LAND
in Our National Economy

THE most important facts in life is life itself. Descartes summarized this essence in the words, *Cogito, Ergo Sum,* "I think, therefore I am." Second in importance to life, itself, is the fact that man is a land animal. Professor W. MacNeile Dixon when discussing man's family tree in his well known Gifford lectures at the University of Glasgow about two decades ago, put it in these words, "It has dawned upon men that there is no escape from the conclusion that they [men] are simply animals, one species among thousands. . . ."*

Man, from time immemorial, has had to provide food, fuel, clothing, and shelter for the needs of his physical well-being. As soon as he passed the primitive stage in his history, he also became interested in gadgets to make his life easier. The substances out of which he provided and still provides these needs for himself, one and all, without exception, come from land. This postulate is emphasized quite unconsciously in the opening paragraph in the comprehensive five volume study, *Resources for Freedom,* a report made by the President's Materials Policy Commission and published by the Federal Government six years ago.

Resources for Freedom

In January, 1951, President Truman appointed a five man Commission to study the materials problem of the United States and the relation of that problem to the "free and friendly nations of the world." Included was the task of making an objective inquiry into all major aspects of the question of assuring

* *The Human Situation,* p. 113 (Edward Arnold, Ltd., London, Eng., 1954).

an adequate supply of production materials from asbestos to zirconium, from antimony to zinc, for our long-range needs, a task of world-wide scope. The results of this inquiry appeared in the extensive and interesting study, *Resources for Freedom,* published in June of 1952. This group of men who were solely concerned with the material well being of the Nation, not with philosophy or economics, did, however, postulate a basic economic truth in the opening paragraph of the first of these five volumes. That paragraph reads:

The Question, "Has the United States of America the material means to sustain its civilization?" would never have occurred to the men who brought this Nation into greatness as the twentieth century dawned. But with the twentieth century now half gone by, the question presses and the honest answers are not glib.

"Material means" in this paragraph, as the authors of the study paraphrased the explanation, stand for "the contents of the earth and its physical environment." It is only one short step from "the contents of the earth and its physical environment" to the realization that every material thing we have, all wealth,* all capital, comes directly or indirectly from land by the application of labor and capital. And capital is congealed labor just as matter, as we have learned in the atomic age, is congealed energy.

Land, as this brief quotation points out, is important for two reasons, first because of its natural resources, that is, "the contents of the earth," and second, because of its location, that is, "its physical environment." Land on Wall Street in New York, on La Salle Street in Chicago, on Market Street in San Francisco, is far more valuable than other land nearby because of its very location. Land near a railroad depot, near a boat dock, or near other locations which border traffic routes, becomes valuable. Land in growing population centers, tends to increase in value due to the monopoly of location and the demand for the use of particular sites by the growing population for manufacturing plants, wholesale and retail establishments, warehouses, offices, apartments, and residences. "Land is necessary to all production," one of our great economic philoso-

* There are two kinds of wealth, personal wealth and national wealth, and they may be very different. We are concerned with national wealth, what the noted Scottish Professor of Moral Philosophy termed the "wealth of nations." While wealth is the subject matter of economics, and, as such, its definition is of some considerable importance, it seems to receive far less consideration from economists on the stage today than from the "classical economists" at whom it has long been the fashion to poke fun. Definitions, and the differences between personal wealth and national wealth, are treated in a pamphlet by the author, *A Study of the Concept of National Income,* published by DUN & BRADSTREET, INC., in 1952.

phers wrote three quarters of a century ago, "no matter what be the kind or form; land is the standing-place, the workshop, the storehouse of labor; it is to the human being the only means by which he can obtain access to the material universe or utilize its powers. Without land man cannot exist."*

All-Importance of Land

This all-importance of land in the scheme of life was fully recognized by the economists of the latter part of the eighteenth, the nineteenth, and the early part of the twentieth century. The underlying and unquestioned importance of land as the source of all wealth and the site of all human activity, no longer seems to occur to our economists who are more concerned in the middle of this twentieth century with macro-economics than with the source of material wealth, and with material wealth, itself, and its distribution. Macro-economics is concerned with national monetary aggregates, concepts such as gross national product, net national product, national income, personal income, and personal savings, not national wealth.† Even though these studies, and the vast underlying compilations which are involved in providing the data, have become invaluable for understanding facets in our way of life, through them runs the confusion that the aggregate individual incomes of the people of the country for the production of goods and the providing of services, and national income, are synonymous. If we materially exhaust our national resources in the decades ahead, that is, greatly deplete our resources of iron, copper, zinc, lead, oil, it could logically happen, athough it is quite unlikely, that gross national product and national income as monetary aggregates could soar while our annual production of real national wealth could well decrease.

That our physical resources are of the utmost importance in understanding economics as the science of the nature, the production, and the distribution of wealth would seem to be the conclusion to be readily drawn from a careful reading of the five volumes of *Resources for Freedom.* Perhaps this emphasis

*George, Henry, *The Land Question*, p. 27, 1881 (Robert Schalkenbach Foundation, New York, N. Y., 1945 edition).

† John R. Fuchs in his book *Constructive Taxation for Free Enterprise*, p. 125 (Exposition Press, New York, N. Y., 1956) brings the contrast between money and land into sharp focus. He writes, "Land and power are, economically speaking, synonymous terms. If A controlled all the money in the world he would nevertheless be powerless if B owned the earth and refused to trade with him; and this would still be true if the number was increased to millions and billions of A's and B's. The land question is basic and dominates all other questions. . . ."

on "the contents of the earth and its physical environment" as the one and only source of wealth, by men who were not concerned with the changing streams of economic theory, but who were brought up sharply before a stone wall in grappling with the potential production problems of the immediate future, was needed to bring what would seem to be a basic economic fact, back into focus. We are as completely dependent on the land as the source of all our wealth as the earth is upon the sun for the energy it receives in the form of light and heat. The Report, for example, points out:

> The task assigned the President's Materials Policy Commission was to explore the Materials Problem and suggest ways by which private actions and public policies in the years ahead can help avert or overcome materials shortages which might threaten the long-run economic growth and security of the United States and other free nations. This undertaking implies a survey of a multitude of raw materials and the resources from which they come. It implies consideration of the productive forces of technology and energy by which iron ore becomes an automobile, or air an explosive—and the obstacles that tend to hold these forces back. . . .
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> The Nation's economic life calls for a vast and delicate balancing of multitudinous resources against continually changing needs and demands. The American pioneers had first to destroy trees so that they could plant corn. In a more complex world, minerals, fuels, forest and agricultural products, the land on which these grow and the water that nourishes the land must be variously dug, burned, felled, cropped, and constrained in inter-actions that reach further than we are aware of when we induce them. We grow and we destroy. We concentrate and we disperse. We nurture and we abandon. A chemist makes a crucial discovery, and the resource base for the production of women's stockings shifts from mulberry leaves in Japan to bituminous coal underlying West Virginia. A war occurs, and the material for tires and teething rings no longer comes from *Hevea brasiliensis* in Malaya but from Texas petroleum, natural gas, or ethyl alcohol made from molasses.*

As the Commission clearly explains in this interesting quotation, ". . . . minerals, fuels, forest and agricultural products, the land on which these grow and the water that nourishes the land must be variously dug, burned, felled, cropped and constrained. . . ." Such application of labor to produce minerals, crops, and cattle, has been true down through the ages. It was so with the Egypt of the Pharoahs, with the Persia of the Achaemenes, with the Greek city states in the days of Pericles, with the Rome of Pompey and Caesar, with Europe of the Middle Ages, in our own colonial days, and so it is today. The use of the soil to produce food, fuel, clothing, and shelter and the place to live and work and struggle, is synonymous with life, itself.

