THE NATURE OF CAPITAL AND INCOME

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TO

WILLIAM GRAHAM SUMNER

WHO FIRST INSPIRED ME

WITH

A LOVE FOR

ECONOMIC SCIENCE

PREFACE

THIS book is an attempt to put on a rational foundation the concepts and fundamental theorems of capital and income. It therefore forms a sort of philosophy of economic accounting, and, it is hoped, may supply a link long missing between the ideas and usages underlying practical business transactions and the theories of abstract economics. To some readers it may seem that certain elementary topics have been treated at undue length; but, as experience shows that economic structures built on hasty and inadequate generalizations inevitably collapse, it seems hardly possible to take too much pains in making the foundations secure. On the other hand, topics which are in their nature technical or which digress from the main theme — and in particular mathematical formulæ — have been relegated to appendices.

Many of the theses maintained will undoubtedly fail to command assent on a first reading, for in any orderly presentation of a subject it is impossible to forestall all objections as they occur. The aim has been to preserve a definite sequence by which each step prepares the way for those which follow; but this plan has necessitated the postponement of some topics beyond the point at which a consciousness of their difficulties might begin to trouble the reader. He is therefore asked to stay judgment until he has finished the work, and, if necessary, to reread those parts in which his difficulties were first encountered. This suggestion is especially urged in regard to the treatment of income, the concept of which forms the central theme of the book. Many of the friendly critics to whom the manuscript has been shown have at first dissented strongly from the conclusions of Chapter VII, but have invariably withdrawn their objections after finishing Chapter XIV.

The nature of income is a subject which has not hitherto received, in economic literature, the attention it deserves. Income plays an important rôle in all economic problems; it is income for which capital exists; it is income for which labor is exerted; and it is the distribution of income which constitutes the disparity between rich and poor.

Nor is the subject of interest solely to theoretical economists. It appeals to practical men of affairs and to those who are interested in problems of social reform, as well as to the special classes of accountants, actuaries, and mathematicians. The book is so arranged that the general reader may, if he so desires, omit the technical portions, such as the appendices and possibly Chapter XVII. It is suggested that all readers should give special attention to Chapters VI, VII, IX, and XIV.

The problem of nomenclature has proved not a little puzzling. In general, each term has been employed in one, and only one, sense; but to follow this plan exclusively has not been found practicable. Several words are sometimes used for the same concept,— for instance, "resources" and "assets," or "utility" and "desirability"; and sometimes the same word has been used in more than one sense, as in the case of "capital," which may mean capital-goods or capital-value. But special pains have been taken to avoid any confusion or uncertainty of meaning. The definitions have been carefully framed, and will be found collected in a glossary at the end.

A few fragments of the book have appeared in a somewhat different form in economic periodicals, and the whole book may be said to be only the elaboration of the ideas outlined some years ago in the *Economic Journal*. I would express my thanks to the publishers of the *Economic Journal* for permission to use unaltered some passages from "What is Capital?" 1897, "Senses of Capital," 1898, and "The Rôle of Capital in Economic Theory," 1898, and to the *Quarterly Journal of Economics* for similar permission with reference to "Precedents for Defining Capital," 1904.

I wish also to express my obligations to the many persons who have aided me in the preparation of this work, among them especially my wife; my brother, Mr. Herbert W. Fisher; my colleagues, Professor Henry C. Emery, Professor John P. Norton, and Dr. Lester W. Zartman; and my friends, Mr. Richard M. Hurd and Mr. Orland S. Isbell of New York City.

IRVING FISHER.

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INTRODUCTION. Fundamental Concepts

