Section XIV: The Industrial Revolution, Classical Economics, and Economic Liberalism

Contemporary Civilization (Ideas and Institutions of Western Man)

1958

8. David Ricardo and Classical Economics

Robert L. Bloom Gettysburg College

Basil L. Crapster *Gettysburg College*

Harold L. Dunkelberger Gettysburg College

See next page for additional authors

Follow this and additional works at: https://cupola.gettysburg.edu/contemporary sec14

Part of the Economic History Commons, Economic Theory Commons, and the Growth and Development Commons

Share feedback about the accessibility of this item.

Bloom, Robert L. et al. "8. David Ricardo and Classical Economics. Pt XIV: The Industrial Revolution, Classical Economics, and Economic Liberalism." Ideas and Institutions of Western Man (Gettysburg College, 1958), 37-49.

This is the publisher's version of the work. This publication appears in Gettysburg College's institutional repository by permission of the copyright owner for personal use, not for redistribution. Cupola permanent link: https://cupola.gettysburg.edu/contemporary_sec14/8

This open access book chapter is brought to you by The Cupola: Scholarship at Gettysburg College. It has been accepted for inclusion by an authorized administrator of The Cupola. For more information, please contact cupola@gettysburg.edu.

8. David Ricardo and Classical Economics

Abstract

It is David Ricardo, (1772-1823) rather than Malthus who has long been regarded as the more outstanding of the classical economists after Adam Smith. His father was a Jewish immigrant to England who became a prosperous merchant and broker. Ricardo entered his father's business, but after marrying a Quakeress and embracing her faith was forced onto his own resources. By the time he reached his early forties he had gained a large fortune as a stock broker which enabled him to retire to a large rural estate. Here he played the role of landlord and engaged in serious study. In 1819 he bought a seat in Parliament, representing an Irish rotten borough which he seems never even to have visited. This gave him an opportunity to participate at a high level in discussing the great economic and political issues then before the country. As a member of Parliament he favored parliamentary reform, widening the suffrage, and free trade. The first of these measures might well have lost him his seat and the third would have adversely affected the income from his estate. [excerpt]

Keywords

Contemporary Civilization, Classical Economist, David Ricardo, Supply and Demand, Price Fluctuation, Free Trade

Disciplines

Economic History | Economics | Economic Theory | Growth and Development

Comments

This is a part of Section XIV: The Industrial Revolution, Classical Economics, and Economic Liberalism. The Contemporary Civilization page lists all additional sections of *Ideas and Institutions of Western Man*, as well as the Table of Contents for both volumes.

More About Contemporary Civilization:

From 1947 through 1969, all first-year Gettysburg College students took a two-semester course called Contemporary Civilization. The course was developed at President Henry W.A. Hanson's request with the goal of "introducing the student to the backgrounds of contemporary social problems through the major concepts, ideals, hopes and motivations of western culture since the Middle Ages."

Gettysburg College professors from the history, philosophy, and religion departments developed a textbook for the course. The first edition, published in 1955, was called *An Introduction to Contemporary Civilization and Its Problems*. A second edition, retitled *Ideas and Institutions of Western Man*, was published in 1958 and 1960. It is this second edition that we include here. The copy we digitized is from the Gary T. Hawbaker '66 Collection and the marginalia are his.

Authors

Robert L. Bloom, Basil L. Crapster, Harold L. Dunkelberger, Charles H. Glatfelter, Richard T. Mara, Norman E. Richardson, and W. Richard Schubart

8. David Ricardo and Classical Economics

Couple years before the / walth of Waters is published It is David Ricardo (1772-1823) rather than Malthus who has long been regarded as the most outstanding of the classical economists after Adam Smith. His father was a Jewish immigrant to England who became a prosperous merchant and broker. Ricardo entered his father's business, but after marrying a Quakeress and embracing her faith was forced onto his own resources. By the time he reached his early forties he had gained a large fortune as a stock broker which enabled him to retire to a large rural estate. Here he played the role of landlord and engaged in serious study. In 1819 he bought a seat in Parliament, representing an Irish rotten borough which he seems never even to have visited. This gave him an opportunity to participate at a high level in discussing the great economic and political issues then before the country. As a member of Parliament he favored

^{*} T. R. Malthus, An Essay on the Principle of Population...

