannot have practical usefulness; secondly, that, even if they were filled, they would not have practical usefulness; thirdly, that they cannot be filled. I proceed to consider these three contentions in turn.

The first of them I have already partly answered. These boxes, as he calls them, are not merely boxes; they are also elements in the intellectual machinery by which the main part of modern economic thought functions. If then it be granted that this thought as a whole is able to render any practical service—and, in face of the
enormous range of problems now confronting Europe in which the issues involved are largely economic, this will scarcely be disputed—these particular elements in that machinery cannot be singled out from the rest and condemned as useless; they are an organic and inseparable part of that machinery. But there is a further consideration of a more direct kind. Even regarded as boxes, and empty ones at that, the categories of increasing and diminishing returns are not mere ornaments. Knowledge about them cannot, indeed, on the hypothesis of their eternal emptiness, help us in a positive way, but it can help us a great deal in a negative one. It enables us to discover with absolute precision what assumptions are implicit in the statements about economic causation (upon which action is often based) that politicians and other such persons are accustomed to make for the guidance of the public. When we are informed that a tax always raises the price of the taxed article by the amount of the tax, we know that our informant, though himself probably unaware of it, is tacitly assuming that all articles are produced under conditions of constant return. We know, therefore, that his statement is almost certainly untrue, and we also know what information we should need to have about any article subject to tax, in order to prophesy what the result on the price, at various intervals after the tax was imposed, would be. Dr. Clapham will hardly contend that this is unimportant. He will hardly deny that science may help practice by exposing the falsehoods of charlatanry as well as by itself discovering truths.

The second contention is that, even if they could be filled, knowledge about these boxes would have no practical usefulness. In discussing this contention I am again placed in something of a difficulty by Dr. Clapham’s failure to clarify his own meaning. Of course, merely to know that a particular article—article, being a term used by shopkeepers, sounds more "realistic" than commodity—is being produced under conditions of increasing or diminishing returns is to know very little indeed about it. It is on a par with knowing merely that a man's temperature is above or below normal. To get any large and important guidance for practice we must know, or, at all events, we must have some rough general idea, as to how much above or below the normal it is. If we knew that the hat industry was being conducted under conditions of increasing or of diminishing returns, we should be able, it is true, to say something more about the effect to be expected from the imposition of a tax on hats than we can say now; we should be able to say, that is, whether, other things being equal,
a given tax would cause the price to go up by more or by less than the amount of the tax. But this is all we should be able to say. In order to get a definite result—to be able to say by how much, in actual pounds, shillings and pence, prices would go up,—we must know a great deal more than this. We must know the exact shape of the relevant part of the supply curve for hats and also the exact shape of the relevant part of the demand curve; in more general, if less exact, terms, we must know the numerical values of the elasticities of supply and demand for quantities of hats in the neighbourhood of the quantity that is actually being produced, and the relation of these elasticities to the passage of various intervals of time. Had Dr. Clapham pointed out that to know that a particular article is being produced under conditions of increasing or diminishing returns is not to know these things, and is, therefore, of little practical use, I should have agreed with him. But this is not his line of argument at all. He speaks as though increasing returns is one definite thing and diminishing returns another, whereas, in fact, each of these terms covers an infinite number of different things. The boxes between which the "analytics" are interested to draw distinctions are not, as he evidently supposes, the bulky valises displayed in their shop windows, but an intricate collection of little cases inside these, each labelled with a legend of the form "η lies between a and (a + Δa) and ε lies between b and (b + Δb)." Dr. Clapham does not say in so many words that the filling of these little cases would have no usefulness for practice, because he does not seem to realise that, inside the valises, there are any little cases. But the form of his argument suggests that, if he had realised that fact, he would have said this. At all events, in rebuttal of his view I wish to argue, not that the filling of the boxes would serve practice a great deal, but only that the filling of the little cases would do so.

Consider then his argument. For believing that the filling of the boxes would be of no appreciable use he adduces two reasons. First, he would not thereby be enabled to give any more advice than he can offer now to a manufacturer of woollen goods in the conduct of his business. Secondly, the information available to governments through the filling of the boxes would not, by itself, enable them to reach any political decisions. To the first of these reasons the answer is that it is not the business of economists to teach woollen manufacturers how to make and sell wool, or brewers how to make and sell beer, or any other business men how to do their job. If that was what we were out for, we should,
I imagine, immediately quit our desks and get somebody—doubtless at a heavy premium, for we should be thoroughly inefficient—to take us into his woollen mill or his brewery. The second reason is a remarkable one. Dr. Clapham has learnt from the *Principles of Economics* that, if we knew, as between two articles, that one was being produced under conditions of increasing and the other under conditions of diminishing returns, we could draw inferences that were relevant to the comparative effects on social welfare of putting taxes on the one or the other of them. Because there are also other considerations relevant to that problem, Dr. Clapham considers that this knowledge would be useless! What is there to say of reasoning of this quality? It is as though Dr. Clapham, in choosing between two suits of clothes (he will forgive the horrible suggestion that he might buy such things ready-made!), should refuse to inquire which of them will fit him best, because there is another consideration also relevant to his choice, namely, the amount of money that they respectively cost!

There remains the contention that the empty boxes cannot, in fact, be filled. Here I must point out that, had Dr. Clapham realised what the issue really was, he would have been able to strengthen his case very considerably. For, if it is difficult to decide whether a particular article falls into the increasing returns box or the diminishing returns box, *a fortiori* it is difficult to decide into which of the little cases inside these boxes it falls. I am very far from wishing to underrate the difficulty of this task: indeed I have myself more than once discussed and emphasised it.¹ None the less to declare, of a piece of work that has not yet been seriously tackled, that it is impossible, is, in my judgment, at least premature. Something, I believe, might be accomplished if economists would take counsel with leaders of business, expert in particular branches of production. Of course, if Dr. Clapham, or anybody else, goes to them and says, "My dear fellows, an 'analytic' up at Cambridge wants to know if your industries obey the laws of diminishing, constant or increasing returns," no great illumination is likely to result. But, if he were to ask them to discuss the conditions, as regards the relation between aggregate output and cost, under which various important articles have been and are being produced,—which is really asking a great deal more—I for one do not believe that he would always come empty away. Nor need we rely only on the general judgment of people expert in particular industries. There is

¹ Cf., e.g., *The Economics of Welfare*, pp. 8–10.
already available a certain amount of statistical material—and we may reasonably hope that this material will both grow in quantity and improve in quality—from which students with the requisite mathematical equipment may make rough deductions about the shapes of certain supply schedules. On the side of demand something on these lines has already been accomplished. On the side of supply the task is undoubtedly more difficult. But we need not conclude that it is impossible. The hope of which I have just spoken, that better statistical material may presently be available for study, thus making the inquiry more feasible than it has been hitherto, should itself forbid that. There is, indeed, a lion in the path; the fact that those people—with the towering exception of Jevons—who have the qualities required for conducting a detailed intensive study of particular industries and writing monographs about them, are not usually well versed either in the more intricate parts of economic analysis or in modern statistical technique; while the "analytics" lack alike capacity and inclination for these detailed studies. For this there is only one real remedy. We must endeavour to train up more men of the calibre of Jevons, who are equally at home in both fields. Till we can accomplish that, the next best thing, for those lesser persons who are moderately qualified for the one sort of inquiry and for the other, is to work together in combination, and not to waste time in quarrelling, perhaps on the basis of an imperfect understanding, with the deficiencies of one another's methods.

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[For a rejoinder to this article by Dr. Clapham, see Notes and Memoranda below.]