

CHAPTER I.

PRODUCTIVE AGENCIES.

1. PRODUCTION consists in rendering the utilities of nature available to man. Some of these are furnished spontaneously, or without human effort. Others require only slight exertion. But generally, though the resources of nature are inexhaustible, and readily offer themselves under the proper conditions, these conditions must be furnished in the form of man's labor.

There are two great agencies which must co-operate in production,— *nature* and *man*. Man furnishes *labor*. This includes not only muscular exertion, but all the mental effort—the study, care, and anxiety—involved in securing objects of desire. Nature furnishes all the *material* upon which labor is to be exerted, and all the *forces* without which it would be ineffectual.

1. Nature supplies *materials*. In the simplest and most rudimentary style of human living, the desires of men are few, and easily satisfied. Fruits and nuts may be had for the gathering. Wild animals may furnish meat. There are caves and hollow trees which serve for shelter. Still some effort is requisite to secure the sustenance, and to render the shelter tenable. The animals must be hunted and slain, and their flesh prepared, although it be in the rudest manner. Fruits must be gathered, and the caves and cavities shaped

and in some way adapted. As society is developed, and as improvements are made, there will be additional desires prompting to additional exertions ; and the material to which these are to be applied will be forthcoming in the forms of wood, minerals, the skins of beasts and their coverings, the soils of the earth and those things which spring out of them. These comprise an almost endless variety of materials to which industry may be applied.

2. But nature furnishes not only materials, but also *forces*, to aid man in his productive efforts. The more obvious and palpable of these are gravitation, wind, explosive agencies ; the expansive power of steam, magnetism, electricity, and the forces of vegetation. There are also numerous passive powers or properties of matter, which, when adopted by man, give him untold advantage. Such are the mechanical powers of the lever, inclined plane, and pulley, and those qualities of the metals which render them capable of taking an edge for cutting-purposes, as also malleability, ductility, and elasticity.

2. Labor has been defined as the voluntary effort put forth by man to secure objects of desire. We have seen that nature furnishes the material upon which labor is to be exerted, and the efficient forces through which production is effected. These materials and forces are supplied gratuitously. Nature is not parsimonious in this respect. The more we avail ourselves of her help, the more ready she is to help us ; and the greater the advantage we get over her, the more lavishly she bestows her gifts upon us.

Labor, then, consists not in creating things, but in *moving them* ; that is, in *effecting changes*. It directs the natural forces to the service of man, and it is in this that production chiefly consists. It can move materials and objects into positions where these forces can act upon them with

the desired effect. Thus an agricultural laborer can effect such changes in the soil as are requisite to the growth of corn, and he can place the seed in the ground ; but he cannot make the crop. It is as impossible for him to create a kernel of grain as to make a planet. Labor may move fuel to the fire-place, and may properly dispose it for ignition ; it may move a match, which by a previous motion has caught fire, to the prepared fuel : but the kindling flame, the heat and its effects in cooking food or transforming water into steam, are the results of energies and properties which man could never invent. It is nevertheless true, that, without the agency of labor by which the changes are made, none of these effects would follow. Nature does ten thousand things without the co-operation of man. She even furnishes innumerable utilities ; but by herself she is not a producer, she creates no value.

CHAPTER II.

APPLICATION OF LABOR TO PRODUCTION.

1. THE application of labor to production is of two kinds, *direct* and *indirect*. The direct changes effected by labor may be embraced under the three heads of *transmutation*, *transformation*, and *transportation*; or, a change of elements, a change of form, and a change of place. They are also spoken of as chemical, mechanical, and commercial changes. The first finds its most common examples in agriculture. The seed is put in certain relations to the soil; and thus are furnished conditions of marvellous changes in the elements, drawn from both the earth and the atmosphere. But this kind of change is not limited to agriculture. It is exemplified in the rendering of ores, and the manufacture of soap, butter, cheese, etc.

Changes in form are seen in the mechanical arts. Leather is transformed into shoes, cloth into garments, and lumber into houses and cabinet-ware.

Changes in place are seen when a commodity is produced in one locality, and desired in another where it cannot be produced. Coal is found in the mountains of Pennsylvania, and carried to New York, Boston, and hundreds of other places where it is needed.

2. The *indirect* application of labor to production has far more importance than is popularly attached to it. A

little reflection will convince us that the direct effort put forth in effecting changes is only a small fraction of the whole labor involved. In indicating the several distinct forms of indirect labor, we may make a general division into *the more obvious* and *the less obvious*.

The more obvious.

