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THE ECONOMIC EFFECTS OF VARIATIONS OF HOURS OF LABOUR [1]

I

THE number of hours a man works is not a matter which is determined independently of other circumstances. It depends partly on habit, partly on technical or legal necessity, partly on the relative pulls of product, production and leisure, and these in turn are partly dependent on it. To exhibit the form of this dependence under the complex conditions of industrial civilisation is one of the chief problems of the analysis of economic equilibrium, but it is not a problem with which I wish to deal in this paper.[2] My object here is of rather a different order. Assuming that a variation of hours takes place, I wish to inquire what other changes we should expect to be associated with it. For the purposes of this analysis, that is to say, the change in the length of the working day is to be regarded as the independent variable. What I discuss is not what causes bring it about, but what consequences follow from it. From a philosophical point of view, no doubt, this procedure is more arbitrary than the analysis of the conditions of equilibrium, but from the point of view of social policy it has much to recommend it. The practical problem which we have to decide at any given moment is the problem whether our present distribution of time between work and leisure is satisfactory; and although the final solution, involving as it does an appeal to subjective standards of worth, is outside the scope of scientific inquiry, yet a precise knowledge of the objective consequences of any variation is of material assistance in arriving at a solution. Our valuations are only valid by accident if they are not based on a knowledge of fact. What I have to say is not new. The materials for a solution of this problem are to be found in all reputable handbooks of economic principles; but they are not often deliberately collated with this particular object in view, and in popular discussion they

[1] A Paper read before Section F of the British Association at Glasgow, September, 1928.

[2] The matter is dealt with in Sir Sydney Chapman's article on "Hours of Labour" in this JOURNAL, for September 1909.

are apt to be ignored. In view, therefore, of the practical urgency of clear thinking on these matters, it has seemed to me to be worth while, even at the risk of repeating things which are familiar, attempting to combine them in one general survey.

II

I turn first to the connection between hours and output—at once the most simple and the most fundamental of the relations we have to examine.

Here fortunately it is possible to be brief. The days are gone when it was necessary to combat the naïve assumption that the connection between hours and output is one of direct variation, that it is necessarily true that a lengthening of the working day increases output and a curtailment diminishes it. Systematic study of the conditions of efficiency has abundantly vindicated the view, which after all is not very sophisticated, that, if we wish to maximise daily output, just as it is possible to work too little, so it is also possible to work too much. Of course it is true that if we start from the beginning of any given job and measure onwards throughout a single day, so long as we continue to work at all without spoiling what we are doing, we add something to the product. But to argue from this to the conclusion that the longer the average working day, the greater the average daily output, is completely to beg the question at issue. For the human frame is not inexhaustible, and the greater part of the work of the world must be done from day to day and not accomplished in isolated spurts. And this means that if a man continually works beyond a certain point, the intensity of his work will be reduced to such an extent that the gain in longer hours will be more than offset by the loss in hourly output, so that if he had worked less his average output would have been greater.[1] This is true of all continuous occupations. A great number of observations have proved it to be true for many kinds of manual labour,[2] and although in the case of mental work of any complexity quantitative measurement is out of the question, there can be no doubt that in a broad way it is true here likewise. We all know the hacks who are always dull because they are always overworking.

[1] For convenience of exposition, the above argument has been stated in terms of days and hours, but of course there is no special sanctity about these periods, and it is not difficult to state the theory in terms which are of greater generality.

[2] See Sargant Florence, *Economics of Fatigue and Unrest*, for an excellent account of this matter.

If, therefore, we are to predict the effect of a given variation in hours we must conceive of it in relation to a working day of maximum productiveness. This day, of course, will vary from man to man and from industry to industry. It will vary in the same industry with variations of technique, distribution of hours within the day and over longer periods, and general working conditions. It will vary, too—and this is a point which has not been sufficiently emphasised—with the length of time over which the maximisation of output is contemplated. A length of day that would maximise output for a month or a year would not necessarily bring it to a maximum if a period of many years was contemplated. A length of day that maximised output during a short war would not necessarily maximise it during a long peace. But if we bear in mind the essential relativity of the conception, we may legitimately speak of a point (or points) of maximum productiveness in connection with a given variation. So long as the variation is towards this point, output will be increased; so long as it is away from it, it will be diminished. That is, output will be increased if a working day longer than the day of maximum productiveness is shortened, or if a day shorter than the day of maximum productiveness is lengthened. It will be diminished by converse variations. How much it will be increased or diminished will depend on the extent of the change and the rates at which productiveness falls away on either side of the maximum—a matter which again will vary with varying circumstances.

