Evolution Series, No. 22 January 15, 1892

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THE LAND PROBLEM

BY

PROF. OTIS T. MASON, PH. D.

Curator of the Department of Ethnology in the National Museum, Washington, D. C., President of the American Folk-Lore Society

NEW YORK
D. APPLETON AND COMPANY
1, 3, AND 5 BOND STREET
1892

Entered as second class matter at the New York, N. Y., Post Office, April 28, 1891

EVOLUTION IN SCIENCE, PHILOSOPHY, AND ART. A Series of Seventeen Lectures and Discussions before the Brooklyn Ethical Association. With 3 Portraits. 466 pages. 12mo. Cloth, $2.00. Separate Lectures, in pamphlet form, 10 cents each.

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COLLATERAL READINGS SUGGESTED:

Carey's Principles of Social Science, and Past, Present, and Future; Walker's Land and its Rent; Gunton's Wealth and Progress; Kinnear's Principles of Property in Land; Spencer's Justice; Tylor's Primitive Culture; Lubbock's Origin of Civilization; Maine's Early History of Institutions, and Village Communities; Seebohm's The English Village Community; Laveleye's Primitive Property; George's Progress and Poverty, and The Land Problem; Patten's Malthus and Ricardo; Wallace's Land Nationalization; Phillips's Land, Labor, and Law; Davis's *Why the Farmer is not Prosperous, When the Farmer will be Prosperous, Exhaustion of Arable Lands*, and *Probabilities of Agriculture*, in Forum, April, May, June, and November, 1890. Fustel de Coulanges's The Origin of Property in Land.

THE LAND PROBLEM.

By Prof. Otis T. Mason, Ph. D.

The land question is a problem involving at this stage of the world's progress many unknown quantities, to the solution or satisfaction of which the acutest minds have devoted their best thoughts. It was a very simple problem at the beginning of human history, as we shall see; but it will never be a very simple problem again. On the contrary, as the years go by it will become only the more complex. Upon many of its factors, you will agree, too much effort has been bestowed. To offer an original idea upon these is scarcely possible. Daily journals, periodicals, transactions of societies, blue-books, national records, reports of commissions and of bureaus, are the repositories of an illimitable literature upon the separate parts of the structure in its finished and highly complex condition.

In ordinary parlance, the land is that part of the earth's surface which Lord Byron has characterized mankind as marking with ruin. In all of our school-books we learned that the surface or skin of the earth is divided into land and water, giving the latter the lion's share.

But when men discuss the land question and seek to legislate about it, they accept no such boundaries for the term, but persistently give to it a wider inclusion and lay their maps and charts and deeds over the entire surface of the globe, its waters as well as its lands. They sink their shafts thousands of feet down into its strata, dredge the bottom of the seas, pierce the air with shafts and chimneys, discharging their grimy sewage into the very fountain of life, and by many selfish devices veil the face of the sun from millions of their fellow-creatures. We may therefore proceed to accept their practical interpretation of the term land, and ask what all these things have to say of the past, and what their plans may be for the future welfare or misery of humanity. If possible, we may withhold our gaze altogether from the present legal and political elements of the problem—the adult stage—and regard the testimony of the earth itself much in the spirit of the archæologist or the

palæontologist. Surely, if the earth has witnessed a great series of economic and industrial phenomena, it has some marks thereof left upon itself, and is now receiving some impressions therefrom. These we may study one by one with profit, just as our scientific friends, legislators, and business men draw their wisdom from the experiences of others and from the past.

In this inquiry, the land or the earth as modified by and modifying human life—its thoughts, its industries, its arts, its speech, its customs, its societies, its laws, its beliefs, its cults—includes the land surface down to the bottom of the deepest possible mine or artesian well; all the aqueous mass, that is, every drop of water in the seas and out of them, for there is no telling when any drop may enter the circle of human agencies and ownerships; the circumambient air, every gallon of that aërial ocean which swathes the world and vitalizes all living things, the common carrier of clouds and birds, of health and disease, of music and perfumes, of industry and commerce. As modifying and modified by human conduct, as subject of preëmption and monopoly, not only the masses just mentioned are included, but motions and powers, even gravity, mechanical properties, physical forces, chemical activities, vital phenomena of plants and animals, may all be covered by patents, and their uses become a matter of legislation. I had almost said men themselves and women, when I remember how like things and chattels they frequently are, and how their motions and thoughts are at the command of other fellow-beings.

These constitute the earth, the land of my definition, together with such sunlight and moonlight and starlight and cosmic forces as our race may subdue and preëmpt. Some of these things are still beyond our caveats and prescriptions; they are still untrammeled, and with these at this time we have naught to do. There is no patent on them; each human being has unlimited access thereto.

From one point of view, the earth appears to us as a reservoir, a store-house, a larder. Emerson tells us that "there is nothing great but the inexhaustible wealth of Nature." It is possible, however, in the examination of this store-house, to find out that many articles in the account of stock are extremely rare and high-priced. Many of them may be wasted irrecoverably, many of them are capable of recuperation, many of them are susceptible of irremediable contamination and deterioration. This subject is not a matter

for poets, but for business men. The race are the owners of the earth, which is all they have. It is their heritage. Each piece of property in the manifest has values, and these values are in their keeping. The thin layer of arable land is one of these.

You are well aware that in our day the land-battle is waged quite unequally over the things and forces that I have described. The contest is chiefly over what Mr. McGee has expressively characterized as the thin veneering of soil upon which so much human industry is expended. This is one item and a very valuable one, but not more so than some others, the facility of which for waste, the difficulties of which of recuperation, the possibilities of which, are greater still.

"The chief wealth of the world comes from the soil. Some food is gathered in the waters, materials for shelter and apparatus are yielded by quarries and mines, fuels and illuminants are from the earth, but the materials of food and fabrics are from the soil. The sustenance of man and his beast friends of the remotest kind, the productions of the forests, all fibers and nutritive plants, even the stuffs of skin, wool, fur, hair, silk, are derived from the land. The manipulation and commerce of all these depend on wind and water and coal and metals, but the most precious of all resources is that extremely thin cover of arable soil that is so easily dissipated and so hardly recuperated." * A similar panegyric and caution could be framed for the other resources of the earth.

Now, let us take another point of view, a more advantageous situation for comprehending the earth truly. All the items named in my definitions are not so many articles in a variety store or in a wholesale jobbing establishment. The material earth, the waters, the atmosphere, the forces and activities of Nature, are a complex unit, like a machine, "a great factory or shop of power, with its rotating times and tides." † Each wheel has reference to every other wheel, each part to every other part. So that as history has progressed, men have come to know that in their adjustments of the things to be done in one direction they must study the bearings of this change upon the whole mass. The geographers of our childhood—Humboldt, Rit-

* McGee. Mississippi Old Fields, A. A. A. S., Washington, 1891.

† Emerson. Letters and Social Aims. Boston, 1883, Houghton, Mifflin & Co., p. 135.

ter, Guyot—never tired in speaking of the earth as a whole, systematically constructed of many related parts, a cosmos, a very complex unit, whose land and water areas and configurations, whose elevations and depressions, whose fertile and arid lands, whose arctic and temperate zones, whose animal, vegetal, and mineral resources, whose enfolding atmosphere, are almost indispensable to one another. A great change in one of these in the past history of the globe has materially influenced the others more or less, and often transfigured the whole face of Nature. These changes may come about from secular causes, but they may also be wrought by the hand of man. The miner ruins the land for the farmer, the forester disturbs the relations of plant and animal life, the manufacturer contaminates the waters for the fisherman, the careless filling of a harbor impoverishes a whole State, the disturbance of insect or bird life destroys millions of wealth, the exhaustion of the soil depopulates vast regions.

"The first tide of settlement entered Louisiana and Mississippi from the South, and its influence was practically confined to the lowlands. The first upland population, whose implements were the rifle and the hunting-knife, lived the savage life of the Indian. The men of the second generation subsisted on the products of the soil and of the chase. In the third generation the slave-holder not only subsisted on but exported the products of the soil. The civil war impoverished the farmer, liberated his slaves, and cultivated acres were abandoned by thousands. The hills were attacked by the rains and fertile fields were invaded by gullies, until the soil of a thousand years' savings melted into the streams, and fair acres became bad-lands. Over thousands of square miles the traveler is never out of sight of glaring sand-wastes where once were fertile fields. It is within the truth to estimate that ten per cent of the western uplands of Mississippi have been ruined to agriculture. No one can traverse the territory so terribly invaded without feeling that the State loses each year in value of real estate more than she gains from all sources.

