PART V.—CONSUMPTION.

CHAPTER I.

SUBSISTENCE: POPULATION.

381. What is Consumption?—By the term consumption, in economics, we express the use made of wealth. This does not necessarily imply the destruction of the form or material of the commodities so used, or even the exhaustion of the value which had at some time been imparted to them. In general, however, the use of wealth involves, in a greater or less degree, loss of substance and change of form, with a decline, rapid or slow, in that power in exchange which we call value.

"That almost all that is produced is destroyed, is true; but we can not admit that it is produced for the purpose of being destroyed. It is produced for the purpose of being made use of. Its destruction is an incident to its use; not only not intended, but, as far as possible, avoided."* That destruction may, in exceptional cases, be practically avoided altogether. An intaglio is consumed, in the economic sense, when it finds its place in the British Museum, where it may remain unimpaired through uncounted centuries. Certain hewn stones were consumed, in the economic sense, twenty-five hundred years ago, when they were lifted into their place in a Roman aqueduct. As hewn stones, simply, they had been commodities, having a variety of possible uses. They might have been wrought into the fortifications of the city, or used in building

*Prof. N. W. Senior.

a temple, or an amphitheater, or a private palace. But when once they were applied to a definite use, they were, in the economic sense, consumed. They ceased to be merely hewn stones, to be sold by themselves, and subject indifferently to many uses; they became inseparable parts of something else.

Iron ore is consumed, *i. e.*, applied to the end in view in its production, when thrown into the furnace, and here takes place almost instantaneously not only a great chemical change, but a complete loss of form. The iron bar or plate is in turn consumed, when it is fitted into a bridge, without undergoing any chemical or mechanical change at the time, to be thereafter subject only to slow agencies of decay in the atmosphere, or to effects of attrition which, from one year to another, would be imperceptible.

382. Consumption as a Department of Political Economy.—Why should the economist interest himself, at all, in questions relating to consumption? Why, having traced wealth through its production, distribution and exchange, should he not leave it in the hands of the consumer without further inquiry, satisfied with its having reached the end for which it was created? So have many, indeed most, economists dealt with the uses of wealth, declining to recognize consumption as a department of political economy.

It is, of course, competent to any writer on economics thus to limit the scope of his inquiry; but I can not but deem it a subject of much regret that the fascinations of the mathematical treatment of economic questions, and the ambition to make political economy an exact science, should have led to the practical excision of the whole department of consumption from so many recent works. For, after all, the chief interest of political economy to the ordinary reader, its chief value to the student of history, must be in the explanation it affords of the advance or the decline in the productive power of nations and communities; and it is only in the consumption of wealth that we find the reasons for the rise of some and the fall of others, from age to age.* It is in the use made of the exist-

*The late Prof. Jevons, in the introduction to his "Theory of Political Economy," after noting the close analogy to the science of Statical

ing body of wealth that the wealth of the next generation is determined. It matters far less for the future greatness of a nation what is the sum of its wealth to-day, than what are the habits of its people in the daily consumption of that wealth; to what uses those means are devoted. That wealth may be applied to ends which inspire social ambition, which restrict population within limits consistent with a high *per capita* production, which increase the efficiency of the laborer and supply instrumentalities for rendering his labor still more productive, or it may be applied to ends which allow the increase of population in the degree that involves poverty, squalor and disease; to ends which debauch the laborer morally and physically, striking at both his power and his disposition to work hard and continuously. When it is remembered that statisticians estimate the wealth of England at only five or six times the amount of its annual production, it will appear of how much more importance, in the large view of a nation's future, is the direction of its expenditures than the absolute amount of its accumulations, at any given time. The completeness with which the French people, through their temperance, frugality and industry, combined with the strict repression of population, made up in a few years the terrific losses and fines of the German war, affords a very striking illustration of the virtue there is in the labor power of a country to replace its capital, if only a right consumption of the annual product be assured.

383. Subsistence.—The primary use of wealth is for subsistence. In the earliest stages of human society, man, like the lower animals, had only one want. Like the lower animals, he gathered his food, whether fish or flesh or nuts or berries, where he chanced to find it, and ate it without preparation. Long, however, before he began to cultivate food, even in the simplest way, he began to cook it. The discovery

Mechanics presented by the Theory of Economy proposed by him, significantly says: "But I believe that Dynamical branches of the science of Economy may remain to be developed, on the consideration of which I have not at all entered." Elsewhere Prof. Jevons says: "We, first of all, need a theory of the Consumption of Wealth."

of fire and its application to the preparation of food, is made by some writers upon primitive society to mark the boundary between the purely savage and the barbarous condition.

