

THE DESIRE FOR LAND

1. **"Land" as an Economic Term.**—Of all material objects possessing desirability and owned by human beings, the most important is land: first, because it is absolutely limited in quantity and therefore may become the object of indefinite conflicts of interest; second, because land is the source of all other forms of wealth.

In the economic sense, "land" includes not only the soil itself, but all other divisions of the earth's crust: rivers, lakes, rocks, forests and even the oceans. In other words, it includes all the original material substances that make up the world. In a certain sense land also includes elements of temperature, sunlight and the like which, while not part of the earth's crust, are associated with each section of land and help to give it value. Similarly, the air, which is material and is a true part of the earth, is included in land, altho any given body of air is continually passing over different portions of the earth's surface. So defined, it is easy to see that land is in truth the source of all wealth, as every material object originally came from it.

2. **Creating Forms of Wealth from Land.**—Many of our most valuable articles of wealth have been elaborated by man's efforts and so have acquired great additional value. As various different natural substances may be combined by man's art into new forms of usefulness, it would be incorrect, therefore, to say that the value of all wealth comes from the land. The true statement is that

without the land there can be no single item of wealth. An illustration is furnished in the case of iron, which exists in many sections of the earth's crust, sometimes combined with other substances and sometimes in an almost pure state. This native iron is called "iron ore," and land which contains it has value accordingly. But as iron ore itself cannot gratify human desire directly, it does not have a large value. Such value as it has depends upon the belief that it can be worked over into forms of wealth which will satisfy human desires directly.

By subjecting the iron ore to certain processes, the iron may be extracted in a commercially pure form and moulded into blocks of uniform size. This is what we call "pig iron," which has a greater value per pound than the iron ore, because it is one stage nearer to satisfying human desire. It is sometimes stated that the pig iron has greater value than the iron ore because of the effort which has been expended upon it. A more correct statement is that effort is expended on iron ore because of the belief that the resulting pig iron will have the greater value. It is important to get this idea clear at the beginning, because confusion in this respect underlies a great many fallacious economic arguments.

By the application of further effort, this pig iron may be transformed into hammers, which will directly satisfy human desires, and for that reason have value. By still greater effort and the addition of other materials it may be transformed into steel knife blades, which also satisfy human desires; and it is readily seen that a pound of knife blades will contain more desirability than a pound of hammers. Or finally the pound of pig iron may be made into hair-springs for fine watches, and in that form be worth vastly more than either a pound of knife blades

or a pound of hammers. In each case the amount of effort expended upon the material will be determined by the anticipated value of the product.

It might happen that after a pound of knife blades had been made, the demand for that particular kind suddenly ceased, in which case they would become valueless. Thus it is not correct to say that the effort expended to create wealth gives it value, since it is this anticipated value of wealth which leads people to expend effort to secure it. But however much effort may be expended to create these elaborate forms of wealth, none of them would be possible were it not for the original mass of iron ore.

As the amount of land available for man's use is strictly limited, not only all the wealth that we now possess, but all that future generations may possess, is and must be derived from the material substances included in the earth's composition from the beginning.

3. Creation of Secondary Wealth.—In an earlier paragraph was described the collection stage of civilization, where the limitations of land are evident and keenly felt by each individual in the course of every day's routine. There is practically no wealth, the only objects of utility being those which nature furnishes, which are consumed as soon as appropriated, so that the period of ownership or property is only momentary. Men and women wander over the face of nature, satisfying their wants directly with what nature provides.

Little by little men learned to improve the materials of nature and make them better serve their purposes. They began to get away from purely primary wealth and to develop secondary wealth. Some of the earliest forms of this secondary wealth were rude stone ham-

mers, prepared skins of animals, flint scrapers and other simple tools and weapons. Elementary property rights and permanent forms of wealth developed with the production of these articles. An interesting side-light, showing the importance of belief in the creation of value, is that among the earliest forms of wealth were amulets or charms, believed to secure for the possessor certain favorable regard or action on the part of unseen spirits. Objects with this purely imaginary utility had an importance in primitive society hardly less than that of the really useful tools and weapons. Slowly also men learned to make simple clothing and shelters for themselves, and thus other forms of the most essential secondary wealth were created.