(London: Reeves and Turner, 1878), pp. 1-13, 475-481.

In dustrial levis under way during heards time. Alles to explain the difference between smith disaster smith bialding wealth - Reinto - how odivide the wealth.

parliamentary reform, widening the suffrage, and free trade. The first of these measures might well have lost him his seat and the third would have adversely affected the income from his estate.

Ricardo had first read The Wealth of Nations about 1799. It made a lasting impression on his mind. He was a close friend of Malthus and James Mill, and benefited from his frequent discussions with them, both before and after he helped organize the Political Economy Club. Malthus and Ricardo regularly corresponded for more than a decade, and it was at the suggestion of Mill that Ricardo published his most influential work, Principles of Political Economy and Taxation, in 1817. This book followed a series of treatises directed at specific issues relating to money, banking, and the tariff. It was designed to affect the continuing discussion in a somewhat more general way. It proved to be one of the two or three most important books the classical economists produced.

A central theme of Ricardo's work, and indeed of economics generally, is an explanation of the power of goods to command other goods in exchange. This power the economist calls value, and usually expresses in terms of money, as a price. Value was of such importance to the classicists because they believed that the principal task of the economist in their day was somewhat different from that of Adam Smith earlier. His primary concern had been the total wealth or income of a nation and how to increase it. Theirs was to explain how that income was divided into wages, rent. and profit. "To determine the laws which regulate this distribution," wrote Ricardo, "is the principal problem in Political Economy...."

In drawing his conclusions about value, Ricardo made three assumptions which must be kept in mind in studying classical economics generally First for the purposes of his analysis, he assumed that metalities conditions prevailed in the market place. To him this meant that there were many buyers and sellers, without significant interference in their activities by government or any other outsider. It meant that each buyer and seller had adequate information about where the best bargains were available, and that each person was working to drive such with her a bargain for himself. To the extent that competition as Ricardo understood it does not prevail in a particular market, and that some degree of monopoly does, classical analysis must be modified. Following Adam Smith, most of the classical economists believed that competition, the famous invisible hand, was the great regulator of economic life. Competition pushed up the quality of goods. It also tended to push down prices to their "natural" levels, by which they meant the lowest amounts which the sellers could take and still remain in business in the long In some ways the natural price of the classicists is comparable to the just price of the Middle Ages.

There is a second assumption to be noted. Ricardo took for These economistous unstably model building"

granted that what happened in the long run was more important to the economist than what transpired in the immediate market, or, as it is sometimes called, the short run. The latter was the brief period in which the existing stock of goods already in a marker could be bought and sold. Ricardo dismissed it by saying that the supply of goods and the demand for them were the factors which determined prices here. He was more concerned with the longer period of time, in which by definition businessmen (for example, buggy manufacturers) could adjust their production schedules to meet whatever changes were occurring in the demand for goods, and in which prices would tend toward their natural levels. In theory, the long run embraced enough time for supply and demand to be adjusted completely to each other, for all of the variable factors (such as the shortage of wheelwrights and the desire to be a two-buggy family) to run themselves out to a point of equilibrium. At this point there would be no tendency for change in any direction until entirely new variables (such as the automobile) might be introduced into the market. In a dynamic world this long-run equilibrium does not exist outside the imagination.

A third assumption which Ricardo made for the purposes of his analysis was that the price level remained stable. He was fully aware that prices often fluctuated, and in another connection had ably discussed the phenomenon of inflation. But wanting to simplify his analysis by limiting the number of variables, he made the price level constant.

The classical economists believed that where competition prevailed, the value of a good (by definition, anything that satisfies a human want) was related to the amount of labor that went into producing it. Adam Smith, following earlier writers, including John Locke, made the relationship a close one. Labor, he wrote, is "the only universal as well as the only accurate measure of value, or the only standard by which we can compare the values of different commodities at all times and in all places." However, he continued, in a developed society "the whole produce of labour does not always belong to the labourer," but must be shared with the landlord and the profit taker. Ricardo examined this labor-cost theory of value, made some qualification in it, and took it for his own:

Value has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of that object conveys. The one may be called value in use; we the other value in exchange. "The things," he continues, the use "which have the greatest value in use, have frequently little or no value in exchange; and, on the contrary, those which have the greatest value in exchange, have those which have the greatest value in exchange, have the little or no value in use." Water and air are abundantly useful; they are indeed indispensable to existence, yet, under ordinary circumstances, nothing can be obtained in

exchange for them. Gold, on the contrary, though of little use compared with air or water, will exchange for a great quantity of other goods.