Man is the only animal that has attained the capability of preparing food for consumption. All other species are content with the animal or vegetable material. Man, even in the lowest of existent communities, demands for his subsistence something more than the raw material. It must be prepared or manufactured for his uses, though this may be by very rude and simple processes.

384. Clothing and Shelter.—At what stage in the evolution of the human kind, clothing and shelter, other than that furnished by the casual cave or by the foliage of the forest, became a requirement of the theretofore naked man, exposed unsheltered to the storm, we need not inquire. At moderate elevations throughout the zone in which the human race originated, that requirement has never been onerous. The amount of effort there involved in providing the bamboo hut, the wigwam of poles and boughs, or the tent of skins, for protection against the rainy season, and in preparing the scanty garment of pelts or of cloth, demanded by comfort or by the awakened sense of decency, has never been great. Food still remains, in those regions, the one great requirement of human existence.

When, however, mankind spread over higher altitudes or zones further removed from the equator, as tribes were driven up the mountain sides by victorious enemies, or were crowded toward the arctic or antarctic circles by the increasing scarcity of the casual food of the chase, of the fishery, or of the natural forest, the requirement of clothing, of shelter, and last of all, of fuel, came to be of increasing urgency and severity. Within certain limits, however, clothing, shelter and fuel are, in the higher latitudes, interchangeable with food, in the human economy. One of the prime purposes of food being there the maintenance of the warmth of the body, that occasion may, in part, be served indifferently by a certain amount of food, or by clothing of a certain thickness applied to the frame, or by the combustion of a certain amount of fuel

within an inclosure, or of a larger amount of fuel in the open air.

And here, as on the ten thousand occasions of a higher civilization, it is found that the greatest economy resides in the largest capitalization of labor. A dress of skins, which may have cost the effort of a week, will, during the time it lasts, more than replace, for purposes of warmth, food which would have required the efforts of many months. A hut which may have been a season in building, may save more in the food required for health and comfort, during the lifetime of the builder, than could have been obtained by the hunting or the fishing of years.

385. Now let us suppose that, within some geographical division, the conditions of production are such that each adult male is able by steady labor to secure for himself considerably more, in the way of food, clothing, shelter and fuel, than is required for his own subsistence in health and strength to labor and in physical comfort, meaning, by this last, not much, only a freedom from pain and discomfort. It does not matter, whether the laboring population under consideration obtain the means of subsistence, as hunters, as fishermen, as herdsmen, or as agriculturists. The question we have to ask is, what will these laborers do with the wealth they produce, after the strict needs of subsistence are met; how will they consume it?

386. The Wife.—In the first instance, it may be assumed that each laborer will undertake the support of one adult female, and this, not out of charity, or compassion, not by the force of any legal arrangement, not with any reference to the continuance of the tribe, but in obedience to a natural instinct second only, in the demand it makes upon men, to the craving for food. The latter satisfied, the former asserts itself, irrepressibly, among all classes and conditions of men, in all states of human society.

The woman with whose subsistence the laborer's income or annual production of wealth thus becomes charged, will, in greater or less degree, add to the means of the family thus formed. She will spin and weave, fashioning the fibrous

materials which the man has gathered, into garments, blankets, and nets. She will, in various ways, prepare the flesh, the fish, or the vegetable food, which the head of the family supplies, rendering it more palatable, more nutritious, more wholesome, or less perishable, according to the nature of the subject matter. She will bring water from the spring or brook. She will keep the hut or tent in a certain order and decency.

While, thus, the female, in an early stage of industrial society, adds something to the family means, both by what she makes and by what she saves from waste, we may assume that, speaking broadly, she does not produce as much as she consumes. The margin of subsistence which the hunter, the fisherman, the herdsman, the tiller of the soil enjoys, is smaller after he has taken a wife than before. Nor is the contribution made by the wife to the joint revenue of the family in any degree a determining cause of the formation of the family.

We have, thus, the two earliest forms of the consumption of wealth, first, in the sustentation of the individual laborer, and secondly, in the maintenance of the wife. Let us suppose, for the further purposes of this discussion, that the production by the head of the family, increased by the wife's contribution, amounts to three and a half times what is necessary to support one adult person in health and strength to labor, and in physical comfort, according to the definition of that term already given. We have, then, to be deducted from this amount the subsistence of both husband and wife.