One warning only is needed in this connection. Generalisations of the sort I have been making—of the sort I shall be making throughout this paper—are only statements of tendencies. They are only statements of what will happen if other things remain the same. And this means that, if other things are not equal, such statements cannot be refuted by a mere appeal to facts, nor can they necessarily be proved by facts which appear to support them. During the nineteenth century, for instance, the average duration of the working day was considerably curtailed. At the same time there was a fairly continuous increase in output, and from this it is sometimes argued that the length of day actually worked at the outset was beyond the point of maximum productiveness. No deduction could be more illegitimate. A general increase in productivity may make the yield to a shorter day after the change greater than the yield of a longer day before, even if without the reduction output would have been still greater—and of course during the nineteenth century productivity in

general was increasing. Other considerations may lead us to believe that hours of labour were excessively long during the earlier part of this period, but from crude statistics of changes in output it is as illegitimate to argue that the curtailment of the working day was the cause of the increase, as that, if the day had not been reduced, productivity would have increased still faster.

III

That is all I have to say at present on variations of hours and output. I now proceed to deal with the opposite aspect of the matter, the relation between hours and incomes—a subtler connection demanding greater delicacy of treatment.

So far as men consume the product of their own labour, of course, income and output are identical. Robinson Crusoe living alone on his island lives exclusively on the product of his labour. So does human society conceived as a whole. External circumstances being given, what is got in the form of produce depends on what is given in the form of effort. In both cases, therefore, there is nothing to add to the simple generalisations which have been made already.

But when we come to consider not individuals working on their own or society conceived as an aggregate, but individuals and groups of individuals working within society and exchanging their products for the products of other individuals and groups of individuals, matters are not so simple. For in such circumstances what men work for is not their own output but the power to acquire by way of exchange little bits of other people's output. That is to say, what they work for is not their own output but the value of their output. Thus we have to examine, not only the effect of variations of hours on output, but also the effect of such variations of output on the income available from its disposal, and on the incomes of those who purchase it. To do this it will be convenient to proceed by stages. First, we may inquire as to variations on the part of single individuals, then as to variations on the part of single industries, then as to variations on the part of a whole society, and finally as to variations on the part of geographical groups or "nations."

IV

I turn first to variations on the part of single individuals.

This is the simplest case and need not detain us long. The fact of exchange introduces no important complications. The income of society (which, as we have just seen, *is* its output) will

obviously fluctuate with individual output, and in the great majority of cases so will individual income. For so far as the great majority of people are concerned, the value per unit of the work they do is a fixed fact which is unaffected by variations in their individual output. The total work they do is only a tiny fraction of the total supply of the work they are supplying. The effects on value per unit of fractional variations of this tiny fraction, therefore, are so small that they may be disregarded. In a small minority of cases this might not be so—there are certain British etchers, who, I am told, maintain the value of their work by limiting its quantity—in these cases what I shall be saying about group variation will be applicable. But in most markets individual income will tend to fluctuate with quantitative variations in individual work. It is obvious that it must be so in the case of independent producers. It is no less clear in the case of contract wages paid on a piece-work basis. In the case of wages paid on a time-rate basis and weekly, monthly and yearly salaries, disparities may arise, but except where economic friction is very great, they are not likely to persist.

V

I turn next to variations on the part of all the producers engaged in any one line of industry, a question looming larger in public discussions of industrial policy. Suppose all the producers of, say, coal decide to vary their working day, what results are to be expected?