Utility then is not the measure of exchangeable value, Thank although it is absolutely essential to it. If a commodity an exchange were in no way useful -- in other words, if it could in no value, dim heave the contribute to our gratification -- it would be destituted and the contribute to our gratification -- it would be destituted as the contribute of exchangeable value, however scarce it might be, or whatway contribute to our gratification -- it would be destitute value.

Possessing utility, commodities derive their ex
the changeable value from two sources: from their scarcity,
and from the quantity of labour required to obtain the and from the quantity of labour required to obtain them.

There are some commodities the value of which is determined by their scarcity alone. No labour can increase the quantity of such goods, and therefore their value cannot be lowered by an increased supply. Some rare statues and pictures, scarce books and coins, wines of a peculiar with any quality, which can be made only from grapes grown on a particular soil, of which there is a very limited quantity, are all of this description. Their value is wholly independent of the quantity of labour originally necessary to produce them, and varies with the varying wealth and inclinations of those who are desirous to possess them. John - later

These commodities, however, form a very small part of they of the the mass of commodities daily exchanged in the market. By later makes Tar the greatest part of those goods which are the objects your property of desire, are procured by labour; and they may be multiplied, not in one country alone, but in many, almost without any assignable limit, if we are disposed to bestow the

labour necessary to obtain them.

In speaking then of commodities, of their exchangeable value, and of the laws which regulate their relative prices, we mean always such commodities only as can be increased in quantity by the exertion of human industry, and on the production of which competition operates without restraint. In the early stages of society, the exchangeable value of these commodities, or the rule which determines how much of one shall be given in exchange for another, depends almost exclusively on the comparative quantity of labour expended on each....

If we look to a state of society in which greater improvements have been made, and in which arts and commerce flourish, we shall still find that commodities vary in value conformably with this principle: in estimating the exchangeable value of stockings, for example, we shall find that their value, comparatively with other things, depends on the total quantity of labour necessary to manufacture them, and bring them to market. First, there is the labour necessary to cultivate the land on which the raw cotton is grown; secondly, the labour of conveying the cotton to the country where the stockings are to be manufactured, which includes a portion of the labour bestowed in building the ship in which it is conveyed.

and which is charged in the freight of the goods; thirdly, the labour of the spinner and weaver; fourthly, a portion of the labour of the engineer, smith, and carpenter, who erected the buildings and machinery, by the help of which they are made; fifthly, the labour of the retail dealer, and of many others, whom it is unnecessary further to particularize. The aggregate sum of these various kinds of labour determines the quantity of other things for which these stockings will exchange, while the same consideration of the various quantities of labour which have been bestowed on those other things will equally govern the portion of them which will be given for the stockings.

To convince ourselves that this is the real foundation of exchangeable value, let us suppose any improvement to be made in the means of abridging labour in any one of the various processes through which the raw cotton must pass, before the manufactured stockings come to the market, to be exchanged for other things; and observe the effects which will follow, If fewer men were required to cultivate the raw cotton, or if fewer sailors were employed in navigating, or shipwrights in constructing the ship, in which it was conveyed to us; if fewer hands were employed in raising the buildings and machinery, or if these, when raised, were rendered more efficient, the stockings would inevitably fall in value, and consequently command less of They would fall, because a less quantity other things. of labour was necessary to their production, and would therefore exchange for a smaller quantity of those things in which no such abridgment of labour had been made,

Economy in the use of labour never fails to reduce the relative value of a commodity, whether the saving be in the labour necessary to the manufacture of the commodity itself, or in that necessary to the formation of the capital, by the aid of which it is produced. In either case the price of stockings would fall, whether there were fewer men employed as bleachers, spinners, and weavers, persons immediately necessary to their manufacture; or as sailors, carriers, engineers, and smiths, persons more indirectly concerned. In the one case, the whole saving of labour would fall on the stockings, because that portion of labour was wholly confined to the stockings; in the other, a portion only would fall on the stockings, the remainder being applied to all those other commodities, to the production of which the buildings, machinery, and carriage, were subservient.*