4. The Hunting Stage.—The improvement of these simple weapons and the addition of new devices constituted man's next great step in the utilization of wealth and his consequent liberation from the limitation of land. The new appliances included the bow and arrow, lances or javelins, traps, snares and pitfalls. By means of these, men were able to kill or capture much larger and more active animals than previously. This added to their food supply and enabled a larger number of persons to live in a given area. So great a change did this make in human civilization that the period is given a distinct name—the "hunting stage."

The lot of man in this stage was much more favorable than before. Great improvements in his living conditions were possible. From the skins of animals, clothing, tent coverings and various other articles of wealth could be constructed. When a large animal was killed, the hunter and his family probably held a gluttonous feast which might require days to recover from, but at

least hunger was satisfied for the time being. Gradually, too, men learned to make and use fire, which not only enabled them to secure the greater nourishment of cooked meat but also advanced their civilization in various other ways. The discovery of fire is perhaps the greatest single event in the whole history of human civilization.

Another advantage which men reaped from the development of hunting was the gradual realization that they could secure better results by joining forces and working together than were possible if each hunted independently. By organizing the hunt, animals could be prevented from escaping, and enough secured so that each might have more than he could have taken alone. This is probably the earliest type of economic cooperation and the germ of all our highly developed industrial systems. It is also one of the very earliest forms of recognition of community interest and consequent adoption of community action. The primitive family and the primitive organized hunt form the foundation of our whole social structure.

5. Domestication of Animals.—The next great step in human advancement rested upon the domestication of animals. By experiences which we can only imagine, men gradually learned that ultimately they could add to their food supply if, instead of instantly killing and eating an animal which they had captured, they placed it with others of its kind and allowed it to breed. It is not unlikely that the first animal to be domesticated was the dog, and Jack London's stirring story, *Before Adam*, gives a realistic picture of the struggle between the alternatives of keeping the animal or using it at once to satisfy hunger. Also a very interesting question of

property rights is involved. In the case of the dog, it is significant that the desire for its companionship and probably for its aid in the hunt were motives in its domestication, no less than the desire for food.

From the point of view, however, of securing freedom from the limitations of nature, the most important animals were the sheep, goat, cow, camel, etc. We can hardly conceive of the long and difficult struggle that took place before man by foresight and self-control gradually mastered the power of immediate desire. We can picture a little group of men capturing a small number of wild goats, inclosing them in a pen and looking forward to their natural increase. Week after week and month after month they control their desire to slaughter these animals for food. Then comes a time when the hunt is unsuccessful, or when some natural supply of fruits or fish fails, and the pangs of hunger assert themselves. Little by little the power of self-control weakens, and first one and then another of the little herd is slaughtered, until finally the last one is gone and the whole laborious process has to be repeated. By such steps, undoubtedly, was the virtue of economic self-control, or thrift, built up and the foundations of real wealth-accumulation laid.

6. The Pastoral Stage.—At some point in the process of domesticating animals, men learned that certain of them were useful not only for the meat which their bodies furnished, but also for the milk which they provided and which could be drawn off and used for human nourishment. This meant an increase of the available food supply, and that a given animal could remain useful for many years, instead of having to be killed as soon as it reached full maturity, unless it were kept at great

expense for breeding purposes. With this discovery it was possible to multiply flocks and herds and to build up stores of permanent wealth. Furthermore, the hair of these animals was found to be suited to many human needs, and their skins, when eventually they were killed, furnished a supply of materials for other uses.

This type of civilization is called the "pastoral stage," and represents another substantial advance in human comfort and well-being. Thru these discoveries many more people could live on a given area and on a higher level of comfort. It is worth repeating that this advance was made possible not only by increased knowledge, but by the development of the ability to save, which is the power to preserve wealth in order that it may produce more wealth, instead of consuming it to satisfy immediate desire.

Most of the animals best adapted for domestication—those whose flesh or milk are suitable foods—are such as feed upon grass or similar vegetation. The grains which we now use to feed them are simply developed grasses. The maintenance of large flocks and herds, therefore, requires the use of great areas of grass land. As the herds quickly consume the food available at one time in a given region, societies living in the pastoral stage must be continually on the move. So universally does this characteristic appear, that the pastoral stage is often described as the "nomadic stage." Under such conditions all the institutions and devices of a society are designed to facilitate frequent movements. Dwellings consist of tents or other portable structures, and there are no heavy nor bulky objects of wealth. The use of horses is developed to aid in movement. Groups of men living in this stage of culture are still to be found in some sections of the

earth's surface. The patriarchal form of family and of the state harmonizes well with the pastoral form of economic organization, and the two are generally found associated.