Here matters become more complicated. As before, we may expect the income of society to fluctuate in the same direction as output, but in the absence of further knowledge with regard to the disposition of other members of society and the technical conditions of production, we are no longer justified in predicting the same of the incomes of the producers in question. For now, by hypothesis, the total volume of supply is fluctuating appreciably, and therefore value per unit must be affected—and, of course, must be affected inversely. But until we know *how* it is affected—at what rate it falls for an increase of supply or rises for a diminution—we cannot say how the incomes of the producers in question are going to fluctuate: 9,000 units at 10*d.* (90,000*d.*) are worth more than 8,000 units at 11*d.* (88,000*d.*), but 9,000 units at 6*d.* (54,000*d.*) are worth considerably less.

It is in tackling problems of this sort that we become conscious of the immense debt that we owe to the Marshallian analysis of demand. For, armed with the concept of elasticity, we can assert

quite simply that, in the circumstances we are discussing, if the elasticity of demand is greater than unity—in non-technical terms if the change in amount demanded is more than proportionate to the change in price—incomes will vary directly with output; if it is less, they will vary inversely. It is important, of course, to distinguish between elasticity of demand for the ultimate product and elasticity of demand for the labour that helps to produce it. In cases of simple production with free or low-priced raw materials and no complicated organisation or capital equipment, the divergence between the two may not be considerable. But if expensive raw materials and extensive capital equipment are involved, the divergence may be very important. The elasticity of demand for the product will, of course, be one of the factors governing the conditions of demand for labour. But so will the way the prices of the other factors employed react to changes in the scale of output, and the technical possibilities of varying the proportions in which they co-operate. Overhead costs may be increased or diminished, raw materials may become more or less expensive, different technical combinations may become more expedient, and so on. It would be possible to spend much time unravelling the subtleties of these relations;[1] but in the last resort, here, as in the simple breakfast-table examples of the elementary text-books, we may imagine a scale of prices at which given quantities of work will be taken, and the rate at which this change will be all-important in determining the outcome for the wage-earners of any given variation of hours of labour.

Now if wage-rates are freely adjustable and the market for labour is reasonably competitive, that is the end of the matter. Wage-earners whose labour is in relatively elastic demand will increase their income by increasing their output, and diminish their income by diminishing their output. Wage-earners whose labour is in relatively inelastic demand will increase their income by curtailing output, and diminish their income by increasing output. *So long as the group remains intact*—I shall return to this assumption later—and no changes in the technique of production take place, the effects of variation here exhaust themselves in variation of incomes.

But under modern conditions matters are not quite so simple, even if we do not waive the hypothesis of immobility. For wage-rates seldom have the complete flexibility postulated by these generalisations. Rather they are usually fixed in advance by

[1] Cp. Marshall, *Principles* (8th Ed.), Notes XIV and XV of the Mathematical Appendix and Chapter VI, Book V.

the same apparatus of collective bargaining which is responsible for the regulation of hours. And this means that, until the contract is revised, wages themselves are rigid. By fixing the rate and fixing the length of the working day the daily wage is itself predetermined.[1]

But this does *not* mean that the conditions of demand lose their governing importance. The general disposition of the market to buy, as exhibited in the demand schedules we have been discussing, does not change when the price prevailing ceases to be flexible. All that happens is that the effects of variations of supply exhibit themselves in a different fashion. Instead of the price accommodating itself to the given supply so that the actual quantity demanded clears the market, the amount demanded accommodates itself to the price that is fixed. If this happens to be the price that will clear the market, then all is as if wage-rates had been flexible. If it is less, then unusual profits are made until more labourers are drawn into employment. If it is more, then some labour is not purchased, and, since hours are fixed, this means that some labourers will be thrown out of employment, or at any rate that there will be unemployment in that industry. It is surprising indeed that this should not be more universally recognised, for of course it is only a simple application of the general theory of monopoly. We all know that if the proprietor of a patent medicine decides to increase his supply, if he does not successfully readjust his price to the prevailing conditions of demand he is liable to be left with unsold bottles. It is time that we realised that *in this respect* the market for labour is not dissimilar from the market for patent medicines.

Given the variation in supply then, everything is still ultimately dependent upon the conditions of demand. We may, therefore, formulate the following generalisation. *For every wage-rate that can be fixed there is an elasticity of demand for labour that will just maintain employment constant for a given variation in supply of labour.* If the actual elasticity is greater than this, then an increase in the work offered will increase employment, and a decrease diminish it. If it is less, then the converse result is to be expected.