1. In a large majority of instances, the material from which a commodity is to be produced by direct labor must be previously prepared. In the building of a house, a few carpenters, masons, and other artisans are employed. But the lumber, timber, bricks, stone, nails, paint, paper, etc., have to be furnished to these workmen by other producers; and the material out of which the latter prepare some of these has to be provided by laborers still back of them. Nature, it is true, furnishes all the original material; but it must often pass through several processes before it is fit for its final uses.

2. Another form of the indirect application of labor is seen in the manufacture of implements which the direct laborer uses. The farmer must have ploughs, cultivators, carts, etc.; each of the makers of these must also have tools to work with: and so on, back to the simplest forms of handicraft.

3. For the workers in any occupation, *sustenance* must be provided. Hence those who produce the food upon which the direct laborers subsist are indirectly helping in the creation of the value resulting.

4. Another form of indirect labor is the preparation of shelter, clothing, and fuel for the direct workers. Under this head, too, is to be reckoned the erection of buildings for any manufacturing or mechanical business. These are essential to every such enterprise, and the labor involved is to be considered in estimating the value of the final product.

5. *The protection of the laborers*, their implements, materials, and products, is also an item in the indirect application of labor. It is necessary to have agents selected by society, to guard against fraud, violence, and intimidation. They are a condition of profitable exertion, and their services are to be reckoned among the costs of all production.

3. *The less obvious forms of indirect labor.*

The foregoing comprise most of the more obvious forms of the indirect application of labor to production. There are other, not so conspicuous yet very important, ways in which labor more remotely, but still actually, contributes to this end. To some of these less obvious forms of indirect labor, I now call attention.

1. There is the work of organizing, superintending, and managing a business enterprise. Every one knows how much depends, even in small undertakings, on wise calculations, careful plans, and judicious oversight; and how, for want of these, there has often been a vast expenditure of labor to very little profit. Hence the organizers and managers of enterprises are to be reckoned as contributors to the product.

2. All the labor comprised in the raising of children, who are themselves to become laborers, is to be reckoned here. This demands the expenditure of much effort on the part of parents and others. Were their labor to be wanting, the productive force of the world would soon cease.

3. The labor involved in education is also clearly subsidiary to production. In this is embraced all that adds to the power and efficiency of the individual man. The labor may be that of the teacher or of the pupil, of instruction or of learning. Some of the most important vocations require no small amount of mental training in those who follow them. It is true, these are comparatively few: but all of the industries

require more or less intelligence; and the more of this any worker has, other things being equal, the greater will be his productive efficiency. Certainly there is no calling in which ignorance is an advantage: an idiot would not do for even a hod-carrier.

4. In the class of indirectly productive labor is comprised that of the so-called *professions*. Physicians, by their knowledge and skill, preserve the health which would otherwise become impaired, or restore that already impaired, and thus furnish laboring ability to the community, which would not exist but for their agency. The lawyer puts forth productive power in another way: if a laborer has a legal question which it would require days, and perhaps weeks, for him to investigate and determine, but which a lawyer who has prepared himself by previous discipline and experience can determine in a few hours, at a cost to the laborer of only a quarter of the labor which he might have otherwise vainly spent, is there not here a clear and undeniable gain to the productive force of the community?

The clergyman furnishes none of the commodities which are commonly reckoned as constituting wealth; but if, through his ministries, diligence, temperance, frugality, and integrity are promoted, and indolence, sensuality, and dishonesty are diminished, he certainly furnishes conditions of a larger productiveness than would otherwise exist; and thus his labor is, in a marked though indirect way, applied to production.

5. Into this category come also *inventors* and *discoverers*. Among the latter we include the men of science, who, by their investigations, bring to light new forces and agencies, or new combinations of those which nature furnishes in aid of human labor. The former are those whose skill enables them to apply these in the various devices and contrivances

which constitute the efficiency of machinery. The marvelously multiplied resources accruing to humanity by these means are familiar to the most ordinary intelligence.

These are some of the chief ways in which human exertion, though not very obviously related to production, does not the less actually enhance it to a manifold extent. There are also others, which there is no need to enumerate.

4. It is perhaps worth our while, at this point, to notice an error to which a certain class of writers have given encouragement. They have taught us that wealth is the creation of labor alone. The impression is made, whether intentional or not, that this labor is solely physical exertion. Demagogues have seized upon this notion, and have instilled into the minds of uneducated workingmen that the latter have created all the wealth comprised in massive buildings, in bridges and aqueducts, in great ships and ocean steamers, in railroads and canals, in complicated machinery and costly wares. This doctrine would be safe enough if it were true. But it is not true, and is therefore unwholesome and pernicious. Certainly the things spoken of could not have existed without physical toil; but, just as certainly, physical toil alone could never have produced more than an insignificant fraction of them. Of incalculably greater importance have been the mental qualities called into requisition. It is also further to be considered, — and the consideration is more important than any yet named, — that *character* is, after all, the most potent condition of wealth. A great part of the error to which I here allude consists in putting the ethical aspects of the question out of sight. But these cannot be ignored without vitiating the whole discussion. Upon the moral character of a society, more than upon all other things, depends its productive and especially its accumulative power. No qualities are so essential to the existence

of wealth as industry, frugality, and self-denial. There will be little wealth in a community where fraud, injustice, and sensuality are the ruling characteristics. This makes an important proposition, previously announced, more evident; namely, that *man* is the proper subject of political economy.