THE NATURE OF CAPITAL AND INCOME

CHAPTER I

WEALTH

§ 1

The term "wealth" is used in this book to signify *material objects owned by human beings.* According to this definition, an object, to be wealth, must conform to only two conditions: it must be *material*, and it must be *owned.* To these, some writers add a third condition, namely, that it must be *useful.* But while utility is undoubtedly an essential attribute of wealth, it is not a distinctive one, being implied in the attribute of appropriation; hence it is redundant in a definition. Other writers, like Cannan, while specifying that an object, to be wealth, must be useful, do not specify that it must be owned. They therefore define wealth as "useful material objects." This definition, however, includes too much. Rain, wind, clouds, the Gulf Stream, the heavenly bodies — especially the sun, from which we derive most of our light, heat, and energy — are all useful, but are not appropriated, and so are not wealth as commonly understood. Still other writers insist that an article, to be wealth, must be "exchangeable." But this restriction would exclude parks, Houses of Parliament, the Hague Temple of Peace, and much other trusteed wealth; all wealth, in fact, which happens to fall into permanent hands. Although it is essential that wealth should be owned, it is not essential that it should continually change owners. Again, many writers, like McLeod, omit the qualifier "material" altogether, in order to make room for the inclusion of such "immaterial wealth" as stocks, bonds, and other property rights, and for human and other services. Property and services are, it is true, inseparable from wealth, and wealth from them, but they are not wealth. To embrace all these under one term involves a species of triple counting. A railway, a railway share, and a railway trip are not three separate items of wealth; they are respectively wealth, a title to that wealth, and a service of that wealth. Finally, a few economists, like Tuttle, have endeavored to break away from concrete objects entirely. The term "wealth," they maintain, applies, not to the concrete objects, but to the *value* of these objects. Much may be said in support of this contention. But as the question is chiefly verbal, that is, not a question of finding a suitable concept, but of finding a suitable word for a concept, it does not seem advisable to depart from the prevailing usage among economists.

Wealth, then, includes all those parts of the material universe which have been appropriated to the uses of mankind. It does not include the sun, moon, or stars, because no man owns them. It is confined to this little planet, and only to parts of that; namely, the appropriated portions of the earth's surface and the appropriated objects upon it. The appropriation need not be complete; it is often only partial and for a particular purpose, as in the case of the Newfoundland Banks, which are appropriated only in the sense that the fishermen of certain nations have the right to take fish in their vicinity, while their waters are open to all men for all other purposes. In fact, it is doubtful if there are any objects owned so unrestrictedly that the owner of them may use them in absolute defiance of the wishes of others. By appropriation of any object is therefore meant that degree of appropriation to which the object is subjected.

Any single object of wealth is called an *article* of wealth, an *item* of wealth, or an *instrument*. The term "instrument" is perhaps the most convenient. It appears to have been first employed by John Rae in 1834.[1]

§ 2

Various classes of wealth may be distinguished. Wealth which consists of the earth's surface is called *land;* any fixed structures upon it, *land improvements;* and the two together, constituting immovable wealth, *real estate.* All wealth which is movable (except man himself) we shall call *commodities*. A third group includes *human beings* — not only slaves who are owned by other human beings, but also freemen who are their own masters.

It is true that freemen are not ordinarily counted as wealth; and, indeed, they are a very peculiar form of wealth, for various reasons: first, because they are not, like ordinary wealth, bought and sold; secondly, because the owner usually estimates his own importance so much more highly than any one else; and finally, because the owner and the thing owned in this case coincide. Yet they are, like other wealth, "material" and "owned." These attributes, and others which depend on them, justify[2] the inclusion of man as wealth. But in order to concede as much as possible to popular usage, the following supplementary definition is framed: By wealth (in its more *restricted* sense) we mean *material objects owned by man and external to the owner*. This definition obviously includes slaves, but not freemen. But it is more difficult of application than the wider definition first given, as it requires

[1] *New Principles of Political Economy,* recently reprinted under the title *Sociological Theory of Capital,* Macmillan, 1905.

[2] Among those writers who have included man in the category of wealth are Davenant, Petty, Canard, Say, McCulloch, Roscher, Wittstein, Walras, Engel, Weiss, Dargun, Ofner, Nicholson, and Pareto.

us to separate into arbitrary classes those persons who are intermediate between freemen and slaves, such as vassals, indentured servants, long-time apprentices, and negroes held in peonage. A man bound out to service for thirty years is almost indistinguishable from a slave, and if the term of service be long enough and the control absolute enough, the distinction becomes a distinction without a difference. On the other hand, the shorter the term of service, the nearer does his condition approach freedom. As a matter of fact, most workers in modern society are "hired," *i.e.* bound by contract to some extent and for some period of time, even though it be for no more than an hour, and to that extent are not free. In short, there are many degrees of freedom and many degrees of slavery, with no fixed line of demarcation.

