Marginal Productivity and the Social Framework of the Economy*

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I

The purpose of the present article is highly limited although not, for that reason, perhaps unimportant. It is intended to investigate what functions, if any, minimum wage legislation and similar “outside” influence can have in a world of pure competition, both on the market for finished goods and for the factors of production. The assumption of pure competition in the sense of Chamberlin is deliberately maintained because this condition is the most difficult one for a demonstration that minimum wages and the like can, within limits, raise real wage rates and the real wage bill without causing unemployment. If, therefore, it can be demonstrated—as it is the intention of this article to do—that even under the restrictive assumptions of pure competition bargaining, minimum wage legislation and so forth fulfill an important social function and that minimum wage legislation is economically as well as socially defensible, it follows a fortiori that the assertion must hold good also under less stringent assumptions.

On almost every exam of an introductory economics course some such questions can be found as: “Under pure competition workers receive what they produce. Unions therefore cannot raise wages without causing unemployment”; or: “It is impossible for unions to raise wages and employment under conditions of pure competition.” And it is perhaps not unfair to say that most texts will agree with these statements and will base their defenses of interferences on the labor market (if any) on the absence of pure competition and of a perfect market in the real world. Yet this seems to me, though correct as far as it goes, essentially a misunderstanding of the meaning of theory. And it seems an injustice to the intellectual acumen as well as to the sense of social justice of the founders of modern economics as the views of Edgeworth, to quote only one, indicate.

What is perhaps sometimes forgotten, or at least not sufficiently stressed, is that every economic system and thus every theoretical discussion assume and imply a definite social framework, not only as to consumers taste which

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are usually explicitely assumed, but also as to laws and customs; as to ideas of what behaviour is acceptable and what not; as to concepts of what is proper and admissible and what is not. To put it somewhat extremely: murder has always been outlawed as a means of competitive struggle. Similarly, it seems sometimes not sufficiently stressed that in the last analysis it is human beings who act and make decisions and who are by no means merely automata without any freedom of will at all.

It is of course true that under pure competition the economic endresult comes about as the outcome of the interactions of the many individuals none of whom have any decisive influence on that outcome. Nevertheless, this seems not a sufficient consideration to dismiss the point touched upon. For, each individual acts only in certain ways. He does not, except in pathological cases, murder, or forge, or blackmail, or rob. Nobody would seriously consider the suppression of robberbarons or the establishment of the King's Peace as an undesirable restriction of an otherwise freer and purer competition. And there are other restrictions on the behaviour of the individual which are not the less real because there is no legal sanction to enforce them. Thus, discrimination because of sex or color is not really necessary. Business men may have strong incentives to pay substandard wages but they are not forced to do so. Other examples may be given.

The heart of this article is a discussion of the interrelationship of the social framework of a society and the working of the economic relationships within that society. In order, however, to avoid a morass of pious good wishes and wellmeaning generalities, it seems necessary to demonstrate exactly how a change in the social framework works itself out in the economic relationships; more precisely, how it works itself out in terms of economic theory, here in terms of the marginal productivity theory of distribution.

II

It seems desirable to start with at least a partial list of general agreement as exists among economists as to the theoretical possibilities in which unions and/or minimum wage legislation can raise real wage rates and the real wage bill without adverse effect on employment. No attempt will, however, be made to estimate the importance which each case might have in reality.

1. Whenever labor is bought monopsonistically, an interference with the labor market can, within appropriate limits, raise wages without adverse effect on employment. The economic function of the union, for example, is here to substitute for the existing market situation another one which at least formally is identical with pure competition.

2. Whenever wages have lagged behind productivity, unions, and so forth can force them to the equilibrium level without adverse effects on employment. The economic function of the union is here only to speed the process of reaching an equilibrium which would come about in any case through the working of purely competitive market forces.
3. Since the real world is considerably less perfect than the theoretically assumed one, neither workers nor entrepreneurs may perform their functions in the best possible way without further incentives than those which competition provides in any case. Unions may force entrepreneurs to be more efficient than they would be without such union pressure. This consideration which has been aptly christened the "shock theory" may or may not be important in reality, but it cannot be dismissed a priori in all those cases in which the market is less than perfect or in which monopolistic practices exist.

Whatever disagreement exists among economists as to the mentioned points relates only to the extent to which they may actually be found in the real world.

