

tain stage of industrial society. The spade, the cart, the plow, the distaff, the forge, are the tools of a later stage. The loom, the lathe, the printing press, the trip-hammer, the railroad and the ship, may, with equal propriety, be called the tools of to-day. The buildings which protect machinery from the weather, and the shops in which trade and manufactures are carried on, are, in this sense, tools.

96. Materials.—The third form which capital takes is that of Materials. The word, as here used, covers all kinds of wealth which are devoted to the production of wealth in any other way than as subsistence for the laborer, or as tools to increase his power in production. In a primitive state, materials play a small part. The bait for the hook among the tribe of fishermen; the corn saved for seed in a planting community, are the most prominent materials of early industry. In a later age a large part of all the accumulated wealth of a community exists in this form.

Ultimately, indeed, these materials will be wrought partly into tools, partly into the means of subsistence. A part, also, may come to be devoted to purposes of luxury or display, and, hence, cease to be capital at all. But at any given time, the capital of a community may be classed under these three heads: Subsistence, Tools, Materials.

97. The Three Forms of Capital.—In a certain sense these three may be resolved into one, Subsistence; as, indeed, all the forms of subsistence itself may be resolved into one, Food. Thus, the first simple tools of the barbarous community may be said to be exactly represented by the subsistence required by the laborers engaged in making the tools. The first materials produced by the aid of these tools may be said to be represented by the subsistence of the laborers using the tools, added to that of the laborers who made the tools. And so of the more elaborate tools and the more various and costly materials of after ages: all may be said to represent the subsistence of the laborer while engaged in the act of production.

Likewise all the forms of subsistence, food, clothing, shelter and fuel, may, in theory, be reduced to one, food. The clothing of the laborer, for example, represents the food which he con-

sumed while he was gathering the fibers of the wild grasses and weaving them into a blanket. The hut represents the food consumed during its erection. The fuel represents the food consumed while the laborer was gathering fagots in the forest.

98. One of the advantages of this classification is, that it directs the attention to the part performed by tools, machinery and apparatus, in the production of wealth. Look into many text books on Political Economy, and you will find capital spoken of as if its main, or even its sole office, were to furnish subsistence to the laborer. Yet two nations may be equally provided with subsistence, while the superiority of one of them in the possession of tools may give it a prodigious advantage over the other in the power of producing wealth. One man with simple tools may do the work of ten men equally well fed, but having only their hands to work with. Ten men with the wood-working, cotton and wool-working, or metal-working machinery of to-day, run by steam or water power, may easily do the work of a thousand, with distaff, chisel, saw and axe.

CHAPTER IV.

THE PRODUCTIVE CAPABILITY OF A COMMUNITY.

99. We have spoken, in succession, of land power, labor power and capital power. The productive capability of any community is determined by these three elements, in the degrees in which they are severally found to exist there.

While the land remains in the condition of increasing returns (Par. 50), as in the Eastern States of the American Union during their earlier history, production may be large, per head of population, with but a small amount of capital available. Even after cultivation has reached the condition of diminishing returns (Par. 51), the energy, intelligence and skill of the laboring class, and the thorough organization of industry, may wrest a comparatively high rate of produce from the reluctant soil; or, in spite of an ignorant, clumsy

and spiritless population, as in the west of England, the concentration of a vast capital upon a naturally rich soil may yield large returns, long after the same stage of cultivation has been reached.

100. Where all three conditions are found favorable to production, *i. e.*, fertile lands not yet fully taken up, an intelligent and energetic laboring population, with abundant capital, as in the opening up of parts of our Western States within the last thirty years, and notably in the development of Minnesota and Dakota now going on, the rate at which wealth grows appears almost fabulous. Surely, inevitably, however, the increase of population will bring about the condition when an increasing labor power and capital power must struggle with a decreasing capability of the soil. Mechanical inventions, chemical discoveries, may long postpone the diminution of the per-capita product; all improvements in the industrial character of the working classes, or in the organization of labor, enable a larger population to be supported without reduction in the quality of their subsistence; but not the less is the power of one of the factors of production steadily on the decline.