Two concepts have been defined which may be designated as "wealth in its more general sense" and "wealth in its more restricted sense." There need be no confusion between them. Ordinarily, when the simple term "wealth" is used, the former concept will be understood, and any propositions which hold true of this broader concept will necessarily apply also to the narrower one. If we have occasion at any time to refer to the latter exclusively, we may always make use of the full phrase, "wealth in its more restricted sense."

There are many admissible ways of classifying wealth, one being more or less desirable than another according to the purpose for which it is intended. The scheme on page 7 is not based on any one logical criterion, but is intended merely to give the principal groups into which wealth, as it actually exists, naturally falls. It scarcely needs to be stated that the various classes are not always absolutely distinct. Like all classes of concrete things, they merge imperceptibly from one into another. For this reason the classification is of little importance except to give a bird's-eye view of economic science. In fact, the classification of concrete things is seldom of paramount importance in scientific study. Not classification, but analysis, solves scientific problems.[1]

- Wealth
  - Real Estate
    - land
      - productive land
        - crop land
        - grazing land
        - timber land
        - mining land
        - hunting land
        - fisheries
      - ways of transit
        - railways
        - roadways
        - waterways
        - parks
      - building land
    - land improvements
      - buildings
      - improvements on highways
        - overhead
        - underground
        - surfacing
        - bridging
      - minor
  - Commodities
    - raw materials
      - mineral
      - agricultural
      - manufactured
    - finished products
      - consumable
        - by being burned
        - by being eaten or drunk
        - by being otherwise used
      - durable
        - mechanical devices
        - animals
        - "hard money"
        - clothing and jewelry
        - furniture and works of art
        - reading matter
        - minor
  - Human Beings
    - slaves
    - free

[1] See the writer's "What is Capital?" *Economic Journal,* December, 1896, p. 516; and "Precedents for Defining Capital," *Quarterly Journal of Economics,* March, 1904.

§ 3

In the definition of wealth were included two attributes: wealth is *material;* and, it is *owned.* These attributes, materiality and appropriation, need to be considered separately. The remainder of this chapter will be devoted to the former.

An important and useful result of the materiality of wealth is that it provides a basis for the physical measurement of wealth. Wealth is of many kinds, and each kind is measured in its own proper physical unit. These units have been handed down to us from various sources and in great diversity, but all of them are in the last analysis arbitrary.

Many kinds of wealth are measured by *weight-units.* This is true of coal, iron, beef, and in fact, of most "commodities." Each unit consists of the weight of some particular piece of matter which is adopted for convenience as a standard. For instance, the English pound is simply a lump of platinum kept in London and called arbitrarily the pound.

Many articles are not so conveniently measured by weight-units as by *space-units*, whether of volume, area, or length. Thus we have, for volume, milk measured by the quart, wheat by the bushel, wood by the cord, and gas by the cubic foot; for areas, we have lumber sold by the square foot and land by the acre; for length, we have rope, wire, ribbons, and cloth measured in feet and yards. All these units of length, area, and volume are also quite arbitrary or conventional. The definition of the English yard, for instance, is an imaginary line drawn between two small dots on gold plugs in a particular brass rod in London.

Many articles exist in more or less definite units which need only to be counted, as for instance, eggs or oranges, which are measured by the dozen. Similarly, writing paper is reckoned by the quire; pencils and screws by the gross.

In such cases we say that the article is measured *by number*. But "number" is by no means peculiar to the last-named case. All measurement implies both an abstract number, and a concrete unit, as "ten screws," "six eggs," or "four pounds-of-granulated-sugar."

The last example suggests that in order to specify fully the unit of any kind of wealth, it is necessary to enumerate its particular attributes, or enough of them to distinguish it from other sorts of wealth with which it may become confused. Thus, it is often necessary to specify what "grade" or "brand" is meant, as "Grade A," "Eagle Brand," "Lackawanna" coal. Sometimes the special sort is denoted by a trade mark or hallmark. It is in this way that the attributes of particular kinds of wealth enter into the consideration of economic science, and not, as some have erroneously supposed, separately as an "immaterial" sort of wealth. The "fertility" of land is not to be counted as wealth apart from the land itself; it is the "fertile land" which is wealth. The "skill" of a mechanic is not wealth in addition to the man himself; it is the "skilled mechanic" who should be put in the category of wealth.