4. It is sometimes argued that wage changes may, through affecting the average and/or marginal propensities to consume (or to spend) change the volume of employment so that a minimum wage law, for example, may justify itself in this manner. This line of reasoning is deliberately ignored in this article. The argument to be presented here remains strictly within the methodological framework of general equilibrium theory which, in Keynesian terms, implies that the average propensity to spend remains constant at unity.

III

The usual marginal position can be stated briefly as follows: given pure competition, assuming that the marginal product curve will remain unaltered and assuming, of course, that comparison is made with an equilibrium position, then a minimum wage that lies above the wage which would otherwise be established without it necessarily reduces employment.

The theoretical point which has to be made for the purposes of this article is that it is not legitimate to assume that the marginal productivity curve remains constant, when wages are changed or a minimum wage law is passed, under the conditions of the marginal productivity theory itself, and without recourse either to the so-called shock theory or to an effect on the average propensity to spend. It is intended to show in what follows that different relative factor prices are consistent with the same amount of employment. The argument will be based solely on orthodox marginal productivity theory; it is a static general equilibrium argument. It is of no concern in this context just how realistic such a situation is deemed to be.

Now it can be shown a) that if the relative factor remunerations are changed, a full employment equilibrium is possible and consistent with these changed relative remunerations; b) that this result is achieved through changes in the composition of aggregate demand with aggregate demand itself remaining constant. In other words, the average propensity to spend is assumed to remain constant as is appropriate under general equilibrium assumptions. No cyclical considerations of any kind are involved.

The reasoning can be most easily presented in graphic form by a simultaneous consideration of graphs 1 and 2. Suppose we deal with factors A and B and
with goods I and II. Graph 2 is the familiar box diagram. The length of the sides of the box correspond to the amounts of factors A and B available in the economic system. Each point in the box corresponds therefore to a definite distribution of the factors between the production of varying quantities of goods I and II. Thus each point within the box lies on two isoquants. The points of tangency of the isoquants form, of course, the substitution or production indifference curve, assumed here to picture conditions of increasing costs for both commodities. Only a few isoquants are drawn into the picture.

Graph 1 represents the identical substitution curve plotted now with respect to the commodity axes rather than with reference to the factor axes as in graph 2. This is logically easy to do since each of the isoquants corresponds to a definite quantity of good I and II respectively. Numbers of the isoquants are drawn into the box increasing from left to right for good I and from right to left for good II.

Superimposed upon the production indifference curve on graph 1 is also a system of consumption indifference curves. Now these community indifference curves can cross, unlike their individual brethren. This is due to the fact of a different real income distribution among the individuals making up the society. "It will be noticed that there is... an infinite number of community indifference curves going through" any particular point "corresponding to different distributions of welfare (i.e. bread and wine) among members of the community. ... Once the distribution of welfare is given, the shape of the community indifference curve is uniquely determined... Since each community indifference curve represents a given welfare distribution, they have the same geometric properties as individuals' indifference curves. (Negative slope and convexity towards the origin.) The relationships between different community indifference curves need not obey the rules of the individuals' indifference map, because they need not repre-
sent the same distribution of welfare. In other words, they may intersect each other... We can state as a general rule that of two situations one is better than the other if it lies on a higher indifference curve and if the two indifference curves do not intersect between their relevant points. If they do intersect... then each situation is worse (or better) than the other for its own welfare distribution; according to our convention we must regard the two situations as equally good.

This writer accepts Mr. de Scitovsky's reasoning particularly as he has not run across any discussion challenging its correctness. But for the purpose at hand it is not necessary to accept everything. It is here sufficient to state that different income distributions will correspond to different indifference maps. These maps may intersect; and whether they do or not, we cannot tell which indifference system is preferable except possibly by drawing on information outside the system presented. Put in a less fancy way: it obviously makes a difference how the income is distributed. If one person prefers whisky and another Moselle wine, then the same aggregate income will lead to different commodities being bought depending on who gets which part of the same aggregate income. If in addition whisky and Moselle are produced with different factor proportions, the redistribution of income will itself lead to different relative wage rates with the same amount of employment. Evidently the average propensity to spend has in this case not changed at all.

Speaking in terms of the graphs, if we have an income distribution corresponding to the consumption indifference curve R the combination M will be produced which is arbitrarily labeled 1000 and 100. The income distribution corresponding to the combination M is shown on graph 2 in either of two ways. The wage rate corresponds either to the slope of the tangent of the two isoquants at M. Or it is proportional to the slope of the straight lines going from M to I and II respectively.