Although Ricardo continued modifying his explanation of value until his death, he was never fully satisfied with it. The labor theory could be, and indeed was, used with telling

^{*}Quoted from The First Six Chapters of The Principles of Political Economy and Taxation of David Ricardo (1817) (New York: Macmillan and Company, 1895), pp. 1-3, 16-18.

effect by the Marxists and other critics of capitalism. If labor is the sole source of value in goods, then why should not Tabor receive the full price of the goods as its reward? Ricardo's followers tried to explain away these implications of the labor theory as best they could, but it remained for economists writing for the most part after 1870 to suggest another theory of value which would find general, though not unanimous, acceptance among economists in the capitalistic tradition.

By stressing value in exchange, the classical economists undoubtedly had dealt with one of the key factors in value analysis: supply. By dismissing value in use on the ground that, while important, it cannot be measured, they neglected another key factor: demand. A good is worth something because it has the power to satisfy a human want, or as the economist puts it because it has utility. As Ricardo himself recognized, no discussion of value is complete without reference to this fact. Utility is not something inherent in a good, but rather is subjective with the individual. A new automobile, a mink coat, or mince pie will likely have unequal appeals to different individuals at any one time, and therefore will have different values attached to them. Moreover, to any one person the utility of an automobile, a mink coat, or a piece of mince pie is related to how many of these things he already has or has just consumed. Presumably the third piece of mince pie will have less utility to most persons than the second, which in turn might well have less than the first. This fact can be generalized into the principle of diminishing utility: as a person acquires or consumes more of a good at a particular time, beyond a certain point the utility of the units acquired or consider consumed will hegin to decrease. The economists who developed femand this concept were Austrians. Influenced by the utilitarianismalso of Jeremy Bentham, they thought that this utility could be setting and measured scientifically, and that the usefulness of the last unit that would be purchased, rather than labor cost, was the most important element entering into the price of a good. called the usefulness of the last unit marginal utility, and it is by this name that their approach to value is known.

The generally accepted theory today avoids isolating any one factor as the determinant of value. It recognizes that utility conditioned by such things as income or wealth, habit, advertising, and (it is hoped) serious thought, affects demand in the long run. It recognizes that costs of production, including a return to all of the factors of production, affect supply in the long run. Price, or value, is the result of the complex interaction among these and other items, with supply considered more important than demand in the long run. In the face of continuing economic development and constant reinterpretation of the meaning of that development, we can expect no theory as central as that of value to remain long without modification.

arbitrarily in terms of three factors of production. The first labor, received wages for its services. The second land, was paid for in the form of rent. The third, capital, got profits. Later, many economists added a fourth factor, which Jean Baptiste Say (1767-1832) had called entrepreneurship, or enterprise. The function of the entrepreneur is to take the risks that are involved in combining the other three factors in production. These economists defined the return to capital as interest and that to entrepreneurship as profits. The study of wages, rent, interest, and profits is called distribution, a term which should not be confused with the physical marketing of goods. Ricardo did not recognize clearly that distribution is merely a continuation of the analysis of value, and therefore did not relate wages, rent, and profits as carefully as he should have. However, he did propound theories to explain each of them, and it is to these that we now turn.

Ricardo believed that in the long run, given the pressure of population against resources which Malthus forecast, wages will tend naturally to the level of subsistence:

Labour, like all other things which are purchased and sold, and which may be increased or diminished in quantity, has its natural and its market price. The natural price of labour is that price which is necessary to enable the labourers, one with another, to subsist and perpetuate their race, without either increase or diminution.

The power of the labourer to support himself, and the family which may be necessary to keep up the number of labourers, does not depend on the quantity of money which he may receive for wages, but on the quantity of food, necessaries, and conveniences become essential to him from habit, which that money will purchase. The natural price of labour, therefore, depends on the price of the food, necessaries, and conveniences required for the support of the labourer and his family. With the rise in the price of food and necessaries, the natural price of labour will rise; with the fall in their price, the natural price of labour will fall. *

It must be noted that <u>Ricardo did not mean by subsistence</u> the barest minimum necessary to sustain physical life, but rather something quite different: whatever the worker by custom needed, or considered he needed, to support a family. "It essentially depends on the habits and customs of the people," he wrote. "An English labourer would consider his wages under their natural rate, and too scanty to support a family, if they enabled him to purchase no other food than potatoes, and to live in no better habitation than a mud cabin...." ** Ricardo assumed that if wages were lower than this, births would decline

^{*} Ibid., p. 80.