This principle applies, be it observed, only to the per-capita product. The absolute quantity produced increases constantly with every increment of labor or capital judiciously applied to the land. There never comes a time when more laborers will not produce larger harvests. There never comes a time when additional capital introduced into agriculture cannot secure for itself some return.

101. Such is the condition under which the earth is cultivated by human labor, for the supply of human wants. The production of wealth by mechanical processes is, however, as we have seen (Par. 53.), subject to this condition only so far as relates to the materials employed in manufactures, all of which are derived from agriculture. The mechanical processes themselves are subject to no such drawback. On the contrary, the increase of population for a considerable period allows the division of labor to take place more fully, with the result of enlarged production. Hence the multipli-

cation and diversification of conveniences and refinements, so far as they involve no increase in the amount of material consumed, may be carried forward literally without limit.* Labor and capital here act with prodigious force, not, as we might say, by addition, but by multiplication, each step rendering every successive step easier, as the force of habit and invention give to production a constantly accelerating rate of movement.

102. **Productive Capability not fully Realized.**—Productive capability being thus determined by the three elements which have been stated, the greatest question which the economist has to answer, the most difficult, the most important question in economics, is, why the actual production of wealth falls so far short of its productive capability. But this is a question which cannot be finally answered till the reader has been taken through all the departments, by turns, of economic science. It is not until the economist reaches the department of consumption, that he can show how the use which is made of wealth may waste the capital power of a community, or may impair its labor power through the effects of vicious indulgence upon muscular strength and upon the will of the laborer. In the department of distribution, again, we shall see how the division of the product of industry, among the several persons and classes of persons engaged, may work great and permanent injury to those who are at disadvantage in making their claim; and how disputes and contests over that division may seriously reduce the amount to be divided. In the department of exchange, the economist meets the question in a special form, namely, what is the cause of those occasional stoppages of production which are known as crises, or "hard times," when the wheels of industry move with painful slowness, and the wealth which has been gathered in preceding periods is wasted in an inactivity from which all classes suffer, and yet for which no one seems accountable, since all are, or profess to be, ready and

* The important mistake committed by Mr. Henry George, through overlooking this point, will be indicated in Par. 515-7.

desirous to work. Under each of these titles, thus, we shall find something by which to explain the phenomenon that the actual production of every commercial and manufacturing country, taking a term of years together, falls far below the possible production.

103. Industrial Structure.—Even under the present title, we have to note a liability which besets the productive power of a community arising from what we may term its industrial structure. By this term is intended that organization of the capital power and the labor power of a community, which makes the productive capability of the whole depend, in a greater or less degree, upon the character of individuals or classes of individuals, and, in consequence, upon accidents affecting the fortunes of such individuals or classes. This is a matter far too little regarded in reasoning about the wealth of nations and communities. Writers in economics are apt to speak of the labor power and the capital power of a community as if they were aggregates of pure force. No reference is made to structural organization. Complete homogeneity and the highest mobility are assumed for the whole labor-mass and the whole capital-mass.

In such a way of looking at the subject we lose sight of the possibilities of great loss to production arising out of two conditions.

104. (a) Partial Immobility of Capital and Labor.—In all advanced industrial societies, labor and capital become committed to certain courses, from which they can only depart after much delay, against great resistance, at heavy cost. We have seen how vast is the increase in productive power caused by the division of labor, the differentiation of industrial functions, the specialization and localization of trades and the organization of the productive forces.

Precisely according to the chances of gain resulting herefrom, is the risk of loss, in the case of mistake or misadventure. The artisan who has learned a trade becomes comparatively helpless if the opportunities for working at that trade are taken away. The factory hand who has learned to perform only one operation out of the multitude that go to the

spinning of a single yard of cloth, can do little if he be thrown out of the place where that operation is to be performed in immediate connection with all the others. In theory, the artisan or the factory hand may turn to some other field of production, and soon acquire the knowledge and the manual skill required in some new art or trade. The observation of large populations, through long periods, shows that such readjustments of specialized labor demand more energy and more enterprise than are possessed by most laborers, occupy a great deal of time, at the best, and involve no small waste of labor power.