Of course, the number expressing the measure of wealth may be unity, as for instance, "one dwelling." Sometimes there is only one article of the particular kind in existence. There is but one Battery Park, one Buckingham Palace, one Koh-i-noor diamond, one Rhynd papyrus. Dealers call such articles "uniques." Strictly speaking, every article might be called a unique, even as no two grains of wheat are precisely alike; but for practical purposes we overlook minor differences and regard articles sufficiently similar as homogeneous.

§ 4

Thus each individual kind of wealth may be measured in its own special unit, — pounds, gallons, yards; but for most purposes it is more important to measure the *value* of wealth, and this may be done in dollars and cents, pounds and shillings, francs and centimes, and so forth. This is also a species of physical measurement, but involves the principle of *exchange*. So much mystery has surrounded the term "value" that we cannot be too careful to obtain correct and simple ideas on the subject. In the explanation which follows, the concept of value is made to depend on that of price; that of price in turn on exchange; and finally, that of exchange on transfer.

An article of wealth is said to be *transferred* when it changes owners. It is to be observed that such a change does not necessarily imply any change of place. Ordinarily, the transfer of an article involves change in its position. The purchase of tea or sugar is accompanied by the delivery of these articles across the counter from dealer to customer. But in many cases such a change of position does not occur, and in the case of real estate it is even impossible. This distinction between change of ownership and change of position is not always borne in mind. It is sometimes said, for instance, that exports and imports must balance in a certain manner. But if by "exports" we mean articles that are sent out of the country, and by "imports" those which come into it, the proposition will not hold true. When, some years ago, Englishmen were buying American breweries, these articles, of course, were not exported, though they were transferred to foreign ownership.

Transfers may be voluntary or involuntary. Examples of involuntary transfers of wealth are transfers effected either (1) through force and fraud of individuals, as in robbery, burglary, embezzlement, etc.; or (2) through force of government, as in taxes, court fines, etc. But at present we have to do with voluntary transfers.

Voluntary transfers are of two kinds: (1) one-sided transfers, *i.e.* gifts and bequests; and (2) reciprocal transfers or *exchanges*, which are the most important for economic science.

Exchange of wealth, then, means the *mutual and voluntary transfer of wealth between two owners, each transfer being in consideration of the other*. If either of the two quantities of wealth exchanged is divided by the other, the quotient is called the *price* of the latter. Thus, when three bushels of wheat are traded for two dollars of gold, the price of the wheat is $\frac{2}{3}$ of a dollar per bushel, and the price of the gold is $1\frac{1}{2}$ bushels of wheat per dollar. In modern times, one of the two articles is usually money, but this condition is not essential, and in primitive times was not even common. When the exchange is one of money for other wealth, it is called a *purchase* (with reference to the one who parts with the money) and a *sale* (with reference to the person who receives the money).

§ 5

In order that there may be a price, it is not necessary that the exchange in question should actually take place. It may be only a contemplated exchange. A real estate agent often has an "asking price," that is, a price at which he tries to sell, usually above the price of an actual sale. In the same way there is often a "bidding price," which is usually below the price of actual sale. The price of sale thus generally lies between the prices first bid and asked. But it sometimes happens that the bidder refuses to raise his bid and the seller refuses to lower his asking price. In such a case no sale takes place and the only prices are those bid and asked. Trade journals report, for many commodities, the price of sale if there is a sale, otherwise the two prices bid and asked, or if both do not exist, the one which does.

When there is no sale, and especially when there is no price bid or asked, it is not so easy to answer the question, What is the price? Recourse is then had to an "appraisement" or appraisal, which is simply a more or less skilful guess as to what price the article would or should fetch. Appraising or guessing at prices is often very difficult in practice. It is necessarily employed, however, by the government in assessing taxes and customs and condemning land; by insurance companies in settling claims and adjusting losses; by merchants in making up inventories and other statements; and by statisticians and others. In fact, some people make a living by simply appraising wealth on which, for one purpose or another, a price of some sort must be set. Evidently, the purpose makes a great difference in the appraisal. Sometimes we need to know the price for which an article could be sold at an immediate forced sale; sometimes, what it might be expected to bring if a reasonable time were allowed; sometimes, what the owner would probably take; sometimes, what a possible purchaser would probably give. These appraised prices may all be different. A family portrait may be worth an untold amount to the owner, but might bring next to nothing if actually sold. The owner would endeavor to appraise it at a high figure if he wished to insure it against fire; but if he wished to borrow money on it, the appraisement would doubtless be small, for the pawnbroker would consider it almost worthless.

