CHAPTER II.

LABOR.

60. The Hunter State.—The second great agent in the production of wealth is human labor. Up to a certain low point, the grosser human wants are supplied by the bounty of nature. So long as this continues, value does not emerge; wealth is not produced. Man may live like the squirrels or the monkeys, from the spontaneous fruits of shrubs and trees; or, like other large and fierce animals, he may prey upon smaller and weaker species, which, in their turn, are nourished without care by grasses or nuts. So long as races of men subsist in this fashion, they are doomed to remain few in numbers, low in character, subject to occasional visitations of famine, the victims of ferocious enemies among the higher orders of animals, or of internecine war in the unceasing struggle for existence. Political economy has no more to do with men in such a state than with the monkeys who compete with each other for cocoanuts and bananas.

61. The Pastoral State.—Labor, in the economic sense, first clearly appears in the pastoral state. Here men no longer subsist on the bounty of nature, or perish miserably and helplessly when that bounty fails. They no longer hunt for nuts and roots and fruits which have grown without care and without labor, or for casual animals nourished upon the spontaneous products of the soil, bred and reared without human intervention. In the pastoral state, tribes tame the cattle and sheep and goats and asses which once ran wild, training them to be easily guided, handled and controlled, caring for their

per acre. The 40 bushels of wheat, 90 of corn, 2½ tons of hay, that good farmers, in long cultivated regions, gather, per acre, from small areas, are exceptional. For these exceptional natural fertility, or natural manuring, or else exceptional artificial fertilization are required; but for the agricultural production of the world "*im grossen und ganzen*" small crops per acre, fed mostly by natural disintegration of the soil and natural nitrification, as by natural rainfall and natural supplies of carbonic acid and solar energy, are the rule."

subsistence, driving them to fresh pastures, digging wells or diverting streams to give them a constant supply of water, even cutting the abundant food of summer and curing and storing it against the season of scarcity. The hunter protects the animals he has tamed against those that still remain savage, and folds or houses them against severe storms and protracted cold; he bleeds, blisters and physics them in sickness; superintends their breeding after their kind, and cares for the young far beyond the power or the wisdom of the dam. By all these forms of labor, men in the pastoral condition make that to be wealth which in a state of savagery was no wealth.

62.—And of this social condition we note two things: First, population increases largely. It requires many thousands of acres to support a family of hunters; as many hundreds will support a family of shepherds. The animal that in the one condition yielded, once for all, a carcass of three or four hundred pounds net, now returns, for the little care given her, five hundred gallons of milk every year, making, if the owner pleases to expend some additional labor, three hundred pounds of cheese. Another animal that once yielded a carcass of fifty pounds, covered with a pound of coarse stiff hair, now parts every year with four or five pounds of soft, flexible wool, susceptible of being wrought into forms of the greatest beauty and usefulness.

Secondly, the subsistence derived by communities in the pastoral state is not only more ample; it is also far more secure. Men are no longer subject to be swept by famine, as by a hurricane, from the face of the earth. In the main, subsistence, and with it existence, has ceased to be precarious; it has become constant and calculable.

63. Agriculture.—The next economic state is reached in agriculture. Man no longer skims the surface of the land; he plows into the depths of the soil, and brings up the productive energies that lay hidden far below the roots of the grass on which the cattle were wont to graze. And now, where hundreds of acres were required to support a family, as many score suffice. Population rapidly increases. Man

and beast no longer wander to seek their food. Food is brought to them. Tribes cease to shift their place from season to season as the exigencies of pasture demand. The cottage replaces the tent. New wants are felt, now that men are not obliged to carry around with them all they own. New and varied forms of wealth appear.

To do only the things which formerly were done, would require less exertion, and consequently values tend to diminish, since value measures, speaking roughly, the difficulty of attainment; but more things now require to be done; there are more who feel wants, and each of them feels more wants, than formerly, and hence the body of values increases, in the face of improvements in the arts which tend to substitute gratuity for value.

64. Two Factors of Labor Power.—The labor power of any community, whether in the pastoral or in the agricultural state, or in the higher state where manufactures and commerce enter, is compounded of two factors, that derived from the efficiency of the individual laborer, and that derived from what we call by the somewhat unsatisfactory term, the division of labor, which embraces the joint action of men in production, the differentiation of productive processes, the specialization of trades and the organization of productive forces.