Not infrequently that readjustment is not fully accomplished in the generation that first feels the necessity for it. The population or class of laborers upon whom this demand is made, prove unequal to the task, lose hopefulness, courage and self-respect, and by a slow decline sink into pauperism, squalor, vagabondage and vice, too often transmitting tainted blood and tainted minds to the generation that follows.

105. (b) Misdirection of Labor and Capital.—Capital power and, in perhaps a greater degree, labor power are in the hands of individuals whose peculiarities of character, of habitude, of station, seriously modify the application of capital and labor to production; whose mistaken aims, whose erroneous impulses, may divert these forces from the object which we have supposed them to be seeking with an unremitting and an unmitigating attraction; whose accidents of fortune may impair the energy of the industrial movement, or for a time arrest it completely.

The most familiar illustration we could use is that of a factory whose master has suddenly died. The labor power remains; the capital power remains; but the spring that set them in motion is broken. It may happen that a son, or a partner, of equal ability, will at once step forward and take up the burden that has fallen from the nerveless hands. It may be, on the other hand, that a long period of embarrassment will result, during which labor and capital will stand idle. Perhaps the loss will never be made good. An incompetent person succeeds by right of relationship. Bad manage-

ment dissipates both the accumulated wealth and the reputation of the establishment. After a dreary struggle, the stock and fixtures are sold, the factory is dismantled, and the operatives go forth to find employment elsewhere as they may. There is many a thriving town in New England, whose only reason for growth, through fifty years, from small beginnings, has been found in the accident of the birth there, and the long life, of a single energetic, able, careful man of business. There is many a "deserted village" whose decay dates from the sickness or death of one man, out of the many hundreds who thronged its streets.

So difficult is the control and direction of capital and labor, that a distinct class is called into being, in all industrially advanced communities, to undertake that function. This class is known as the employing class, or, to adopt a word from the French, the *entrepreneur* class.

106. The Entrepreneur Class.—Mastership is essential to a large and varied production. The industrial enterprises of the civilized states could not have been brought to their present height without mastership, and could not be maintained at that height one year without it. Whatever may be true of politics, the industry of the world is not tending toward democracy, but in the opposite direction.

In its first stages, the division of labor does not necessarily imply the introduction of the master-class. When the forms of production are few; when materials are simple; when only hand-tools are used; when each artisan working at his bench makes the whole of the article to be marketed; when styles are standard, and the consumers of the product are found in the immediate neighborhood, the need of the master is not felt. But when the hand-loom gives way to the power-loom; when the giant factory absorbs a thousand petty shops; when many persons, of all degrees of skill and strength, contribute to a result which perhaps not one of them comprehends perfectly or at all; when machinery is introduced which deals with the gauzy fabric more delicately than the human hand, and crushes stone and iron with the force of lightning; when costly materials require to be brought from the four quarters

of the globe, and the products are distributed by the agencies of commerce through every land; when fashion enters, demanding incessant changes in form or substance to meet the caprices of the market, then the master becomes a necessity of the situation.

His work is not alone to enforce discipline through the body of laborers thus brought under one roof; not alone to organize these parts into a whole and keep every part in its place, at its proper work; not alone to furnish technical skill, and exercise a general care of the vast property involved. Beyond these and far more than these, he is called upon to assume the responsibilities of production; to decide what shall be made, after what patterns, in what quantities, at what times; to whom the product shall be sold, at what prices, and on what terms of payment. The armies of industry can no more be raised, equipped, held together, moved and engaged, without their commanders, than can the armies of war.

107. Those conditions of production which bring to the laborer the necessity of finding a master under whom he can work, bring to the man of superior abilities and acquirements the opportunity to employ his powers for the greatest economic advantage of society and for the greatest profit to himself. In a community where division of labor has proceeded but a little way, the man of intellect moves but one pair of arms. In a highly organized industrial system, he moves a thousand.