Thus, in practically making an appraisement we encounter many difficulties, owing partly to the unknown character and condition of the parties involved, and partly to the variety of interests to be served by the appraisal. But whatever the difficulties and ambiguities in ascertaining a price or prices for any article, the price or prices do actually exist without ambiguity. The vagueness comes wholly from failure to specify sufficiently the conditions under which the exchange is to take place. If we specify in sufficient detail the conditions of the contemplated exchange, its terms will be quite definite; but whether or not we can guess at those terms correctly is quite another matter.

§ 6

Having obtained the *price* of any kind of wealth, we may compute the *value* of any given quantity of that wealth, without necessarily supposing that particular quantity to be exchanged. The value of a given quantity of wealth is found by multiplying the quantity by the price. Thus, if the price of wheat is $\frac{2}{3}$ of a dollar per bushel, then a lot consisting of 3000 bushels would have a value of 3000 × \$$\frac{2}{3}$ per bushel or \$2000. In other words, the value of a certain amount of one kind of wealth is the quantity of some other kind for which it would be exchanged, if the whole amount were exchanged at the price set upon it. The exchange which sets the price need not be the exchange of the particular 3000 bushels which we are valuing; some other exchange of, say, 300 bushels for \$200 may set the price. This is one reason why it is preferable to explain price first and value afterward.

The definition of value which has been given, applying, as it does, to an aggregate of wealth instead of the unit, departs somewhat from economic usage; but it follows closely the usage of business men and practical statisticians. Economists have not usually thought it necessary to distinguish between the purchasing power of the unit and the aggregate, but have employed the term "value" indiscriminately to both. In other respects also their usage has been somewhat different from that here employed. Some of them have confined "price" to a money expression, *i.e.* to what is here called *money* price, and applied the term "value" to purchasing power in "goods." Others have used the term "price" in the sense of what an article actually sells for (market price) and "value" in the sense of what it *ought* to sell for (appraised price or reasonable price). Others, in turn, have used the term "price" in the sense employed in this book, but "value" in the sense of the degree of esteem in which an article is held ("marginal utility" or "subjective value"). It seems preferable to conform our definitions of value and price as closely as possible to business usage, which instinctively and consistently applies the term "price" to the unit and "value" to the aggregate.

§ 7

The distinction between quantity, price, and value of wealth may be seen clearly in any "inventory," such as the following: —

	QUANTITY	PRICE IN WHEAT	VALUE IN WHEAT
Shoes	1000 pair	4¼ bu. per pair	4,250 bu.
Beef	300 lbs.	⅕ bu. per lb.	60 bu.
Dwelling House . . .	1 house	10,000 bu. per house	10,000 bu.
Wheat	100 bu.	1 bu. per bu.	100 bu.
			14,410 bu.

In the first column are recorded various quantities of wealth, measured each in its own special unit; in the second column are the prices of these in wheat; while in the last column are their values, also in terms of wheat. The first and last columns represent two different modes of measuring wealth. Statistics of wealth, such as those published monthly by the Department of Commerce, usually give both "quantities" and "values." To translate from one to the other we need always a *price* as go-between.

It is important not to confuse the three columns with each other. The *quantity* of beef is a totally different thing from its *value*, and each of these is different from its *price*. The quantity is measured in *pounds* of beef, its value in *bushels* of wheat, and its price in *bushels per pound*. These three magnitudes are all of different "dimensions." Both quantity and value are simply physical magnitudes. "Value" as here explained is not a subjective magnitude in the mind of man, but purely objective, as *money value*, or *wheat value*. It has, of course, subjective causes, but these do not concern us yet.[1]

The measurement of wealth in "value" has this great advantage over its measurement in "quantity," that it translates the many kinds of wealth into a single kind. All the items in the third column of the inventory are thus expressed in a common unit, the bushel. We may consequently add together this column and obtain a single sum, namely, 14,410 bushels; but summation of the first column is impossible, because shoes, pounds of beef, houses, and bushels of wheat are incommensurable. We see here one of the important functions of money; it brings uniformity of measurement out of diversity.

