DISTRIBUTION BY A LAW OF RENT

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In following the argument by which Professor Clark has sought to establish his theory of distribution by a law of rent, the present writer has encountered more than one serious difficulty. Indeed so serious do these difficulties appear to be and so important is any contribution from the pen of Professor Clark that the present writer has been persuaded to submit to the Association a paper that may seem like a belated review of the "Distribution of wealth." No objection will here be urged to certain concepts established by Professor Clark that may be regarded as the premises upon which his theory rests. Instead it will be urged that the confusion in the mind of at least one reader is due to a lack of correspondence between the conclusions reached and the premises upon which they are based. We will first attempt to state the premises as succinctly as possible.

Possibly Professor Clark's most important single contribution to economic science is his clear exposition of the difference that exists between the two concepts to which the term "capital" is indiscriminately applied in common usage. If I invest $100,000 in a manufacturing plant, the average business man will regard both the $100,000 and the plant in which it is invested as my capital; and yet that they are essentially different concepts can readily be shown. In time the machines in which I have invested this money will gradually wear out; hence if the business is to be regarded as successful, it must give a return sufficient both to replace those machines and to give a net surplus above this amount.

In a word, my capital of $100,000 must remain intact while the machines or the concrete forms in which I have embodied this fund are constantly changing. Any confounding of these two concepts must result in some confusion of thought; and so Clark has suggested that the term "capital" be confined to the permanent fund, while the concrete forms or machines in which it is at any time embodied he would call "capital goods."

The importance of this distinction cannot well be overrated. Indeed all hope of clear thinking about the problem of interest rests in last resort on a clear and persistent recognition of the difference between these two concepts. Let us therefore pause long enough to note two other peculiarities of the constant or permanent fund of capital. We saw that in a successful business the returns must be large enough to replace the machines as they are worn out. The money thus returned may be invested in similar machines or in entirely different machines or even in an entirely different business without in any way impairing the permanent fund of capital. In a word, we can think of this permanent fund as being mobile or capable of embodiment in any concrete form or capital goods that we may desire. This also carries with it the condition that while the capital goods may vary as to form, the permanent mobile fund of capital is absolutely homogeneous. And so while capital goods are wearing out and lack both mobility and homogeneity, the capital invested in them is a permanent mobile homogeneous fund.

The same distinctions may likewise be established in regard to labor. As Karl Marx long since pointed out, there is an abstract and a concrete labor. This distinction rather vaguely apprehended by Marx has been clearly set forth by Clark. Here, too, there is both a

permanent mobile homogeneous fund of labor and the concrete forms of weaver, blacksmith, carpenter, etc., in which this fund is embodied. If Clark had made no other contribution to economic science, the clearness with which he has established this distinction would give him an assured place as one of the keenest and ablest thinkers in this most difficult field of investigation.

Again Clark has placed every student of the problem of distribution under obligations by his masterly exposition of Von Thünen's suggestion that interest and wages are set by the product of the last dose of capital and labor or by their marginal productivity. Entire clearness on this point was impossible in Von Thünen's times because the distinction between capital and capital goods, or between abstract and concrete labor, had not as yet been clearly worked out. Once this distinction was clearly established, it became manifest that it is the earnings of the abstract funds of capital and labor that are set by their marginal productivity. The supply of such capital first seeks investment or embodiment in those capital goods which yield the greatest return. As these more profitable fields of employment are exhausted, the remaining capital is constrained to find employment in the form of less and less profitable capital goods. If the supply of capital were unlimited, its employment would be extended until it ceased to yield any net return; but as a matter of fact its supply is limited, and hence its employment stops at a point where there is still a net return. As it is a mobile homogeneous fund, no part of it can secure a greater return than any other part, and hence the earnings of this entire fund are set by its marginal productivity. If I borrow money and invest it in different forms of capi-

tal goods, the capitalist from whom I borrow it could not get any more for the thousand dollars invested in a very profitable loom than he could get from a like thousand dollars borrowed from him and invested in the much less profitable or marginal lathe. In a word, it is the least profitable or marginal employment of capital that fixes its earnings in all employments. Any excess above this that may be derived from a particular investment is retained by the entrepreneur against all claims of the capitalist.[1] In brief, then, interest is the earnings of capital as a "permanent social fund," and is fixed by the marginal productivity of that fund. On the other hand any excess above this level rate must be credited to capital goods, in the form either of rent or of profit. If the interest we have in mind is this marginal or level rate, then its transmutation into a differential gain or rent is likely to give trouble to even the most careful reader. To the present writer every such attempt seems to involve an ignoring of that fundamental distinction between "capital" and "capital goods" which lies at the basis of all of this part of Clark's reasoning. It will be necessary, therefore, to follow Clark still further in his statement of the case.