One man who has the genius to plan finds a host of helpers, each of whom can execute his schemes nearly if not quite as well as he himself individually could, who yet would have been wholly helpless and amazed in the presence of the exigencies, the difficulties, the dangers, which only arouse the spirit of the master, stimulate his faculties, and afford him the keenest zest of enjoyment.

108. Whether we regard this as the ideal state or not, whether we rejoice or repine at the extension of the principle of mastership in industry, it is the most characteristic fact of the industrial system of to-day. It is likely to gain rather than to lose importance in the years to come.

During the great moral and political fermentation which

brought on the Revolution of 1848, the attention of social reformers in France was called to the possible benefits of Co-operation, being an industrial system in which mastership should disappear. Not a few of the English economists, and, following them, American economists generally, have been led to take up co-operation as a practicable scheme, which only needs to be tried in order to work the most beneficent results.

So far from it being true that the abolition of mastership is at present feasible,* there never was a time when the distance between the man and the master was so wide as it is to-day. Nay, the distance between the mere superintendent, or overseer, on the one hand, who thoroughly understands the technicalities of production, and has all the ability required for executing orders, for enforcing discipline among the working force, and for keeping the machinery of the mill smoothly running, and the real master, the organizer and energizer, on the other, is greater to-day than it ever was before. That distance, so far as I can judge, tends continually to increase. The possibilities of gain or of loss were never so great as now. The choices and decisions essential to the conduct of business were never so frequent or so difficult. The difference in the product, which results from the difference between the able and the inferior management of affairs, was never so great. The toleration offered to the commonplace in industry was never so small.

109. Possibilities of Industrial Damage Involved in the Entrepreneur System.—While the entrepreneur system is, thus, an agency of the highest efficiency in increasing the productive power of a community; becomes, indeed, the condition without which the industrial enterprises of modern society could not exist, it will be seen that it involves the possibility of industrial disasters commensurate with the forces it sets in motion. Just as the accidents of the railway are more

*I speak here of industry as a whole, and especially of the largest branches, supplying general markets. When we come to speak of Industrial Co-operation, in Part VI, I shall note certain possible exceptions, in the case of smaller branches of industry supplying narrower markets.

destructive and fearful than those of the wagon road, so do the catastrophes of modern production exceed, in their wreck of fortune and waste of capital, all that is possible under the less ambitious organization of productive agencies. The mistakes of the man who controls a thousand workmen are multiplied a thousand fold.

And those mistakes will not be infrequent. While the entrepreneur class in any community consists generally of strong men, that class contains many persons who by the accident of fortune have come into the control of the agencies of production without the necessary qualifications, and who habitually mismanage and misdirect these agencies, to the lowering of the general scale of productiveness in the community. Moreover, the ablest men of business themselves fall far short of the ideal standard. Not to speak of intellectual failings, infirmities of the will are such as to make it a matter of course that no small part of the industrial power placed in the hands of the entrepreneur class will be misdirected. The perfect temper of business is found in few men: oscillations between recklessness, on the one hand, and over-cautiousness, on the other, constitute the rule, while absolute self-poise is the rare exception. In paragraphs 313 to 314, are indicated certain causes which tend to multiply the proportion of incompetent employers.

110. Destruction of Wealth.—Another cause which requires to be mentioned, as in a degree accounting for the failure of industrial society to accumulate wealth and maintain a productive capability corresponding to the theoretical efficiency of the three primary agents of production, land, labor, and capital, is the actual destruction of wealth by accident or convulsions of nature. The losses by fire, alone, in the United States probably exceed a hundred millions of dollars a year, if structures only are considered; while were we to add the damage to crops and forests, the sum of wealth consumed by this fearful agent would be greatly increased. Hurricanes, and storms, and floods, and accidents by rail, annually waste and destroy no inconsiderable portion of the products of human skill and toil.