Women's stockings may be made from silk or nylon, but the basic raw materials whether obtained from mulberry leaves

* *Resources for Freedom*, Summary of Volume 1, p. 3.

in Japan or bituminous coal in West Virginia, are products of the land. The raw material out of which rubber is produced whether it is *Hevea brasiliensis* or petroleum, natural gas, and ethyl alcohol made from molasses, are products of the land. I suppose this unconscious harking back to the logic of the economists of the nineteenth century in the current recognition of the all-importance of land is the basis for the growth, in more recent years, of what is called "land economics." If Mother Earth is the source of all wealth, perhaps the wider conscious recognition of the return to nature is highly desirable in a machine age. Where did the machine, itself, come from? The Commission then continues:

> But these colossal interplays between resources more often take place in less dramatic ways; more often entirely within our own domestic economy and so slowly that we may be unaware of their significance for a decade. Energy for farming operations, once supplied almost entirely by draft animals, now comes chiefly from tractors, stationary gasoline engines, and electric motors. This considerable fact carries with it another, even wider ranging: in this process of change, the petroleum industry releases for other use no less than 60 million acres that would be necessary to feed draft horses to do the same work. (The nitrogen cycle is upset in the same process, and the loss of manure fertilizer must be compensated.) *Per contra*, farm land can be made to return the compliment by growing sugar to supply molasses to produce alcohol as a raw material for rubber—or for solvents having so many industrial uses they cannot be listed. Or it may be asked to supply corn products to be turned into glycerin for lacquers or explosives, or into fibers which bypass the sheep as a producer of wool. Farm and forest residues may combine into plastics, which petroleum products will also supply, and these plastics may supplant metals drawn from mineral deposits. The land itself may balance off in its uses in a variety of ways; the same acres can produce timber, a wide variety of crops, or pasture; decisions are made every day which affect the land; these decisions can affect the supplies of water available for nearby industry. As prices rise and fall, the resultant of thousands of forces, steel replaces wood in housing construction, or vice versa, or concrete replaces both. Glass increases while brass diminishes; plastics from coke ovens supersede porcelain enamels; paint pigments begin to come from sands in Florida instead of from galena deposits in Missouri. The rise and fall of materials streams constitute the great fugue of our industrial times.*

Here is further elaboration of the same timeless theme. We have indeed seen a change in the form of energy used in farm operations from horses and cattle to the internal combustion engine and the electric motor. Horses and cattle are raised on the land and are fed the products of the soil. What is the source of the raw materials from which our tractors, our stationary gasoline engines and our electric motors are assembled? Does not every wire, nut, screw, bolt, and casting come from the land. And where does the petroleum come from, petroleum from which gasoline is refined to provide the new form of energy through the medium of the internal combustion engine? And

* *Ibid.*, pp. 3-4.

so it goes with every other material item mentioned in this quotation from the summary of Volume I of *Resources for Freedom,* corn products to be converted into glycerin for lacquers or explosives or into fibres which bypass the sheep as a producer of wool; farm and forest residues combined into plastics; steel, wood, concrete, glass, brass, porcelain enamels, paint pigments.

"The rise and fall of materials streams," as the Commission so aptly summarizes, certainly "constitute the great fugue of our industrial times." These streams of materials also constitute our daily debt to the earth on which we live, just as have the needs of man over the centuries of his early pastoral and agricultural life, his pre-history life, and his life in this atomic age. Perhaps the understanding of the single source of the origin of all material things from airplanes to zaratite, might help to make economics the science of the nature, production, and distribution of wealth, and as Rudolf Bultmann might write, "rationally intelligible as a unity."

Wealth of Nations

The realization of what comprises the wealth of nations might well again be dawning because of the changing times. It is like the rediscovery of the great classics of the ancient world during the Renaissance. A basic theme which flows through the works of Adam Smith, J. S. Mill, David Ricardo, and Henry George, would seem to be in process of re-discovery as we, as a nation, no longer can produce our requirements of one form of wealth after another. Strange as it may seem in the middle of this twentieth century we have become, as the *Resources for Freedom* emphasizes, the world's largest importer of copper, lead, and zinc; once we were huge exporters! We have begun to acquire from foreign sources a sizable and growing portion of our needs for petroleum and iron ore, the most basic raw material requirements for sustaining our present culture. We have shifted from being a net exporter to a net importer of lumber. There are today only two metals, magnesium and molybdenum, used in our industry for which we are not partially or wholly dependent on foreign countries.

In the year, 1950, we used 2.7 billion tons of minerals, timber products, and agricultural products. It is estimated that

by 1975, if the total materials streams in use should rise only 50 to 60 per cent, the volume of consumption would aggregate 4 billion tons annually. If, by that time, we have succeeded in increasing our imports to one-quarter of our consumption—a high estimate—we shall still be drawing much more heavily upon our domestic resources than we are today. And every ounce of that 4 billion tons will have come from the land. Some minerals, like industrial diamonds, mica, and tin, have never been found in commercial quantities and grades in the United States. Others are still abundant. The critical problems center in those minerals still produced in the United States but whose reserves no longer appear adequate, copper, lead, zinc, uranium, vanadium, tungsten.

The Megalopolitan City

Unfortunately, to the city child of today, milk apparently comes not from the cow that feeds on the grass and grain of the land, it comes from the milkman; gasoline comes not from black petroleum down in the secret depths of the earth, it comes from the corner gasoline service station. To the city adult of today, an automobile is not a product of land, every element in its construction having first been mined or produced from land, then refined, treated, stamped, cast, machined, woven, and fitted together with great precision; it comes from an assembly plant.

Few, except those who work with nature, seem to realize that the raw materials which go into all wealth, no matter what the form or nature that wealth may be, come from the one all-embracing source, and not only the raw materials which go into wealth, but even the human being, *homo sapiens*, his very self. Farmers, cattle raisers, geologists, prospectors, miners, oil drillers, quarry workers, and lumbermen know the difference. Their very livelihood seems to make the difference. Gerald Vann, in the words and phrases of the poet, explains the deep tragedy which the city has brought in drawing man away from the land:

> It is not only love that thus withers if it is torn away from its roots in Nature: it is man as a whole, body, mind, and heart. It is not for nothing that the story of man begins in a garden. All through the ages men have learnt something, have learnt a great deal, simply from their awareness of field and forest, of green and growing things, of birds and animals, of sun and moon and stars. . . . The pattern of social life, the system, is such as to make us forget our roots in Nature unless we react very strenuously against

it. We live in a cellophane age; more and more, things come to us at fourth or fifth removed from their natural state: the canned food and the canned music; the air-conditioned rooms and the potted "reader's digest"; and life becomes more and more, in the strict sense, unnatural, and therefore more and more unreal.

. . . It would seem likely that any such recovery [of "our roots"] . . . must remain impracticable so long as the general structure of life as it is lived in the great cities, in our industrialized, technological society, remains as it is: remote from Nature, remote from the earth, wrapped up in cellophane. . . . The cellophane age creates cellophane personalities; the cellophane personalities in their turn acquiesce in the cellophane age: how is the vicious circle to be broken into? . . .

Man is an animal: his roots are in Nature, in the earth. That is not to say that he needs, for his own personal fulfilment, to be a farmer or a gardener or to live in the country; but it does mean that if he lives in a city it must be a "natural" city, where he is in contact with Nature none the less, with green and growing things, with the rhythm of the cosmos.*

One hundred and fifty years ago, even one hundred years ago, when we were still an agricultural nation, and all except a small percentage of our population lived on the farm, there was a general realization that all wealth was produced by the application of labor, or labor and capital, to nature. Land was indeed Mother Earth. Now we have the megalopolitan city, and the great masses of people are urban bred. What a difference the city has made in understanding the basic importance of the bounteous gifts of nature by both the young and the old; as Gerald Vann wrote, "things come to us at fourth and fifth removed from their natural state" and too few can go back through the steps from the apparent source to the prime source of what we have. Pierre-Joseph Proudhon had a somewhat similar feeling for the wayside country; for him, however, it was necessary to get back to nature to get rid of the crushing burdens of the State.

Land Hungry Colonists

Last year—1956—almost without notice the economy of the United States as reported from Washington "passed a major milestone." For the first time in our history, the number of people employed in the direct production of goods was fewer than the number employed in everything else — government, trade, services, finance, utilities, transportation. These are arbitrary breakdowns of our laboring force but the statement does indicate the ability to produce more and more things with a decreasing proportion of our workers, as capital—wealth

* Vann, Gerald, *The Water and the Fire*, pp. 12-13, 147 (Collins, London, Eng., 1953).

used in the production of more wealth—has steadily increased.

