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Author(s): Simon N. Patten

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THE FUNDAMENTAL IDEA OF CAPITAL.

IT requires but little study to make evident that the term "capital" is used in a variety of ways, each of which is necessary to develop some line of economic thought worthy of attention. Almost every writer on economic subjects uses the word "capital" in a new sense, or at least gives it a definition differing from all others. So varied a use of the term cannot but make the whole subject ambiguous and perplexing. Any proposition concerning capital is true only when capital is defined in a particular way. Great confusion is caused by authors not perceiving that in different propositions they have used the term in different ways. It is not the purpose of this article to magnify the importance of the use of the term in the sense in which I shall use it, nor to belittle other discussions where it is used in other senses. It is, however, to be hoped that this discussion will tend to make writers more conscious of the many ways in which it is now used, and help to establish a more definite usage of the term. Some usage ought to be accepted as fundamental; and, when it is used in any other way, some other word should be used, or at least some modifying word should be introduced. This is especially true of the widely different ways in which the word is used in production and distribution. It is so easy to confuse one usage with the other that no escape from the present confusion seems possible without some addition to or modification of the vocabulary of economic words. We really need new words more than we do new thoughts.

No intelligent discussion can be carried on unless the fundamental idea of capital is first grasped; and, when any modification is introduced pending the discussion of

particular problems, care must be taken that propositions founded on different definitions are not combined to make further deductions.

What, then, is the fundamental idea of capital?

There are three ways in which labor may co-operate to increase the productiveness of industry.

In the first place, by combination. Two men working together in many simple operations can do more than three or even a larger number of laborers, if each should work by himself. This is the case in the felling of trees, the lifting of heavy weights, the moving of large boats, and in innumerable other instances of the same kind.

Secondly, there is the division of labor. More will be produced if some laborers devote their entire attention to producing one article, obtaining whatever else they want by exchanging their produce for that of others. Thus more is produced when some are farmers, others tailors, weavers, blacksmiths, and the like, than if each one endeavored to supply his wants by producing everything for himself.

Thirdly, there is the order in which the labor is performed. One hundred days' work done successively will produce, in many cases, a greater quantity than if all the work is done on the same day. There being a need of a given amount of food, it can be obtained with less expenditure of labor if the labor is mostly performed several months before the supply becomes necessary than if nothing is done until the day is at hand on which there is a demand for the food. If the labor is delayed until the time arrives, the only remaining resources for acquiring nourishment are hunting, fishing, berrying, and the like; and of these the supply is very limited, and much work is required to obtain a supply from these resources, if any considerable quantity is desired. On the other hand, if land is ploughed, prepared, and sowed to wheat several months before there is a scarcity of food, a much larger

amount of food is produced and at a much less expenditure of labor. Again, a supply of cloth being essential, a much larger quantity can be obtained for the same labor if, previous to the time when it is required, a part of the labor has been employed to prepare machines on which the cloth can be woven.

The production of wheat offers a good example for showing how the use of capital causes the exertion of labor in a series involving time, and how the series becomes longer as a more extensive use is made of capital. Doubtless, the first consumers of wheat found it growing wild. They gathered and used it as they did fruits and berries. In this case there was no use made of capital, the consumption immediately following the labor of gathering the wheat. Soon they found that wheat could be easily preserved and consumed when the other fruits, which cannot be preserved for any length of time, could not be obtained. Now the use of capital began as there was an interval of time between the act of gathering and the time of consumption, and during this interval some labor must be continually exerted to preserve the wheat from decay or prevent its loss by theft. At length, when wheat growing wild would not supply the wants of all desiring it, the discovery was made that by cultivation the supply could be greatly increased. The series of acts necessary to produce wheat thus became lengthened out several months, while the need of protecting the crops by fences added a much longer period to the time by which the first and the last acts of production were separated from one another. Subsequently, the desire to exchange other commodities for wheat produced at a distance caused the use of wagons, ships, and railroads, and for their construction the series of acts necessary to obtain the wheat was again extended. In these and many other ways, such as the draining of the land, the use of tools, and the grinding of the wheat, the interval of time between the first act

of the production of wheat and its final consumption has been gradually lengthened by the use of more complicated processes of production; and, during this interval, labor must be constantly exerted, or there will be a diminution of the quantity of wheat which the last acts of production bring the consumers. On all sides can be seen illustrations of like character, showing how the series of acts necessary for production has gradually been lengthened by improved industrial processes; and I now wish to point out what deductions can be drawn from these facts.