387. The Child.—Now, we have to note the third great form of consumption, in the order of nature. The association of husband and wife is followed, in the vast majority of cases, by offspring. Races that are comparatively infertile, for what reason physiology can not say with confidence, are known to history, and some such are to-day in occupation of portions of the earth's surface; while, among prolific races, are here and there found individuals who are sterile, from causes which physiology is equally unprepared to explain. The proportion of these exceptional cases among laboring populations is very

small. We may, therefore, disregard them in our argument.

The appearance of the child makes a new and imperative demand upon the revenue of the family. In the immediate instance, it diminishes the ability of the mother to render her accustomed services in the household and reduces her contribution to the joint income. Then and afterwards, for a long time, it causes a steady draft upon the resources of the father in the way of food and clothing.

The demand thus made upon the family income is, within the limits of the father's ability, met, in general, fully and even cheerfully. It is not in obedience to the requirements of law, or because of any patriotic desire to make good the numbers of the community, or contribute to the strength of the state, or, on the other hand, from the consideration that these babes may, after the lapse of years, themselves become producers, and possibly, in time, become his support in his old age, that the father unquestioningly gives up to his children that margin of subsistence, which, as a married man without children, he might have enjoyed. It is in obedience to a purely individual feeling, of an instinctive character, so generally planted in the human mind that, in spite of instances of parental neglect or cruelty, we may speak of it as universal.

Here we have the third form in which wealth is consumed. It will be remembered that, thus far, we have supposed nothing to be done with the wealth produced in the primitive community which has for its object display, luxury, or even the gratification of appetite beyond the actual requirements of subsistence. That wealth is applied to the support, first of the productive laborer, secondly, of the wife, taken in obedience to a natural craving which may be termed a universal instinct of mankind, and, thirdly, of the children springing from that union.

388. Children in Excess.—Let us suppose that, with three children, of various ages, the subsistence which can be provided by the head of the family is fully taken up. These five persons, male and female, old and young, consume all that can be produced, which we have assumed to be equal to the sustentation

of three and a half adults. If, now, other children are to appear to claim a support at the hands of the husband and father, what will be the result? Clearly, a reduction in the standard of living. There will no longer be food, clothing, shelter and fuel adequate to maintain each and every member in health and strength, and without pain or discomfort resulting from deprivation of things needful. The new-comers will, indeed, under the impulse of the parental instinct, be admitted to an equal participation in the family income; but the share of each member of the family will be diminished. The pinch may come earliest and most severely at one point rather than another; food may be denied, or fuel, or clothing, or shelter, according to circumstances; but, in one way or another, something less than what is necessary to maintain the members of the family in health and strength and comfort, is supplied. Of this the effects may be grouped in three forms: first, the reduction of vital force and labor power; secondly, the diminution, perhaps the disappearance, of the subsistence fund heretofore laid up against the occurrence of bad seasons or the disability of the head of the family through accident or sickness, thirdly, the generation of infirmities and diseases of a transmissible character.

389. The Effort of Nature to Restore Equilibrium.—Now let us, further, suppose this increase in the number of children beyond the limits of subsistence to have taken place uniformly throughout the tribe, but to have taken place once for all, not from a persistent but from a purely transient cause: will there be any effort of nature to restore the condition of general health, strength and comfort, which has been for the time lost?

It is, indeed, true that nature will make an effort, first, through disease, which will have a greater destructive power upon an ill-sustained than upon a well-sustained community, especially in the case of children and of the aged; secondly, through an impairment of the reproductive power of the adult; and, thirdly, through famine breaking upon a population whose store laid up against drought or flood or fire or the ravages of insects, has been, once for all, eaten up. But this effort of

nature will be unequal to the work to be done. The history of a thousand tribes shows that there is not sufficient force in famine or disease to prevent the permanent reduction of a community, through excess of numbers, from a condition of physical well-being to one of inadequate subsistence with consequent impairment of vital force and labor power.

390. Solidarity of the Family.—Of late years, with the growing interest in biological investigation, there has been manifested a disposition, in certain quarters, to glorify privation and famine, as agents in the uplifting of the human condition, the doctrine of the "survival of the fittest" being applied to societies of men without due consideration of a most important difference existing between men and other species of animals.