65. The Efficiency of the Individual Laborer.—The degree in which the labor of an individual shall be efficient in the creation of values, *i. e.*, the production of wealth, depends upon several causes.

First: His inherited strength, his original endowment of physical force. This endowment varies greatly, not only as between individuals of the same community, but as between communities, races and nations. Into the causes of the differences in this respect existing, it is not necessary to enter. That inquiry belongs to the physiologist and the ethnologist. The economist has to do only with the fact. In the matter of sheer lifting-strength alone, the individuals of one race may, on the average, surpass those of other races by fifty, one hundred or two hundred per cent.; while in the matter of the use of that strength, in operations at once difficult and delicate, the range of existing differences is very much wider.

66. Relation of Food to Industrial Efficiency.—A second reason for the higher industrial efficiency of the laborers of one class or nation than belongs to those of another, is found in the quantity and quality of the food consumed by the laborers of the two classes or nations, respectively. The human stomach bears much the same relation to the whole frame as the furnace to the steam engine. In the one, as in the other, must all the forces which are to drive the machine be generated. In the one, as in the other, the force generated will, within certain limits, increase with the material supplied. With more fuel, the engine will do more work. With more food, the man will do more work.

But not proportionally more. To a great extent the return made, in force, to the introduction of new fuel into the furnace varies according to a principle which is strongly analogous to that which governs the returns made, in crops, to the application of new labor to land. Thus, if we suppose that, with a furnace of a given height of chimney, 3 lbs. of coal to the square foot of grate surface, are supplied, we should have, resulting from the consumption, a certain amount of force available to do the engine's work. But that amount would be small. A great part of all the heat generated would be lost by radiation in the tubes and through the cooling effect of the water in the boilers. Now, suppose that, instead of 3 lbs., 6 are consumed. Will the efficiency of the engine be doubled merely? No, the engine will do easily three times as much work. If 9 lbs. are used, the power will be still further increased, not only positively but proportionally, that is, there will not only be more power, but more power for each pound of coal. If 12 lbs. are consumed, there may be a still further addition to the force generated, not only positively but proportionally. It might be easily found that, with this amount of fuel, the resulting force would be, not four times as much as with 3 lbs., but eight or ten.

The parallelism which exists between the economy of applying labor to land and the economy of supplying fuel to the

furnace, is broken at one point. Labor may be applied to land indefinitely with an increase of absolute, though not always of relative, production. But coal can not be added indefinitely to the fire beneath the boiler.

67. The economy of supplying food to the human machine is in a high degree analogous. If, for example, a laborer were supplied with only 100 oz., per week, of a certain kind of food, the laboring power which would be generated by the digestion and assimilation of that food would be very slight. After a course of such diet, the man would crawl feebly to his task; would work with a very slight degree of energy when he first started out, and would soon become exhausted. Were 125 oz. given to the laborer, he would be able, with no greater strain on his constitution, to accomplish an amount of work which would be not merely one quarter more, but largely in excess of it. He would perhaps be able to do one-half as much more. Were his subsistence to rise to 150 oz. there would be a still further gain. His efficiency would be to his efficiency when receiving 125 oz., not as 6 to 5, but as 7, or perhaps 8, to 5. With 150 oz., the laborer's diet might be regarded as sufficient for comfort, health and a reasonable development of muscular strength. Let the amount of food be carried up to 200 oz., and we should have a liberal, generous diet, ample to supply all the waste of the tissues, and to keep the fires of the body burning briskly, generating force enough to allow the laborer to put forth great muscular exertions through long periods of time.

Up to a certain limit, then, with food as with fuel, the true economy of consumption is found in increasing the supply. Niggardliness is waste, and waste of the worst sort. But just as there is a maximum limit with the fuel, so there is with food. After that limit is reached, the increase of food does not imply a proportional increase of force, if, indeed, any increase at all; and after a certain still higher point is reached, the increase of food brings mischief.