"Furthermore, this erosion is carried into the valleys to overwhelm bridges, invade roadways, convert fertile lowlands into treacherous quicksands or blistering deserts. Not only is the humus carried away, but the veneer of brown loam is also removed, leaving only inferior soil stuff. The destruction is irremediable by human craft; the fertile loam

once removed can never be restored. The creation of forest-clad hills and prairie in the prehuman period established a stable equilibrium which is rudely broken when cultivation on a large scale is attempted." *

I think we may take a still more exalted view of the earth, looking upon it not only as a pile of available resources, or even as an orderly arranged mass; but, from the point of view of the botanist, the zoölogist, the anthropologist, the evolutionist, we may almost regard it as an organized collection of parts, having had a germinal period, periods of transformation and fructification—in short, its ontogeny or individual evolution. We are not dealing with a homogeneous mass when we talk of dividing it up or of appropriating portions of it. Nor is it sufficient merely to scrutinize it as an orderly cosmos when we proceed to legislate about it. These are well and they are necessary, but a more exalted idea still is demanded on the part of those who bring the earth into the arena of political philosophy.

Whatever our theory of its origin, the earth may be discussed as a living, thinking being, capable of teaching cause and effect, of rewarding the wise and of punishing the unwise, capable of barbarizing and being barbarized, of civilizing and of being civilized.† And this discussion is regardless of our theory of its origin. If we are creationists, then we have only to transfer the personality to the ever-present Creator whose servant the earth is. If we are theistic evolutionists, then we conceive that this ever-present Intelligence has manifested Himself in the earth as its vivifying, organizing force. If we are agnostic evolutionists, then we regard the power as residing in Nature itself to confer these ethical qualities and prerogatives, though we know Him not. If we are atheistic evolutionists, the earth is only the more exalted in our thoughts and endowed with absolute power. With some of the older thinkers we may believe in a soul of the world, the *Welt-geist.* Then, when we compass the results that have been achieved, we are still in a reverential mood before a being of such cleverness and power.

In any event, and we need to dwell upon the subject no longer, the highest conceptions of the earth or land ques-

* McGee. On the Mississippi Old Fields, A. A. A. S., 1891.

† I have been a thousand times interested to notice how often in the Old Testament the earth is referred to as the delegated agent of God, with plenary powers, to bring forth living things (Gen. i, 11); as making covenants (ib. ix, 13); as devouring men (in many references); as executing judgment (Job, xx, 27); as enriching (Ps. lxvii; Ezek. xxxiv, 27), etc. Consult any concordance under the word "earth" or its synonyms.

tion demand the recognition of order and consequences, of largess and property, of bounty and retribution, of disease and recuperation. We are in presence of a something, no matter what, that has come to be what it is, has grown; that can be sick and recover or make sick and cause to recover; that can measure out justice and call the guilty to account. No earthly government has ever had such a consistent legislature, such incorruptible judges, such a powerful and effective executive, with its ever vigilant police and executioners, or such a bountiful treasury for the reward of the good.*

Now, nearly all of the books that I have read view the subject as a question of immediate results and expedients; but a few writers take it up from the side of the earth, as a something that has had a long evolution and that has never been unmindful altogether of human history. It is far more easy to find a paper devoted to some immediate pain or wound of society associated with the ownership of the soil than to find one discussing the claims of the earth on us drawn from a study of the correlations of earth and man through all the ages. So far as the earth has acted, as transformed and transforming, it opens a vast anthropological study. Do you believe that the digging-stick and the digger had any mutual duties in savagery? That each could improve and be improved by the other, until at last the one becomes the steam plow and the other lord of many thousand acres? Do you think that the first savage who carried a burden had any moral and prudential relations to his burden strap? So that each could help and improve, could be helped and improved by the other, blessing and blessed, until one became the great burden-train the other a railroad magnate? Once more, for the illustrations have no limit, the desolate creature who millenniums ago conjured the Promethean spark from two dried sticks, was he not interested in every way to improve his fire-sticks, and was he not *pari passu* improved through them, until by and by he could dispense with the moon and stars by night, the sun by day, and could convert the light of his torch into the motion of his wheels?

* Assuming this point of view, the Ethical Society is an institution for inquiring into duties, founded on law, obedience to which may or not make us happy. We must obey, to live. If we disobey, we die. And this is just as true of societies and nations as of men. The one saving clause, which in the struggle for resistance has given our race such preponderating momentum, is the fact that in the vast majority of cases obedience is followed by pleasure.

Now, all human inventions whatsoever, the conversion of all earthly materials into means of existence and happiness, have passed into their anthropological stage. The first projectile was a rude stone thrown from the hand of a savage, the last is more complex than the human frame, requiring hundreds of trained workmen many months to prepare it for its momentary errand of destruction. If these separate pieces of mechanism for many hundreds of years have been associated with men as mutual friends, helping and helped, blessing and being blessed, the relations of one to the other becoming more and more complex, there is no escaping the conclusion that the earth itself, the land out of which the material came, over which it was invented to travel, for whose further research and upturning many of them were devised, has stood in a similar but more intense relation. The earth has helped and has been helped, improved and been improved, rejoiced and given joy.

Again, it is all-important to bear in mind that only a small part of this world's largess lies on the surface. Its endowments are promises and potentialities, not free gifts. "The world is all gates, all opportunities, strings of tension ready to be struck." * At the dawn of humanity there were only two or three favored spots on all this globe equipped to keep alive our race for a single generation. The north was too cold, the equator was too hot; this region too dry, that too wet; this too poor, that too rich. Here were noxious and venomous creatures, there the deadly miasma.

Not only was standing room limited, but natural grains and fruits were at their poorest. The beasts of the field, the fowls of the air, as natural resources, were at their worst, and could be procured only at the greatest expenditure of time and energy, and transported only on the backs of men and women. The possibilities hidden away even under unfavorable locations to our progenitors we are just beginning to guess. There were materials and advantages spread on the surface just abundant enough to keep man alive, and just concealed enough to whet his appetite. The cosmos appears to us in the light of a wise provider, who gives to him that earns, discloses to him that searches, rewards and crowns him that wins. As a magazine, the earth is to be explored and its amounts and locations of resources and forces conned. As a machine, the power and relation of

* Emerson, *op. cit.*, 133.

parts are to be closely studied. As a teacher and a moral force, its laws must be searched out and its purposes known, its punishments understood, and its promises appreciated.

Again, to revert to the appliances of culture. All the peoples of the earth have not advanced equally in the matter of bettering their opportunities. Along the march of history, whole tribes, nations, races, have ceased to improve their apparatus—they have made them worse from year to year. And these had their revenge. They have made their owners more miserable in return. If poor farmers build wretched barns and fences, these are not slow in making farmers poor and wretched. If the carpenter works with dull tools, then will his patronage be dull. If the smith hammers cold iron, he will soon have to eat a cold dinner for his neglect. So the rule holds good both ways. The appliances of life are degraded and degrade; are impoverished and made poor, are wasted and their owners starve.

In a remarkable lecture by President Gilman on maps and history he declares with great emphasis that the true relation of the earth to civilization and politics and *vice versa* will be understood and studied with pleasure only when we have better maps. By this he means that in the past the earth has been the marshaler of nations, has spread out homogeneous stocks over the great plains of the continents, has packed the mountain valleys with kindreds and tongues and nations, has opened easy highways between some and separated others by deserts and oceans, has led the ambitious and vigorous into fertile and productive areas, and packed the feebler races into the suburbs of the world. A well-trained student in geography and geology may almost write the human history of a land whose people he has never seen. Mark how many times the map of Europe has been changed in the historic period since the "earth-spirit" drew the natural boundaries. Only once in an age do mountains rise and new rivers run. This is a serious event, and is coupled with the extinction of myriads of genera of living things and the recreation of the face of Nature. Less than centuries are sufficient to efface political boundaries. Forms of government do not appear so stable as personal and family occupation. Nations come and go; but any student of ethnology knows that, more now than ever, mankind are following these great leading strings of progress set by the earth itself.

In relation to these resources, this cosmos, this organized

something, our race has passed through a series of epochs quite similar to those into which plant and animal life have been divided. For convenience we may say there have been eight such periods. Each period is marked by certain characteristic phenomena, and, after the first or second, each period not only takes on new characteristics, but retains, in a more or less modified condition, those of all the preceding periods. The plant life of to-day is a comprehensive series of all the plant life of the globe from the beginning. The animal life of all palæontologic time is studied in the light of creatures now living on the earth. I mean, therefore, that the land problem, or the question of legislating about the earth, involves the study of every question that has arisen in the ages regarding this same subject. Its true solution sets the value of all the comprehensive interests of the world's societies.*

In the first period man was absent; he was present only as a promise. It was a time of earth-building, and, if you will not admit that preparation was being made specially for him, all the materials out of which he would ever build his nest, clothe and feed himself, develop his industries and fine arts and find exercise and expression for his activities and thoughts, were here. So far as our present needs go, the surface of our planet had come to a tolerably stable equilibrium. And if great changes took place, they were not so much due to intelligent animals as to minute organisms and physical forces. All of those agencies through which men have since modified the earth were in existence, but their activities were uniform.