It is the solidarity of the family which prevents the law of the survival of the fittest from exerting that power in raising the standard of size and strength and functional vigor among men, which it exerts throughout the vegetable and the animal kingdoms, generally. In the vegetable kingdom I suppose there are no traces of this solidarity of parent and offspring, although not being a botanist I can not speak with assurance. In the animal kingdom, exclusive of man, the solidarity of the family exists, indeed, but to a limited extent only, and for a brief period. The mother protects and nourishes her offspring most sedulously and devotedly; drains her life-blood for its support, and will die in its defense; but, in general, when the offspring is weaned the connection is broken. The lives become separated. The young must thereafter be their own providers and protectors. Mother and child become competitors for food in the same field or forest; may even tear and kill one another in the struggle for existence. Thus the principle of survival obtains leave to operate. If the conditions of existence become hard, if subsistence is inadequate, the weak, the deformed, the sick, are run over, trampled on, killed out, while the fittest survive, acquire all the nourishment which is to be had, grow continually larger and stronger, breed only among themselves, and thus the standard of size and strength rises from generation to generation.

With man, however, the conditions of the struggle for existence are greatly changed. Generally speaking, that struggle is between families as units, not between individuals. Within the family, the young and old, the weak and the strong, male and female, are bound together by natural instincts, which are too strong for pain, for hunger, for death itself. If want or famine pinch, all suffer together. So far as any preference is given, it is to the younger and the weaker. The parent denies himself that the cries of the child may be hushed. If one member of the family fall sick, instead of being neglected, or even trampled on, as among the lower orders of animals, he commands the tenderest care of all. This, clearly, is not a condition under which the principle of "the survival of the fittest," however fierce may be "the struggle for existence," can operate among men, to raise the standard of size and strength and functional vigor. Instead of the natural elimination of the weakest and the worst, it is here the best who, from sexual or parental love, bare their breasts to receive the blows of fortune.

391. The Capabilities of the Procreative Force.—We have thus far inquired respecting the effects of an increase of the number of children in any community beyond the limits of subsistence, assuming for the moment the increase to be due to purely transient and adventitious causes. How is it as to the degree of activity and persistence in the procreative force, in the presence of a threatened reduction in the standard of living below the point of health, strength and freedom from discomfort?

But, first, of the reproductive capability of mankind. It is evident that the mere fact of children being born to parents does not, of itself, insure or threaten any increase of numbers from generation to generation. With the limits set to human life, reproduction in a certain degree may be only sufficient to make good the loss by death. It may be even less than is necessary to this end. Hence we must inquire what is the normal relation between births and deaths.

In his celebrated treatise on "Population," Mr. Malthus assumed a birth rate sufficient to yield, in spite of occasional

celibacy and exceptional sterility, in excess of four children to a family. There is reason to believe that in any colony of European blood, planted on new land, of reasonably salubrious quality, within the temperate zone, this rate of increase would be reached, and, in the majority of cases, exceeded. That rate of reproduction alone, however, would be sufficient to secure an appreciable increase of each generation over the one preceding, were the facts of infant and of adult mortality but moderately favorable to the growth of population.

392. Geometrical Progression.—Now, if we may assume for the members of successive generations an undiminished degree of fecundity, we have here all the conditions of a geometrical progression. And the possibilities of geometrical progression, when persisted in for a long time, become simply tremendous, whether in population, in wealth, or in any other direction.

What is the characteristic of geometrical, as contrasted with arithmetical, increase? It is that, in the former case, *the increase itself increases:* the fecundity of the original stock is transmitted through all that is successively derived from it. Thus, to take a series of ten terms, we might have

Arithmetical: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20.

Geometrical: 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024.

Here, in the arithmetical series, the difference between the ninth and tenth terms is the same as that between the first and second, *viz.*, 2. In the geometrical series, the difference between the first and second terms is, also, 2; while, between the ninth and the tenth, it is 512. It would require more than five hundred terms to carry the arithmetical series to the point which, in the geometrical series, is reached in ten terms. It would require more than a million terms to carry the former series to the point reached by the latter in twenty-one terms; a thousand million terms to carry the former series to the point reached by the latter in thirty-one terms.

These tremendous leaps in the geometrical series, are due to the fact that the increase between the first and second terms becomes itself the cause of a proportional increase between the second and third terms; which increase, in turn, becomes the

cause of corresponding increase between the third and fourth, and so on to the end. Whereas, of the arithmetical series we may say that the entire increase comes out of the original stock, which continues to propagate at a constant rate, while all the successive increments so produced remain barren.