Between the middle of 1947 and the middle of 1956 the production of things went up approximately 45 per cent. During the same period the number of factory workers went up a little less than 3 per cent. Each worker, on the average, produced more, not because he worked harder or longer—he worked less, in fact—but because, in immediately prior years, his labor had been transmuted into more and better machinery.

This recent change in the complexion of our working force is a far cry from our colonial days when manufacturing was primarily a household matter, a Robinson Crusoe technique, when all but a minor proportion of the settlers in the thirteen original colonies were farmers. When one visualizes a castaway on an uninhabited island, it is not difficult to realize that such food as he might obtain, such shelter as he might provide for himself, such clothing as he might put together to protect his body, and such comforts and tools, no matter how primitive, that he might be able to make, one and all must come directly or indirectly from the land. Daniel Defoe's well-known hero planted, cultivated, and harvested his own rice and barley, dried grapes for his raisins, domesticated a flock of goats, made his own chairs, tables, earthen pots, a canoe, and wove his own baskets. It might take days to hack one plank from a single tree but planks were a necessity for carpentry.

The creation of a way of life where there had been only wilderness epitomizes the far-flung settlements in America in the sixteenth and seventeenth centuries. With the exception of such food and articles as they brought with them, the settlers at Jamestown in 1607 could look to only two sources for additional food and comforts of life, namely, trade with the native Indians, and the application of labor and capital to land or the products of land. Such food and comforts as were obtained in trade with the Indians had already been derived from the one and only original source.

By 1574, approximately one-third of a century before Captain Newport had set "saile" from London with the Jamestown settlers on the three little ships, the *Sarah Constant*, the *Godspeed*, and the *Discovery*, the Spanish settlers in America numbered 152,500. The Spaniards had found the world's richest silver mine at Potosi in 1545. It was the steady flow of this precious metal from the New World which provided the wealth

to maintain dominance over a commercially expanding Europe down to the defeat of the Invincible Armada. If the Spaniards could find silver and gold so easily in Mexico and Peru, the English could do likewise in Virginia! It was far-fetched reasoning and expectation from our enlightened viewpoint, but it must be realized that the early and primitive descriptions of the natural resources of this hemisphere were based largely upon a misleading idea of the geographical extent of the profitable exploits of the Spanish conquerors and explorers in Central and South America. These exploits, however, were the most profitable of their kind in all the pages of history.

Jamestown Settlement

Almost the entire face of Virginia at the time of the first settlement, we are told by the early explorers and settlers, was concealed by primeval forests. The new arrivals exclaimed in terms of admiration and astonishment at the size and height and variety of the trees. The *Colonial British State Papers,* according to the diligent research of Philip A. Bruce, contained the opinion that the new country presented to view the finest timber that the world afforded, and that this timber was adapted to the greatest multiplicity of purposes, whether in the building of ships, or the erection and ornamentation of houses.* The pine, walnut, locust, chestnut, cypress, and several varieties of oak were widespread across the landscape. So lofty and erect were many of the great oaks, and so great their diameter, that their trunks afforded planks twenty yards in length and two and one-half feet square. Here were extensive, natural and valuable offerings of the land which extended inland as far as the eye could see. Here the settlers were to provide their livelihood first hand from their natural surroundings.

While the forests were the most evident wealth of natural resources, the colonists soon learned of other gifts of nature. The great sturgeons in the river, the luscious oysters on the rocks, "mussels with their hidden pearls," flowers in the woods, wild strawberries twice as large as those in England, filled the newcomers with admiration. Virginia, indeed, presented a fair appearance. This is all described in great detail in the first volume of Philip Bruce's fascinating and exhaustive study,

* Bruce, Philip A., *Economic History of Virginia in the Seventeenth Century,* Vol. 1, p. 85 (Peter Smith, New York, N. Y., 1935).

Economic History of Virginia in the Seventeenth Century, published a little over two decades ago.

The charter of the London Company which financed the first permanent settlement at Jamestown, was granted to Sir Thomas Gates, Sir George Somers, Edward-Maria Wingfield, Thomas Hanham, Raleigh Gilbert, William Parker, George Popham, and "divers others," merchants, traders, and landed gentlemen. These men knew no more about America than the typical, present-day investor knows about the oversea interests of any large American corporation with ramified international interests in which he is a stockholder. Moreover, these early seventeenth century shareholders expected a profit from their investment just as present day stockholders expect dividends from their investments. The shares in the London Company were originally sold to two hundred and three investors at twelve and one-half pounds each. Thirteen of these original shareholders were also investors in the Muscovy Company that had a monopoly of the trade with Russia, and one hundred and sixteen were investors in the more successful East India Company. Quick profits and large profits were the order of the day and age. Here, however, was a dubious financial speculation if ever there was one, and as the years went by, losses were piled upon losses.

Every man, woman and child above ten years of age whose transportation was paid to the colony by the Company, received one share interest in the venture, the same shares for which investors paid twelve and one-half pounds each. The adventure of settling in America was to mean primitive hardships, unbearable heat, unwholesome water, disease, fighting for one's life, and the slow stark ebbing of life in the face of dwindling food supplies and vacillating Indian tribes, now very friendly, now cunningly hostile. This was particularly true in the early years of the colony, when there was such a complete failure to provide adequate food supplies, and to realize that wealth in the form of precious metals was not located along the North Atlantic seacoast awaiting exploration and the conquering European, as the early Spaniards had found it so easily in the land far to the south. For his one share interest, each settler agreed to labor seven years in behalf of the Company.

The London Company would own the requisite buildings, it would send over from England the necessary food, guns, ammunition, farming equipment, tools, cattle and household goods;

and it would hold full property rights for the seven years in the labor of the settlers. Under this arrangement the Company would provide taskmasters; it would "feed" and clothe the laborers; and it would own the produce resulting from their labor. Everything produced would go into a storehouse in which the colonists would have no immediate financial interest. At the end of seven years there would be a distribution in land, optimistically expected to be "five hundred acres at least" for each share interest.

Under this unusual and impractical plan of operation—most important, it seemed at the time, for the success of the Company—it shortly became evident that there was a natural disposition on the part of the settlers to idle over their tasks, or to avoid the performance of these tasks, altogether. Men, even slaves, have rarely been known to labor conscientiously when the profit of their labor went wholly to others.

The immediate task of the settlers, one and all, upon reaching Jamestown, was to obtain open ground in which seeds could be planted. To obtain open land, forest land had to be cleared with hand tools. Here was the most tedious and difficult task. By the time winter had come around the area of ground cleared had not exceeded four acres. The colonists had not yet learned from the Indians that the most primitive method of destroying trees was to tear the bark in circles from the lower trunks before the spring sap had begun to rise from the roots. They were in dire need of open ground, and the only way to obtain it for immediate use was by the application of the axe to the primeval woods surrounding them on all sides. In January, 1608, when Captain Newport made his first return voyage with additional supplies and more recruits, the original 120 settlers which had set sail from England about one year earlier had been reduced to forty.

Wretched idleness became the fruit of the program under which the settler was to labor seven years in behalf of the London Company before he received his dividend in land. There was just as little incentive to the colonist to put forth his best efforts as in Soviet Russia today, perhaps even less so, as virgin land spread out in every direction as far as the eye of the colonist could see. The results of the laboring colonist's toil, no matter how hard and conscientiously he worked, flowed into the company's warehouse, and he gained little or nothing for him-

self beyond a bare subsistence. Why should he not work for himself instead of laboring seven years for the entire benefit of the London Company?

In 1611 Sir Thomas Dale arrived as Governor of the colony, as oppressive a tyrant as ever held office in America. Along with his utter ruthlessness he possessed singular energy and decisiveness. Promptly he put into effect measures to change the prevailing unsatisfactory arrangements by giving each settler an immediate interest in his own labor. Three acres of land were set apart for the personal use of each individual. One month of free time was granted to him in which to cultivate his own plot and a small stock of corn was allotted to him from the common store. This innovation provided an incentive for each colonist to raise food for his own needs, but even this change could not salvage the system of Company tillage. It was too repellent to attract settlers from England, and it lacked the element of direct and personal supervision. So, after a few years of this experimentation, the development of planting in the lowlands of Virginia fell into the hands of individual landowners who secured estates by investment, purchase, or grant, and obtained by one process or another laborers—freemen, bond servants, or slaves—to cultivate their wide acreage.