Altho men living in the pastoral stage are less closely bound by the limitations of land than those in either the hunting or the collection stage, there is still a very definite connection between the number of people who can live in a given area and the natural products of that area, since the flocks and herds live upon the natural vegetation, and the human beings live upon the products of the flocks and herds. Such societies have little vegetable food and the population is limited by the resources provided by nature.

7. The Agricultural Stage.—The next distinct advance in civilization resulted from man's discovery that by careful effort he could increase the useful vegetation above the amount which nature provided. This was accomplished in two ways: the first, by substituting useful plants for those which were not useful, or which men did not know how to use, as by cutting off or burning timber land and planting grain; the second, by improving the usefulness of the valuable plants themselves. Our grains are developed out of natural grasses; the seed grown on a given bit of land may be increased hundreds-fold in quantity, and improved in nutritive quality. The same is true of fruits and other vegetable foods.

At first, this process of plant improvement was extremely slow. We have become so accustomed to the advantages of highly cultivated plants, and to the services of such plant experts as Burbank, that we accept without surprise the development in a few years,

of a new type of grain like "durum" wheat or a new fruit like the loganberry. It would be impossible to estimate how many centuries it took the first farmers to improve a food plant—a process nowadays accomplished in half-a-dozen years. We profit both by the tangible improvements themselves and the increase in knowledge and intelligence which the long stretch of human effort has won.

The pioneers in what we call the "agricultural" stage had no experience to build on, hence the increase in plant food was due not so much to the improvement of useful plants as to the substitution of useful plants for useless ones. This made possible a very great increase in the food supply, and introduced economies in the use of natural resources which are still an essential part of our modern economic organization.

8. The Industrial Stage.—All the changes so far described have been improvements in primary production, that is, methods of increasing the amount of materials secured from the land and directly serviceable for man's need. Parallel with this line of development was another, which contributed immeasurably to man's comfort and happiness and also helped to increase the number of people who could live upon a given area of land. This was the invention and construction of various appliances and devices to aid men in getting and preparing wealth from the land to serve their immediate desires.

The stone hammer, the flint scraper and various weapons and tools in their earliest forms were material objects so constructed as to augment man's physical strength and capacity, particularly in the use of the hands. To these appliances we give the name of "tools," if they are to be used in creating wealth, and

"weapons," if they are designed to slay men or animals, or to afford self-protection. The distinction is rather arbitrary. A weapon is really a specialized tool and some of these earliest devices were undoubtedly used both as tools and weapons.

The possession of even the simplest weapon gives a man a great advantage over one who has none, and the use of the simplest tool will greatly increase nature's yield of wealth. In combat, a man armed only with his fists is no match for one equipped with a stout club or pointed stone. If the pointed stone is attached to the end of the club like a rude hammer or hatchet, the issue of the fight is practically determined in advance. Similarly, a man who has the use of a simple implement, even if it be nothing more than a pointed stick, can get a better agricultural return from the soil than if he is dependent upon his hands alone.

So great has been the importance of tools in developing human civilization, and in the escape from an almost purely animal existence, that man is frequently defined as the "tool-using" or "tool-making animal." The ingenuity of primitive man in making and using efficient tools invariably arouses the admiration of civilized travelers, but tools alone never could have enabled man to reach his present point of mastery over nature. By another inconceivably slow series of steps men learned to devise more complicated appliances, by which operations could be carried on much more rapidly and perfectly than with tools, and by which many new operations could be performed which were quite impossible with tools alone. These new devices are what we call in general "machines," and their widespread use introduced what is known as the "industrial" stage of

human evolution. We are now living in the midst of this stage.

9. Gradual Development of Human Society.—The lines of difference between these various stages were not sharply defined, and the actual transition in each case covered long periods of time. The process of change was so slow that it was probably unperceived by individuals at any one period. There never was a man in primitive society who could say, for example, "When I was a boy my group lived in the collection stage, while now we are living in the hunting stage," or, "My grandfather tells me that he remembers the beginning of the pastoral stage in which we are now living." We designate types of society by names only when a given type of product becomes dominant or characteristic, and no contemporary producer would be able to fix that point.