There is a radical difference between this method of co-operation and the others mentioned. By the other methods labor is economized, but the supply of commodities is not enlarged; while by this method the supply is vastly increased. If a large number of persons hunt together, they can kill more game, but they do not increase the supply of game. So, too, if several co-operate to cut down and saw trees, they save labor, but do not increase the supply of wood. In the same way it may be shown that the two first-mentioned modes of co-operation do not enlarge the quantity of food or other raw materials, only causing the present supply to be more economically used and labor spared. When food is produced by the cultivation of land, the supply is greatly increased, and a much larger population can be supported than before: their average condition also will be much better, there being not only a greater population, but it is supplied with food with much less labor.

The reward of each laborer must vary in proportion to the length of time which must elapse between the performance of the labor and the time at which the commodity is ready for consumption. If a hundred successive days' labor is necessary to prepare a commodity for consumption, the one who does the first day's work must have more than he who performs the last day's work; for, if they shared alike, each one would desire to do the

last day's work, and no one would perform the first day's work. The difference between the shares which the laborer performing the first day's work receives and he who performs the last day's work is the reward for abstinence. This reward will be greater or smaller according as more or less inducement must be offered to obtain some one willing to defer his consumption until the commodity being produced is ready for use. The amount which the last laborer receives for his day's work is his wages, for he did not defer his consumption. Each one of the other laborers will receive more than the last laborer in proportion to the length of time which must elapse before the commodity is ready for consumption; and this reward for abstinence is called interest. Any of the laborers can sell his right to future consumption and get the present worth of his right, which will always be equal to the amount received by the one doing the last day's work. Hence, the wages of the laborers will be equal if each disposes of his right as soon as the work is performed.

The idea of capital does not necessarily imply a previously accumulated stock of produce for the support of the laborers. This point has been so much insisted upon as something essential to the idea of capital that it is necessary to show exactly in what this opinion is erroneous. The commonly accepted view can be best illustrated by using the production of food as an example. This is usually taken, because it shows the accepted view in the clearest light. The crops are sown in the spring, it is said, and many months elapse before the harvest; and, if the laborers were not maintained in the mean time from the produce of past labor, they would necessarily perish.

I do not deny the fact that they must, in this case, be supported from a previous accumulated stock, but I do assert that this fact has no connection with the idea of capital. To illustrate my meaning, let us suppose that

nature was somewhat different; that, instead of all the crops necessarily being sown in the spring, they could be sown at any time, and would mature at the end of a year; and that farmers, instead of sowing all at one time, sowed each month one-twelfth of what was needed for the year. In this case, they would reap enough every month to support themselves that month, and sow a like quantity in the same place to support themselves the same month the next year. They would now need no previously accumulated stock of food to support them until their crop ripened; yet, in the latter instance, capital has been used just as much as in the former. If the return for labor is uncertain, or the work can only be done at particular times, then a previously accumulated stock is necessary; but, where the produce comes in regularly, there is no need of such a stock. Agriculture is almost the only instance which we now have where a previously accumulated stock is necessary. In manufactories everywhere, the work goes on regularly; and each day sees completed a new supply sufficient for the wants of the community. Wherever a stock of manufactured goods is kept, it is not to assist production, but to enable consumers to have a large assortment to choose from. It is the convenience of the consumers, and not the needs of production, that causes such stocks to be kept.

That in a society where all the produce comes in regularly, and no previously accumulated stock is needed, capital is necessary, and just as much so as in a society existing in our time, where the supply of food comes in irregularly, can be well illustrated in the following manner: The commodities which are produced are divided into two classes, which I, for sake of distinguishing them, will call products and produce. Commodities are produce which will directly satisfy a want of man, and are desired by men on their own account. For instance, we all desire bread and meat because they satisfy our

hunger. We want clothes to keep us warm, houses to protect us from the weather, music, books, and paintings to amuse and instruct us. All these and many other things of like nature we desire because they directly enable us to be happy and contented. Besides these there are many products which no one wants because they can directly satisfy his desires, but because, with their aid, he can produce more abundantly those things which he wants. No one wants a plough, a spade, an engine, or a loom for any pleasure that he can get out of them at the present time, but because by their use he can have at a future time a better supply of food, clothes, books, and other produce than if he did not have them. Tools, machinery, and other instruments of production in the possession of individuals or communities are merely means for the attainment of their ends, and are not things desired on their own account, and hence, from the stand-point of the consumer, are unfinished produce or products; while those things like food and clothes are finished produce. A plough is so many loaves of bread partly made, while a loom and the engine which moves it are partly made coats; that is, society, having determined to make some more bread and coats, is so far along in the work that it has made a plough, a loom, and an engine to propel it.