When Dale left Virginia in 1616, the days of illusion were over and the colonists realized that their future was tied up with the development of the agricultural resources of a fertile country. The colonists then numbered 350 and they were well supplied with cattle and hogs. It was within this period that a special impetus was given to the economic life of Virginia by the discovery of a single staple product of the soil that could be grown easily in large quantities and exchanged readily for cash and goods, namely, tobacco. Very early the settlers learned that little money was to be made by raising corn, by making iron and glass, or by exploring for the precious metals. They turned almost to a man to the cultivation of tobacco as a profitable money crop, planting it even in the streets of Jamestown.

In addition to bringing quick prosperity, tobacco now gave a decided bent to the course of social development. It determined that the land, especially on the seaboard, should be tilled primarily, not by small freeholders such as settled in New England, but rather by servile labor directed by the lords of great

estates. So the tobacco plant, a product of the soil and sunshine, unfolding its broad leaves in the moist air and hot sun of Virginia gave a direction to the economy which was to remain unchallenged until Eli Whitney gave the great impetus to the production of cotton by the invention of the cotton gin in 1793.

Agriculture and Handicraft

Now, let us leave the original settlement in Virginia and get a general picture, if we can, of economic life in the various colonies. Curtis P. Nettles, in his fascinating and comprehensive volume on our colonial life, *The Roots of American Civilization,* paints this picture in vivid hues:

> During the seventeenth century between 90 and 95 per cent of the settlers were engaged in agriculture, although the colonial farmer was also generally a hunter, builder, artisan, and in places a lumberman and a fisherman. The New England and middle colonies developed a diversified, nearly self-sufficient economy centering in grains, livestock, and household manufactures. The surplus and therefore the exports of the middle colonies consisted chiefly of wheat, flour, beef, and pork, while New England—less adapted to farming—produced little or no surplus of foodstuffs and depended more upon household manufacturing and specialized trades such as lumbering, shipbuilding, shipping, and fisheries. Thus New England's export, which matched the grains, cattle, and meat of the middle colonies were fish, lumber, ships, shipping services, earthenware, woodenware, leather goods, woolen cloth, and even ironware. Virginia and Maryland produced more pork, Indian corn, vegetables, and fruits than did New England but less than the middle colonies. Tobacco, the great staple of Virginia and Maryland, taking the place occupied by manufactures and the fishery in New England and by wheat in the middle colonies, enabled the Southerners to purchase such provisions and merchandise as they needed. . . . North Carolina resembled Virginia and Maryland save that tobacco was less important and food production and household manufactures relatively more important. The agriculture of South Carolina was of the diversified type until the growth of rice production in the 1690's.*

In the seventeenth century as Nettels writes, "between 90 and 95 per cent of the settlers were engaged in agriculture." Our population in those days was small and scattered, by 1690 amounting, it is said, to only a quarter of a million souls. But here they worked directly on the land although quite naturally the crops were different in the different colonies, fish, lumber, and ships in New England, wheat, beef and pork in the middle colonies, and pork, Indian corn, vegetables, tobacco, and rice in the southern colonies. This, however, is only part of the story. The settlers were also able at handicraft, as they had to be. They built their own houses, made their own furniture, and put together with great ingenuity their own farming tools and

*Nettels, Curtis P., *The Roots of American Civilization,* pp. 229-230 (F. S. Crofts & Co., New York, N. Y., 1938).

equipment. That is, they made the gadgets they needed to help in their occupation and in raising, as we say today, their "standard of living" by applying their labor to the products of the land to produce capital. The main occupation was working on the soil, being at one with nature, day after day, but colonial farming did not absorb one's whole energies. The colonial farmer had plenty of time particularly in the late autumn and the winter to use his hands to erect houses, and to make furniture, tools, and equipment. Nettels also paints this collateral picture:

> The farmer in the middle colonies and New England acquired no little skill with axe, saw, and hammer. He felled the timber for his house and barn, shaped planks, rafters, shingles, clapboards, and flooring, and did much of the actual construction, although his neighbors helped him to put the heavy framework into place. He also quarried and dressed stone but he generally employed a stonemason to build the chimneys and foundation of his house. Using twisted tree limbs or branches he fashioned sled runners, scythe handles, ox yokes, harness hames, and hay forks. In place of a wagon he depended upon a cart, the wheels of which he made from ends of large tree trunks cut crosswise, while the feed troughs for his stock were probably hollowed-out logs. Spade and shovel handles, flails, plows, harrows, axe-helves, rakes with wooden teeth, brooms made from hickory saplings or hemlock branches, baskets fashioned from birch bark—all these testified to his skill as a woodworker. His house contained homemade chairs, benches, tables, bedsteads, stools, cradles, chests, spoons, and plates or trenchers (blocks of wood hollowed out on top). As a cooper he manufactured boxes, casks, and barrels. In the tobacco colonies indentured servants who were coopers or carpenters specialized in their trades, thus leaving the planter free to farm or manage his estate.*

In 1831 and 1832, many decades after the period about which Nettels wrote, Alexis de Tocqueville travelled over seven thousand miles in the United States and Canada, from Boston to Green Bay, from Quebec to New Orleans, obtaining first hand information on democracy in America. He arrived at a similar observation about the American farmer. "In America it sometimes happens," he wrote, "that the same person tills his field, builds his dwelling, fashions his tools, makes his shoes, and weaves the coarse stuff of which his cloths are composed."†

What was the source of the materials out of which the colonial farmer fashioned his handicraft products? The land was the source of all wealth which the colonists produced just as the land is the ultimate and basic source of all that we have. The colonist was in tune with nature because he and nature provided the livelihood for his family. He was not removed to the fourth or fifth factor like our urban population to whom Elsie is a figment of advertising ingenuity. The timber for his house

* *Ibid*, p. 239. † de Tocqueville, Alexis, *Democracy in America*, Vol. 1, p. 425, 1835 (Alfred A. Knopf, New York, N. Y., 1956 edition).

and barn, for planks, rafters, shingles, clapboards and flooring, the twisted tree limbs or branches for sled runners, scythe handles, ox yokes, harness hames, and hay forks came from the one and only available original source. The stone which was quarried and dressed for the chimneys and for the foundation of his house came from the same ageless source.

Down through the ages man has lived with the seasons. Along with the changes in nature he changed his way of life. All nature is rhythm and so is life. In the spring, he plowed and tilled the soil, harrowed, and planted his seed, the activity of each day depending upon the temperature, the sun, and the rain. It is no wonder that primitive man living on the soil in widely separated parts of the world, invariably had a cult of an Earth-goddess. In the summer he cultivated his crops and began to harvest a little. In the autumn he completed his harvesting and prepared for the quiet winter months. Then when winter came around, he communed with his thoughts, he had the time to think and reason, and to carry on his handicraft operations. No matter what the season, he was at home with and worked with nature. He was the embodied spirit of the countryside. That was all changed with the industrial revolution and the megalopolitan city.

Life at Mount Vernon

In the years 1804-1807, John Marshall, most noted for his trenchant decisions as Chief Justice of the Supreme Court and the part those decisions played in establishing the complete independence of the Court from the administrative and legislative divisions of our Federal Government, wrote and published a five volume biographical study entitled *The Life of George Washington*. Some portions of these five volumes were based on original papers bequeathed to his nephew, Bushrod Washington, by George Washington, and which had been turned over to John Marshall for his use in hours off the bench to compile this extensive biography. Two quotations from these five volumes are of interest to us as they illustrate that George Washington was, in truth, a country gentleman. Not once, but twice, when he had completed assignments given to him by those in supreme authority, he returned to his home at Mount Vernon, a happy and contented gentleman farmer, a man at home with the

soil and who recognized that all material possessions come from this one ultimate source.