If the relative factor remunerations are changed, this corresponds to another point, for example to N, where the slope of the isoquant has changed. This change in the slope is, of course, not arbitrary as far as its direction is concerned, for it can be shown that the slope of the straight lines from N to I and II respectively (that is the factor proportions employed in the production of I and II) change in the same direction as aggregate production changes in composition in the process of moving from M to N. Yet there is the same total amount of employment in both productions together as before, which graphically corresponds to the fact that the sides of the box remain unaltered.

But this new income distribution corresponds to a new indifference curve, S, tangent to the substitution curve at N. It is supposed that this is the final

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2 This is a hedge against someone actually finding a way to decide between the two indifference systems, something this writer is at present unable to do.
income distribution. Otherwise readjustments take place which graphically correspond to a movement of the point \( N \) along the substitution curve, a change in the indifference curve \( S \) and a corresponding change in the slope of the isoquants. However, it must not be assumed that the readjustment will always move point \( N \) back to \( M \), or more generally that only one equilibrium position is possible. This will be discussed in further detail presently. Quite incidentally, the combination of the two graphs seems to be the simplest possible way to picture the interrelationships of the equilibria on the factor market and on the market for finished goods, that is, "general equilibrium".

The argument can now be turned around. If by minimum wage legislation a redistribution of income is brought about, this will lead to a change in demand and a change in relative prices, etc. This will lead to a new equilibrium in which the total employment of all factors is unchanged. It will be observed that the argument depends only on the assumption that different goods are produced with different factor proportions; that the factor proportions in the production of each good can change in the same direction even though the total amounts of the factors available to the economy remain the same; and that different income distributions mean that different amounts of the various goods are demanded and therefore produced. The argument (which is as yet incomplete) has nothing to do with immobilities of any kind, not even in the form of non-competing groups. It has nothing to do with changing the average propensity to spend. It has nothing to do with labor or any other particular factor affected being inefficient. It has nothing to do with the marginal product curve being shifted because entrepreneurs are shocked into becoming more efficient. It has nothing to do with monopsony. It is simply the result of the indisputable fact that the marginal productivity theory is a general, not a partial equilibrium theory, and that relative factor remunerations do not depend on the overall proportions of the factors in the economy as a whole, but on what might be termed the weighted average of the factor proportions employed in the production of the individual commodities.

IV

The completion of the argument presented requires a proof that the points \( M \) and \( N \) will not, or at least need not, coincide. Two approaches to this proof seem feasible the first of which is more in keeping with the theoretical discussion, and the second of which consists precisely in the problem of the inter-relationship of the social framework and the determinatness of equilibrium which we set out to investigate. The two approaches are different but mutually not exclusive.

1. There exists, of course, always the possibility of multiple equilibria. Under the assumptions ordinarily made by the marginal productivity theory, any change in the system will bring about repercussions. But the marginal productivity theory being a general equilibrium theory, these repercussions are allowed for. The circles involved are virtuous ones. Nevertheless it is conceivable
that the various schedules involved intersect each other more than once, or are
tangent to each other for short stretches.

It is, for example, possible that there is some sort of feedback effect\(^1\) of
wages and other factor prices upon the weighted importance of the different
commodities. Thus the *ceteris paribus* assumption may not always be legitimate.
If wages were raised and workers spent their increased wages mostly on com-
modities which require a greater relative proportion of labor than those which
were demanded before the redistribution of income (for example, shoeshines or
ballet dancing) then the increased wages might justify themselves. This feed-
back effect is undoubtedly neglected by the graphic versions of the marginal
productivity theory found in many texts, but hardly by the symbolic versions.

In such cases there may then be more than one equilibrium position, which
otherwise must be presumed to be perfectly determinate. The existence of
multiple equilibria is, however, generally considered to be a fancy case, and I
do not wish to stress this possibility beyond its capabilities.

2. On a slightly different level the argument presented in the preceding
section becomes complete when it is realized that the assumption of constant
consumers’ tastes is compatible with several actual demand situations, more
specifically, when it is realized that these consumers’ tastes are determined
naturally by and with respect to a definite social framework. To clarify this
assertion it is necessary to retrace some steps.