But, although this reduction to a common measure is practically convenient, it would, of course, be a great mistake to suppose that it gives what may be called "the true measure of wealth." "The value of wealth" is an incomplete phrase; to be definite we should say, "the value of wealth in terms of gold," or in terms of some other particular article. We cannot, therefore, use such values for comparing different groups of wealth except under certain conditions and to a limited degree. To compare the wealth-values of America and England, of Ancient Rome and Modern Italy, of Carnegie and Crœsus, will give different results according to the standard of value employed.

§ 8

We have seen how to measure the three magnitudes,—quantity, price, and value of wealth. This measurement is, practically, a very inaccurate affair. The degree of accuracy attained is exaggerated in the minds of most persons, even including business men. In measurements of quantities of wealth there are two sources of error, for every

[1] Further explanation as to the dimensions of the quantity, price, and value of wealth are given in the Appendix to Chap. I, § 1.

measurement includes, as we have seen, two elements: a *unit of measure,* which may be inaccurate; and a *number* or ratio between the quantity to be measured and the unit, which number may also be inaccurate. In modern times the first source of error is practically eliminated. Our units of weight and measure are standardized by law, and a pound weight in California is equal to one in Connecticut, within one part in many thousand. The chief source of error, therefore, lies not in the unit, but in the ratio of the wealth to that unit. In retail trade the inaccuracy is as great as five per cent, or greater. Wholesale transactions are more accurate. A large manufacturing concern of Syracuse had its measurement of the weight of caustic soda sold in carload lots compared with the measurement made by its customers, and the results agreed within one fifth of one per cent on two fifty-carload lots. Probably the greatest degree of accuracy ever obtained in commercial measurements is on the Mint scales used by the United States in Philadelphia and San Francisco. These scales weigh accurately to within about one part in ten million.

When we proceed from quantities of wealth to values, we introduce still a third source of inaccuracy, namely, in the price factor by which we multiply. This is especially true if the price be merely an "appraised" price. The price of any actual sale is an absolute fact and cannot be said to have any inaccuracy; but the price at which we estimate that a thing *would* sell under certain conditions is always uncertain. In the case of staple articles, *i.e.* articles regularly on the market, a dealer can often appraise correctly within one per cent. Real estate in certain parts of a city where sales are active can sometimes be appraised correctly within five or ten per cent; but in the "dead" or out-of-the-way parts of some towns, where sales are infrequent, the appraisement becomes merely a rough guess. Again, in the country districts, while farms in the settled parts of

Iowa and Texas can be appraised within ten or fifteen per cent, in the backward parts even an expert's valuation is often proved wrong by more than fifty per cent. In some cases, in fact, where a sale of the article is scarcely conceivable, an appraisement is almost out of the question. To estimate the value of the Yellowstone Park is impossible, unless we allow ourselves a range of several hundred per cent. Similar wide limits must be allowed when we try to value free human beings. We can often give a lower limit, but seldom an upper one. The estimates may vary enormously with the point of view. It is sometimes said, "If I could buy Mr. So-and-So at my valuation and sell him at his, I'd get rich." It would be wrong, however, to conclude, as some writers have, that because we cannot value them accurately, public parks or freemen cannot be called wealth. When the slaves in the South became freemen they ceased to be appraised as wealth. The result has been somewhat confusing to our census statistics. The *Manufacturers' Record* of Baltimore recently issued figures showing a sharp drop in the assessed valuations of wealth in the South after the war, and the inference was drawn that wealth had immensely decreased. But a large part of this so-called decrease consisted merely in the change of ownership of slaves from their old masters to themselves, and the consequent omission of them from the statistics.

Various writers, from Petty down to Engel and Nicholson, have tried to assess the value of human beings. Professor Nicholson estimates roughly that the English nation is worth at least five times the value of other existing wealth in England.[1] Such calculations are of course of more theoretical than practical moment. They are also necessarily inaccurate, and involve in each case some particular supposition as to the purpose of the appraisement; for instance, whether it is to indicate the earning power of the population, their value to themselves, or to others.

[1] *Economic Journal*, March, 1891, p. 95.

CHAPTER II

PROPERTY

§ 1

The definition of Wealth in the previous chapter restricts its meaning to concrete material objects. But economics has also to deal with abstract services, utilities, and property rights. These, like material wealth, are bought and sold, and are, in fact, often regarded as a sort of "immaterial" or "incorporeal" wealth. It is, however, needless as well as confusing to include these elements under the general category of wealth. They are not wealth, though they are intimately related to wealth. The definition given shows that wealth has two attributes: it must be material, and it must be owned. Its materiality was the subject of the previous chapter; its ownership will be the subject of the present chapter.