The fourth volume of this biography ends with a brief description of the farewell dinner at Frances' Tavern* in New York City held at noon on December 4, 1783, when Washington bid farewell to his intimate associates and fellow officers in the Continental Army. After the dinner Washington left New York for Annapolis where the Continental Congress was in session "for the purpose of resigning into their hands the authority with which they had invested him."† This he did at a public audience on Tuesday, December 23, 1783. Then, in the very last paragraph in this volume, Marshall wrote with quiet restraint the first quotation which is of interest to us: "Having laid down his military character, General Washington retired to Mount Vernon, to which place he was followed by the enthusiastic love, esteem, and admiration of his countrymen."‡

In 1797, fourteen years later, after Washington had served his two terms as the first President of the United States and had been succeeded by John Adams, Marshall, in the fifth and last volume of the biography, wrote with the same quiet simplicity about the parting for his home in Virginia: "After the solemnities of the occasion had been concluded, and he had paid to his successor those respectful compliments which he believed to be equally due to the man and to the office, he hastened to that real felicity which awaited him at Mount Vernon, the enjoyment of which he had long impatiently anticipated."§

For one, even in this day and age who has lived his daily life in an urban city, and who has joined the throngs on a pilgrimage to the Mount Vernon of the mid-twentieth century, the all-importance of land becomes immediately and clearly evident. In the forty-five years of George Washington's tenure, Mount Vernon grew in size from twenty-one hundred and twenty-six acres to somewhat over eight thousand acres. The estate "was divided into five farms, each a complete unit, with its overseer, workers, live stock, equipment, and buildings. The four outlying farms were highly developed and well cultivated. The brick barns on several of them were not excelled by any of that period in America: one, a sixteen-sided structure designed by General Washington, had a threshing floor in the loft which was

*This historic edifice is now known as "Fraunces Tavern." †Marshall, John, *The Life of George Washington*, Vol. IV, p. 621 (C. P. Wayne, Philadelphia, Pa., 1805). ‡*Ibid.*, p. 626. §*Ibid.*, Vol. V. pp. 730-731.

unique. It was the master's custom, when in residence, to ride daily about his farms, inspecting, planning, and directing." Washington, it is said, "was one of the most progressive farmers of his day, despite the major diversions created by his public service. Observing the ill effects of continued tobacco cultivation on his land he turned, as early as 1766, to a system of crop rotation which favored soil conservation. He corresponded with leading agriculturists of his day and in his travels was a keen observer of crops and farm methods, even when military problems or affairs of state weighed heavily upon him."*

A little more than fifty years after John Marshall wrote his biography of George Washington, Washington Irving, now well along in years, completed his five volumes on the *Life of George Washington*. "A large Virginia estate," Irving describes in this biography "was a little empire. The mansion-house was the seat of government, with its numerous dependencies, such as kitchens, smoke-house, workshops and stables." The planter had his legion of house negroes for domestic service, and his host of field negroes for the culture of tobacco, Indian corn, and other crops, and for other out of door labor. The negro quarters formed a little hamlet apart, composed of various huts, with little gardens and poultry yards, all well stocked. There were larger wooden edifices for curing tobacco, the staple and most profitable production, and mills for grinding wheat and corn.

Mount Vernon, with its over eight thousand acres, was a typical example of one of these little empires, and the orderly arrangement of its dependencies imparted a village-like character to the group of buildings about the mansion-house. In 1786 there were about ninety people in residence at the Mansion House Farm, most of them domiciled in the formal area. In addition there were over one hundred and fifty people living on the four tributary farms. All had to be fed and clothed. Of necessity Mount Vernon was, as nearly as possible, a self-contained community; nothing was purchased which could be produced on the estate. Irving describes a typical plantation:

> Among the slaves were artificers of all kinds, tailors, shoemakers, carpenters, smiths, wheelwrights, and so forth; so that a plantation produced everything within itself for ordinary use: as to articles of fashion and elegance, luxuries, and expensive clothing, they were imported from London; for the planters on the main rivers, especially the Potomac, carried on an immediate (direct)

**Mount Vernon, A Handbook*, pp. 21-22 (The Mount Vernon Ladies' Association of the Union, Mount Vernon, Va., 1947).

trade with England. Their tobacco was put up by their own negroes, bore their own marks, was shipped on board of vessels which came up the rivers for the purpose, and consigned to some agent in Liverpool or Bristol, with whom the planter kept an account.*

Washington was essentially an agriculturist; he was close to the soil throughout his life, with the knowledge that here was the source of all food, fuel, clothing, shelter, and comforts. When on military campaigns he kept himself constantly informed about the course of rural affairs at Mount Vernon. With maps on which every field was laid out and numbered, he was able to give directions for their several cultivation, and to receive accounts of their respective crops. No hurry of affairs prevented a correspondence with his overseer, and as Irving wrote, "he exacted weekly reports." In this way the agriculturist was mingled with the soldier with his constant interest in the cultivation and use of the soil.

It was also essential, if his farms were to prosper, or just to remain self-supporting, that their activities be closely supervised by the proprietor, or in his absence by his overseer. Washington was an able manager and, when in residence an active one:

To James McHenry, Secretary of War (in 1796-1797), he wrote, "I begin my diurnal course with the sun; if my hirelings are not in their places at that time, I send them messages of sorrow for their indisposition; that having put these wheels in motion, I examine the state of things further; and the more they are probed the deeper I find the wounds which my buildings have sustained by an absence and neglect of eight years; that, by the time I have accomplished these matters, breakfast . . . is ready. This being over, I mount my horse and ride round my farms, which employs me until it is time to dress for dinner, at which I rarely miss seeing strange faces, come, as they say, out of respect to me."†

Some industrial activity was carried on, supplementary to agriculture as the primary occupation of the colonists. The most important of the natural resources were the forests which extended from Maine to California, a basic product of the timeless soil. So sawmills were set up, ships were built, naval stores such as pitch, tar, turpentine, and resin were produced. Potash was produced as a by-product of clearing the land for farming. Some smelting of crude ore and its conversion into pig or bar iron, and then the manufacture of small finished articles from the refined iron was also carried on in most of the colonies. But, by and large, a high proportion of all manufacturing was of the handicraft variety carried on at home. This was also so at Mount Vernon.

* Irving Washington, *Life of George Washington*, Vol. 1, p. 315, (G. P. Putnam, New York, N. Y., 1857). † *Ibid.*, Vol. V, p. 274, (G. P. Putnam, New York, N. Y., 1859).

The spinning house was the most important structure on the north lane. Ten or more women were constantly employed here, spinning and knitting. The wool, flax, and cotton fibres with which they worked were grown on the place. In 1768 this domestic textile industry is reported to have produced eight hundred and fifteen yards of linen, three hundred and sixty-five yards of woolen cloth, one hundred and forty-four yards of linsey (a combination of wool and linen), and forty yards of cotton. These figures are not impressive but are unusual for the time and locality. The loom, reels, and spinning wheels now displayed in the spinning room are representative of the equipment originally used there. Some of them were collected in the neighborhood over fifty years ago and are believed to have been originally at Mount Vernon.

Three small buildings, the smokehouse, washhouse, and coachhouse, on the south lane below the butler's house, are open to public view. A coach which was owned by a friend of General Washington is displayed in the coachhouse; it was made by the builder of his own coach. The smokehouse seems scarcely adequate in size to have served the needs of the establishment. In January, 1776, Lund Washington reported in a letter to his employer that he had killed one hundred and thirty-two hogs, and remarked, "When I put it up I expected Mrs. Washington would live at home, if you did not, and was I to judge the future from the past consumption, there would have been a use for it,—for I believe Mrs. Washington's charitable disposition increases in the same proportion with her meat house."*

So, Mount Vernon was a self-contained community with the exception of articles of fashion and elegance, luxuries, and expensive clothing which were imported from London. All food, fuel, and necessities of daily life for the owner, his family, workers and servants were grown, produced, and made on the premises, year after year.

Rural and Urban Population

In 1790 when the first census was taken we had a population of 3,929,300 of which 3,727,600 or 94.9 per cent were rural and 201,700 or 5.1 per cent were urban. The urban population, in general, was the population living in incorporated places having 2,500 inhabitants or more. By 1800 our population was 5,308,500 of which 4,986,100 or 93.9 per cent were rural. Ten years later our population had increased to 7,239,900 of which 6,714,400 or 92.7 per cent were rural. By 1830 the rural population represented 91.2 per cent of the total, by 1840, 89.2 per cent, and by 1850, 84.7 per cent.