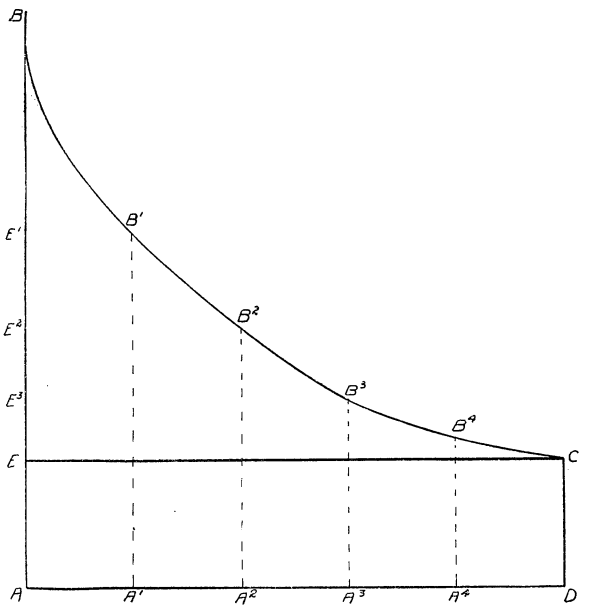
"The true method," writes Clark, "of obtaining a law of distribution is not, therefore, first to eliminate from the earnings of society the element of ground rent, and then to try to find principles that will account for the remaining elements: it is to eliminate what is not rent,—namely, pure profit,—by reducing society to a static condition, and then, by use of the rent law, to account for all that remains."[2] It is this attempt to reduce all shares

[1] By a like bit of reasoning it might be shown that wages, as the reward of the abstract fund of labor, are set by the marginal productivity of this fund.

[2] *Quarterly Journal of Economics*, 1891, p. 289.

in distribution except profits to a rent form that we must now examine with more than ordinary care.

Clark elsewhere writes, "The differential gain of labor as applied unaided to fertile land, offers the clearest illustration of the different incomes that can be measured by the Ricardian formula. It is the type of all the rents. Labor, as thus applied to land, is subject to a law of



diminishing returns. Put one man on a quarter section of land, containing prairie and forest, and he will get a rich return. Two laborers on the same ground will get less per man; three will get still less. . . . . If, however, our farm is isolated and the workers are a society by themselves, and if there are ten of them to be employed, we shall set them all working and pay to each of them as much as the last one produces."[1]

[1] Distribution of wealth, p. 192.

"Let us measure the number of laborers by the line AD, and the product of successive increments of labor by AB, A^1B^1, etc. If we give to these lines an appreciable width, so that a series of them will fill the entire figure, $ABCD$, that area will measure the product of all the labor and all the capital in our illustrative agricultural community. The capital is virtually all in the form of land; and we are now able to attribute to the land that part of the product which, in effect, it creates."[1]

For reasons that seem good and sufficient to himself, Clark regards land as one form of capital goods and at the same time he here assumes that the auxiliary capital in the form of tools is so small in amount as to be a negligible quantity. Under these assumptions "The capital is virtually all in the form of land." $ABCD$ is the total product of labor and land, and what labor can claim is its marginal product CD multiplied by AD, the number of units of labor force. From this it follows that what the landowner can secure is the total product $ABCD$ minus $AECD$, equal to ECB. We will not here trouble ourselves with the equity of this distribution, but instead will follow Clark in the further development of his argument.

He continues,[2] "For a fixed area of land read, now, a fixed fund of permanent social capital. It is at this moment an exact sum; and it will, as it were, prolong the conditions of this moment, remaining at exactly its present size. The artificial instruments are, of course, perishing and renewing; but, if there is no need of changing the form of the capital, a worn-out instrument will be replaced by another that is exactly like it. A hoe will replace a hoe, and a ship will succeed a ship;

[1] Distribution of wealth, p. 194.
[2] Distribution of wealth, p. 197.

and the new instruments of production will be exact duplicates of the old. This would be clear in a completely static condition. We are, however, to introduce labor, increment by increment, into this general field of industry; and this, of course, compels such a change in the forms of the capital as we have already described. The amount of the capital remaining fixed, the instruments become more numerous and cheaper, as the force of labor enlarges."