68. Under-fed Laborers.—The consideration here presented is of great importance in explaining the varying efficiency of labor. Probably the inhabitants of the United States constitute the only large population in the world who

are thoroughly well-nourished; that is, who have enough of wholesome food to secure the greatest economy of consumption. "Many a French factory hand," writes Lord Brabazon, "never has any thing better for his breakfast than a large slice of common sour bread, rubbed over with an onion, so as to give it a flavor." "Meat," says a careful observer, "is rarely tasted by the working classes in Holland. It forms no part of the bill of fare, either for the man or his family." Of the laborers of Belgium, an official report states: "Very many have for their entire subsistence but potatoes, with a little grease, brown or black bread, often bad; and for their drink a tincture of chicory." Even through large portions of happy England, the fabled land of the beef-eater, there is a mass of unimpeachable testimony to show that the working classes are able to obtain less nourishment by far than is necessary to the highest efficiency of their labor. "In the west of England," wrote Prof. Fawcett, in 1864, "it is impossible for an agricultural laborer to eat meat more than once a week." Of the peasantry of Devonshire, Canon Girdlestone wrote: "The laborer breakfasts on tea-kettle broth—hot water poured on bread and flavored with onions—dines on bread and hard cheese, at 2d. a pound, with cider very washy and sour; and sups on potatoes or cabbage, greased with a tiny bit of fat bacon. He seldom more than sees or smells butcher's meat."

Now, as to the want of true economy in thus reducing the consumption of food among the working classes, there can not be a moment's question. The case may perhaps be best put by saying that if cattle were not kept better nourished than are the majority of laborers in the world, it would not "pay" to have cattle at all. It would be better to do without them entirely. Barely to keep them alive would require a large expenditure of food, and to give them, in addition to this, only enough to secure a low grade of muscular strength and activity, would not make them worth their keep.

69. Influence of Sanitary Conditions on the Efficiency of Labor.—A third reason for the higher industrial efficiency of the laborers of one class or nation than of another, is found in

different sanitary conditions, especially those which concern the quality of the air. The food which is taken into the animal system is converted into blood which is kept in a state of purity by being oxydized in the lungs, through the process of breathing. In this process, the foul and stupefying element, carbon, is thrown off into the atmosphere, and the life-giving element, oxygen, is taken into the system. That this may be done, there should be, in all inclosed habitations, a sufficiency of space to each person and a free access of fresh air. Human beings confined in small, unventilated rooms inevitably lose vigor; the process of the oxidization of the blood being checked, the process of making blood, through the digestion and assimilation of the food taken into the stomach, is checked. With foul air, therefore, a smaller amount of muscular force is generated from the same amount of food. Not only so, but the food taken into the system may become an actual obstruction and cause of disease, through the failure of digestion and assimilation. Moreover, in close rooms, unventilated and uncleaned, the germs of certain diseases, known as filth-diseases, *viz.*, typhus and typhoid fevers, scarlet fever, diphtheria and others, are preserved and readily communicated, to the impairment of health and the destruction of life.

70. The cause here adduced is not of slight importance in accounting for the differences in the labor power of different communities and nations of men.

As the people of the United States are the best nourished, so they are, by a long interval, the best sheltered people in the world. It is impossible for an American who has not traveled widely, to form an adequate conception of the manner in which the laborers of other countries are housed. "Hovels, cellars, mere dark dens," wrote Mr. Inglis of the city homes of Ireland, in 1834, "damp, filthy, stagnant, unwholesome places."

In 1861, one-third of the population of Scotland lived in houses of one room only; another third in houses of two rooms. In England the character of the country cottages and of the dwellings of the poorer classes in the cities is even

worse than in Scotland. Cases are not infrequent where families of 7 to 13 members occupy a single bedroom.

Of the cottages of Devonshire, Canon Girdlestone says: "They are, as a rule, not fit to house pigs in." The cottages of the County of Durham were thus described by the Poor Law Commissioners of 1842. "The average size of these sheds is about 24 by 16 feet. They are dark and unwholesome; the windows do not open, and many of them are not larger than 20 feet by 16; and into this space are crowded eight, ten, or even twelve persons."

71. If this is the way Englishmen have to live in the country, we might expect to hear worse things of the towns, where land is sometimes worth as many silver crowns as would cover its surface. Some years ago Mr. Edwin Chadwick declared that more filth, worse physical suffering and mental disorder than John Howard described in his account of the prisons of his day, were to be found among the cellar populations of the working people of Liverpool, Manchester, or Leeds, and in large portions of the Metropolis. Much has of late been done, both by private philanthropic effort and under the authority of law, to cure the evils described; yet still much that is hideous remains.