The marginal productivity theory simply states that in equilibrium and
under conditions of pure competition, total product will be divided between
the factors of production according to their marginal productivity and that each
factor receives its marginal product. Now if we start with a position of dis-
equilibrium in which the enumerated conditions are not fulfilled, the equality
of marginal product and remuneration can be brought about in a number of
ways. More or less units of a factor can be hired, which changes the marginal
physical product in the appropriate direction without a change in price. The
amount and proportion of the factors can remain unaffected (as it will, for
example, in the “rent” case) but the price of the factor can change. And, of
course, the price of the product is from the standpoint of the economy as a whole
a variable too. These three possibilities may be combined. All three possibilities
or their combinations are consistent with the marginal productivity theory.

The actual endresult will depend on the conditions of competition. But in
this context this has to be more broadly understood than the usual distinction
between competitive, monopolistically competitive, and monopolistic market
situations. The argument presented amounts to saying that any one factor of
production can increase its remuneration at the expense of the other factors
without change in employment, so that its wage rates and its income will change
in the same direction. It can do so if it can induce or force the other factors to
accept less. It is usually argued that this presupposes that the favored factor
is in a monopolistic situation, that is, in a position to withhold part of its supply.

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\(^1\) This term and the examples used have been suggested by Professor Samuelson.
But while this is a correct argument, it is not the only possible one and it is not the argument relevant here. The argument presented here amounts, when stripped to its essentials, to saying that a factor can (for example via minimum wage legislation) change relative demand. The argument here is, that there is some room for bargaining—the word "collective" has been deliberately omitted—even under purely competitive conditions, indeed that the marginal productivity theory as usually stated implies a definite distribution of bargaining power among the various sections of the economy.

The following considerations are intended to show that. It has already been shown that factor remunerations will change if a factor succeeds in changing the components of aggregate demand, provided that the individual components of aggregate demand are produced with different factor proportions. The case developed for two commodities and two factors is evidently perfectly general. In fact, the more homogeneous factors of production the economy contains, the easier it must be for any one of them to change its relative remuneration through a change in demand, because the changes in demand will in this case be not too drastic.

Suppose that white shirts are produced by labor which by common agreement is considered to be underpaid. Now let a minimum wage law be established. The result will be that white shirts cost now, say, $3.10 instead of $2.95 which they cost before. Suppose the elasticity of demand for white shirts to be very low. Then the money spent on white shirts will increase as the quantity demanded remains about the same. But this implies of course that less will be spent on something else. With different factor proportions used in the production of other goods, this will lead to a fall in some other remunerations which are not affected by the minimum wage law.

Now it is suggested that the term "elasticity of demand" used in the preceding paragraph in deference to a common practice is actually misleading in this context. It assumes that the demand curve for white shirts is given in general. But this is not the case, theoretically speaking. The demand curve can be assumed to be given only when the relative bargaining positions of the various groups in the economy are given; or most generally if the social framework in which competition works itself out is given. Of course, anyone may be presumed to be out for as much for himself as he can, and to care for his fellow man as little as he can get away with or as his conscience lets him. This seems a theoretically sound assumption, but the qualifying phrases "as he can" and "as he can get away with" indicate that what will actually happen depends very much on the relative bargaining strengths, depends on the social framework. To be more specific: it seems more appropriate to consider a minimum wage law, for example, as exerting an influence on demand, as changing consumers’ demand, than to consider it as interfering with the purity of competition.

The point which I wish to stress is that even the purest of pure competition cannot be imagined except as proceeding within a certain definite though not

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1 It should perhaps be re-emphasized that the argument presented here remains strictly and deliberately within the confines of general equilibrium analysis.
unchangeable or unchanging social framework. Thus it seems more reasonable to view the prohibition of child labour as part of the rules under which (pure) competition has to proceed than as an interference which brings an otherwise free market that much nearer to a monopolistic form.

Indeed, marginal productivity theorists have been struggling continuously to prevent their theory from being abused. Thus Edgeworth may be quoted as follows:

"For example, the required compromise may be attained if it were arranged that the agreement between employers and employed under some heads might be settled by collective treaty between combinations, but under other heads by competitive bargaining between individuals—as the German students in their duels expose only certain parts, not all parts of the body to the brunt of the combat. To determine what matters should be subject of treaty would indeed require some sort of treaty. But it would be a kind of treaty for which there is good precedent in laws and institutions. For instance, there might grow up, or be enacted by law, the practice that the hours of labour should be a matter for collective treaty between a trade union and a combination of employers, the particular number of hours to be settled by such treaty while other terms such as wage rates should be settled by the play of competition."