This view can be still more generally represented in the following way: All labor is employed in putting objects in motion; and, by these motions, we effect what we desire. When we wish a coat or some bread, some of our laborers begin a series of motions, then others take their places and continue the series of motions, and these are followed by still others; and, finally, after many sets of laborers have followed one another, all keeping up the series of motions, the coat, bread, or other desired article appears, and our desires are satisfied.

In all this, we have a series of successive motions — or, in other words, days' labor — exerted to produce a de-

sired commodity; and, wherever this is the case, the idea of capital is involved. At the end of each day's labor, we have a given amount of produce or commodities capable of directly satisfying some desire, and a certain number of products to which still more labor must be added before they will of themselves be desirable. Those laborers who have been employed on products must, by exchange, obtain the food, shelter, clothes, and other desired produce. The question now arises, What will be the ratio at which products will exchange with the produce? or, in other words, How will ploughs and machines exchange with food and clothes? The reply must be that products will not exchange on equal terms with produce; that is, a given number of days' work in ploughs and machinery will not exchange for the same number of days' work in food and clothes. Whoever takes the ploughs must wait a long time before his ploughs become food; and no one will exchange a given quantity of food for the same quantity at a future time, at least not while human nature retains its present characteristics. Ploughs and other products must therefore exchange for a less quantity of food and other produce, measured in the number of days' work required to produce them, and enough less so that some one will consent to exchange food, clothes, etc., for them.

There are two stand-points from which we can view production in which the use of capital is involved. We can suppose the laborers agreeing before the labor begins as to how the produce will be divided. In that case, the agreement must be that he who does the first day's work must receive more than he who does the last, and the other laborers must receive more than the last laborer, in proportion as a greater length of time must elapse from the time they work to that in which the product is completed. We may also consider, as is usually the case, that each laborer or set of laborers does his or their part, and then they

exchange products to obtain what they desire. In this case, products like ploughs and engines will not exchange in proportion to the quantity of work required to produce them with food, clothes, and other produce. These two views are the same, only the point of observation is changed. To say that a laborer will not do the first day's work unless he has more of the final produce than he who does the last day's work is the same in substance as to say that the product of the man doing the first day's work, at that time, will not exchange for a full day's work in food or clothes. Whichever stand-point we take will give us a clear view of what is involved in the idea of capital. This idea, however, must be kept distinct from an accumulated stock, the necessity of which arises from other causes.

The commonly accepted view of capital and its errors may be well illustrated as follows. Suppose, in a community living on fish obtained by hook and line, some one conceives the idea of building a boat to aid them in fishing, and, wanting another laborer to help him make it, offers him four fishes to stay at home and assist in making the boat. The man says that he must see the fishes before he goes to work, for he will be hungry at night; and, if there is no stock of fishes on hand, he will suffer. The employer shows him the stock of four fishes, and the man remains at home and helps make the boat. Having completed the boat that day, they exchange it for fish with some of the fishers, thus replenishing the employer's stock. This labor of making boats is continued from day to day; and each night a boat is finished and exchanged for fish. Soon the laborer finds that his master receives fresh fish each night, and, preferring them to those received the night before, which are no longer very fresh, willingly takes those last received instead of those caught the day before. When this happens, the master can eat up or throw away his accumulated stock, and still production go on as before. It is true, when they begin to work, they

have no stock of food; but by the time they need it the fishermen come home with a stock, and they have made a boat which they can exchange for food.

There is a cause greatly increasing the accumulated stock of produce which nations in our present state of civilization must possess for productive purposes. Most of the laborers do not save for themselves, thus necessitating a class of capitalists who accumulate wealth, not only for their own use, but also for others who prefer immediate enjoyment and a diminished return for their labor to the increased return obtained by deferred consumption.