It is in such homes that the greater part of the present laborers of the world were born and reared. And it is in homes like these, that, in their estate as laborers, they have to live, to eat, to rest and to sleep after the exhausting toil of the day. It is not to be wondered at that children grow up puny and deformed; that scrofula and rheumatism become deeply seated in the constitution; that the blood grows foul and the pulse feeble; that the efficiency of the laborer falls to a low point, while his power to labor at all becomes liable to be prematurely terminated.

72. The Laborer's Intelligence.—A fourth reason for the superior efficiency of the laborers of one class or nation over those of another, is found in their higher intelligence. Intelligence is a powerful factor in industrial efficiency. I speak not now of technical knowledge, but of clearness of mind, quickness of apprehension, strength of memory, and the power

of consecutive thought, in no more than the degree in which these may fairly be expected to be found in a nation where popular education has existed for generations; in the degree, for instance, in which they are found in New England, in Saxony, in parts of Scotland.

The intelligent is more useful than the unintelligent laborer:

(*a*) Because he requires a far shorter apprenticeship. He can learn his trade in a half, a third, or a quarter the time which the other requires. (*b*) Because he can do his work with little or no superintendence. He is able to carry instructions in his mind, and to apply them with discretion to the varying conditions of his work. (*c*) Because he is less wasteful of materials. In some branches of manufacture the value of the materials used is equal to the amount paid in wages. In others it is twice, thrice, and even ten times as much. A very little difference in the degree of thoughtfulness, foresight and regard for instructions, on the part of the laborer, may make a great difference in the net product.

73. (*d*) Because he readily learns to use machinery, however delicate or intricate. The extent to which labor is saved and power increased by the use of machinery hardly needs illustration here. It is only the intelligent workman who can freely avail himself of this great help. Brains are not alone required for the invention of machines; they are wanted for their adjustment, their ordinary use, and their occasional repair. He who is to use a machine need not be the same man as he who made it; but, to a great extent, he should be the same kind of man.

74. Race Characteristics Regarding Machinery.—The capability of dealing with costly and delicate machines varies greatly between different races and nations of men. Notwithstanding the prodigious increase in the power of producing cotton goods, through the inventions of Watts, Arkwright, and Sitgreaves, vast quantities of cotton are still spun or woven by hand. In some of the countries of Europe, as Turkey and Greece, the ordinary "mechanical powers," the screw, the lever, the inclined plane, etc., are used but little,

or not at all, the lifting or pulling being done by direct physical force, at, of course, the expenditure of a vast amount of animal strength. Even in highly civilized nations the application of agricultural machinery is limited by the inability of the peasantry to use it. The Judges of the World's Fair of 1852 reported that there was probably as much sound, practical labor-saving invention and machinery unused, at that time, as was used; and that it was so far unused, "solely in consequence of the ignorance and incompetence of the workpeople."

75. Machinery in the United States.—The United States is the only country in the world, excepting some of the English colonies, in which it can be safely assumed of the average laborer that, after a reasonable period of experiment and trial, he will be able to use delicate and costly machinery to the advantage of his employer.* In all other countries, even the most civilized, it is only picked laborers who can use intricate machinery without doing more damage than their labor is worth.

76. Cheerfulness and Hopefulness in Labor.—A fifth reason for the higher efficiency of the laborers of one class or nation than of another, is found in greater cheerfulness and hopefulness, growing out of higher self-respect and social ambition, and a more direct and certain interest in the product of industry.

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* A remarkable illustration of the strong natural aptitude of the American for the use of machinery, has come to my notice during the present year, 1887. A boot and shoe manufacturer, employing eleven hundred hands, had occasion, during a great and long-protracted strike, to replace considerably more than half of the old operatives by new hands. This branch of industry is well known for the vast variety of highly intricate and delicate machinery which it uses. Yet at the end of five months, during which this substitution had been carried through to completion, the machines in this factory were found, on careful inspection, to be in absolutely as good condition, as at the beginning of the strike.

Had an English manufacturer carried through such a replacement of old by new hands, his machinery at the end of that time would have been worth just what it would have sold for, by the pound, as old iron.