But what is meant by owning wealth? We answer: to have the right to use it. Such a right is called *property*, or, more explicitly, a *property right.* To own a loaf of bread, or to have property or proprietorship in it, means nothing more nor less than to have the right to eat it, or sell it, or otherwise employ it to satisfy one's desires. To own a suit of clothes is to have the exclusive right to wear it. To own a carriage is to have the right to drive in it or otherwise utilize it as long as it lasts. To own a plot of land means to have the right to its use forever. The concept of property — the "right to use wealth" — is more fully expressed by the phrase, the "right to the uses of wealth." In this phrase we have to deal with two new ideas — rights and uses — each of which needs to be treated separately.

§ 2

We need first to understand what is the nature of the uses or services of wealth. The services of an instrument of wealth are the desirable changes effected (or the undesirable changes prevented) by means of that instrument. For instance, the services of a loom consist in changing yarn into cloth, or what is called weaving. Similarly, a plow performs the service of changing the soil in a particular manner; a bricklayer, of changing the position of bricks. A dam or dike performs the service of preventing the water from overflowing the land; a fence, of preventing cattle from roaming; a necklace, of sparkling or reflecting light, and thereby satisfying the love of beauty or the vanity of the owner.

When services are described as *desirable* events, it is meant that they are desired or esteemed by the owner or owners, not necessarily by every one, or even any one, else. It may even happen that the events are distinctly distasteful to others. A factory whistle may be a nuisance to every one except the factory owner.

In this connection it is important to distinguish between the uses or desirable events, and the utility or desirability of those events. The desirable service is a thing; it is usually objective. The desirability of the service, on the other hand, is a quality, and is purely subjective. It is a feeling toward the events, not the events themselves. In the present chapter we do not have to deal with the desirability, and it will form the subject of the next chapter.

Each sort of service is measured in its own appropriate unit. Sometimes the measurement is by *number*, *i.e.* obtained by simply counting the acts in which the specified service consists, as, for instance, in the case of the strokes of a printing press; sometimes the measurement is by *time*, as in the case of the day laborer; while sometimes the measurement of the services is expressed in terms of the *units of wealth* affected by those services, as in the case of so-called piecework. The services of a miner are measured by reference to the quantity of coal mined; the services of a planter, by the number of acres planted; and of a spinning machine, by the number of yards spun. Services, like wealth, are subject to exchange and, in consequence, have *prices*. The quantity of any service multiplied by its price gives its *value*. When reduced to value in a common standard, all varieties of services become commensurable with each other and with wealth.

The opposite of a service is a disservice, which is an undesirable change effected (or a desirable change prevented) by means of wealth. For instance, a locomotive renders disservices by consuming coal; a farm, by requiring fertilizers and labor; a factory, by requiring costs of working. Disservices, like services, are measured in quantity by special units and made commensurable in value by reduction to a common standard.

§ 3

Having seen what is meant by services of wealth, we next ask what is meant by the *right* to those services. "Right" is a term of jurisprudence, and brings economics into contact with the whole subject of legal and custom-sanctioned relations; but, for our present purpose, it is not necessary to go far in this direction. The right of a person to the uses of an article of wealth may be defined as his liberty, under the sanction of law and society, to enjoy the services of that article.