CHAPTER III.

PRODUCTIVE AND UNPRODUCTIVE LABOR.

1. THERE is no very general agreement as to what constitutes the difference between productive and unproductive labor. Some deny that there is any such thing as unproductive labor: others restrict productive labor to that which results in material wealth. According to the latter, Daniel Webster, Horace Greeley, and Professor Agassiz were not producers, but the men who made their shoes and furnished their provisions were. Still other writers enlarge the sphere of productive laborers by reckoning as such all who indirectly contribute to production.

If we accept the definitions previously given of labor, production, and value; and if we admit, even without accepting it as a definition, that "wealth is the power which man has to command the gratuitous services of nature,"—then we shall be obliged to admit, that not only all the various classes of laborers to which reference is made in the last chapter, but that all who labor in any art the design of which is to gratify any legitimate desire of man, are productive laborers. For, this capability of gratifying desire is an essential condition of wealth; and when furnished by any kind of effort, whether the product takes on a permanent form awaiting future consumption, or is consumed at the instant of production, it is all the same; for nothing can be

regarded as a product which is not destined to be, sooner or later, consumed.

2. Notwithstanding these strictures on the doctrine which makes so many and important kinds of effort unproductive, there are still numerous instances of unproductive labor. The following are the most prominent of these:—

1. *Misdirected labor*, or that which does not secure the object at which it aims. If a man should devote months of time to the construction of a machine of which the mechanical principle on which it depends is impossible, his labor is, of course, ineffective.

2. All of that labor *the ultimate object of which is destruction*. Such almost wholly is war. It is admitted that wars may be waged to prevent a greater destruction than that involved in their prosecution. But, whatever may be the design of any war at the beginning, it must be acknowledged, that the destruction of wealth has been incalculably greater than the conservation or creation of it. Evidently most of the energy expended in war is unproductive. Here, too, must be reckoned the labor implied in maintaining vast standing armies. Could all this labor be turned into productive channels, it would incalculably augment the resources of the civilized world.

3. All *purely speculative projects*. By these I mean all such buying and selling as involve no increase of wealth to any one except by the same amount of diminution to others; in other words, where all that is gained by one party is necessarily lost by another. All trade which does not furnish some utility to society, not otherwise possessed, is unproductive.

4. Finally, we may rank here all labor expended in ministering to any desire the gratification of which will diminish the productive power of its subject, or of any under his

control. Such would include the manufacture of, and traffic in, intoxicating beverages. And by *beverages* here is meant only what the word implies. It does not include such alcoholic commodities as are used in the arts, or for mechanical or medicinal purposes. Nor is this the only business which has this character, though doubtless it has it more obviously and conspicuously than any other. All the labor of furnishing a depraved literature to the perversion and enervation of the mind, and every system of effort by which is stimulated or gratified any passion or proclivity that diminishes man's power over himself, and so over the means which nature freely furnishes to all who are competent to command them, are of this kind.

5. The statement in the previous paragraph respecting intoxicating beverages possibly needs some modification. It may be plausibly objected that these commodities come within the limits of the definition of wealth, that is, that they possess utility in the sense of power to gratify desire, and that their attainment involves sacrifice; and hence, since the labor which produced them results in wealth, it must be productive labor. This, doubtless, is true so far as the first effect is concerned. But productive labor, in the broad, economical sense of the expression, must ultimate in the increase of the wealth of the community: labor which does not do this is not productive labor. Now, I suppose that it will be admitted by nearly every one that the labor expended in the manufacture of intoxicating beverages does not result in the ultimate increase of the wealth of the community, but the contrary. It is therefore unproductive labor.

We find ourselves here, too, on the border line between economics and ethics, where thinkers are apt to get into confusion. For instance, Dr. Chapin tells us that every

man has a right to do what he will with his own, and that the protective system violates this right, and is therefore to be condemned. This may be all true, but it is an ethical, and not an economical, argument. It is true that many measures may be economical and ethical at the same time, but economics and ethics should be kept clearly distinct in our reasoning on these subjects. It is furthermore undoubtedly true that most things that are immoral are at the same time uneconomical. I am inclined to think that no really immoral measure is in the long run economical.