The first three causes which have been adduced are purely physical, affecting the laborer's muscular force and capability of endurance. The fourth cause adduced, *viz.:* the laborer's general intelligence, determines his intellectual qualification for his work, his ability to direct his bodily powers, such as they are, to the production of wealth, with the maximum of effect and the minimum of waste. The cause now adduced is moral, affecting the will.

The importance of this cause is most conspicuously seen in the wastefulness and inefficiency of slave labor. Always and everywhere, that labor has been found to be vastly inferior to the labor of freemen. Even the stimulus of the lash fails to command the faculties which instantly spring into activity under the inspiration of an ample reward. Fear is far less potent than hope in evoking the energies of mind or body; while efforts made under the influence of the former passion are far more exhausting than those made under the influence of the latter.

77. Nearness and Directness of the Reward.—Even among free laborers, the degree in which the physical and intellectual powers may be engaged in the production of wealth depends greatly on the directness and certainty of the reward. This is proved by the difference everywhere observed between the exertions of wage laborers and those of men working on their own account. The wage laborer necessarily becomes, in a great degree, a time server, an eye pleaser. He saves himself as much as he can; he counts his hours; he measures the work he does. But more than this, a laborer not merely will not, he can not, the laws of human nature remaining the same, work as hard for another as he would if working as his own man.

On the other hand, he who is working for himself keeps no grudging account of his time or exertion. If the proprietor of land, he knows that every stroke of his arm is creating wealth which he and his children are to enjoy; that every straw saved is his own. He watches against waste with unfailing eagerness. His vines, his plants, his animals, his fences, his buildings, are borne upon his mind; and no care

or pains are withheld to guard them against the almost infinite forms of injury which beset these species of wealth. He is early afield, for the day is not long enough for all he wishes to do; and when night falls, he still lingers, tying up his vines, tinkering his sheds, tending his cattle, bringing home the harvest.

Even beyond the mere love of wealth, of what can be bought and sold, enters the love of his land, which is his own, which was his father's, which shall be his son's after him; and he works upon it, sparing himself little more than does the mother caring for her child. "Give a man the secure possession of a bleak rock," said Arthur Young, "and he will turn it into a garden." The vineyards of the Rhine, built up, in many cases, of earth brought in baskets up the sides of the mountains, are speaking witnesses to the truth of this saying; while many of the richest fields of Holland and Belgium, once drifting wastes, illustrate that other saying of the eminent traveler: "The magic of property turns sand into gold."

78. Influence of Bad Laws in Producing Idleness.—Doubtless much of the indolence we have been accustomed to regard as constitutional with certain races and nations, and as indicating lack of physical endurance or feebleness of will, is due simply to the absence of incentive, resulting from unjust laws or bad social institutions. It would be enough to make one laugh to hear the Scotch spoken of as lazy. The energy and perseverance of that people have been illustrated in every quarter of the globe. Yet, three or four generations ago, the Scottish people, says Prof. Hearn, "were conspicuous for their incorrigible indolence." The ample explanation was found in the almost universal system of short leases or of tenancy at will. A single wise action of legislation cured this defect; and with it disappeared the laziness of the Scotchman.

Not half so long ago as that, the Irish were a proverb over Europe, for indolence and shiftlessness. Arthur Young describes them as "lazy to an excess at work," but "spiritedly active at play." The Irishman of that day was spiritedly active at play, because the fun was sure to be all his

own. There were no laws or institutions which robbed him of his sport. He was lazy to an excess at work, because invidious laws, social proscription and the customs relating to land kept from him a large part of the natural fruits of his labor. Every country of the globe has witnessed, since 1850, the indomitable pluck and energy of the Irish at work under equal laws and with "a fair chance."

79. The Varying Efficiency of Labor.—I have indicated the chief causes which influence the efficiency of the individual laborer in the production of wealth. The joint effect of all these is very considerable. Industrial operations conducted upon a large scale have shown that wide differences exist in the working power of men of different nations. In comparing the cost of constructing railroads in India and in England, for instance, it was found that, though the Indian laborer received but 4½ to 6d. a day, and the English laborer, 3s. to 3s.6d., the sub-contracts in the two countries were let at the same prices. The English cotton spinner is paid as many shillings as the East India spinner gets pence; yet the cotton cloth of England undersells that of India in Indian markets. As between England and Russia, it is found that a weaver in the former country tends from two to three times as many looms as in the latter, the English looms, moving, moreover, at a higher rate of speed.