We may illustrate this by two cases of great practical significance. Let us assume that the workers in a given industry have agreed to lengthen their working day, such a lengthening

[1] It is assumed, of course, that, in the case of work remunerated on a piece-wage basis, the intensity of work only suffers the consequential changes discussed already.

being accompanied by an increase in daily output. Let us assume further that, being willing to submit to a downward revision of rates, they insist only on such rates as maintain daily wages constant. In such a case, clearly, if employment is to remain constant, the elasticity of demand for labour must be of the constant outlay order—that is, in Marshallian terms, equal to unity.[1] If it is greater than this, employment will be increased (or profits will rise); if it is less, it will be diminished—the degree of extension or contraction for the given variation depending on the degree in which the elasticity of demand is greater or less than unity.

Let us now reverse the requirements of our policy. In harmony with recent fashions let us regard constancy of employment rather than constancy of wages as the ultimate *desideratum*. It is not difficult to show that in certain cases a lengthening of the working day with increasing output must result in lower wages per head than would have prevailed if the day had not been lengthened. For obviously the downward cut in wage-rates, which is necessary to maintain employment constant, must always be greater if output is increased than if it is not. The greater supply of work must necessarily be cleared at a somewhat lower price per unit. But if the elasticity of demand is greater than unity, this greater diminution in wage-rates will not offset the increase in the number of units by which it is multiplied. On the other hand, if the elasticity of demand is less than unity, this will actually happen. The fall in wages will be greater than it would have been if hours had not been lengthened. The popular belief that, if hours are lengthened, a fall in wages can always be averted or at least diminished, is only true when certain conditions are satisfied. If they are not, then it must prove a bitter delusion. It would be pleasant to believe that some day city editors and leader-writers might become aware of this simple proposition.

Clearly we are a long way here from the harmony we found existing between individual income and output. A group which puts more into the common pool may be compelled to take out less, and a group which diminishes the size of the pool may receive an enhanced share. But notice that our generalisations with regard to individuals are not rendered invalid by the fact of group variation. It still remains true that, if a given individual varies his hours of labour, his income tends to vary with his output.

[1] If the changes are not relatively small, then, as Dr. Dalton has shown, the Marshallian formula becomes inadequate (see *Dalton Inequality of Incomes*, pp. 192–197.) For convenience of exposition, however, I refrain from introducing this complication.

The unfortunate miner may see his standards of life being wrecked by an upward variation of hours affecting price more than proportionately. But if he does not vary his hours upward too, he will get even less than he would have done otherwise. On the other hand, if group rates are being raised by a common restrictive policy, each individual would lose if *all* were to abandon restriction, yet *each* will gain if he singly succeeds in evading the regulation. The behaviour of the group moves the target, but the individual score still depends on the marksman.

VI

But this is not the end of group variations. Rather it is only the beginning. For unless we are willing to contemplate only the institutions of a caste society, it is not to be expected that variations in one group should not sometimes at least involve migration to or from others. This, however, is a matter which can be considered more conveniently when we have surveyed the effects of wider variations. I pass, therefore, to changes of hours of labour throughout society as a whole. Suppose all the producers in a given society decide to vary their hours of labour, what results are to be expected?

So far as the real income of society is concerned, what has been said already is sufficient. The real income of society *is* its output, and therefore what has been said about output exhausts this part of the subject. One caution perhaps is necessary. We have seen that the point of maximum productiveness varies from man to man and from industry to industry. It is not to be expected, therefore, that the output of each man and each industry will be similarly affected by similar variations of hours of labour. On the contrary, we must expect not only the *extent* but even the *direction* of variation to vary. It is only, therefore, after striking a balance that we can speak of effects on the social income.

But now let us turn to the incomes of the various individuals and classes within society. Here obviously we have a problem of greater complexity than any we have yet examined, and it is advisable to proceed to its solution by stages.

Let us begin by assuming homogeneity of skill, flexibility of wage-rates and complete mobility of labour. In this way we can ignore the different effects upon the position of different groups which in almost any real world would be produced by the variation we are supposing, and concentrate on the problem of what will happen to the general level of wages.