^{**}Ibid., p. 84.

and the size of the labor force would eventually decrease. This would force the level of wages upward. Similarly, if wages were higher than this, Ricardo believed, population would tend to rise, thus increasing the size of the labor force, and eventually depressing wages.

Ricardo's explanation of wages has often been misinterpreted. Ferdinand Lasalle (1825-1864), a German socialist, called it the iron law of wages. Some businessmen concluded comfortably that it excused them completely from ever trying to improve the lot of their employees. It is true that Ricardo, like Malthus, seemed to be turning the workings of a law thought to be natural, and therefore beneficent, to pessimistic rather than optimistic ends. There appeared to be ample justification for those who agreed with Thomas Carlyle in calling economics the dismal science. Nevertheless, this is not the whole story. Ricardo never denied the possibility that the market price for labor might be well above the subsistence or natural price almost indefinitely, though in a free market it would not remain below that price for very long. He was merely warning that where the increasing pressure of population bore heavily enough upon the existing resources, wages would be pushed inexorably toward the lowest possible level, unless labor acted in its own behalf:

The friends of humanity cannot but wish that in all countries the labouring classes should have a taste for comforts and enjoyments, and that they should be stimulated by all legal means in their exertions to procure them. There cannot be a better security against a superabundant population. *

Many later economists were willing to admit that Ricardo had identified the natural floor for the level of wages, but had failed to foresee the tremendous growth both in economic productivity and social power which thus far has characterized labor since his day. These economists insisted that where labor was in a competitive position wages would tend to move generally upward rather than downward, toward a point determined by the relative contribution of labor as one of the four factors in the process of production.

Ricardo also gave an explanation of rent. By rent, he was careful to say, he meant "that compensation which is paid to the owner of land for the use of its original and indestructible powers." It arose, he wrote, because land is scarce. In a new and sparsely populated country, where land could be had for the taking, there would be no rent. (It arose also because some land is more fertile than others. Ricardo was certain that in the long run the landlord would exact as much rent as he possibly could for allowing his land to be used. He deduced that

Profits are what are left over.

^{*} Ibid., p. 88.

the landlord could take in the form of rent as much as could be attributed to the fertility of his own land measured against the poorest land then in use. The pressure of population, he reasoned, eventually forces the cultivation of some land the product of which pays only for the necessary labor and capital. This was called marginal or no-rent land, since there was nothing left from its use with which to pay any rent for it. Ricardo concluded that if a landlord had a piece of land which yielded fifty more bushels of wheat than could be produced by an equal amount of labor and capital on marginal land, he could demand in rent the monetary equivalent of fifty bushels of wheat. Furthermore, he argued that competition among tenants for this better land would force up the rent to this price.

From the foregoing analysis it follows that increases in rents must be attributed to the cultivation of poorer and poorer lands made necessary by the increasing demand of a growing population for farm products. More labor was needed on these than on better lands. This increased use of labor, rather than higher rents, maintained Ricardo, was the real reason prices were increasing in the England of his day and why they would continue upward:

The reason, then, why raw produce rises in comparative value, is because more labour is employed in the production of the last portion obtained, and not because a rent is paid to the landlord. The value of corn is regulated by the quantity of labour bestowed on its production on that quality of land, or with that portion of capital, which pays no rent. Corn is not high because a rent is paid, but a rent is paid because corn is high; and it has been justly observed, that no reduction would take place in the price of corn, although landlords should forego the whole of their rent. Such a measure would only enable some farmers to live like gentlemen, but would not diminish the quantity of labour necessary to raise raw produce on the least productive land in cultivation.

Nothing is more common than to hear of the advantages which the land possesses over every other source of useful produce, on account of the surplus which it yields in the form of rent. Yet when land is most abundant, when most productive, and most fertile, it yields no rent; and it is only when its powers decay, and less is yielded in return for labour, that a share of the original produce of the more fertile portions is set apart for rent. It is singular that this quality in the land, which should have been noticed as an imperfection, compared with the natural agents by which manufacturers are assisted, should have been pointed out as constituting its peculiar pre-eminence. If air, water, the elasticity of steam, and the pressure of the atmosphere, were of various qualities; if they could be appropriated, and each quality existed only in moderate abundance, they, as well as the land, would afford a rent, as the successive qualities were brought into use. *

^{*} Ibid., pp. 59-60.