In the second period, the first in the history of humanity, the earth movements continued, and to these were added the modifications produced by a being in the rude stone age, who lived in caves and under shelters, who took from the bounty of the air, the land, and the waters what his daily cravings demanded, who thought that all things were alive like himself, whose marriage was a slender bond, and whose family life was little above that of the brute. His conduct was entirely based on the interests of the hour, and for the earth he had no special thought in the lines here marked out. Little change was made on the earth by him. He sat on Nature's lap, and ate the food that she dropped into his mouth.

* Compare Spencer's Atlases of Sociology, Morgan's Ancient Society, Mason's What is Anthropology? for an elaboration of the periods of civilization and their accompanying conducts on the part of man.

In the third period much of the earth remained as at first. In a few areas primitive peoples continued without progress, but in the most favored spots our race discovered fire—the Promethean spark. Blessed and fatal gift! With fire came a long train of blessings; the light of heaven was let in upon the dwelling; discouraging forests and jungles, with their malaria, noxious insects, venomous serpents, and ravening beasts, were subdued or removed. Arts sprang up, better houses were built, more convenient tools were invented, a little navigation ventured upon the waters. Social life was modified in its marriage, family, government, and customs. But chief of all, for our argument, man attacked the resources of earth with firebrands.* Climate was modified a little, and the battle began to be earnest.

In the fourth period there remained unknown lands, primitive tribes, fire-using peoples like the Australians; but in a more favored spot was invented the bow, first of that long series of devices which conquer distance and time and brute force. As a matter of course, other arts improved as well; but the special thought in mind now is the on-going of that battle, in the progress of which men attacked the treasures of the earth and began to modify it. In the chase and in war the feathered messenger of death plucks its victories from the air, the earth, and the sea. Animal life is now to be profoundly modified until all brute creatures shall be extinguished or subdued. The evolution of morals and skill kept pace with these epoch-making inventions, and we may almost hear the first expression of tender compassion in the twanging of the bowstring that gave a man more of the most wholesome food than he could devour.

In the fifth period, while the other characteristics continued, a new art sprang up—a very little art, but the germ of mighty industries. Man became an explorer into the earth. He scratched its surface here and there, to plant a seed or to dig some nutritious root; he quarried clay for pottery, stone for his implements and ornaments, and copper and galena for his rude industries. The possibility of having a week's provision with him, of landing and cooking it anywhere, of being somewhat independent of Nature's daily supply, set in motion a long train of useful arts.

* There is a system of cultivation used in India to-day, especially on the eastern frontier of Bengal, in which a tract of forest land is cleared by fire, cultivated for a year or two, and then abandoned for a new tract. In southwestern India it is called *Coomry*, and in Ceylon it is known as *Chena*. (Yule & Burnell, quoted in Cent. Dict.)

For our purpose, however, it is enough that he began to tear up the earth and to use up her mineral resources. Art, music, thought, religion, and morality moved upward with the new treatment of the earth.

In the sixth period animals were domesticated; the horse, ass, camel, ox, sheep, goat, dog, llama, poultry, were extensively used. Cyclopean walls were built. Engineering was begun. Canals, roads, causeways, and bridges were planned. The winds, the waters, the mechanical powers were yoked. Almost all of our peaceful industries were in vogue as handicrafts. Language progressed to the written stage, and a symbolic record at least was known. The priestly caste was differentiated, a pantheon set up. Monogamy was elaborated, father-right prevailed, and personal property was recognized. The smelting of bronze was the most marked characteristic, since it added the search for precious metals, which scarifies the ground, turns the neighborhood into a desert, and then removes the fickle population, whose desire was not to find a home, but suddenly to enrich themselves.

The seventh period is still in flourishing existence over the best parts of Asia, in northern Africa, in eastern Europe, and in much of Latin America. Its glory reached its climax in the great empires about the beginning of the Christian era and in the splendor of the Middle Ages. The patriarchal family was more or less established, with polygamous marriage. The arts were still largely handicrafts. Transportation was over the water and by beasts of burden. Machinery was in its infancy, the race was as busy as now, but space and time and resistance were slowly overcome. Great improvement was made in government and the art of war, depending on the increased production of supplies by artificial means. Nations and national boundaries were established. It was the iron age.

And now we are in the eighth period, with mariner's compass, printing press, gunpowder, but pre-eminently with coal. It is the age of machinery and all that this implies. We are in the carbon age. All the wealth, all the learning, all the experience, all the crime of the past are upon us. The Andamanese, the Australian, the roving savages, the sedentary barbarians, the semi-civilized, the civilized after old standards—all survive even in Brooklyn, and the age of coal has touched only a small share of our race. The progress of life has noted the evolution of morals as the indi-

vidual has acquired the means of dispensing freely a portion of his gain to bless his fellow. The disposition of the earth and rules of the earth's conduct are becoming more familiar.

In all of these periods there existed five sets of phenomena that our enquiry commands us to observe carefully: Land tenure; land waste; land recuperation; land evolution * (elaboration of the earth's crude resources); land ethics.

In the first period, man being absent, land tenure was the struggle for existence and the survival of the best fitted to survive. Waste was geological, recuperation the work of minute organisms, evolution was vegetal, and animal progress and conduct were "doing the best for self-preservation." It is interesting to note how many of our intellectual activities, feelings, wishings, choosings—in short, how much of our conduct—was foreshadowed in this period by our animal predecessors.

In the second period, the first of humanity, there was probably but one area of occupation, where men huddled for self-protection and the tenure was absolutely commercial. Waste was increased only by the omnivorous habit of man; he did nothing consciously to recuperate the earth and was ignorant of its wonderful capabilities under domestication. The most marked ethical improvement was the altruism engendered by the prolongation of helpless infancy.

In the third period, land tenure was of the horde, and tribal boundaries were natural boundaries. Each man had unlimited access to the tribal territory, in the air, the water, the land. The question of disputed boundaries was settled by personal or clan encounter. The utmost prodigality prevailed. No thought of recuperating wasted resources existed, and as yet the possibilities of becoming, lying dormant in the air and land and sea, were undreamed of. On

* I should explain more fully what is intended by this phrase, land evolution. Every one must have noticed the difference between a lump of ore and a cambric needle, a wild grape and a garden grape, a wolf and a pointer dog. Now, all power of coming to be the latter in each case existed in the former. From one point of view it seems like the simple letting loose of native characteristics, giving opportunity to a progressive spirit in Nature. The one becomes the other by personal unfoldings. That would be *evolution*. From another point of view it is the inventive, creative genius of man that transforms in each case, and the latter is not *evolved*, but *elaborated*, from the former. In both cases, however, it is in Nature's shop or garden or zoötechnic establishment, in the path of Nature's lines of action, that the results are achieved. Now, all that man has done to coax or compel Nature into these new revelations of herself, to cultivate and perfect and renew her, is land *evolution* or *elaboration*.

the contrary, whole regions deprived of fruit and game by remorseless fires were abandoned to Nature.

To morality this was added: clan marriage prevailed in the tribes, so that to every individual thought worthy to survive, possessing a clan standing, support and defense were assured. This assurance of daily supply must have added greatly to longevity. A sort of forced respect for the earth had for its reward an increased momentum of human life.

In the fourth period, the ownership of land, still respecting natural boundaries, began to assume a more artificial form by reason of improvements in the apparatus of war. The possession of the bow enabled the advanced tribes to draw their lines about the game animals, the bird resorts, the fishing grounds. To mountains and impassable waters were added other fences. Waste was more rapid, owing to the increased means of gratifying new desires. Mammals and birds and fishes were slain in sport, and often only the dainty parts consumed. The dog became a domestic animal and a few other creatures disclosed the secret of Nature's capabilities of education. No effort at recuperation was needed and none was made. Man's attitude toward his fellows was beginning to be just, and blood or clan revenge and kindness to brutes were the contributions of the age to morality.

The age of pottery and of polished stone, of agriculture as well, brought sedentary life and a brand-new style of ownership—clan right of tenure. The tribal territory was fixed somewhat. The clan portion for culture was marked off and the patch or portion which each little group might occupy was settled temporarily. There being no international law, all this was in a state of flux. The waste of exhausting fertile fields, abandoning them and then skimming others, began, and I am told that some of our New England tribes actually put fish around their corn hills to manure them. This, so far as I know, is the first attempt to pay back to Nature a matter of rent. In Peru and other lands of this grade, breeds of dogs and other domestic animals show that the people had been told some of Nature's dormant resources. I can not find, however, that any people of this culture-status had dreamed of the time when their natural supply would disappear altogether. The ethical contribution of this period was the introduction of forms of justice, civil processes, personal rights, somewhat of the safety and importance of the citizen.