As between England and France, the superiority of the labor of the former country has been repeatedly shown in great competitive experiments. Mr. Brassey states that, in the construction of certain French railways, it was found that the working capacity of the Englishman was to that of the Frenchman as five to three. Superior as are the workmen of England to those of other countries of Europe, they are, in turn, surpassed, on the average, by those of the United States, in the respects of strength, intelligent direction of force, and ability to use machinery to advantage.

80. The Division of Labor.—The second factor of the labor power of a community is that which is commonly called by the unsatisfactory term, division of labor, embracing, as was said on an earlier page, the joint action of men in production, the differentiation of productive processes, the specialization of trades, and the organization of industrial forces. The term, organization of labor, is perhaps the best single term that can be used to cover all this ground.

In primitive society the division of labor does not exist, or is found only in a rudimentary state. Each able-bodied man does all which any one does. Each builds his wigwam or hut, shapes his bows and arrows; cares for his horses, if he have any, and hunts or fishes in his own right and name. Yet, even here, the division of labor as between the sexes is in some degree carried out. The women make the nets, weave the blankets and cook the food, as duties suitable to their powers.

Soon, however, emerges a division of labor founded on differences of capability less fundamental than those of sex. The smith appears, working at first alike in iron, wood and stone. He does all the work of this class which the community requires; and, in return, receives flesh and fish from those whose spears and hooks are sharpened and pointed at his forge. As the amount of this class of work to be done increases, three smiths, instead of one, come to be employed; one working in iron, one in wood, and one in stone, known respectively as the blacksmith, the carpenter and the mason. As the wants felt by the community are multiplied, as modes and fashions appear, new classes of artisans come into existence, each working on some one class of substances, or making some one class of articles. The cabinet-maker follows the carpenter; the jeweler the blacksmith; the sculptor, in time, the mason. Finally, the operations of each trade come to be distributed among several distinct classes of laborers.

81. How the Division of Labor Increases Production.—It is difficult adequately to appreciate the increase of production which results from the application of this principle.

(*a*) It shortens apprenticeship. If each man had to learn the whole of a trade, much more to learn several trades, he would have to take a great deal of time and spoil a great deal of material and many tools in doing so. But when each workman is required to learn but a single trade, and, within

that trade, to practice only one simple operation, the period of instruction becomes very brief. The end of a few months finds him intelligent, if not expert, in his business.

(*b*) It develops dexterity. Long after the workman has so far mastered his trade as to be able to perform its operations without mistake, he continues to gain in productive power, through the incessant repetition of his task. The sense especially concerned in his work, be it sight, or touch, or hearing, becomes preternaturally acute. The muscles brought especially into play gain in size and activity. Even certain organs may become involved in the operations of the trade, and undergo changes which, whether favorable to the general health and symmetry, or not, are of a nature to facilitate the customary work. Any one who watches a cashier counting notes, a telegraph operator sending messages, can see how wonderfully practice must come into industry, to make perfect the workman.

82. (*c*) It obviates the loss of time and the distraction of thought which would be involved in passing from place to place, and in laying down the tools of one trade to take up those of another. In agriculture, where the division of labor can be carried but a little way, we know a great deal of time is thus lost.

(*d*) It facilitates invention and leads to the discovery of improved processes and new materials. Practiced thus in detail, every art or trade is studied in detail, and, one by one, here a little and there a little, its mechanical possibilities come to be seen and realized. Some of the most conspicuous discoveries in the history of industry have, indeed, come through scientific research, or by casual suggestion; but an infinite multitude of inventions and improvements in processes, accomplishing, in their aggregate effect, an incredible gain to productive power, have been the result of the minute study of the operations of industry, in detail, by men each of whom was dealing with a single class of substances, performing a single operation, with the aid, perhaps, of a single tool.

(*e*) It allows women and children, as well as men who are suffering from some partial disability, to find places in the

industrial order where they can labor to advantage; while among men of full powers it assigns to each that work which is best suited to his individual capacity.