"Labor, applied to the whole fund of capital, in land and all other instruments, is now subject to the law of diminishing returns. The first unit produces the amount AB, the second produces the amount A^1B^1, the third creates the quantity A^2B^2, and the last the quantity DC. This last amount sets the rate of wages, and the area $AECD$ measures the amount of wages. It leaves the amount expressed by the area EBC as the rent of the fund of social capital. *All interest is thus a surplus, entirely akin to the rent of land, as that is expressed by the Ricardian formula:*[1] it is a concrete product, attributable to the agent that claims it is an income."[2] Clark then reverses the condition and assumes that labor is fixed in amount while capital is added in successive increments. In this way he endeavors to show that wages likewise are a differential gain or rent. He writes, "The Ricardian formula may be employed to describe the earnings of the whole force of social labor; for wages, in their entirety, are a differential gain. *It is one of the most striking of economic facts that the income of all labor, on the one hand, and that of all capital, on the other, should be thus entirely akin to*

[1] The Italics in this and other passages in this paper quoted from John B. Clark are not in the original.

[2] Distribution of wealth, p. 198.

ground rent. They are the two generic rents, if by that term we mean differential products; and the earnings of land constitute a fraction of one of them." [1]

Now if it can be shown that interest is a surplus entirely akin to the rent of land, it will hardly be denied that the earnings of the other mobile hemogeneous fund (labor) may be reduced to a like differential form or rent. I shall therefore confine myself to the question: Has it here been shown that interest or the earnings of the *permanent fund of social capital* can be reduced to the rent form? In a word, is it true, as assumed by Clark, that the differential surplus here represented by the triangle *ECB* corresponds to or in any way represents the earnings of the permanent fund of social capital? So far as I have been able to follow his reasoning, Clark has failed to show any connection between the two phenomena. On the contrary every attempt to show such a connection seems to involve an ignoring of that distinction between capital and capital goods upon which he has so strongly insisted.

Clark reproduces[2] therewith in a simplified form the diagram by which he has sought to show that interest and wages are differential surpluses. In Fig. 1 interest

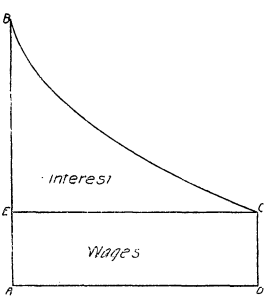


FIGURE 1

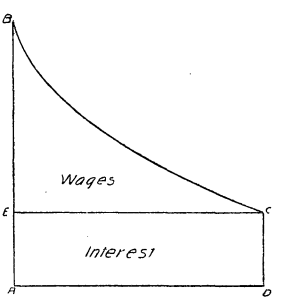


FIGURE 2

[1] Distribution of wealth, p. 191.
[2] Distribution of wealth, p. 201.

is shown as a surplus "that is of the nature of rent;" while in Fig. 2 wages are made the "surplus that is akin to rent." Now what we want especially to note is the fact that Clark regards these as the diagrams of a *static* form of society. He writes, "These amounts together [interest and wages] make up the whole *static income* of society." He also writes, "Profits have no place in such *static* conditions. The two incomes that are permanent and independent of dynamic changes are the products respectively of labor and capital." Again he concludes the summation of this entire chapter as follows: "The *static* conditions assumed in the present study preclude the existence of entrepreneurs' gains." It is clear, then, that Clark regards these as the diagrams of a static form of society, and that profits, being the result of dynamic changes, can find no place in these diagrams. The question that now confronts us is: Is this the correct interpretation of these diagrams?