The motive which induces a man saving for himself to labor to-day for the needs of the morrow, instead of waiting till to-morrow, is of a different nature from that which prompts his neighbor who is not willing to save. Whoever saves for himself labors to-day instead of to-morrow, because labor exerted before the product is needed increases the return. If he labors to-day and enjoys himself to-morrow, he will have more leisure and a greater sum of pleasures than if he had his pleasures precede his labor. That he is willing to conform to the demands of natural conditions, and work when his labor is most efficient, does not increase his need of an accumulated stock of produce. He does not defer his consumption of food; for he eats the same amount whether he works to-day or to-morrow. He does not reduce his consumption of food, but he defers the other pleasures which he could have enjoyed if he had not labored. Suppose, for example, the question arises whether he shall visit some of his friends for two weeks this year or remain at home and dig a ditch which will so increase the produce of his farm that he can next year spare three weeks for a visit. The thought of food would not enter his head. The only question would be whether a visit of three weeks next year offers a greater inducement than a visit of two weeks this year; and he decides to wait, because he can in this way increase his means of

enjoyment. Deferred consumption does not necessitate a stock of produce where the producer has other enjoyments than the consumption of material commodities. He may defer his other pleasures; and thus, without increasing his stock, he may enjoy the increased return which Nature gives to those who comply with her conditions. In this manner, all the improvements which augment the return for labor could be made without the use of accumulated stock, except in those cases, like the production of food, where the produce comes irregularly.

For a person who does not save for himself, the motive for working to-day instead of waiting till to-morrow is very different. In his case, the necessity of an accumulated stock of produce arises not so much from his unwillingness to defer his unexclusive pleasures, but because he has no other pleasures than those derived from the consumption of a stock of produce. If he had other pleasures, he could enjoy them without a stock of produce; but whoever wishes to consume a stock of commodities must first have the stock before his pleasures can begin. A supply of food sufficient for many days can be consumed in one day for mere pleasure, or all labor may be deferred till the whole supply is exhausted. In either case, the consumer becomes dependent on some one who has accumulated a stock; and only as a stock is accumulated can such a class of laborers exist in any society subsequent to the original social state where no stock was needed.

These illustrations show that no accumulated stock of produce is needed in a community where each one saves for himself, and where at the same time production is carried on regularly, the produce coming in without interruption. When work begins in the morning, there may not be a single consumable commodity in the town; but each producer relies on the other producers to furnish each his share. There may be no bread, but the bakers are at work; and no meat, but the butchers are killing

and dressing some cattle ; and no coats, but the tailors are making some ; and so, through the whole round, each one is preparing some article, and by night there will be the full supply of consumable articles on hand ready for consumption. Every day this can be repeated, and production go on as before. Still, such a community uses capital ; and it is just as necessary to them as if production were irregular and an accumulated stock of produce was needed, even if they do consume all they produce as soon as it is ready for consumption. Although no one has accumulated a stock, some one has deferred his consumption by working instead of enjoying his unexclusive pleasures ; and his rights are as valid as are the rights of those who have on that day labored. If no one had worked yesterday, the supply of consumable commodities would not be here to-day, at least not in so great a quantity. The workman of yesterday, then, or he to whom he has transferred his rights, must have his claims satisfied as well as the workman of to-day.

It is usually allowed that labor expended on land to improve and render it permanently better fit for tillage is capital. Since Adam Smith, the labor expended to elevate and educate the laborer himself is denied to be capital. But this is without good reason, and important truths are thus overlooked and neglected. Labor expended beforehand on the laborers will increase the produce of industry just as much as the labor expended in making machines or improving the land. There is no reason why one should be called capital and the other not. The idea of capital is not correctly apprehended, unless the term "capital" is applied to everything on which, labor being expended before the produce is wanted, the return will be increased beyond what it would be if the same labor had been exerted contemporaneously. For excluding the acquired abilities of the laborers, the reason is usually assigned that by including them we confuse the problems

of distribution, since the reward of the laborer depends on laws of its own, distinct from that of capital. This is true; but, for the same reason, capital sunk in land should be also excluded, as its reward depends on rent and not on profits. Capital, as the term is used in distribution, is a much more limited term than when used in production; and only confusion can arise when the two uses of the term are not kept distinct.

It is the problem in distribution to determine how the produce of industry, commodities capable in themselves of giving pleasure and satisfying the desires of the consumers, is to be divided among those aiding in production. The question is, Who gets the produce of industry? and not, Who gets the products? If any factor, for instance the capitalists, should continually take its share in tools, machines, and other products, and leave the produce of industry—food, clothing, and the like—to the other factors, the capitalists would be simply working for nothing, the products being constantly turned into produce; and then they would be consumed by other classes. The produce is distributed as rent, wages, and interest; and the capital from which interest is derived has reference only to the commodities consumed in the production of the produce divided. It has been consumed in production, and must be replaced before production can go on.