Progress from one stage to another does not involve abandonment of the useful methods of earlier stages, but introduces an improvement so great that it outweighs the others in importance. While men were living in the hunting stage, they would not by any means abandon the collection of useful things that were already in nature. We, living in the most advanced stage, still retain some features of all the preceding ones. We still go berrying and nutting, to our great pleasure even tho it be to small profit; we still hunt and fish. Stock breeding and agriculture are still two of our basic industries. Thus the progress thru these successive stages is represented by a process of addition, or perhaps more accurately of multiplication, since improvements in any one department of production are very likely to increase efficiency in others.

Practically all human societies pass thru these five

stages on their upward path. We can find among living groups of men representatives of every type of society except the very lowest. The most highly civilized societies have reached the highest point on the ladder of economic achievement as far as it has yet been built. No one can predict how many or what rungs may be added in the future. The American Indians are one of the few large branches of the human family which seem to have skipped one of these important stages, the pastoral stage, and to have been living at the time of their discovery in a combination of the hunting and agricultural stages.

When a group of men of the most highly civilized order attempts to develop a new and isolated piece of land, they almost inevitably pass thru these same stages except the very earliest; but they take the steps rapidly, and at each stage have the advantage of certain features of the higher stages, which they bring with them. Thus in the United States we have gone thru the early experiences of hunting, trapping and fishing as the basic economic activities; then of stock raising and agriculture; while for the past half century we have been swinging into the industrial type of society.

10. Increasing the "Man-Land Ratio".—Every successive improvement in man's mastery of nature has made possible a great increase in the number of people who could live on a given area of land. It is true that the population not only of given districts but of the world as a whole has increased continuously from the dawn of human existence, and as a whole, this increase has gone on at an accelerating rate. Such a condition is made possible not by any increase in the useful substances existing in nature, but by the better utilization of these

substances and their transformation and combination to serve human desires. The effects of invention and improvement are cumulative, and each new improvement not only adds its own quota, but increases the utility of what has gone before and extends the equipment for creating the improvements which are to come. Thus human civilization progresses at an ever more rapid pace.

The proportion between the population of a society and the territory which it occupies is called the "man-land ratio," and is usually expressed in terms of persons per square mile. At the time of the census of 1920 the density of population of the United States was 33.9 per square mile, that in all Europe in 1910 was 120, altho in some small European countries it was 600 or more. If each society depended exclusively upon its own territory, the density of population would in general represent the degree of mastery of each society over its natural resources. Thus, if on two equally productive areas, one society had a density of two hundred, and another of four hundred, it would indicate that the second society was approximately twice as efficient as the first in getting wealth from nature. This is not the case in actual life, as no civilized society is dependent entirely upon its own territory, but draws from the whole world. We really have an international division of labor, by which certain societies carry on work requiring a sparse population, while others are responsible for activities consistent with a dense population.

11. The Standard of Living.—There is also another reservation which must be made in the assumption that the man-land ratio indicates the degree of mastery over nature. It might be that the second society, altho it had twice as large a population as the first, was living on a

much lower scale of comfort. It might even be true that it was actually producing no more wealth than the other, and that the members of the first society enjoyed twice as much wealth *per capita* as those of the second.

An improvement in economic methods may make possible either one of two things: a larger number of people, or a larger amount of wealth per person. The economic efficiency of a society is to be judged not by the man-land ratio alone, but by another factor which we call the "standard of living," which may be defined as the average amount of necessities, comforts and luxuries of life enjoyed by the families of a given society. This is one of the most important and significant concepts in the whole field of social science.

A group of persons which has a high mastery over nature, may be able to establish a very high standard of living for its families, provided it has control of a piece of land abundant in natural resources. But since there is a limit to what even the richest land can yield under even the most intelligent cultivation, it follows that such a society cannot provide a high standard of living for an unlimited number of families. To a certain extent increasing the amount of human energy available will correspondingly increase the total amount of wealth, but from the very fact that the resources of the land are limited, this increase cannot go on indefinitely. There will come a time when further increases of population will not produce a proportionate increase in the total amount of wealth, so that there will be necessarily less wealth *per capita* or per family. Hence, beyond a certain point there is opposition between the growth of population and the standard of living. Just where this point lies in any society depends upon the character of its land and its mastery of economic processes or, as we

sometimes say, "its stage of the arts," meaning the industrial arts or arts of production. It is not easy in the case of any given society to determine just where this point is, because of the many factors involved.