The sixth age and the doctrine of divine sanction developed a new element of tenure, well set forth in the early books of the Bible. Before that, trespass was of man alone. But in this time domestication of animals became the leading industry, and the earth must now be carved and staked off differently. "Let there be no strife between my herdsmen and thy herdsmen" was the key-note of a land survey which had for its objective point a well or a spring. The pockets of natural resources were the centers around which the circle was drawn. No grass seems to have been sown, but the greatest varieties of stock were raised and every industry of the world was stimulated. The mining and smelting of bronze also introduced waste without recuperation, by a mighty stimulus to inventive genius. The most beneficent result of this age was the improvement of morals. Over and over again the tribes or clans of herders have been kept from bloody wars by realizing that war would be the end of all their wealth. So they paid tribute and tithes and taxes, and stayed at home. They invented fortified corrals and entered into treaties with other nomads, and established pueblos and walled villages that were the protection of the joint commune.

The seventh period is the iron age of history, lasting three thousand years at least of time. It is also the age of feudalism, the age of reckless waste, the age of ruins. Over the areas of this period Volney cast his eye when he said: "I will go and dwell amid the ruins of cities: I will inquire of the monuments of antiquity what was the wisdom of the former ages." * And yet in this period the fertile lands of the Eastern continent were disclosed, and in its last century the whole world was given to the human race. Artificial propagation of birds, of land animals, of plants, especially the cereals, began so early that we do not know the natural sources of most of them; even pisciculture was common in China and Japan, and irrigation was better understood than it is now. Land recuperation also was practiced, and in China systematically carried on so well that we may take lessons therefrom. In ethics, at the beginning of this epoch, the groundwork of conduct was established in the widespread publication of the Golden Rule. Confucius, Buddha, Zoroaster, Christ, the philosophers of the Western nations, had breathed upon them or into them this benign lesson. To do unto others as one would have

* Ruins, etc., Philadelphia, 1799, Lyon.

them to do unto him was the pearl in the crown of this period.

In our day, the eighth period, the age of coal, the age of domestication, the tenure of the earth is no longer feudal, but individual or technic. If every man has not his vine and fig tree, at least every vine and fig tree has its owner or owners. The earth has undergone a political, national, social, and individual gerrymandering to adjust it to the new carbon-wasting period, the age of machinery. The waste of the nineteenth century has equaled that of all other centuries. The census reports the value of minerals consumed in the United States in 1890 at $600,000,000 (David T. Day). The waste of forests and consequent disturbance of other natural phenomena has called for legislation in every civilized state. Practically, our waters have been cleared of their natural supply of fishes, and game is almost a thing of the past.

The air is no longer in our cities a mixture of oxygen and nitrogen, but a sewer into which is poured the waste of industries. Our old fields in the South turn more fertility into the rivers than the whole production amounts to. The disturbance of the equilibrium of insect life has depopulated vast areas and more than once presaged famine. The filling up of rivers and harbors has made the borders of these streams uninhabitable by reason of malaria, and silted up their mouths so that already we have hundreds of ruined towns within the borders of this youngest nation, and at least one State—Nevada. The waste of the soil has been accompanied by the disappearance of scarce and precious materials that have, for example, moved the wheat-belt from New York to the State of Washington.

At the same time the recuperation and evolution of new sources of supply have gone faster, and we do not care for wild harvest-fields. For the first time in history our century has been asking the earth, What wilt thou have me to do? and what is the best that thou canst do? In the use of drainage and terracing, of transplanting and selecting out weak plants, of utilizing manures and sewage and other waste, of saving the sun-heat by glass and fermentation, of artificial heat, of irrigation, we have been able to obtain from six to ten crops a year from the soil. "In the hands of men there are no infertile soils. The most productive soils are not in the prairies of America, nor in the Russian steppes; they are in the peat bogs of Ireland, on the sand

downs of the northern coast, on the craggy mountains of the Rhine, where they have been made by man's hands." *

In this good work of elaborating and recuperating the earth we still have found no way to bring back the coal and metals we are wasting at such a fearful rate; but the precious nitrogen may be economized and restored by using less meat and calling in more of the product of the sea. The chemical processes by which potash and nitrogen may be got in available form for plant life are now being involved to produce by synthesis our most desirable food elements, without the long process of vegetation. By legislation the contamination of the atmosphere is restricted and poisoning of waters prevented. Immense sums of money are by government expended in experiment stations for the purpose of getting the most product for the least outlay, and of controlling insect life for the good of man. This is a kind of co-operative altruism in which all are taxed for the benefit of the land-worker.

Now, what will this period add to the ethics of the land problem, and thereby to the advancement of society? What ought it to do for tenure, for waste, for recuperation, for elaboration, for conduct?

1. It should profit by all the past, borrow its excellences, but not return to it. I therefore modestly suggest that communism and all other forms of the clan system in legislation concerning the relationship of society to the globe are retrogression.

2. Forms of tenure are really not so important as modes of treatment. That form of tenure which leads men to prevent waste, to repair past damage, to domesticate and develop Nature's resources, to cherish benevolent feelings and a profound interest in posterity through the land, is best. But I am trying to enforce the idea that, after all, the earth is the landlord and that we are the tenants.

3. The capacity of the earth is ample, and its resources abundant for all time, if she be interrogated in a true spirit. More instruction and a refinement of conscience will point the way.

4. It can glorify and magnify the Golden Rule by the scientific study of what we ought to desire others to do for and unto us and unto themselves, and unto this royal heritage. Then it can magnify the doing unto others. The

* Prince Krapotkin, quoted by A. D. Atwater, Cent. Mag., Nov., 1891, 105 and elsewhere.

golden rule, the highest altruism, will be doing the very best to others that can be done, or that with all possible light others could dream of doing for our highest and noblest good. The life and death of the founder of Christianity taught mankind that our own highest happiness lies in this most exalted consecration to others. "Love and serve," on the monument of Shaftesbury, "more sweetness and more light," on the lips of Matthew Arnold, are our watchwords. The Golden Rule has had and will have its own evolution.

In reply to one question propounded by your committee—"How can the capacity of the land for production be maintained in correspondence with the increase of population?"—the answer is easy after what has been said. By the improvement of land ethics, by the bettering of conduct toward the earth, by domesticating the powers of Nature. If the question were propounded to any young clerk in Brooklyn: How do you expect to rise in your employer's favor? he would reply: By studying how to make him richer and more able to raise my salary. The capacity of amassing fortunes through the fidelity of employés is no more unlimited than the capacity of the earth to develop new resources of human happiness.

Relation of Classes of Society to the Land.

It is not the farmer alone who is profoundly interested in the treatment of the earth, the air, and the waters. Every man, woman, and child is interested, for the sake of knowledge, for the sake of health and long life, for our own sake, for the sake of every human being present and to come. As all parts of the earth are united, as all human society has its international laws, so men are all bound to the earth, and no man can defile or waste it without striking every other man that shall ever stand upon it.

The Question of Public and Private Ownership.

In the lowest savagery land ownership is communal, in barbarism it is feudal, in civilization it is individual. Ethically, that system is right which encourages and effects the least waste, the greatest recuperation, and the most successful familiarity with and control over Nature's concealed possibilities. As I have said, forms of tenure are not so

important as mode of treatment. If men are worthy to enjoy individual tenure they should have it. It is the highest good. When they abuse it they get in debt to the rich, who reduce them to feudalism; and if the rich should move away, a kind of clan system or communism would ensue.

Taxation of Land Values.

In the first period the percentage of taxation was highest; in our eighth period it is lowest. The form of law that does not decrease the amount of taxation proportionally to the yield per acre is not in the line of progress; therefore the true principle of the taxation of land will lie in the way of reward; as the productive value of the land is increased, the rate of taxation will be decreased. I am speaking now of intrinsic values. Extrinsic values, created by the public, belong to the public and they may tax them as they will. But any law that punishes a man with taxation for preventing waste, recuperating worn acres or developing the latent resources of Nature, is wicked.

The Land Worker compared with other Workers.

Every tool and industry and implement of man has had its evolution. The wood worker, the metal worker, the navigator, the land tiller, has had his inventive genius taxed to the utmost, and so you behold one with stone saw or planing mill, another with stone hammer or trip hammer, a third with "bull boat" or ocean steamer, the fourth with bone hoe or steam plow. True ethics demands for the one what we give to the other—reward to the progressive, starvation to the retrogressive. If we never think of legislating to persuade men to prefer the old spindle to the spinning jenny, there ought to be no help for the man who looks back to the good old days of the digging stick and the land wasting.

Relative Earnings and Hours.

In agriculture, as in all industries, work or momentum is equal to time multiplied by rate and weight or units of power. The farmer who insists on following cow-paths with public roads and in doing all his work regardless of velocity, must expect to find himself often on the road

after dark. In savagery a moon, in barbarism a day, in the iron age an hour, in the age of coal a minute, is the unit of time. Those who work to the minute have short days; those who do not care for an hour will continue to work long days. It is not legislation that such people need, but education and moral teaching.