Viewed thus, the problem is relatively simple. The number of units of work offered has changed. Their value per unit, therefore, will fluctuate inversely. But the change in the supply of work does not mean a change in the number of labourers. Real wages, therefore, will depend on the elasticity of demand for labour. If the elasticity of demand for labour is greater than unity, then wages will vary directly, and if it is less, inversely, with changes in daily output.

This result is a purely formal one. But we need not be content with formality. For it is the almost universal consensus of opinion among economists [1] that, in the modern world at any rate, with its wealth of technical knowledge and its itch for material improvement, the elasticity of demand for labour is greater than unity. Hence we may assert with some confidence that given our assumptions of plastic wage-rates, a competitive labour market and complete mobility of labour, an increase of hours leading to an increase of output will result in increased wages, and *vice versa*. Some of the increase will no doubt go to other factors, but if this opinion with regard to elasticity is true, there is no need to fear that wages will not benefit.

All this, however, rests upon an assumption which enables us to speak as if all wages were similarly affected. But in the world we live in, this assumption is not valid. Workers are not all of the same degree of skill and adaptability, and even within groups which are homogeneous in these respects, for short periods at least, they are not completely mobile. Therefore, unless we are willing to make the unreal assumption that when the output of different groups varies simultaneously, the amounts spent on the new output vary so as to leave the relative position of the groups unchanged, we are not entitled to assume that the effects of a uniform variation will be uniformly distributed among wage-earners in general. Again, everything will depend upon the demand for different kinds of labour. It is true that things are not quite so simple here as in the cases we contemplated when we were considering group variation. For there we assumed that the supply of one commodity only was changing, the social demand at different prices remaining unaltered. Here not only is supply changing in each industry, but the demand arising from other industries is changing also. In technical terms, it is not only a case of a shift of the point P along a given demand curve : the position of the curve itself is to be regarded as changing. None the less, the same broad considerations are

[1] See *e.g.* Pigou, *Economics of Welfare* (2nd ed.), pp. 622–8.

applicable. Where the demand is relatively inexpansible the position of the workers will be relatively worsened by an increase and bettered by a diminution of output. Where it is relatively expansible the converse effects will follow.

Hence, if the full effects of the change in output are to be diffused to the maximum extent among different classes of wage-earners, there must at the same time be a transfer of workers from the positions of less to the positions of greater comparative advantage. If it is an increase, workers will have to move to the industries of more expansible demands or to new industries. If it is a diminution, *vice versa*. And of course in a world of specialised skill and incomplete mobility, such a uniform diffusion as we contemplated at first is *never* to be expected. All that can be said is that, granted a fair degree of mobility, disharmonies will be reduced to a minimum.

These conclusions sound abstract, but they embody a perfectly common-sense principle. If productive power increases in any way, it is surely most improbable that the increase will be most effectively utilised by uniform application in all directions. If some uniformly efficient robot were invented which increased our powers to do simple manual labour by, say, 25 per cent., we should not expand the production of wheat and motor-cars in equal proportions. And similarly if some cosmic disaster were to reduce productive powers by a quarter, we should not curtail the production of necessities and luxuries uniformly. Progress, in fact—using the word progress in a strictly non-ethical sense—involves the progressive diminution of the relative proportions of productive power applied to the making of things which are in inelastic demand, and a progressive transfer of productive power to the making of things the demand for which is still elastic. And retrogression, the contrary process. That, incidentally, is one of the reasons why, in a progressive age, agriculture is in a state of chronic depression. And, of course, rational increases of hours (increases, that is, which do not go beyond the point of maximum productiveness) *are* increases of productive power—as are also those diminutions which increase production.

Considerations of this sort enable us to complete our treatment of the effects of group variation which we had to leave unfinished a little way back. Obviously we must take into account the possibility of movement both into the industry and away from it. If an extension of hours involves an increase of income, or a contraction a diminution, then we may assume that no movement

is engendered.[1] For by hypothesis we are considering *voluntary* variations. We are, therefore, entitled to assume that the group concerned prefer the gain in income or leisure to the sacrifice in leisure or income. But if income moves inversely to the variation in hours, clearly *if* movement is possible it will take place. There is now a double loss or a double gain to disturb the equilibrium, and if mobility is possible there will be transfers until those employed in the industry in question do not gain or lose more than, with their given disposition towards work and leisure, they would gain elsewhere, the loss or gain of productive power being diffused more or less equally throughout the area of mobility. Only, therefore, where there is an absence of mobility will the disharmonies we have studied in this connection be permanent.