The great colonizing movement which carried the frontier of settlement across the Alleghenies was a combined agricultural and land-speculating one. As land was taken up along the seacoast, waves of Easterners and land-hungry immigrants began to move westward. As the settlers pushed through west-

*_Mount Vernon, A Handbook_, pp. 68-69 (The Mount Vernon Ladies' Association of the Union, Mount Vernon, Va., 1947).

ern New York and Pennsylvania to Ohio, Indiana and Illinois, they reproduced the typical frontier conditions of colonial days, with their primitive exploitative agriculture, lack of markets, rough life, and isolation. This westward moving frontier was characterized by the self-sufficiency of the typical pioneer farmer with his roots in all-pervading nature. Without communication to convenient or profitable markets, the needs of the farm family determined the use of the land, the crops to be planted, and the cattle to be raised. It is difficult to say just when this pioneer period came to an end in any locality, but by 1830 frontier conditions were no longer typical in Ohio, and by 1850 they had passed beyond Indiana, Illinois, and southern Michigan. Land speculation never did abate.*

The movement of the population to the city, which was perceptible in the 1820's became quite marked after 1840. In 1790 there had been only 5 cities with a population of eight thousand or more; by 1840 the number had increased to 44, and by 1860 to 141. The urban population grew five times as fast as that of the country as a whole. Then, as today, the chief causes of this urban concentration were the improvements in the means of transportation and the increased use of machinery in the production processes. Population was massed in the growing factory towns and cities to supply the needed labor for the expanding manufacturers. The industrial locations in New England grew the fastest, and places like Lowell, which were unheard of in 1820, became flourishing cities by 1860.

The table on the following page, compiled by the Bureau of the Census, gives the total population of the United States for each census year from 1790 to 1950 and also for the interim year of 1956. These figures are broken down into urban population and rural population and the percentage of each of these groups to the total.

Between 1850 and 1860 our total population increased from 23,191,900 to 31,443,300 and our rural population from 19,648,200 to 25,226,800. In this decade, however, the rural population decreased from 84.7 per cent to 80.2 per cent of our total population. After the Civil War the old America with her small-scale manufacturers and the majority of small farmers was gone forever. A giant made of steel, steam, and oil was rising instead,

*See two volumes by Aaron M. Sakolski, *The Great American Land Bubble*, (Harper & Bros., New York, N. Y., 1932) and *Land Tenure and Land Taxation in America*, (Robert Schalkenbach Foundation, New York, N. Y., 1957); also by Alfred N. Chandler, *Land Title Origins* (Robert Schalkenbach Foundation, New York, N. Y., 1945).

drawing into its expanding cities millions of immigrants and native farmers, uprooting entire rural populations, and spreading tentacles over the entire continent.

In 1880, there were 50,155,700 Americans, 36,026,000 of them living in rural areas. The next fifty years was to witness the dramatic metamorphosis of a predominately rural America with its roots consciously in the soil, into an overwhelmingly urban society. The flight from the land was partly masked by the steady increase in immigration from the Old World, but the flight had nonetheless become alarming in the eastern United

POPULATION OF THE UNITED STATES
TOTAL, URBAN AND RURAL*

	Total Population	Urban		Rural	
		Population	Per Cent	Population	Per Cent
1790.....	3,929,300	201,700	5.1	3,727,600	94.9
1800.....	5,308,500	322,400	6.1	4,986,100	93.9
1810.....	7,239,900	525,500	7.3	6,714,400	92.7
1820.....	9,638,500	693,300	7.2	8,945,200	92.8
1830.....	12,866,000	1,127,200	8.8	11,738,800	91.2
1840.....	17,069,500	1,845,100	10.8	15,224,400	89.2
1850.....	23,191,900	3,543,700	15.3	19,648,200	84.7
1860.....	31,443,300	6,216,500	19.8	25,226,800	80.2
1870.....	38,558,400	9,902,400	25.7	28,656,000	74.3
1880.....	50,155,700	14,129,700	28.2	36,026,000	71.8
1890.....	62,947,700	22,106,300	35.1	40,841,400	64.9
1900.....	75,994,600	30,159,900	39.7	45,834,700	60.3
1910.....	91,972,200	41,998,900	45.7	49,973,300	54.3
1920.....	105,710,600	54,158,000	51.2	51,552,600	48.8
1930.....	122,775,000	68,954,800	56.2	53,820,200	43.8
1940.....	131,669,300	74,423,700	56.5	57,245,600	43.5
1950*(a)....	150,697,361	88,927,464	59.0	61,769,897	41.0
1950*(b)....	150,697,361	96,467,686	64.0	54,229,675	36.0
1956*.....	164,308,000	103,631,000	63.1	60,677,000	36.9

States. Like Roman Italy, two thousand years earlier, the United States was becoming a land of city-dwellers, of rootless population divorced from the soil, conglomerating into gregarious and increasingly impersonal crowds. By 1880, half of the eastern population had become urban and the waning of eastern agriculture was proceeding at a rapid rate.

By 1900, although the rural population had continued to increase to 45,834,700, the percentage of the total population represented by rural inhabitants had decreased steadily. In 1900

* Revised census definitions used in the 1950 *(b)* figure include as "urban," places of under 2,500 population and unincorporated parts of urbanized areas which were counted as rural in 1950 *(a)* and in earlier years. The 1956 figure is from a sample study made by the Bureau of the Census as of March and excludes non-civilians.

the rural population had dropped to 60.3 per cent of the total, and in 1920 to 48.8 per cent. In 1920, for the first time, town-dwellers outstripped the rural population. We had become a compact mobile nation of highly civilized town-dwellers. The growing urbanism and increasing nomadism made easier by the fabulous development of motor transportation, had been tearing up the earlier rural roots of the country. Our civilization is now a predominately urban phenomenon.

In 1907 Oklahoma became a state and the frontier had come to an end. Cosmopolitan life with its increasing mechanization was slowly extending over the entire continent. This trend has continued up to the very present time. In 1940 the rural population reached a new high of 57,245,600. In 1910 the rural population had been 54.3 per cent of the total, in 1920, 48.8 per cent, in 1930, 43.8 per cent and in 1940, 43.5 per cent. Between 1940 and 1950 the rural inhabitants increased from 57,245,600 to 61,769,897 ("old definition," see table page 28) while the proportion of total population decreased from 43.5 per cent to 41.0 per cent. The rural population continued to grow in political prestige and importance.

The contrast between the field and the forest with the city, the rural with the urban, has become more and more marked with the increase in our urban population. Not only has the all importance of land to man receded in our economics, it has also receded in importance to our everyday life, in our background of thinking and reasoning. To Edwin Way Teale, the well-known author of two of the most readable volumes on nature published in the last decade, *North With The Spring and Autumn Across America,* some land to be forever wild is a necessity for a country, whose whole continent when the settlers landed at Jamestown and the Pilgrim Fathers landed in New England "extended away before them in one continuous wildness." In a recent issue of the *Audubon Magazine* Teale summarized the views of naturalists:

"We need," Henry Thoreau wrote in *Walden,* "the tonic of wildness—to wade sometimes in marshes where the bittern and the meadow-hen lurk, to hear the booming of the snipe; to smell the whispering sedge where only some wilder and more solitary fowl builds her nest, and the mink crawls with its belly close to the ground." Throughout all the 20 volumes of Thoreau's works there runs the recurring theme of the value and importance of wildness. His was the first eloquent voice lifted in its praise. "In wildness," he said, "is the preservation of the world." Since his day others have recorded similar convictions. "The clearest way into the universe is through a forest wilderness," John Muir wrote amid his beloved Sierra peaks. And in a more recent day

Aldo Leopold has set forth his belief that "the opportunity to see geese is more important than television, and the chance to see a pasque-flower is a right as inalienable as free speech." Such men have spoken for more of us than is generally recognized.*

The separation of man from his roots in the land exemplified by the rapid increase in our urban population is now having the same effect that similar concentration of population had in Europe at a much earlier date. The early medieval towns in Europe, though surrounded with walls, were still a part of the open country. Lewis Mumford explains why this was so:

Until the fourteenth century, these two types of environment were scarcely differentiated. The village had not been devoted purely to agriculture since handicraft, at the time of the English Doomsday Book, had flourished there; nor were the towns, for centuries to come, wholly industrial: a good part of the population had private gardens and practiced rural occupations, just as they did in the typical small American town up to about 1870. At harvest time, the population of the town would swarm out into the country as the slum dwellers of the East End still migrate to Kent for the hop-picking. One has only to read the household recipes of the Goodman of Paris, who was of the well-to-do merchant order, to see how prosperous burghers kept a leg firmly planted in each world. Near the city, the fowler and the rabbit hunter could go after game. Fitz-Stephens noted that the citizens of London had the right of hunting in Middlesex, Herefordshire, the Chiltern Hundreds, and part of Kent. And in the streams by the city, fishing was diligently pursued: not merely on the coast but inland. Augsburg, for example, was noted for its trout; until 1643 many of the city officials took their pay in trout.†

In 1820, the first year for which figures are available, there were 2,068,958 people employed in agricultural pursuits representing 71.8 per cent of all workers. The number employed increased to 4,901,882 in 1850, 8,584,810 in 1880, 10,911,998 in 1900, and finally to a high of 11,591,767 in 1910. By 1940 the number had turned down to 9,162,547 and by 1956 to 6,585,000.