Tariff, in this view, paid on foreign luxuries by the consumer for the support of the Government, is an easy way to raise revenues and does not interfere with the ends here laid down. Tariff for the encouragement of an industry is an experiment or a patent and should be limited in time. If it bring honest people and skill and consumers and diversified industries to our doors, then the experiment has succeeded; if it impoverish the whole merely to create a monopoly, then it belongs to the middle ages and should be abandoned.

The Outlook.

Consider for one moment the first human family as they stood millenniums ago in front of their cave-dwelling, without clothing or furniture of any kind; chips of stone and fragments of bone or horn or wood were their only appliances. They were without experience. The simplest tools—such as hammers, saws, gimlets, planes, adzes—were unknown to them. No one had dreamed of the mechanical powers, except the inclined plane. The wedge, the roller, the wheel, the wheel and axle, the pulley and the screw, were far, far in the future. No commerce existed but the simplest barter, and all transportation was on human beasts of burden. This naked creature seemed also poorly provided physically for the common struggle. Without a hairy covering, having feeble jaws and nails, his agility in climbing lost without corresponding addition of fleetness of foot, he will, apparently, be outwitted and devoured in the next generation by the combination of his enemies.

But when we consider that this same creature has at last come to master the whole earth by exploration and by acquaintance with its laws and activities, has acquainted himself with the weight and motion and composition of the heavenly bodies, has projected his imagination into systems beyond all these and out of sight, dreams of infinite time and space and motion and creates conditions of things in his fancy that can have no possible existence in fact, and finally expects for himself an unlimited existence in a spir-

itual sphere transcending all that his present life can experience or hope for, we are prepared to believe that the chances for his success must have immensely outweighed those for his destruction. No other creature has so progressed; the whole animal kingdom has not traveled so far upward from the nomad to the anthropoid.

Now, if all this splendid progress was made under the old feral system of bad tenure, waste, absence of recuperation, and little elaboration of latent resources, what do you think will be the pace under the new *régime* of culture and higher ethic? The earth is no longer able to support its human population as grazers, as hunters, as fishers, as nomads. But the ingenious mind of man will devote its energies henceforth to the new culture, and literally make the desert blossom like the rose.*

* In the preparation of this paper I have consulted men rather than books. I shall always have a filial affection for Marsh's Man and Nature; Guyot's Earth and Man; Ritter's geographic publications; Maury's Physical Geography of the Sea; Humboldt's Kosmos; Klemm's Culturgeschichte des Menschen, and a few others of the older anthropogeographers. My present obligation is here expressed to Dr David T. Day, of the Census Office, for information concerning the output and waste of coal and metals; to Prof. F. W. Clarke, of the United States Geological Survey, for assistance in the study of man's share in the irremediable dissipation of physical and chemical energy; to Prof. Wiley, of the Department of Agriculture, for the outlook along the line of recuperating the precious elements of plant production in the worn-out lands; to Prof. Fernow, of the same Department, for accurate knowledge concerning the forestry problem as it now stands; to Colonel Marshall McDonald, Commissioner of Fish and Fisheries, for information concerning the destruction of the natural fish supply and the immense advantage gained by saving our waste over the vast pasture lands of coastal waters; to Prof. Cleveland Abbe and the Weather Bureau for help in studying the nature of atmospheric contamination and the line of its true remedies; to Prof. W J McGee, of the United States Geological Survey, for permission to examine and quote from his unpublished manuscript concerning the Southern Old Fields; to Prof. C. V. Riley, for many conversations respecting the myriad relationships existing between human happiness or misery and the insect world; to the Coast Survey and Hydrographic Office for the privilege of examining their series of charts with reference to the silting up of harbors; to Prof. G. L. Goodale, whose studies on the useful plants of the future are exactly in the line of the present paper. (American Journal of Science, vol. xlii, October, 1891.) I have been much interested also in a work by Colonel C. C. Jones, entitled The Lost Towns of Georgia, and various statements in current literature about the decline of agriculture in many of our older States.

ABSTRACT OF THE DISCUSSION.

Mr. James A. Skilton:

While we are laying foundations, beginning work in our field somewhat on the lines of the Smithsonian Institution and waiting for our Smithson to appear, it is a pleasant coincidence that we have with us and helping us one of the prominent workers in connection with that institution.

Prof. Mason has, no doubt intentionally, left open for further discussion the economic and political implications and applications of the land problem, to which it is our plan for this season to pay special attention.

If it be true, as Tyndall says, that the promise and potency of every form and quality of life may be discerned in matter, then we may conclude that the promise and potency of a proper system of the conduct of life may also be discerned in matter, and probably was discernible, had a discerner been present, even in the nebular age. Consequently, coming down to our own time and the subject of the evening—land, whether in its narrow or in its broader definition—we may expect to find that there is at least the beginning of a system of morals integrated with matter and with the physical, chemical, and vital laws concerned in the action and use of land.

Borrowing the words of Dr. Janes in the Popular Science notice of Justice, recently published: "Mr. Spencer shows that we must seek for the germs of morality in the animal world. He even goes further, and shows that human morality is based upon laws which are as universal as life itself, and are active and potent in the development of all living things." To which I add that morality and justice are conditioned in and by the laws that were already at work at the time when life was mere potency and promise, and have therefore become framed into the very structure of the earth, and that in a very complete and important sense morality and justice are based upon laws which are as universal as the physical universe and to which biological principles and action are subordinate. If this be true, then human justice is not simply a development of "subhuman" justice, as limited to the biological field, but also of subanimal justice, including justice to and in land, the approximate source and store-house of all life materials and forces; which is the beginning of all right-eousness.

Indeed, a mere cursory glance at the history of nations arouses suspi-

cion that land requires not only that justice shall be done to it by man, but that it finds a way of punishing him if that justice be withheld.

The ancient boast was that all roads led to Rome; which meant, in part at least, that the land products of the then known world steadily moved toward Rome. The inevitable result of this movement was that eventually the outlying lands grew continually poorer and less able to produce, while the lands at the center of the movement—about Rome—became congested with the elements of fertility, the outlying lands approaching the condition of wilderness or desert, and Rome itself becoming imbedded in the pestilent Campagna. In the light of evolutionary science and philosophy, why need we to go further in search of the cause of the decline of Rome, the decay of civilization, the dark ages, and all the remainder of the terrible story? And why do we need further suggestion that injustice to land eventually caused or promoted the degradation of the intellect, the morals and the religion of Europe, and that we in America inherit our share of that degradation?

But the discovery of America brought new land into use, and in some very large sense the upward progress of civilization in all these directions since that event is attributable to the substitution of the new lands of the New World as the new source of supply in place of the worn-out lands of the Old World. The approaching close of the fourth century since that discovery would seem to make it a fit time for asking ourselves how we are treating these new lands? Are we repeating or permitting the policy of Rome, and slowly but surely earning the same result? Are we doing justice to the land? Are we maintaining its fertility by returning to it the elements of fertility, or are we robbing the land and preparing for the day when it will drive us or our successors out as Adam and Eve were driven from the Garden of Eden? Unquestionably, the general view is, that the land has no rights that any man is bound to respect. The crops it produces are sent far away to be used; little or no thought is taken or provision made for the return of the elements of food and other products of the land after they are used; no man realizes that what he properly purchases in the market is the mere *usufruct*, and that unless the elements of the once-used food are returned to the land, he is participating in a gigantic system of waste that would be actionable as such if practiced by his tenant upon his land.

Taking a larger view, we discover that the new age has a new Rome in London, to which all modern roads lead, whether on land or sea; where practically the price of the productions of the land of the whole earth are fixed, and in which are intrenched a nation, a commerce, a banking and an economic system, and all the paraphernalia for their

maintenance, which, taken together, are more effective than ever the legions of Rome could dream of being in directing the steady streams of products of the world toward one common center, and in bringing again upon the world the same dire consequences. Furthermore, we find at work everywhere the inventive energies of an inventive age, by steamship, railroad, and canal, by improved agricultural implements of all kinds, by telegraphic, telephonic, and improved postal means of communication with the whole world, and by the aid of machinery set in motion by steam and electricity, assisting so effectually that, whereas it took Rome centuries to do its destructive work, the world may now be once more looted in a few short decades. And Africa even having now fallen into the clutches of this globe octopus, we may well weep to learn that there are no more new worlds, not for our conquering, but for the resupply and relief of mankind, when all the accessible outlying lands have been reduced to wilderness or desert.