Ricardo refused to consider rent a cost of production in the long run, as were wages and profits. It was, he said, an economic surplus. By this he meant that rent was not something that was necessary to insure an adequate supply of land to produce corn, cotton, or sugar beets. Land was a gift of nature. It supply was fixed, or very nearly so, in a way that the long-run supply of labor and enterprise were not. No increase in rent could make more land available, as presumably an increase in wages would eventually make more labor available. If, then, rent disappeared by government decree, the land would still be there and available. There would be neither more nor less wheat. Nor would price drop. If rent disappeared, Ricardo maintained, profits would increase. Some later economists, accepting this line of reasoning, called rent an unearned increment and questioned whether society should permit it.

Like his other explanations, Ricardo's theory of rent applies to an economy making full, or nearly full, use of its resources, one in which there is a high degree of competition for the available land and in which the principle of diminishing returns is in operation. His critics have pointed out that land rents in nineteenth century England, where much of the farm land was used by someone other than its owners, were scarcely determined competitively. They were fixed largely by custom and changed but little as agricultural prices rose and fell. did not disprove his theory. It merely made it irrelevant. The theory suffered on other counts. Ricardo thought of rent as the return "for the use of the original and indestructible powers of the soil." But most land to be useful must have buildings, fences, and perhaps drainage facilities. How can one possibly fairly assign part of a money payment popularly called rent for the use of the land and part for the use of these capital improvements? Furthermore, while Ricardo's explanation took into account the fertility of land, it neglected another desirable quality land often possesses: location. And as some American writers pointed out, the experience of the United States was compelling evidence that the best lands in a new country are not necessarily the ones that are used first. Many later economists have used the term "rent" to apply to part of any payment which represents more than is necessary to secure the services of a factor in production. In this sense, part of the salary of a professional baseball player or a movie star is a wage, and part is a rent.

Ricardo regarded profits as a residual. They were what was left, if anything, after all of the other expenses were paid, a possible reward for the entrepreneur's taking upon himself the risks coincident to production. While profits might fluctuate widely from year to year, Ricardo believed that over the long run they would have to average out to a certain level, or businessmen would not continue taking risks. "The farmer and manufacturer can no more live without profit," he wrote, "than the labourer without wages."

In new countries, Ricardo admitted, where risks are great and land abundant, profits might be high. But he believed that in a competitive market their long-run tendency was downward, while that of wages and rent was upward. Growing populations eventually force the use of poorer and poorer land. This increases rent on all other land and, because more labor is required on the poorer land, raises the price of food. According to Ricardo's own explanation, this in turn requires an increase in money wages:

profits depend on high or low wages, wages on the price of necessaries, and the price of necessaries chiefly on the price of food, because all other requisites may be increased almost without limit....

The natural tendency of profits, then, is to fall; for, in the progress of society and wealth, the additional quantity of food required is obtained by the sacrifice of more and more labour. This tendency, this gravitation as it were of profits, is happily checked at repeated intervals by the improvements in machinery, connected with the production of necessaries, as well as by discoveries in the science of agriculture which enable us to relinquish a portion of labour before required, and therefore to lower the price of the prime necessity of the labourer. The rise in the price of necessaries and in the wages of labour is however limited; for as soon as wages should be equal ... to ... the whole receipts of the farmer, there must be an end of accumulation; for no capital can then yield any profit whatever, and no additional labour can be demanded, and consequently population will have reached its highest point. Long indeed before this period, the very low rate of profits will have arrested all accumulation: and almost the whole produce of the country, after paying the labourers, will be the property of the owners of land and the receivers of tithes and taxes. *

Ricardo insisted that, like rent and profits, wages and profits varied inversely. "Whatever increases wages," he wrote, "necessarily reduces profits." If true, this meant that every wage increase endangered the incentive of the entrepreneur and could result in unemployment. Later economists rejected Ricardo's view of total income. It is possible, they argued, for wages and profits to increase simultaneously, although this is certainly not always the case. In the twentieth century, many economists have stressed the need to create through high wages the purchasing power necessary to use up the output of massproduction industries. Without such purchasing power, profits are almost impossible.