12. Underpopulation and Overpopulation.—If a small group of men with advanced knowledge of the industrial arts is in possession of a large area of good land, an increase of population will be a positive advantage, because advanced methods of production require a high degree of specialization and can be carried on only where a population is relatively dense. In such a case increase of population will bring an increase not only in total wealth but in *per capita* wealth; that is, both population and the standard of living may advance together. If at the same time the society is improving its knowledge of the arts, these advances may continue for some time. It is evident that a society with a high stage of the arts can maintain both a larger population and a higher standard of living on a given piece of land than a society with a low stage of the arts; but even at the highest stage, population cannot continue to increase forever without infringing upon the standard of living. The point at which this change will take place is the dividing line between "underpopulation" and "overpopulation." A society is underpopulated when it has not enough people to establish a maximum standard of living in consideration of its stage of the arts, and is overpopulated when it has too many people to maintain its maximum standard of living on its existing stage of the arts.

Here again it is often difficult but not always impossible to tell whether a given society is overpopulated or underpopulated. There is no question that India and

China are overpopulated, while Australia is probably underpopulated. There is a great difference of opinion as to whether the point of overpopulation has been reached in the United States. Our standard of living is so extraordinarily high that it is difficult to believe it is not the maximum at our present stage of the arts. Moreover our stage of the arts is advancing so rapidly and steadily that it is equally difficult to believe it will not keep pace with any possible increase of population. There are, however, also some arguments for the opposite view.

When a society finds it is overpopulated, the first and most natural remedy is to draw off some of its surplus population and send them to the underpopulated sections of the earth's surface. The attempt to apply this remedy has gone on since the very beginning of human life, and has accounted for the spread of the human species over the surface of the globe and the progressive appropriation of all its habitable areas. The desire to avoid or to escape overpopulation is the one great underlying motive of all population movements over the earth's crust. The story of these, could it be written, would be more dramatic and thrilling than any fiction. The most extensive and significant portions of it are lost in the mist of man's earliest existence. Also within more recent periods, great population movements have taken place and have furnished the occasion for many of the greatest occurrences of history.

13. Changes in Land Affecting Population.—Since overpopulation is a matter not only of population and the stage of the arts but primarily of land itself, it follows that any change in the land may affect the conditions of underpopulation and overpopulation. In

particular, a state of overpopulation may be induced by unfavorable changes in the land itself. This apparently has been the case in many important instances. When the resources of any area of land are of the type which, once withdrawn, are gone forever, such an area may quickly be exhausted and become incapable of supporting a large population, or even any at all. This is particularly true of the mining areas where certain substances exist in a limited quantity and are taken out once and for all. So important has been this influence on human development that one eminent historian has based his whole system of human history on the discovery, exploitation and exhaustion of natural supplies of metals. The same may be true, tho usually in a lesser degree, of hunting or fishing areas and even of agricultural districts. It is possible to exhaust the richest soil unless certain elements are artificially replaced.

There is another type of unfavorable change which may have far-reaching effects. Land is productive not only on account of what exists in the soil, but also because of the conditions of temperature, rainfall and sunlight to which the soil is exposed. A state of overpopulation may be induced by an unfavorable change in one or more of these conditions, which actually has happened in many cases. There is much evidence that many of the most important movements of history have been influenced by great climatic changes. We are told that for a long period of years the world has been gradually drying up, that is, that the rainfall has been continuously diminishing. This has not been a steady movement but has fluctuated over great periods of time so regular as to be called "climatic cycles." This progressive drying up has been beneficial to some regions and injurious to others, and sometimes beneficial and then injurious to

the same area. If a given region has been so cloudy and damp as to be unfavorable for human habitation, the drying process will enable its population to increase or groups of people to move into it. On the other hand, if it has been particularly favorable for human habitation and is accordingly well populated, the process of drying up will drive some of its people away. There is undoubtedly a close connection between these climatic cycles and the great population movements of the past as, for instance, the successive invasions of Mongoloid hordes out of Asia into Europe.

REVIEW.

Define land in its economic sense.

Enumerate and describe the five stages of civilization.

What is meant by the "man-land ratio"?

How is the economic efficiency of any society determined?

When is a society underpopulated? Overpopulated?