VII

That is all I have time to say here about variations throughout a whole society. The interesting complications which arise when wage-rates are not flexible can be deduced for the most part as corollaries from what has been said already. I pass, therefore, finally to consider the case of variations on the part of open geographical groups.

Here fortunately it is possible once more to be brief. For the principles we have already investigated can be combined to afford a sufficient solution to the various puzzles that confront us. So far as the inhabitants of the area of variation consume their own products, what has been said about a closed society is applicable. So far as they obtain their income by exchanging their products for products produced abroad, the analysis developed in connection with industrial groups is applicable. This is easy to see if we suppose that the group is sufficiently small to produce only *one* commodity, for the geographical group *is* then an industrial group, and that is the end of the matter. When the group is wider, then matters become more complicated; but when allowance has been made for changes in the relative value of different commodities and the reshifting of employment, the same broad generalisations hold. Whether on balance the group gains or loses depends on the conditions of demand and upon the net economies or diseconomies involved by changes in the scale of production.

[1] It is, of course, conceivable that persons outside the group might prefer the new situation and seek it. In such a case the assumption made above would be invalid. I am indebted to Dr. Dalton for this suggestion.

Here again, therefore, there is a theoretical possibility that the income of the geographical group—the " national " income, that is to say—and the world income may move in different directions, and no doubt areas are conceivable in the world as we know it which might gain or lose by this disharmony. But a little reflection on the causes influencing elasticity should convince us that ours is not one of these areas. For, as is well known, one of the most important circumstances influencing the demand for exports is the possibility of obtaining similar supplies, or supplies sufficiently similar, from elsewhere. If this is present, demand will tend to be very elastic. A slight rise in price per unit will cause the transference of foreign demand to other sources of production. A slight fall will mean a considerable enhancement of foreign purchases. Other things being equal, the smaller the group the more probable the existence of alternative sources of supply, and hence the greater the elasticity of demand for exports. Of course this factor of " economic size " may be offset by the possession of unique facilities for production, but so far as our own position is concerned, it is abundantly clear that Providence has not granted us this substitute for industry.

All this assumes the absence of transfers of labour and capital between the areas whose fortunes we are considering. And so far as we consider the particular geographical groups called nations and concentrate upon short-period tendencies, in the modern world, with its legal and cultural checks on movement, this assumption is not out of touch with reality, as regards the human factor. But so far as capital is concerned, it is altogether too artificial. If man is of all luggage the most difficult to be transported, free capital is the most easy. Now the variation of hours in any area will clearly make the investment of capital more or less profitable there as compared with investment in other areas. Hence so far as new capital is concerned we should expect to see the gains or losses resulting from any variation rapidly diffused over the whole area of capital investment. The main effects of the change, therefore, will be seen in the incomes of the immobile factors, labour and property which is not easily transferable. Thus, suppose a contraction of hours, a shrinkage of the supply of labour not compensated by an enhancement in the total value of the product. The return per unit to capital would fall, and this would mean that, in the absence of restriction, capital would tend to go elsewhere. With less capital the productivity of labour would be less, and consequently wages would fall still further. Here, too, notice that the effects would be more

pronounced in an area that was comparatively small than in one that was comparatively extensive.

VIII

That is all I have to say to-day on the broad effects of variations of hours of labour. It is sometimes urged that, beyond this, reductions of hours tend to produce dynamic changes in the general productive situation, in that they tend to evoke new inventions in organisation and technique. Up to a point no doubt this is true, and it is a matter which in any particular situation deserves the most careful consideration of the negotiating parties.[1] But even the most fervent advocate of this view can hardly contend that these improvements in productive efficiency are *invariably* to be associated with changes in hours, in the same way as the tendencies I have been discussing. If a scarcity of coal or labour stimulates entrepreneurs to new inventions under certain conditions, it is certainly a fact to be noted and to be borne in mind when policy is being considered. But it is not a tendency which is logically implicit in *every* variation in every conceivable situation, and having acknowledged the possibility of its appearance, we are justified here, I think, in regarding it as a secondary complication.