And if Edgeworth's opinion has perhaps to be adapted to the point under discussion, this is certainly not the case with the statement of J. B. Clark's which Edgeworth quotes with approval: "A Spirit of Justice is ever standing over the contestants, and bidding them to compete only thus and thus.

Consumers' demand is not independent of the consumers' surroundings. It changes with them and can be changed by them. In this sense, consumers' demand is not determinate until the social framework is given, until the rules of the game are set. Furthermore, as Edgeworth puts it

"where there occurs a series of encounters between buyers and sellers, the results of the earlier encounter may affect the dispositions with which the later ones are entered on. The terms which the laborer is ready to offer and accept are altered by the alteration of his habits and efficiency which is the consequence of previous bad bargains.

If then a law, for example, prohibits the manufacture of alcoholic beverages some people will not like it and others will rejoice. Interpersonal utility comparisons being notoriously difficult to undertake, this writer prefers to say nothing about what happens to total welfare. But if the former "wets" are law abiding citizens, they will simply shift to different commodities resulting in different relative prices and relative factor remunerations, but most definitely not in unemployment as long as competitive conditions and factor mobility are assumed to exist. It does not seem a sufficient objection to say that in this case a reduction of national product is accepted for non-economic reasons. Suppose that the former wets become genuinely convinced that grape juice is better than wine. Is this then not a case such as the one discussed by Mr. de Scitovsky which was quoted above, in which each situation was (economically) optimal in its own social context? The context has changed, and with it relative demands and so on.

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2 J. B. Clark, Philosophy of Wealth, p. 208, as quoted by Edgeworth, op. cit. p. 55, note 3.
3 Edgeworth, op. cit. p. 41. It might be added that in this context it is not necessary that the previous bargain was a bad one.
No statement can be made as to which of the two situations is preferable from a purely economic standpoint 1.

Similarly, if a reasonable minimum wage law simply states that society will no longer tolerate wages below a certain level, this can be viewed as society interfering in the bargaining struggle in favour of certain groups or persons. It may and indeed will lead to a change of relative demands with the consequences already discussed at length. But it need not at all lead to unemployment 2. There simply has been a change in the social framework, in the rules of competition, with an undoubted effect on relative demands.

A minimum wage law implies, as has been shown, a fall in the remuneration of some other factor or factors. It might therefore be argued that the factor aided by the legislation is exploiting the others. The fact, however, is that society by its action has decided that the situation preceding the legislation was „exploitative“. The minimum wage law may even drive whole industries out of existence. But for the reasons stated above it is inadmissible to equate this with a fall of employment in the economy as a whole, just as foreign competition may undoubtedly ruin an individual industry but will not for that reason alone lead to unemployment. A minimum wage law belongs to the framework of competition. Moreover it belongs to the rules of pure competition 3. That abuses exist does not alter the fundamental truth of this assertion.

It will be observed that the argument presented asserts the compatibility of bargaining with pure competition. Those economists who always felt that “wages are established by bargaining power” have thus a point. Their weakness is that, in being usually antitheoretical, they cannot explain why wages should fluctuate around any particular value, why they should not be, say, $1000 per hour. The point is that the relative strength of the various groups in the economy as given by the social framework of that economy will establish the exact position of the marginal productivity schedules, and will do so by affecting rela-

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1 The historic example of the liberation of the slaves during the American Civil War illustrates perhaps even better how a change in the social framework may possibly hurt individuals or individual classes, namely the former and now expropriated slave owners, without that it is possible to argue that this either brings about unemployment or reduces the total social product in any economically meaningful sense.

2 Professor Schumpeter has suggested that the minimum wage law will have this effect only if it also prohibits the dismissal of workers. The same result may however also be reached if for any reason whatsoever entrepreneurs do not dismiss workers. This could be the case, for example, if entrepreneurs succeed in shifting the increased wages to consumers, and if these consumers, who also voted for the minimum wage law, were ready to reduce their consumption of commodities which have not risen in price and whose workers are not affected by the minimum wage law. This will, of course lead to a fall in some other factor remuneration. Another possibility may be that consumers will stop using the commodity which has risen in price, while the labour thus displaced will find employment elsewhere at the higher wages. Such a possibility is discussed below sec. V.