At this point I ask permission for a digression. There are those in this audience doubtless, perhaps members of the association, who have already answered what I have said as well as what I have yet to say, by the easy assumption that the elements thus taken from the soil will somehow be returned thereto through the air, on the wings of gases, and that in that way the circuit will be completed through which due conservation of energy will take place, and that the land, mankind, and civilization will not suffer. To such, and to those who think that a change of crops will do the business, that the "modern improvements" through which the sewage and waste of every house and of the streets of all the cities of the civilized world are constantly thrown into the river, and thence flow into the sea, never to return to the land until in some far-off geologic age the continent is again dipped in the sea, *are* improvements: and who think that conduits leading direct from this mass of filth and infection into their sleeping and sitting rooms are the perfection of modern science and engineering—to such it is pretty certain I have no message.

For those who, discussing the means of maintaining land fertility in parlors and clubs, suggest the change of crop theory, I have the suggestion to make that when they can show me a practical working scheme for keeping their bank accounts in a satisfactory condition by merely changing the color of their checks and without making deposits, then I shall be ready to consider schemes for maintaining the fertility of land by changing the kind of plant life by which the soil is each year drawn upon and exhausted.

But it is my purpose to bring the proposition that soil exhaustion means barbarization to the people and nation that permit it to the test of fact and history.

Time limitations compel me to confine my remarks in the main to an application of the principle I have laid down in the study of a phase of near-by American history.

About one hundred years ago selfishness, which had from the beginning largely governed the human and subhuman world, was reduced to at least the beginning of a science in the writings of Smith, Ricardo, and Malthus. Almost simultaneously the United States became a nation, the foundation principle of which was political freedom—if not the right of life, liberty, and the pursuit of happiness, which later became disputed. For nearly one hundred years now we have had the application of the economic science of selfishness in the affairs of a people whose leading political principle was largely altruistic, and therefore the history of our country will furnish a favorable, or at least a not unfavorable, object lesson for the study of the effects of the application of that science.

At the time of the Revolution, and after, the people and the leaders of the Southern States were as stanch believers in and supporters of freedom as those of the Northern States. The writer of the Declaration of Independence was a Virginian; the Mecklenburg resolutions,* which are said to have antedated, and furnished its pattern or outline, were framed and adopted by citizens of North Carolina; and, long before this, leading citizens of Georgia had strongly protested against the introduction of slavery into that colony. Tobacco was the great exporting crop of the South, and its effects on the soil are well known. The characteristic South had and has no perennial grass or hay crop. Wheat, rye, oats, and corn did not and do not either grow well or produce large crops there. Then, as now, no shipping interest of its own of any magnitude existed there. In Georgia and South Carolina they raised and produced rice and indigo, which were the resources through which money was mostly obtained; but the people lived contented in the main with yams, sweet potatoes, and corn for food, and were true as steel to the cause of independence. The businesses of exportation and soil destruction were then in their infancy.

When the time came to adopt a constitution the representatives of the Southern States refused to consent unless the Constitution was so framed that no export duty could be imposed and no interference made with the export trade of the Southern and other export States. The no export duty clause was presented and insisted upon as necessary to the protection of slavery in the Southern States. Over the

* The so-called "Mecklenburg Declaration" of May 20, 1775, has been shown to be spurious. It was first made public in the Raleigh, N. C., Register, of April 30, 1819. The North Carolina resolutions of May 31, 1775, the genuineness of which is not questioned, bear little resemblance to the Declaration of Independence.—*Ed.*

strong protests of Washington and Madison this limitation of the powers of the nation was accepted and adopted in the Constitution by a bare majority. The votes of members from the commercial and shipping States of the North made that majority. The change of one vote by Mason, Randolph, or Blair, of Virginia, would have fixed the power of levying an export duty in the Constitution.

Presently the cotton and later the sugar crop began to be added to the tobacco crop as great crops of the South, all of them export crops, cotton and tobacco particularly exhausting and destructive to the soil, and rice and sugar requiring soil renewed by overflow like the productive lands of Egypt, but continued as crops under many limitations—as unhealthiness, strong competition in the tropics, small production because these crops were not perfectly suited to the soil and climate, and the difficulty of getting free men to work them. Then came the invention of the cotton-gin, followed by the increase and supremacy of the cotton crop as a Southern and an export crop, and by many other consequences.

In the discussions of the last fifty years in regard to slavery the cotton-gin has always been cited as accounting for the failure of the hopes and beliefs of the fathers at the time of the adoption of the Constitution that slavery would die out by natural processes. So far as I know, the explanation has always stopped with that citation. But how could the cotton-gin strengthen slavery and weaken freedom?

I answer, by the effects it produced in helping soil exhaustion and barbarization; through increased exportation of cotton and its barbarizing effects on the soil, the commerce, and the people of the South. Standing alone, the mere citation throws the discussion into the arena of economics. In the Northern States slavery died a natural death, as it was expected to do throughout the country. The cotton-gin, though invented by a Northerner and manufactured in the North, did not save slavery there. The results observed were therefore due somehow to the effects of its use in and upon the Southern States, land and people.

To one visiting the South for the first time nearly forty years ago, after having become familiar with the reckless expenditure of typical Southern planters at Saratoga, and with their constant boasts that they were the favored people of the earth, because they produced its great export crops and brought all the foreign money into the country, which crops the world must have or perish, it was a profound surprise to discover that these same planters, many of them, when at home, lived in poorly built wooden houses, supported a few feet above the ground on wooden blocks; that these houses were most generally built like the old log-houses of the North a century or two ago, only the

logs were mere poles poorly put together, with the cracks between sometimes plastered with mud, sometimes left open; the floor-boards in many cases placed an inch apart at the edges for convenience in sweeping; the chimney built of sticks split from short and small pieces of pine and plastered with mud; the windows unprovided with glass and closable only by a solid rough pine blind or door; the furniture of the house to the last degree simple and rough, except, perhaps, as to a three- or four-hundred-dollar piano imported from the North. Looking further, everything else about the plantation was found to be of the same order; the adjacent villages and cities, except possibly a half-dozen of the last, were mere travesties of the names, and all of the latter were singular, shrunken, and inferior, considering their ages and their positions as centers of Southern commerce.* Extending observation to the people themselves, they appeared to be suited to and satisfied with their surroundings, not only, but were, with rare exceptions, to the extreme provincially boastful of the superiority of their civilization over all others. The chief occupations of a large portion of the young men in every community seemed to consist in carrying around large pistols and knives, which they used with cheerful frequency upon the persons of their friends and associates. The grocery at the cross-roads was their club-house, and chasing negro girls at night their real business.

Almost no lawyer, doctor, minister, or even teacher, supported himself and family on his professional income, but always added planting, there being practically no other reliable source of income known in the country.

As to dress, the men of the South bought expensive clothes, but, as a tailor once sadly remarked to me, "they never know how to put them on." Now and again you would meet a man with frills for his shirt bosom, and on his shirt sleeves in the place of cuffs, and there would be about him an air as if, could you but make a full examination, there would be a disclosure of frilled pantalets somewhere, in a more or less rudimentary form, in this respect showing the only partly aborted garments of the cavalier from whom he claimed descent, like the partly discarded toes in Prof. Huxley's and Prof. Marsh's fossil horse. At the same time it was easy to detect many noble and engaging traits of character inherited from the same cavalier source.

Looking into the conditions of land titles, it then appeared that there was a carelessness about them indicating an approach toward treating land as personal property, the sufficient title to which lay in

* Although it is but little more than one hundred and fifty years since Georgia began to be settled, we already have a considerable book on library shelves entitled The Lost Towns of Georgia.

possession, while negro property was much more carefully guarded as to title, as if slaves were the real property of the country. And looking into actual land conditions, it appeared that almost all the land occupied in the early settlement of the country had long since been abandoned to wilderness and grown up to forest, and that successive sections occupied subsequent to the Revolution had been robbed of their capacity for production and abandoned as worthless, new lands being ever the resort, and no effort at keeping up fertility being either attempted or possible. In fact, the whole country, so far as devoted to the chief staple of the South—cotton—seemed destined to undergo this change, and be eventually relegated to wilderness, and the people either to emigration, barbarism, or extinction.

Out of this chronic status of decline and decay came the necessary consequences of want of employment, and of any and all opportunity for either a career, or even a meager support, for the young men who had not and could not come into possession of slaves. There was literally nothing for the large majority of them to do except to engage in fortune-hunting or filibustering. The former was, we may advisedly say, reduced to a science, for intending lovers first sought the facts of the case by consulting the records and ascertaining how much "stock" the old man owned before taking any steps to win the young lady. And the young ladies were not far behind the huntsmen of the other sex in this respect. Between 1850 and 1860 the numerous filibustering schemes in the South were largely due to this cause of unrest—want of opportunity for a career—as later it became the actual cause of the rebellion and of all that the rebellion implies.

Next let me say that the growth of slavery in the South, where its decay had been expected and hoped for by the fathers, was due to the same cause—the continued impoverishment of the soil, due to the exportation of its annual product direct from the plantation, the owner of the land living, in fact, on his capital, so far as it was invested in land, eventually to be driven out an exile to seek new lands in new places or new States, there, by the aid of his slaves, to repeat the operation and barely maintain the low order of civilization which was the necessary result of his method of treating the land.