It remains, therefore, only for me to draw certain conclusions from what has been stated already. Two facts, I think, stand out clearly from the welter of complications. In the first place is the absence of harmony between group incentives and the interests of the social income. So far as individuals are concerned, this disharmony is not present. What diminishes the prospect of income for society diminishes it also for the individual, and *vice versa*. But when certain conditions are not present, this is not so for groups of individuals acting concertedly. And this has a double implication. (*a*) On the one hand, it suggests that if we are determined to consider the interests of a group as a group—and in the modern world such a choice is from time to time forced upon

[1] It is a matter, too, which, together with the parallel argument as regards increases of wages, is, I think, capable of further theoretical treatment than it has received already. Clearly there must be a point of maximum effectiveness for such pressure—it is not to be believed that *any* reduction of hours or *any* rise of wages must necessarily have healthy dynamic consequences—and it would be highly interesting to know something more about the conditions determining the position of this maximum in any particular situation. No doubt absolute precision here is even harder to attain than in the discussion of static problems. But the attempt would be well worth making. So long as there is *no* quantitative element in our dynamic speculations, they must remain the ready instrument of economic obscurantism.

us—much greater caution than is usually exercised is necessary before we recommend to the group conduct which might be expedient either for an individual or for society. Deliberately to recommend an increase of hours when the conditions of demand are not elastic is either very ignorant or very Machiavellian. (*b*) And on the other hand, it suggests that, from the point of view of long-period policy, it is possible that in recent years too much attention may have been given to the interests of groups as such and too little to the importance of movement between groups. In saying this I do not wish to prejudge the tremendous issues of the relative importance of group and social solidarity. But I do suggest that it is well to recognise that exclusive concentration on the interests of a group, as a group, does not necessarily imply a like preoccupation with the interests of society. The right of an industry to remain such and such a size and to secure for itself the maximum income under the given circumstances can only be maintained at the risk of failing to maximise the income of society. This is true of the society in which we live. It is a problem which would be equally insistent in any other state of society. Only a community that had forsworn the criteria of economy could afford to neglect the importance of considerable mobility of labour.

But, on the other hand—and this is my second point—there is nothing in all this which justifies the view that the income of society as a whole fluctuates inversely with fluctuations in efficiency. To argue from the possible success for a group of a policy of restriction to the probable success for society as a whole of a similar policy is to commit the fallacy of composition. Nor can it be urged, I think, that there is any probability that wages in general could benefit from such a policy. This is probably true of society as a whole in the world as we know it. It is *certainly* true in a small area such as Great Britain. There is nothing in general theory to justify the belief that diminutions in hours which do not increase efficiency will tend to raise general wages, or that increases which do not diminish efficiency will tend to lower them. Only those who have never learnt to distinguish the general from the particular can urge the contrary proposition.

But notice finally, that this is not in the least to argue that increases are desirable or that diminutions are undesirable. Those who have become so preoccupied with accumulating the means of a good life that they have forgotten that the end is existent may argue that men *should* work so as to secure the maximum product.

There is nothing in economic science which supports them.[1] The relative values which men assign to leisure and the results of production determine indeed the phenomena we have to analyse, but to pronounce upon the validity of these valuations as such is completely outside our province. All that we can do is to attempt to exhibit clearly what consequences follow from one choice or another, and to do this for one small part of the field of choice is all that has been attempted in this paper.

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[1] It is obvious, of course, that such an arrangement will be economical only if the last increment of product obtainable is valued *more* than the leisure that has to be sacrificed to obtain it. Even the despised classical economists knew this. "Happiness is the object to be desired, and we cannot be quite sure that, provided he is equally well fed, a man may not be happier in the enjoyment of the luxury of idleness than in the enjoyment of the luxuries of a neat cottage and good clothes."—Ricardo, *Letters to Malthus*. Ed. Bonar, pp. 138–9.