Clark has elsewhere shown that with a given technical development there is always a certain ratio of capital to labor that will yield the greatest product. Disturb this ratio and you introduce dynamic conditions. The now scarcer product is put at a premium, and so can secure a larger share of the total product than it could under normal, or as Clark puts it, static conditions. This premium is the "pure profit" which leads to an increase of the scarcer element until the normal ratio is again restored. Hence when we add successive increments of labor to a fixed fund of capital the diagram representing this fact is no longer the diagram of a static society. Clark elsewhere[1] recognizes the fact that we have introduced dynamic conditions when we

[1] Distribution of wealth, p. 275.

enlarge one factor while the other remains constant. He writes, "It may seem that we have been outside of the strict limits of a static science, whenever we have traced the process of increasing the social capital." He dismisses the difficulty, however, by saying that "Throughout this volume we have allowed ourselves to observe changes that directly bring about static adjustments."

But is it open to us thus lightly to ignore the reintroduction of dynamic conditions into our diagram? Is it at all allowable for us to add successive increments of labor to a fixed fund of capital, and yet continue to say that our diagram includes nothing but wages and interest? In a word, does not the reintroduction of dynamic conditions compel us to find some place in our diagram for that "pure profit" whose "existence is precluded" only under the assumption of static conditions?

Is it true that in Fig. 1 the supply of capital is assumed to be fixed in amount? Clark has frequently associated this idea of a fixed fund of capital with the static concepts, as when he writes, "The static assumption itself precludes all increase of capital."[1] But why, it might be asked, should not the static assumption preclude all increase of labor as well as of capital? Again it might be urged that even the capital in Fig. 1 has ceased to be static the moment that labor has taken on dynamic conditions, for with any disturbance of the normal ratio both factors become dynamic.

In describing a static society Clark writes: "Tools and materials might never change; they might not alter, either for the better or for the worse, the amount of wealth that industry would yield. Social production

[1] Distribution of wealth, p. 340.

can thus be thought of as *static*."[1] Again he writes:[2] "A worn-out instrument will be replaced by another that is exactly like it. . . . This would be clear in a completely *static* society." In a word, it is here clearly recognized that constancy in the concrete forms of capital is an essential condition of a static society. Yet in this same connection Clark writes: "We are, however, to introduce labor, increment by increment, into this general field of industry; and this, of course, compels such a change in the form of capital as we have already described. The amount of capital remaining fixed, the instruments become more numerous and cheaper, as the force of labor enlarges."

Now if constancy in the form of the capital goods is an essential condition of a static society, then the above assumption of a change in the form of the instruments to suit the increasing supply of labor is an abandonment of static conditions so far as capital is concerned. And so, whether from the standpoint of an increasing supply of labor or of changing forms of capital goods, our diagrams (Figs. 1 and 2) represent dynamic conditions, and this despite the fact that in Fig. 1 we have assumed a fixed fund of capital. "Heroically theoretic," writes Clark, "is the study that creates in imagination a static society." But it may be asked, can we thus justify a study that adds successive increments of labor to changing forms of capital, and yet continue to think of this as a static society?

If Figs. 1 and 2 are the diagrams of a dynamic society, it follows that they must somewhere contain that "pure profit" which Clark has declared to be the sign and token of such a society. We have seen that a disturbance

[1] Distribution of wealth, p. 28.
[2] Distribution of wealth, p. 197.

of the normal ratio gives to the scarcer factor a monopoly advantage. Hence in Fig. 1, where labor is added in successive increments, it is capital that enjoys this monopoly advantage or in some way secures that "pure profit" which is always to be found in a dynamic society. Now as Clark has elsewhere written, monopoly inheres in the concrete forms but not in the abstract or permanent social fund. Hence if ECB represents the entire earning of the capital employed, it must at least include the "pure profit" or the monopoly surplus secured by those who control particular concrete forms of capital goods.

We are further confirmed in this view when we note that in his attempt to show that interest and wages are differential surpluses, Clark has been compelled to assume that each addition to the supply of labor is accompanied by a change in the form of the machines, tools, or capital goods employed. If the number of laborers is very limited relatively to the supply of capital, then this capital will be embodied in concrete forms that effect a great saving of labor. As the supply of labor increases, these concrete forms are transmuted into others that are less efficient as labor-saving devices. Or, while the amount of capital remains the same, it is embodied in less and less efficient forms with each addition to the supply of labor. In other words, the differential gain represented by the triangle ECB, Fig. 1, would seem to be due to variations in the form or efficiency of the particular machines, tools, or capital goods employed, and not to any variation in the mobile homogeneous fund of capital embodied in these particular capital goods.