The rebellion also was due, not to slavery, as almost universally supposed, but to the same cause—land impoverishment, and the want of employment for the young men thereby caused, together with a certain jealousy on the part of the young men of the South, which had for its object the young men of the North and their greatly more abundant opportunities.

Property in the South, as elsewhere, was conservative, and the property of the South was in the hands of the slave-holders. But when it

appeared, as it gradually did during the fall of 1860 and the early months of 1861, that the young men of the better families of the South would at last find a vocation as officers of the large army and navy that would be required to cope with the United States and the North, resistance to rebellion declined where it previously controlled, and rebellion first became a possibility and was eventually accepted as a boon and a solution. In this new scheme of a new nation slaves were to be the workers. This was the secret of the sudden change of front made by Alexander Stephens when he sanctioned the formation of the new government on the foundation rock of slavery. I speak as a witness rather than as a philosopher.

Slavery itself was militant in type in the evolutionary sense, and the Southern people in going into rebellion suddenly saw, or thought they saw, the opportunity to complete the type in a symmetrical whole—the origin of it all being found in the treatment of Southern soil for the purpose of sustaining a foreign trade made free and possible under the clause of the Constitution that prevents the levy of an export duty.

When we take up the race question in the South, I expect to be able to show you why emancipation and reconstruction, which have both of them ignored the real causes of Southern conditions, if my conclusions are correct, have not disposed and can not dispose of the Southern question, but are destined to create greater difficulties and disasters than those they were used to remedy or we have yet begun to imagine.

Let us now turn to the North for the purpose of ascertaining why, under the same Constitution and the same laws, the same results did not there occur.

Contrasting tobacco, cotton, rice, and sugar of the South with Northern wheat, corn, rye, oats, hay, and all the other products that leave the farm substantially in the original crop condition, one would say wealth was concentrated in the one and diffused in the other, and the puzzling question inevitably arises, Why, then, should the South be poor and the North rich—the South unable to find room either for immigrants or for its own children, while the North was able to abandon vast fields of labor to immigrants while the natives moved up into lighter and apparently more lucrative and desirable occupations?

Further observation discloses, however, that whereas the largest of rich Southern products were practically all sent abroad, after first taking this superior richness from the soil, the poorer Northern products were mostly and necessarily consumed and used at home. And here we shall find the secret of the whole business. Nature took care of the North by making it impossible to export much of the crops that were so heavy in proportion to value, while it left the South to its own inventions and its beautiful theory as to growing rich on free

trade based on the no-export-duty clause of the Constitution. In other words, the North can not plume itself for its success, because, against its will and without its knowledge, it has been saved by the great cost of transportation of its heavy products, which, acting as a natural export duty in the absence of a constitutional one, prevented exportation, kept the products at home to be largely consumed on the farms where the manure would help maintain and in some cases increase the fertility of the soil, protected the land owner, and therefore gave an increased return for the labor bestowed upon the land, its products finding a market at home without the deduction of the cost of transportation abroad.

The consequence has been that, instead of at once exporting and getting rid forever of its agricultural capital as found in the productiveness of the soil, like the South, the North has been able to use it over and over again on true principles of conservation of energy, because each time, after doing its proper work as food of men and animals, the waste or manure it makes has been restored to the soil as so much saved capital, to presently be returned to the land owner and worker in new and larger crops, food or other. To the somewhat occult, or at least disregarded or unrecognized, causes of its own prosperity, it is due in part that the North has seemed to be almost afflicted with imbecility or paralysis in its conduct toward the South and its problems.

In other words the North owes its salvation—its temporary salvation—to time, space, distance, and the law of gravitation, by the aid of which the North peacefully emancipated its slaves on evolutionary principles; but not recognizing the source of its success in the moral implications of physical law and matter, it has been, so far, unable to show the South how to solve its problem.

During the past sixty years the progress of the age has, however, produced the railroad and the steamship, whereby the cost of transportation and the time consumed in reaching market have been greatly lessened, thus reducing the natural export duty, increasing the facilities for looting the continent through manipulations of a system known under the euphonious title of foreign commerce, bringing the North under the influence of English economic theory and practice and reducing the North to semi-Southern conditions as to land, people, and individual character.

To this general line of causes I attribute the decay of the farming interest, East, West, and in the Middle States; the development of a new class of nabobs and aristocrats recognized as railroad millionaires; the gravitating tendency of population toward cities and city life; the importation of laborers of an ever-declining mental and normal status; the admitted failure of republican methods of government as applied

to cities (the problem with which our worthy president will deal at our next meeting); the modern dominance of the saloon in all branches of politics; the demand for the increase and development of all kinds of eleemosynary institutions; the labor agitations, in so far as they may have a just foundation in an unfair distribution of the compensation of labor; the growth of poverty; the want of money capital in the South, West, and agricultural regions generally, its concentration in the exporting cities and centers, and the demand now being made the chief political question of the campaign for a more equal distribution of the money instrument of exchange; and also, to a large extent, the development of disease.

With suggestive variations in the rapidity, nature, and location of development, these new conditions have kept pace and maintained active relations with the increase and cheapening of railroad and other transportation facilities at the North.

Disease is a subject worthy of independent treatment, but I can only hint and suggest for your further study. With the decline of fertility, plant life is weakened in vitality, and becomes the prey of all kinds of insect and germ life, finally yielding to its foes and giving up the fight. Coincidently and co-ordinately, associated animal and human life on the farm and in the city becomes weakened and afflicted in similar ways, losing the power to cope with its foes, which make their attacks from every possible direction of approach in the form of an infinite number of germs, to which weakened humanity succumbs. Along with these follow intellectual and moral decline, the entire drift being toward extinction or non-survival because of unfitness, the beginning of which is injustice to land, soil exhaustion, and diminished return for labor. Much more might be added if time permitted, which it does not.

I have received from a gentleman (who states that he is a son of a founder of this church and is deeply interested in the solution of the problems of poverty) a courteous letter calling my attention to an inclosed copy of the "single-tax platform," and asking me to consider it in dealing with this subject.

I could not, for want of time, enlarge upon the scheme of Henry George and its recent modification. Nearly twenty years before George wrote, and as far back as my law-school experience, I studied the fundamentals of his system, which, as he finally discovered, had often been studied, treated, and abandoned before he was born. When his book appeared I welcomed it, not because I found in it any solution, or anything new, but because I judged that it would attract the attention of those who could probably in no other way be aroused to a study of the pressing problems of the time. For such uses I welcome it still, although

I begin to see the arrogances of supposed omniscience, and the consequent inability to learn further, cropping out here and there among the truly true believers in George's theories. It would be, or seem, discourteous if I should say that Mr. George impresses me as if he had gone to sea to study the land question and had developed a scheme of the all-at-sea character. This form of criticism, however, expresses my view of it as a whole. He has first of all taken his case into the wrong court, into the wrong forum. The proper action is an action for waste, for a misuse of the source of all production, and it is not a quarrel over the division of wealth already in assured but wrongful possession, as his tax method implies. The question is one of production first and of destruction afterward, and in this fact lies a part of the significance of biological principles so much insisted on by Mr. Spencer.

But if the facts I have assumed to present are facts, then the system of Mr. George has a fatal error in its proposed remedy of "perfect freedom of trade with all the world," because such freedom under present conditions permits the excessive exportation of land products, causes the exhaustion of the soil, and inevitably produces poverty and the whole Pandora-box full of evils that follow in its train.

I am entirely aware of the strain my alleged facts in regard to the South and the causes of rebellion will put on your opinions, although my testimony is the testimony of a witness to what I do know as facts. And let me say that I neither expect nor wish you to accept them without such further study as shall put you in possession of them as admitted or as demonstrated facts, and also of a co-ordinated system of thought applicable to the subject.

To assist you in the study let me state some other facts that are easily capable of verification. And first this: In framing the Confederate Constitution the South abandoned the no-export-duty principle and gave the Confederate Government the power to levy export duties, and its first loan—the so-called cotton loan—was secured by the pledge of such a duty on cotton. The origin, motive, and history of this clause of the Confederate Constitution form a most interesting subject of study for the evolutionary sociologist and statesman. Second, under the influence of this export duty, in combination with the semi-Chinese wall of the blockade, which our foreign friends were not entirely able to surmount and overcome, its nature being that of a prohibitive export duty, manufactures grew and developed wonderfully in the South for the first time during the war, giving employment to manufacturers and mechanics in large numbers. Third, these became the special favorites of the Confederacy for obvious reasons, and in the last year of the war they met in convention at Richmond and passed resolutions in which they undertook to instruct the plant-

ing class in regard to its duty to the Government. Thus in four short years the "greasy mechanic" and "mudsill" became a leader in the new state under a new Constitution that gave him protection. Accompanying these changes of condition were co-ordinate modifications of the conditions of slave labor clearly pointing to evolutionary emancipation within the Confederacy. And fourth, the moment the Confederacy was overcome and the supremacy of the United States Constitution with its no-export-duty clause was restored in the South, the manufactures which had engaged these men were swept away like writing on a slate with a wet sponge. These four items are worthy of complete treatment, which I can not here give them. I commend them in their present form for use in the pipes of all free-traders. They will prolong the smoke materially. And I further suggest that when later you come to this place to hear free trade, protection, the Democratic and Republican parties, immigration, the monetary problem, etc., discussed, you bear them in mind and watch the essayists to see how their theories fit into these facts, which in the mean time you will be able to verify if necessary or disprove.