83. The Territorial Division of Labor.—This is a phrase devised by an English economist during the great popular agitation which preceded the repeal of the Corn Laws,* to express the carrying out of the principle of the division of labor, which we have thus far contemplated in operation among the individuals of a community, to communities and to nations. The phrase intimates that the vast industrial advantages which attend the application of that principle within the hamlet and throughout the country, will accompany that principle in its extension over the whole field of the world's production.

This is the main, indeed, we may say the sole, economic argument in favor of Free Trade, as opposed to what is called Protection. The claim to freedom of trade as a "natural right" is not one of which the economist can properly take account. On the other hand, the arguments of the protectionist, based on the political importance of the industrial self-sufficiency of the nation, and on the alleged social and intellectual advantages resulting from a diversification of national industry, are equally out of his view.

Inasmuch as the protectionist plea for limiting the territorial extension of the principle of the division of labor, includes a claim that the creation by law of industrial entities corresponding to existing political entities, has an influence, not only upon the production, but also upon the distribution of wealth (which department of our inquiry we have not yet reached), and as the whole question of protection or free-trade is bound up with political and sociological considerations, it has seemed best to postpone the remarks we have to make upon that question to Part VI, "Some Applications of Economic Principles."

84. The Organization of Industry.—But the advantages

* Imposing high duties on foreign grain imported into England. These laws were repealed by Parliament in 1846, under the leadership of Sir Robert Peel. The study of the history of the Repeal movement affords an admirable economic exercise.

derived immediately from the division of labor, are but a part of the total advantage which is attributable to what we have termed the organization of industry. In addition to those already indicated, we find, under the larger title, a vast gain of productive power resulting from the introduction of the principle of competition, the creation of *esprit de corps*, and the direction given to the mass of laborers by the few clear, strong spirits, which, under such a system, dominate the industrial operations of the community.

(*a*) Competition can only be introduced as an active force where the opportunity for exact and easy comparison of results exists. Where each one of a number of persons is performing every day a large number of miscellaneous duties, now a little of this, then a little of that, it is difficult or impossible to measure the achievements of the several persons so employed, bring them to a scale, and assign credit or blame. But when those duties are so distributed that each person is charged with the performance of a certain, definite task, comparison becomes possible.

(*b*) The creation of *esprit de corps* within trades and professions becomes a tremendous force in industry. Competition operates upon the laborer, through the employer's desire to get the most out of each workman, and through the laborer's desire to obtain and retain employment. The principle now invoked operates on the laborer, perhaps not less powerfully, through the public sentiment of the craft, establishing standards of workmanship and laws of conduct which tend to lift each workman to the level of the best.

85. (c) Mastership in Industry.—But the most important of the sources of gain in productive power, now under consideration, is found in that mastership of industry which is created by the division of labor. That division can not proceed to its natural limits without giving rise to the subordination of the mass of the laboring population to a select and comparatively small body of employers, who assume the responsibilities and direct the agencies of production.

Whether this gain is accomplished at a certain social and political cost, is a question the economist is not called upon to discuss. That question belongs to the social philosopher or the statesman. The economist, as such, is guilty of an unwarrantable presumption if he undertake to measure the quantity of economic advantage which would offset the smallest ethical or physiological injury. He does all that he is called upon to do, all that he can undertake to do without impairing the scientific value of his results, when he traces causes to their effects within the field of economics alone.

Looking at the matter in its purely economic aspect, it is clear that the gain in question is not realized without an initial loss, inasmuch as the laborer, under the wages system, necessarily has a less direct and certain interest in the product of his industry, than the man who labors on his own account. But this loss is compensated, many times over, by the gain to production which results from the impulse and direction given to industry by the thought-power and will-power of the ablest minds in the community.

CHAPTER III.

CAPITAL: ITS ORIGIN AND OFFICE.

86. The third great agent in the production of wealth is Capital. The capital of a community is that part of its wealth (excluding land and natural agents, considered as unimproved*) which is devoted to the production of wealth.

Some writers, indeed, insist that the climate of a country, so far as it especially favors production, is to be reckoned as a part of the capital of that country. I prefer to say that the beneficent distribution of heat and moisture, by the gratuitous action of nature, is a favorable condition of production, but is not capital. A sound system of jurisprudence, which secures the impartial administration of justice; a sound organization of the political body, which maintains peace

* The reason for this exception will appear when we come to treat of the rent and price of land.