3 It may be interesting to note that the Industrial Charter adopted by the British Conservatives on their Brighton Conference contains, according to newspaper reports, the right to a minimum standard of living which everyone is entitled to improve according to the best of his ability and without interference. „Freedom“ means after all not only freedom from the State but also freedom from exploitation.
tive demands. The limits of the indeterminacy of the exact position of the marginal productivity schedules are thus set by the extent to which other factors can be forced or induced to accept lower remunerations. And this will in turn depend largely on the extent to which their demands can be changed. These limits may be large or small, but they do exist and they do not coincide. A more precise definition of these limits cannot be attempted here, all the more because such a discussion would require more than the intellectual tools available to the economist.

So far the argument has rested solely on the assumption that the factor proportions with which different goods are produced vary. In this section it will be argued that minimum wage legislation can aid in reducing immobilities without leading to diminished employment.

Suppose that negroes (or women) are paid less in a certain industry than white people (or men) are in another industry for no other reason than that they are negroes (or women). This is clearly a case of factor immobility brought about by social convention, to put it mildly. The physical and mental ability of each member of the discriminated group is assumed to be equal to that of each member of the favoured group.

Now a minimum wage law is passed which raises the minimum wage rates above the rates previously paid to the discriminated group but below the wages paid to the favored group. The following is then at least a logical possibility. It becomes unprofitable to produce as many of the goods whose production was before dependent on low wages. Even if the whole industry which depended on low wages and the existence of the discriminated group should be driven out of existence, this would not alter but rather strengthen the argument. If now the good does not become available any more or only in greatly reduced quantities at higher prices, consumers will turn elsewhere. But so will producers and wage earners. If the immobility persists, the only result can be a further increase in the wages of the favored group plus unemployment of the discriminated group. But there will be extremely strong pressures to prevent this from happening by breaking down the social prejudice. This writer does not claim an exhaustive knowledge of all the facts. However, during the war years the United States seem to have experienced a considerable increase in mobility in precisely the sense in which the term is used here, and for not altogether dissimilar reasons. The possibility sketched seems therefore not a priori absurd. The result need not be a fall in the real wage of the favoured group, although such a fall is very probable.

Now it cannot be argued that, as the breakdown of the prejudice was possible after the minimum wage legislation, it must have been possible before also. This is correct only in the sense that the impossible cannot happen. However, as long as society demanded the goods produced with labour which was discriminated against, and as long as the absence of social legislation made it possible for these goods to be produced at prices consumers were willing to pay, entre-
preneurs and consumers alike had evidently no economic incentive to break down the prejudice.

The argument is therefore not just another version of the shock theory. The point is rather that the minimum wage legislation may succeed in changing part of the social framework within which competition works. After this has been stated in general terms, it has of course to be shown how this change of the social framework will work itself out in terms of economic theory. This has been done by showing that it leads to changed demands with the consequences worked out in detail above.

A possible objection to this reasoning must be met. It may be argued that if the two groups are paid differently really only because of sex or colour while their physical productivities are otherwise identical, we are in the presence of a typical monopolistic interference, of a typical market imperfection. There is no denying that this is one way of looking at the problem. But it is not the only way.

From a theoretical standpoint, black or white, male or female labor can simply be considered to be separate but in themselves homogeneous factors of production. That they are physically capable of producing identical amounts under identical conditions is irrelevant as long as social convention prevents complete mobility. Two analogies to this are possible and it is not a priori certain which one is preferable.

Classical theory knows at least one case in which a physically homogeneous factor is economically not homogeneous, and where this case is nevertheless treated as a case of pure competition. In international trade theory, labour is assumed to be immobile between countries, and therefore different wage rates are possible in different countries which only migration could equalize. The establishment of a minimum wage law making discrimination illegal or unprofitable could therefore be considered similar to the establishment of free (or at least cheaper) migration, or at least to the opening of trade where none existed before.

Secondly, there is the analogy of technological progress. If technical progress changes two previously different factors into perfect substitutes, their remuneration will evidently have to become equal. This analogy seems to be preferable in this context. For, there can be no doubt that before the occurrence of technological change the different factor remunerations were economically justified and the factor distribution as well as the distribution of consumers’ demand were economically optimal. Changes in the social framework, by legislation or in spite of it, certainly will affect relative factor remunerations, exactly in the same way as technological change or an altered international demand.

The possibility of technological change suggests yet another example of the influence which changes in the social framework may exert on the level of wages.