The question naturally occurs whether in presenting this view we have wandered from the paths laid out and guide-boarded by the Master. He says, in Justice: "For the *health* of the social organism and the *welfare* of its members *a balance of functions is requisite.*" While he lays down this principle in dealing with the question of representation, it is evident that it applies with all the more force to those activities of individuals which alone organize the social organism.

He also says: "The end which the statesman should keep in view as higher than all other ends is the formation of *character.* And if there is entertained a right conception of the character which should be formed, *and of the means by which it may be formed*, the exclusion of multiplied state agencies is necessarily implied." And in Data of Ethics he says in substance that egoism without altruism, and altruism without egoism, are immoral; and if this is true in morals, it must be all the more true in economics and statesmanship.*

* Prof. John Fiske, undoubtedly the American leader both as a writer and thinker in the field of evolution, to whose instructive words delivered from our platform we have listened with delight and with whom we rejoice to enroll ourselves as fellow-workers, has treated the critical period of American history out of which the Constitution of the United States was evolved. A perusal of his book clearly discloses the fact that he would not agree with the views here only partially expressed and explained. He eulogizes Adam Smith and The Wealth of Nations, regrets that the principles he therein announced were not more fully carried out in our fundamental national law, and commends the limitations of the Constitution in the matter of the power to levy an export duty as so much gain to human progress. It seems to me he has not fully considered the subject or applied thereto the fundamental principles laid down by Mr. Spencer himself. As Mr. Buckle amply showed, Adam Smith, in writing his first book, A Theory of the Moral Sentiments, confined himself to the sympathetic or altruistic view, and in writing the Wealth of Nations confined himself to the egoistic

Soil exhaustion is but one of the hydra-headed progeny of unrestrained egoism. The effect of it is to take away what our friend Gunton calls "opportunity," and with it goes all possibility of the formation of rightly conceived individual character. Of this loss of opportunity every citizen becomes a victim, whether he lives in a city and has more indirect relations to land, or on a farm which he owns and upon which he labors, and from which he seeks the return for that labor. The direct and necessary effect of soil enrichment, however, and of the system of conduct thereby implied, is to increase every possible "opportunity" of every citizen.

My conclusion, then, is that no scheme of society or its reform whatever can be made to work toward righteousness and the progress of man and the state unless it begins or has its foundation in *absolute justice to the land.*

Dr. Robert G. Eccles:

All I can do is to indorse and confirm the positions taken by the speaker and by Mr. Skilton. In speaking of the exhaustion of the soil caused by the free-trade policy, the latter has given the advocates of that policy a very tough nut to crack. The direction of an industry of a nation is the direction of its intercourse; and this is the direction of its strength. If a nation trades with other nations—intermarries abroad, as it were—its home interests are weakened; but if it trades with itself, the bonds of consanguinity are strengthened. Under free trade the United States would do as Brazil is about to do—break up into two nations, or rather four or five.

The lecture of this evening was a poem, but also clear-cut and brimful of science. The lecturer adopted the true scientific method. He began at the beginning of the problem. He adopted the plan of Copernicus and Galileo in the study of the solar system, and not the crude way of the ignorant observer. He has regarded the problem from every point of view, and pointed to the interlocking of all its features. In this way only can we solve any social or scientific problem. What

or selfish point of view, being at the time when he wrote unable to combine the two views in one synthesis, because of the then imperfect state of human knowledge. Here, too, Buckle and his work broke down and failed. Mr. Spencer, however, has done what Adam Smith confessedly could not do, and has presented us with a system in which the opposite egoistic and altruistic views are harmonized in one and a higher view. And in so doing he has given us the new scientific gospel of the coming civilization. This higher view I have attempted, with what I know is but imperfect success at the best, to apply in the discussion of this topic. But I venture to ask, with sufficient modesty, whether enough has not been developed to show that it is necessary for the mass of the American people and their political parties to reconsider, not simply the questions of protection and free trade, but all the other affiliated questions, in the light of the new principle laid down by Mr. Spencer and of the history of a hundred years and more; and also whether the same reconsideration should not be made by the leaders of evolutionary thought and the teachers of the people in the application of that thought to the practical politics of the time?

should we know about botany without chemistry, or about chemistry without physics? Another grand point of the lecturer was the emphasis he laid upon the fact that true progress can only be attained by allowing every human soul to suffer the effects of its own conduct. The only way to civilize a man is to let him suffer the natural punishment of his acts. I regret that the lecturer did not go further into the question of land values and point out the fact that the "unearned increment" we hear so much about from those who study this as a distinct problem constitutes all there is of value to anything. There is no value in existence that is not unearned increment. This is demonstrated by examining the nature of value in exchange. Labor does not constitute it. Labor is a subsidiary element, but not the law of value. A man in Africa who picks up a valuable diamond has expended but little labor. Value depends solely on human desire—it is the measure of your desire as compared with mine. When we exchange a hat and a dollar, the desire for each is nearly equal on both sides. All this desire is unearned increment, for if I alone desire a thing it has no value, no matter how much labor has been expended in its production. Its value increases as the multitude which desires it. If we are to tax away the unearned increment of land, let us be consistent and tax the unearned increment of everything else.

Mr. J. Whidden Graham:

I could wish that the lecturer had paid more attention to the political aspect of this question—to the phase presented to us in every-day life, and emphasized in the single-tax movement. We have had a unique theory of the effects of free trade set forth to-night, as a tough nut to be cracked, but modern science has given us nut-crackers to use instead of teeth, and the breaking of this nut is no hard matter. It has already been done, and the kernel is found to be quite moldy. It is said that free trade impoverishes the soil—that this is the result of cotton exportation. Now, it makes no difference to the cotton-grower whether he ships his crop to England or to Massachusetts. The crop goes away from his farm, of necessity, and as there is no way to convert the cotton into fertilizers at home, it might as well go. The evil must be remedied in some other way, as it is done in Europe, by more scientific attention to the problem of fertilization.

The speaker of the evening is in practical accord with Henry George. The public has a right to take as taxes the value which the public creates, but it is absurd and iniquitous to tax those who improve the land for their improvements. I disagree with the speaker when he says that the system of land tenure is not important. Is the present system just or equitable? When we see vacant lots along our well-

paved, lighted, and protected streets, there is something wrong. A system which permits the locking up of land for speculation is bad. Taxing land values does not interfere with private ownership, but combines it with the recognition of the right of the public to the value it creates. It permits the best use of the land, and it does not permit the individual to hold the land unless he makes such use of it.

The definition of value given here this evening is new to me. If men could pick up diamonds on the streets, they would have no value. The average amount of time and labor required to find a diamond determines its market value. The labor cost has, up to this time, entered into all values. Henry George lays stress upon the fact that production is depressed and diminished under the present system of land tenure. Unoccupied coal lands and farm lands should not be allowed. It is curious that free trade should be attacked because foreign countries would be benefited by it. Would we not benefit by their trade as much as they by ours? Are not all such benefits mutual? Is it not to our interest that the whole world should be prosperous, so that every one can afford to buy our goods, and thus increase our own prosperity?

Prof. Mason, in closing: There is one thought I wish to leave with you. Look around you in New York and Brooklyn, where there is so much wealth and thrift and intelligence, and then look back to the beginnings of history at the poor little groups of human beings without experience or teachers or advisers, and reflect upon the rude and careless way in which the resources of life have been handled by man—then think with what rapidity he may go forward in the future, when he shall have begun to husband his resources. It took a millennium to make the stone hammer, but now we work more rapidly. It is a laudable ambition and hope to have some part in the new gospel of progress. If one can not himself invent a new machine, or discover the true method of working, he may at least be a colporteur to those who are less informed than himself. In a city all ages and conditions of men are represented. It is but a small portion of the nineteenth century which is in the nineteenth century; the rest is scattered back along the ages. The noblest ambition of our lives should be to take one individual out of the eighteenth century and bring him into the nineteenth, or to take the savage by the hand and lead him to civilization. Doing this, the problems we are studying will vanish like the snow before the sun.

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