In an earlier chapter we saw how the medieval Church looked

^{*} Ibid., pp. 110-111.

upon all interest as usury and denounced it as sinful. With the revival of trade and commerce this attitude seemed unrealistic and was either circumvented or ignored completely. During the English Reformation Parliament repealed the legal prohibition of interest (1545). In its place it decreed simply that rates of interest above ten per cent were usurious, and hence illegal. Later measures adjusted this figure, usually downward. The early classical economists argued about the wisdom of any legal regulation of the interest rate. Should not the individual be free both to charge and to pay whatever he wishes? Does not such regulation discourage the flow of capital to businesses where the risks are high? Are not many of today's risky businesses the soundest enterprises of the future?

An important task still remained to be completed. Writers sympathetic to capitalism had to explain the role of capital in production and determine for themselves whether interest was a payment similar in nature to rent or whether, like wages and profits, it was necessary to assure a continuing supply of cap-Neither Smith nor Ricardo made significant contributions to the theory of interest. Other writers declared that capital, in the form of a plough or a power loom, for example, made labor much more productive than it would otherwise be. explained why interest could be paid for the use of borrowed funds. Nassau William Senior (1790-1864), writing in 1836, explained why he thought it would have to be paid. Individuals are inclined to prefer consuming the fruits of their past labor today rather than postpone their enjoyment to an uncertain future. Some payment is necessary to persuade them to abstain from the pleasure of consuming today in favor of the pain of saving and making capital funds available. This abstinence theory of interest, as it was called, was popular at a time when capital was often scarce, and when saving frequently involved real sacrifice for many individuals. Wilhelm Roscher (1817-1894) gave an oft-quoted explanation of this theory in his Principles of Political Economy (1854):

The legitimateness of interest is based on two unquestionable grounds: on the real productiveness of capital, and on the real abstinence from enjoyment of it by one's self. Let us suppose a nation of fishermen with no private ownership in land and no capital, living naked in caverns, on sea-fish which the ebb of the ocean has left in the puddles along the shore, and which are caught only with the hand. All workmen here may be equal, and each catch and consume three fish a day. Let us again suppose that some clever savage reduces his consumption to two fish a day, for one hundred days, and uses the stock of one hundred fish collected in this way to enable him to devote all his strength and labor, during fifty days, to the construction of a boat and a net. With the aid of this capital he, from the first, catches thirty per day. What now will his fellow tribesmen, who are not capable

of such intelligent and systematic self control to do as he has done, do? What will they offer him for the use of his capital? In discussing this question both parties will very certainly consider not only the fifty days' labor spent in the construction of the boat etc., but also the one hundred and fifty days during which its maker had to abstain from his full ration of food. If the borrower, of the thirty fish which may be caught daily with the aid of his capital, gives twenty-seven away, his condition is at least no worse than it was at first. On the other hand, the lender, if compensated only for the wear and tear of his capital, would reap no profit whatever from his loan. The interest to be paid will be fixed somewhere between these two extremes by the relation between demand and supply. A loan which pays no interest is a donated use of capital. Interest may be called the reward of abstinence, in the same way as wages is called the reward of industry. *

In the last century many writers have contributed to the increasingly complex theories of interest. Economists now regard the abstinence theory as an incomplete statement, in part because they recognize several motives for personal saving which have little or nothing to do with the interest rate, and in part because many corporations supply their own capital funds from earnings not paid out as dividends.

This brief discussion of value, wages, rent, profit, and interest is but an introduction to the topics in which the classical economists were interested. They studied in detail the role of each of the four factors in production. They analyzed the role of money and banking in modern economic life. They investigated the effects of different kinds of taxes on individuals and on business. They developed theories of international trade to explain how the world's resources tend to be used, and how they could be used most efficiently. In short, they took as their own some part of the entire field encompassed by the creation of utility (production), the transferring of utility (exchange), the allocation of income to the factors of production (distribution), and the using up of utility in commodities (consumption).

^{*} William Roscher, Principles of Political Economy, trans. John J. Lalor (New York: Henry Holt and Co., 1878), II, pp. 125-127.