Suppose that a technological advance results in an increased total and average product, but simultaneously in a diminished marginal product of labor. This implies that it may happen that the absolute as well as the relative
share of labor decreases. (As an illustration one might think of the introduction of a mechanical cotton picker.) In the absence of social legislation real wages of the affected group of labour may fall in this case.

Now consider the situation in which a minimum wage law puts a floor under wage rates. Entrepreneurs in the industry in which the technological change has become possible will have an incentive to introduce this change in fact as long as they are better off with than without the change. Since the technological change has increased the total product as well as the absolute and relative shares of total product going to all factors of production except the labour employed in the affected industry, it follows a) that the industrialists are in a position to bribe the affected labor into letting the technological change take place and b) that in doing so they will nevertheless remain better off than they would be without the technological change.

The existence of a floor under wages will in this case not lead to any unemployment. Nor will it prevent entrepreneurs from introducing the technological change. What it will do is simply to re-distribute the increased social product somewhat less unfavorably for the workers and somewhat less favourably for the other groups. But under the conditions sketched above the groups favored by the technological change are nevertheless better off in spite of the minimum wage legislation than they would be without the technological change, and yet the workers would in absolute terms be no worse off. Their relative share of the total social product may of course in this case be reduced.

It is evidently not permissible simply to argue that the low wages of the discriminated group was due to the inefficiency of its members. Nor does it get anywhere to say that the members of the discriminated group got their marginal product, which indeed they did. This would simply be arguing tautologically that by discriminating against them, the members of the group can be forced to accept lower wages.

1 If there is only one type of labor in the economy wage rates have of course to fall in all employments.

2 The following opinion of A. Smithies may here be of some interest, though it was given in another context:

"Is it not possible that the technology of the future may raise the average productivity of labour, but lower its marginal productivity? This could mean that, despite an increase in effective demand, real wage rates could fall and the total share of labor in the national product be reduced. The economic and political effects could be profound, and drastic changes in the whole process of wage determination might be required." (Arthur Smithies, Effective Demand and Employment, in The New Economics. Keynes Influence on Theory and Public Policy. Edited by Seymour E. Harris, New York 1947, p. 564.) Minimum wage legislation and the like may not be all that is "required" in such a situation, but they would presumably belong to the "new process of wage determination" mentioned by Mr. Smithies.

3 The strong family resemblance which the argument presented bears to the classic arguments concerning the effects of lowered tariffs on employment and wages has already been pointed out. It is hoped, furthermore, that no one will think the writer as naive as to believe that legislation can always change what is usually contemptuously referred to as "human nature". Maybe it can, maybe it cant. As a matter of fact, it seems more correct to say that "Plus c'est la même chose, plus ça change" than the original inversion. But this would all be besides the point anyway in a theoretical paper whose chief aim is to show what cannot be dismissed a priori (as can for
VI

It has been shown, it is hoped convincingly, how the social and institutional framework may affect relative factor remunerations; particularly that minimum wage legislation may be consistent with pure competition and need not lead to a reduction of employment. This will be the case whenever the particular piece of legislation is generally accepted as a legitimate change in the social framework of competition and as such leads to a change in the structure of demand with the consequences worked out in detail above. This is, of course, independent of defending social legislation for non-economic reasons, even if it does lead to unemployment; it is independent of denying that minimum wage legislation may by itself be relied upon to reach the desired social goal; and it is of course quite consistent with denying the wisdom of any particular bill before Congress.

If the reasoning is correct it follows also that the theorist as theorist can only with great difficulty advocate any definite policy with respect to social legislation. For what final effects such legislation will have will depend on political, religious and historic factors as well as on economic repercussions about which alone the theorist may speak with authority. The warning of Edgeworth seems therefore appropriate:

"Between two guides, of which neither can be followed implicitly let us walk wearily. On the one hand let us not aim at impossible ideals. But on the other hand let us not deserve the criticism which advocates of trade unionism have with too much truth directed against 'the verdict of the economists' respecting trade unions. Let us not be as trenchant in act as we have been in thought. Let us be cautious in applying our abstract theory to flesh and blood 1."

And this at least for two reasons: Not only may the simplifying assumptions of theory, which are of course absolutely indispensible, not be given in reality. Worse still, economics is a social science dealing with human beings and historic phenomena. And it may be legitimately doubted whether matters are always as clearcut where human beings have some freedom of will and where historic phenomena constantly change irreversibly in time.

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1 Edgeworth, op. cit. p. 55.