393. Population Increases by Geometrical Progression.—Now it is according to the former and not the latter law, that population increases; and as we said, the consequences of a persistence in a geometrical ratio, through a considerable period of time, are simply tremendous. "The elephant," says Mr. Darwin, "is reckoned the slowest breeder of all known animals, and I have taken some pains to estimate its probable minimum rate of natural increase. It will be safest to assume that it begins breeding when thirty years old, and goes on breeding till ninety years, bringing forth six young in the interval, and surviving till one hundred years old; if this be so, after a period of from seven hundred and forty to seven hundred and fifty years, there would be alive *nearly nineteen million elephants descended from the first pair!*"

Man, though a slow breeder, as compared with many of the lower animals, has a rate of reproduction far exceeding that of the elephant. Population has shown the capability, over a vast extent of territory, on more than one continent and through considerable periods of time, of doubling once in twenty-five years. With this capability we may say that, if "neither evil, nor the fear of evil" checked the population of the United States, it would, in a century and a-half, amount to three thousand two hundred millions. Of course this consummation could never be reached. Such a population would be impossible under the conditions of human existence.

394. The Persistence of the Procreative Force.—Such being the capabilities of the procreative force, when operating unrestrained, let us inquire what virtue there is in the fear of a reduction of the standard of living below the point of health and physical comfort, to check population at that line.

It is commonly assumed, in discussions relating to wages, that the laboring class will more and more withhold their increase as the conditions of life become harder and harder; and

that any economic injuries which they may suffer, from whatever cause, will, in the order of nature, be in this way repaired. Instead of it being true, however, that the laboring class tend thus to resist and resent any lowering of the standard of subsistence, the fact is that never is the procreative force more active than when the conditions of life become meager and squalid; when the reserve of the summer against the winter, of the good year against the bad, is swept away by the clamorous necessities of to-day; when alike enjoyment of the present and hope for the future are at their lowest point. Never had the marrying age been earlier, or christenings more frequent in Ireland than when, just upon the verge of the great famine, Earl Devon's Commission, in 1844, thus described the condition of the peasantry: "In many districts, their daily food is the potato; their only beverage, water; their cabins are seldom a protection against the weather; a bed or a blanket is a rare luxury; and, in nearly all, their pig and manure heap constitute their only property."

The state of the population of India and China affords a conclusive proof that there is not sufficient virtue in economic forces to keep population above the plane of extreme misery, if once it falls below the plane of comfort and decency. On the contrary, a moral weakness or recklessness is induced which tends strongly and swiftly to carry population to the point of industrial distress. Then, indeed, famine makes its appearance, as periodically in India, to set bounds to increase of numbers; but, for the reasons that have been stated, this force does not operate, as in the animal kingdom exclusive of man, to cut off only the least active, aggressive, intelligent, or self-reliant. The effect of famine, and of the diseases generated by famine, operating upon population across the barrier imposed by the solidarity of the family, is to lower the physical tone, to taint the blood, and weaken the will-power of the entire body, making it increasingly difficult, from generation to generation, to restore the lost conditions of economic well-being.

CHAPTER II.

THE APPEARANCE OF NEW ECONOMIC WANTS.

395. An Ascending Scale of Personal Consumption.—We have thus far dwelt on the effects of an increase of numbers beyond the limits of subsistence, as the latter are determined by the law of diminishing returns in agriculture. We have seen, that since the procreative force increases rather than diminishes in the face of poverty and squalor, there is no natural resting-place for population, if once it passes below the plane of ample subsistence, until it reaches the point where it meets the "positive checks" of famine and disease and, it may be added, of war.* This principle of population, to which we give the name, Malthusianism, was first clearly enunciated and fully illustrated by Mr. Malthus, in the last year of the last century, although intimated in the writings of earlier economists, especially of the Italian Ortes.

Let us now consider the relations of subsistence and population, on an ascending scale of personal consumption. We have seen that population will go on increasing as fast and as far as food is provided to support it, all increase of wealth surely taking the form of an increase of numbers, unless other and more imperative demands are made upon the income of the family. But let us suppose that, at the point where a competent subsistence is provided to maintain the whole population in health and strength to labor, and in freedom from all discomfort resulting from privation of things absolutely necessary, the want of something beyond this comes to be strongly felt by the individual members of the community.†

---

* "It is impossible," says Senior, "that a positive check so goading and remorseless as famine, should prevail without bringing in her train all the others. Pestilence is her uniform companion, and murder and war are her followers."

† "The much greater number and the longer continuance of his wants," says Prof. Roscher, "are amongst the most striking differences between man and the brute. While the lower animals have no wants but neces-