So long as the United States remained primarily an agricultural country in which most of the workers were independent farm owners, the number of persons working for wages in industrial, commercial, and service activities remained small. After 1860, however, the development of manufacturing, mining and lumbering, the growth of large scale production, the use of automatic machinery, the concentration of industry, and the immigration of large numbers of unskilled laborers all tended to produce a wage earning class. The early ideal of Jefferson of having every worker become ultimately the owner of a farm or manager of his own business passed away, and the existence of a distinct wage earning class came to be recognized as a permanent feature of American society. By 1910 the number of

* Teale, Edwin Way, "Land Forever Wild," *Audubon Magazine*, Vol. 59, No. 3, p. 108, May-June, 1957. † Mumford, Lewis, *"The Culture of Cities*, p. 42-43 (Harcourt, Brace and Co., New York, N. Y., 1938).

persons engaged in manufacturing almost equaled those in agriculture and during the next decade exceeded them.

While the actual number of agricultural workers increased steadily in the ninety years between 1820 and 1910, the per cent of all workers represented by workers on farms decreased without exception with every census. From 71.8 per cent in 1820, the per cent decreased to 63.7 in 1850, 49.4 per cent in 1880, 37.5 per cent in 1900, 31.0 per cent in 1910, and finally to 10.1 per cent in 1956. By 1950 the rural population had increased to 61,769,897, representing 41.0 per cent of the population of the country.

NUMBER AND PER CENT OF AGRICULTURAL WORKERS
FARMERS (OWNERS & TENANTS), AND FARM LABORERS, TO ALL WORKERS

	Number	*Per Cent*
1820	2,068,958	71.8
1830	2,772,453	70.5
1840	3,719,951	68.6
1850	4,901,882	63.7
1860	6,207,634	58.9
1870	6,849,772	53.0
1880	8,584,810	49.4
1890	9,938,373	42.6
1900	10,911,998	37.5
1910	11,591,767	31.0
1920	11,448,770	27.0
1930	10,471,998	21.4
1940	9,162,547	17.6
1950	7,507,000	12.5
1956	6,585,000	10.1

In 1940, however, the rural population was smaller than the total population of the United States was in 1890.

The steadily decreasing importance of agriculture, cattle raising, and dairying from the viewpoint of the per cent of all labor employed on farms is shown by the figures in the table above, compiled by the Bureau of the Census.

"It was only after the Civil War" writes Amaury de Riencourt in *The Coming Caesars,* "that the full effect of the Industial Revolution was felt in America. Delayed until then by lack of capital and the controversies that led to Civil War, it seized a united, powerful America that was fast catching up with Britain, covered her with steel, extracted her minerals, bathed her in oil. America had vast spaces, immense natural resources, fast-increasing manpower. She seemed to have been selected by nature her-

self to become the most successful exponent of the dawning Industrial Age.'"* The steady shrinkage in the proportion of our population represented by rural inhabitants from 1790, the steady shrinkage in the proportion of all workers represented by agricultural workers since 1820, and the decrease in the number of agricultural workers since 1910, emphasize the accelerating importance of industrial activity and the fact that "things come to us" as Gerald Vann wrote, "at fourth and fifth removed from their natural state." But all raw materials, of every kind and description, which go into the industrial processes come from the same ageless, timeless source as do the products of the farm and the field. The fact that this is so must be one of the basic postulates of economics, today as well as in the days of the classical economists.

Land, Labor, and Capital

The classical and now "old fashioned" economists of the nineteen century followed the reasoning first laid down by Adam Smith that there were three and only three factors in the production of wealth. Those three factors were land, labor, and capital. To these early economists, who followed Plato both in defining their terms and using rigor in their reasoning, this was like saying to the mathematician that two and two makes four. Here was one of the underlying, basic postulates of what they called the "science of political economy" and which we call the "science of economics" although there is increasing wonderment today where the "science" really is.†

One must keep in mind that "production" in economics means not merely the making of things, it also includes the increase in value gained by the transportation or the exchange of things. There is a production of wealth in a purely commercial community as there is in a purely agricultural or manufacturing community; and in the one case, as in the others, some part of this produce will go as a return to capital, some part to labor, and some part, if land has any value, to the owners of land. The

* de Riencourt, Amaury, *The Coming Caesars*, p. 169 (Coward-McCann, Inc., New York, N. Y., 1957). † For the expanding literature on this subject which questions seriously the theory, explanations, and bases of economics as currently provided in popular text-books see *Reconstruction of Economics* by E. C. Harwood (American Institute of Economic Research, Great Barrington, Mass., 1955); *The Failures of Economics* by Sidney Schoeffler (Harvard University Press, Cambridge, Mass., 1955); *Bias Against Business* by Waddill Catchings (Privately Printed, 1956).

production of all wealth thus naturally flows into three streams as returns to land, labor, and capital or as Adam Smith wrote, these are "the three original sources of all revenue as well as of all exchangeable value. All other revenue is ultimately derived from some one or other of these." There was, however, some "puzzling ambiguity and confusion" in the description of these three factors and their inter-relations as explained by the classical economists until Henry George examined them one by one and "reasoned away" their illogical statements and confusions.

In 1879, Henry George explained the laws of distribution* with the most logical reasoning and the clearest of statements. His conclusions and the basis for his conclusions are as sound today as they were when he wrote them. He explained and defined: "Land, labor, and capital are the factors of production. The term land includes all natural opportunities or forces; the term labor, all human exertion; and the term capital, all wealth used to produce more wealth. In returns to these three factors is the whole produce distributed."† The eight fascinating chapters in Book III of *Progress and Poverty* are concerned with clearing up the "puzzling ambiguity and confusion" which were made by economic writers up to that time in the description of the factors of the production of wealth.

In contrast to what John Dewey would term the "warranted assertability" that there were three and only three factors in the production of wealth, it is the unusual volume on economics of the mid-twentieth century which deigns to point out that this elementary, all important, central, basic truth is one of the blocks upon which, it would seem, a science of economics would need to be built. Today, as we have already explained, our economic writers seem to be more concerned with the interpretation of the aggregate figures of a nation, that is, macro-economics, than with natural laws which explain the factors producing wealth and how wealth is distributed into three streams as a return to those factors.

It would seem to be no accident that the factors in production are quite generally mentioned in the order of land first, labor second, and capital third. There is a natural logic in this order. Land was here ages before man arrived on the scene, and land will be here ages after man has disappeared. Labor came

* George, Henry, *Progress and Poverty*, Bk. III, Chap. 1-8, pp. 153-224, 1879 (Robert Schalkenbach Foundation, New York, N. Y., 1955 edition). † *Ibid.*, p. 162.

along as man was evolved, and in time was exerted on land and the products of land to produce wealth. Capital, that is, wealth used to produce more wealth, could be made only after wealth had been produced by the application of labor to land. There is a natural sequence, a natural order in time in which these three factors came into being, an order which emphasizes the very importance and timelessness of land.