On the other hand, capital in production must have an entirely different and much broader meaning. The original factors were land and labor; and subsequently capital came to be used, because labor performed before the produce was needed gave a greater return than labor exerted at the time. This labor could be exerted in three different ways, each of which would increase the produce of industry,—in improving the land, in enlarging the productive capacities of the laborers, and in manufacturing products, such as tools, which, in being consumed, assist in production. These three have a common cause. They

are labor exerted beforehand in order to increase the produce, and hence the same term should be applied to them all; and it is only when capital is used in this sense that land, labor, and capital have a distinct meaning in production.

What were the original qualities of any soil is a question of little importance. Labor has added many qualities to the original ones possessed by the best lands formerly in use, and the poor lands have become good through the qualities obtained by the increase of knowledge and the skilful application of labor. These acquired qualities, which have gradually increased the productive capacities of the soil, are as permanent in their effects as are the original ones furnished by nature; and it does not require an extra expenditure of labor to preserve what the labor of the past has done to aid the labor of the present. Each generation finds the land in a better condition than its predecessors found it, and can obtain a greater produce with less proportional labor.

This is not all the labor of the past has done for the present generation. Besides improving the land, it has also added to the productive capacities of the laborers themselves. Those qualities which our ancestors acquired with much labor have been transmitted to us, and our organisms have become so modified that we can perform the acts necessary in civilized life with less labor than our forefathers. The children of a spinner, a merchant, or a farmer inherit the qualities necessary to the successful performance of the labor of their callings; and, when the father retires, the son can do his work with less labor. There is also an increasing stock of free knowledge which descends from one age to another. Without any cost, we acquire much the greater part of the skill and knowledge of our fathers. Children see and hear what is going on around them, and learn how to preserve health, to avoid evils, and also to obtain a large part of the

knowledge necessary for following any trade or profession without the expenditure of labor by any one. Even the labor of teaching reading and writing, or any other acquirement the labor of which must be repeated for every generation, becomes easier to each succeeding age, since children of the educated acquire knowledge more readily than do those of the ignorant.

Nor is it only in the acquired qualities increasing the productive capacity of man that the labor of the past has brought about a better adjustment of man to his environments. The pleasures and wants of the original man were few and simple, since he only desired to have his passions and appetites satisfied. He required only one kind of food, such as flesh, wheat, or rice; and all his pleasures being physical, whose enjoyment excludes the mutual enjoyment of others, he demanded for consumption only those articles of which the soil can produce but small quantities. As soon, however, as the results of education so add to the original qualities possessed by man that he willingly conforms more to the external conditions about him, he obtains from nature more liberal rewards for his efforts, his wants being less exclusive in their enjoyment and more varied in their kind. The more the acquired qualities of man enable him to enjoy all the pleasures that nature offers, the less exertion does nature require for their production. A field devoted alternately to several crops, such as wheat, rye, oats, and grass, will yield a much greater quantity of food than it will when used only for the production of any one kind. At the same time, by a rotation of crops the labor on the land is reduced. A series of crops keeps the soil porous and mellow, while the loss of productive qualities caused by the cultivation of some one crop increases the labor of preparing the soil. By a change of crops, also, weeds and destructive insects are excluded, or the labor of destroying them much reduced, since most of them have some one crop which they accompany, and

cannot survive if this crop is produced only once in a series of years. In these various ways, an ever-increasing proportional return for labor is obtained. The world becomes better fitted for men as men adjust themselves more fully to the conditions of nature.

From the preceding considerations, it will readily be seen that there are two distinct social states which must be kept distinct in thought. In one of these, the factors of production are the original man, the indestructible qualities of the soil, and a stock of perishable commodities. Nature cannot support many people in this state, and to them the law of diminishing returns is doubtless true. It is this state, where capital includes only commodities requiring constant renewal, that economists always have in mind when they seek to establish the now prevalent doctrines of land and population. But in a more highly civilized state the above-mentioned factors of production are no longer the sole causes of the increase of produce. They are supplemented by an ever-increasing stock of labor accumulated both in man and land, differing from a stock of commodities in that it does not perish, but is ever present, not only to reduce the work of man, but also to increase his means of enjoyment.

SIMON N. PATTEN.

UNIVERSITY OF PENNSYLVANIA.