Naturally there can be no production without labor. Likewise there can be no production without land. That is self evident in agriculture, cattle raising, forestry, and the mining of natural resources. But it also holds just as true in commerce, industry, transportation, banking, insurance, and other service activities. For all business activity requires land, a place, a spot, a site, a location, so many acres or square feet of the earth's surface on which to operate. The factory, the office building, the loft building, the retail store, the railroad, the bank, need land on which their structures may be located and their activities may be pursued. Without land no human being can live; without land no human occupation can be carried on. As all wealth is in the last analysis the resultant of land and labor, so is all production in the last analysis the expenditure of labor upon land.

Over the centuries from the days when Jamestown was settled three hundred and fifty years ago to comparatively recent years, little thought has been given to acquiring the maximum benefits from our natural resources. Like Schliemann in his excavation at Ilois, we have ruthlessly exploited our soil, our forests, and our mineral resources, "the contents of the earth" as explained in *Resources for Freedom.* Moreover, the level of consumption over the past fifty years has levied a severe if more normal drain on these contents. Minerals, forest, soil, and water—all have felt it. By 1950—in comparison with the year 1900—we were taking from the earth two and one-half times more bituminous coal, three times more copper, five times more zinc, and thirty times more crude oil. While this particular drain was a natural one, the fact remains that we have been using our resources at an accelerating pace as well as with reckless wastefulness. Here is the explanation of the President's Materials Policy Commission:

> . . . there is scarcely a metal or a mineral fuel of which the quantity used in the United States since the outbreak of the First World War did not exceed the total used throughout the world in all the centuries preceding. The minerals increase is compounded partly out of the needs that rise with growing popula-

tions, partly out of a per capita consumption which has increased threefold in the same time, and is still growing. Fundamentally it reflects the increasing mechanization of modern society. As a result of the turret lathe and tractor, the automobile and airplane, the submarine and tank, the electric washing machine and vacuum cleaner, we have been drawing down our most exhaustible resources even faster than the resources that can, in theory at any rate, be renewed. A ton of ore removed from the earth is a ton gone forever; each barrel of oil used up means one less remaining. This mounting strain upon resources that cannot be replaced has become the most challenging aspect of our present-day economy.

But "renewable" resources have also felt the strain. Ninety per cent of our virgin timber stand in the commercial forest area has been cut, and thus far we have done a poor job of growing replacement crops . . . As a Nation we have long lived and prospered mightily without serious concern for our material resources.*

Only now, when it has become a little late in the day, is serious consideration being given to the absolute necessity of conserving, as far as we reasonably can, "the contents of the earth." This very viewpoint emphasizes the all importance of land in its many aspects to economic life. "Physically we are air-breathing, light-requiring land animals, who for our existence and all our production require place on the dry surface of our globe. And the fundamental perception of the concept of land — whether in the wider use of the word as that term of political economy signifying all that external nature offers to the use of man, or in the narrower sense which the word usually bears in common speech, where it signifies the solid surface of the earth—is that of extension; that of affording standing-place or room."†

In his autobiography, *Baruch, My Own Story,* Bernard M. Baruch mentions that his professor of political economy at the City College of New York was the man who made the deepest impression on him in his college life. He tells the following story:

The professor who made the deepest impression on me was George B. Newcomb of the Political Economy Department. He wore gold-rimmed glasses and looked like an old-fashioned Englishman. In a squeaky voice, which he tried to improve by sucking sugar, he used to say, "Those gentlemen who wish to play chess may sit on the back seats. Those gentlemen who wish to hear me may have the front seats." Although I was a chess player, I always took a front seat and missed little of what the professor said.

Much of my later success can be attributed to what I learned from him. Professor Newcomb never would have agreed with some popular present-day economic theories. He plugged away at the law of supply and demand and taught us to believe in it. It was in his class that I first heard:

"When prices go up two processes will set in—an increased production and a decreased consumption. The effect will be a gradual fall in prices. If prices get too low two processes will set in—decreased production because a man will not continue to produce at a loss and, second, increased consumption. These two forces will tend to establish the normal balance." Ten years later I became rich by remembering those words.

* *Resources for Freedom,* Vol. I, p. 5. † George, Henry, *The Science of Political Economy,* p. 352, 1897 (Robert Schalkenbach Foundation, New York, N. Y., 1946 edition).

Professor Newcomb taught not only political economy, but philosophy, logic, ethics, and psychology—all in one course. Today these subjects would be fragmented among several professors. I believe there was considerable advantage in being taught all these subjects by the same man. Too many educators seem to have forgotten that you cannot teach good economics, good politics, good ethics, or good logic unless they are considered together as parts of one whole.

When Baruch attended the City College of New York there was no elective system. He explained, "I also believe it a mistake that Greek and Latin are no longer subjects that all students must take . . . My study of both languages gave me an appreciation of the cultural background of our civilization which I never would have had otherwise." Although the author of this autobiography, so filled with fascinating incidents of daily life, does not say so, there is every indication that he is a most sincere believer in the liberal tradition of education in contrast to the modern specialized program of education. "I even opposed the introduction of the elective system," he writes, "maintaining that unpopular courses are good for young people because of their disciplinary value. In life we do not always do what we wish. But the elective system rolled over me like a locomotive. If I were a trustee today, I would fight to cut out snap courses and would try to restore the 'dead languages' to their old importance."

Here is an individual on whom economics, or as it was then termed, political economy, made a deep impression, and one who put his knowledge to a practical and profitable use when he entered the world of business. It would be interesting to know whether, in the recess of his mind, he feels that he would obtain as much vital knowledge and essential background from a study of economics with its current emphasis on national aggregates as from economics as taught in "his day" with its emphasis on land, labor, and capital, and the law of supply and demand. Baruch does, however, touch on the subject of economics in a broader way, "Colleges as a rule teach economics badly," he says. "With overspecialization has come a tendency to mistake information for education, to turn out 'quiz experts,' who are crammed full of useful detail but who have not been trained how to think."

Man truly lives off land, taking from it materials and forces. Man also lives on land; in truth, his very life depends on land. It is because these simple facts are so utterly essential that it does seem that they need to be understood fully as much today as when the classical economists used Socratic logic in building a science of economics upward from central basis truths. As one

* Baruch, Bernard M., *Baruch, My Own Story*, pp. 55-56. (Henry Holt and Co., New York, N. Y., 1957).

economist carefully wrote three-quarters of a century ago, " . . . land is the habitation of man, the storehouse upon which he must draw for all his needs, the material to which his labor must be applied for the supply of all his desires; for even the products of the sea cannot be taken, the light of the sun enjoyed, or any of the forces of nature utilized, without the use of land or its products. On the land we are born, from it we live, to it we return again—children of the soil as truly as is the blade of grass or the flower of the field. Take away from man all that belongs to land, and he is but a disembodied spirit."*

In this study we have examined the place of land in the life of the individual, and in the life of our own national economy, and then contrasted the ideas of classical economists with their emphasis on land, labor, and capital as the factors of production with the ideas of present-day economists with their emphasis on macro-economics. To say the least there would seem to be a very marked difference in emphasis. To the "early" economists there seemed to be a recognition of the all importance of land and that it came first in the hierarchy of land, labor, and capital. Our present-day economists seem to have little or no concern with this one ultimate all-embracing reality but to be concerned with national mathematical aggregates and their breakdown. What a revealing contrast! Strange as it may seem, the contrast is now being brought home to us in a most striking manner, not by economists, but by engineers who are concerned with our future well-being as our needs multiply and as our known resources, they forecast, will shrink in the years ahead.

The land was here before the economist came. It will be here after he is gone, and his statistics are rusting in the limbo reserved for commercial prophets. Where does land belong in our estimates of social and economic survival? The question of land and land values cannot be limited to deeds, tax bills, front footage, riparian rights, or mineral or timber privileges. We are dealing with man's primary birthright, to which he is anchored by gravity, of which his physical frame is a part, and from which he obtains all of his sustenance and all of his wealth. This attachment to the land is not easily translated into statistical equivalents.

There is an ancient proverb, "All else passes away, the land only remains." How simple and basic a truth it is.

* George, Henry. *Progress and Poverty*, pp. 295-296, 1879 (Robert Schalkenbach Foundation, New York, N. Y., 1932 edition).