Lawyers distinguish between property rights and personal rights; but, to the economist, all rights are proprietary. The distinction between property and personal rights exists only so long as we restrict the meaning of wealth to the narrower of its two definitions, that is, only so long as we exclude free human beings. Here we have an instance in which logical convenience is served by adopting the broader definition of wealth, which includes human beings even when free, and by adopting also a coextensively broad definition of property so as to include all rights known to jurisprudence. This being premised, it follows that every right is a property right. No rights have ever been suggested which are not rights to obtain and enjoy the uses of wealth, either persons or things. Even the "right to life, liberty, and the pursuit of happiness" is simply one's right to certain uses of his own person. The rights of a husband over his wife and of a wife over her husband, and the reciprocal rights between parents and children, as well as all other rights *in personam,* are claims against particular persons; while the right to reputation, to the free exercise of one's calling, to immunity from boycott, persecution, etc., are claims upon the community generally.[1] These rights are not ordinarily called property rights, just as persons are not ordinarily called wealth, and for a similar reason, — they do not enter into trade. When wives were bought and sold they were regarded as wealth, and marital rights as property. To-day, both are taken out of commerce and therefore removed from commercial ideas and terms. The economist need not, perhaps, absolutely insist on restoring them; like the business man, he is chiefly interested in what is salable. But in framing his definitions he finds it difficult, if not impossible, to confine the terms "wealth" and "property" to objects which are exchangeable, without thereby sacrificing simplicity and logical convenience, and excluding certain objects, such as public parks and former English entails, which, though never sold, even business men would call wealth and property respectively. We therefore choose in this book to frame our definitions so as to include such elements, even though they be not further referred to. In definitions, it is usually better to include too much rather than too little, and in this case,

[1] Cf. T. E. Holland, *Jurisprudence*, Macmillan, 1898, pp. 50, 80, 87, 90, 128.

at least, the superfluous which is included will seldom concern and never embarrass us.

Property rights, then, consist of rights to the uses or services of wealth. But the services which we own are always and necessarily future services; the past have perished. Moreover, since all future events are uncertain, we are always constrained to reckon with the element of *chance.* A strictly complete definition of a property right, therefore, would read as follows: *A property right is the right to the chance of obtaining some or all of the future services of one or more articles of wealth.*

Property is measurable, just as are wealth and services, each in its own particular unit. Usually the measurement is "by number," that is, by counting the number of rights of the same kind. Thus, one hundred shares of preferred stock in a particular company is a statement of the amount of that particular property. The concepts transfer, exchange, price, and value apply to property as to wealth and to services. Indeed, as an exchange of wealth is but a concealed exchange of services, so an exchange of services is but a concealed exchange of the right thereto, namely, property. Hence the exchange of property is the final form of exchange, and includes in itself all other forms whatsoever.

§ 4

Wealth and property, then, are correlative terms. Wealth is the concrete thing owned; property is the abstract right of ownership. The two concepts mutually imply each other. There can be no wealth without property rights applying to it, nor property rights without wealth to which they apply. In fact, the proposition that property and wealth are coextensive follows necessarily from the definitions of wealth and property which we have adopted. But it may readily be objected that in the actual concrete world, for which these definitions were designed, the correspondence between what are known as wealth and property does not hold true. A thorough examination of the case, however, will remove this objection.

Sometimes wealth and property rights are so closely associated as to be confused with each other, so that, unless one stops to consider the matter, the existence of the two separate concepts would not be suspected. This is true in the case of "fee simple," where a piece of land is spoken of as a "piece of property." For practical purposes, little objection can be raised to such popular usage, but even in such cases strict accuracy requires that the two ideas should be distinguished. The distinction is more easily remembered if we employ the full phrase "property right." A loaf of bread is concrete wealth, not a property right; the right to eat it is the property. On the other hand, in the more involved cases of property rights, we encounter the opposite difficulty. The danger here is in separating the concepts of wealth and property too far, so as to consider them as independent instead of interdependent. When railway shares are sold in Wall Street, the investor is prone to think of those shares as entirely detached from any concrete wealth. It is unlikely that he has ever seen or ever will see the steel rails, cars, and locomotives upon which those shares are based; and indeed, the only concrete object of which he is likely to be distinctly conscious is the paper certificate itself. But it is clear that this paper certificate is not itself the property, but merely the written evidence of it and that the railway shares, to be property, involve a real railway (wealth) underneath.

That all wealth involves a property right is not likely to be denied by any one; and that all property rights involve underlying wealth should be equally evident. But this is not the case. In fact, some of the most dangerous fallacies which beset the business world, including many of the sophisms of credit, are due to the difficulty of recognizing the wealth lying behind property in some of its sublimated forms.

§ 5

In order not to devote too much space to this subject the best procedure will be to give types of the chief forms of property, and to specify in each case what wealth underlies the right. This is done in the table on pages 26 and 27, which also specifies the services involved, and (where they exist) the certificate or written evidence of the property right.

§ 6

Probably ninety per cent of the actual property in the United States would be included under the cases entitled Fee Simple, Partnership Rights, Stocks, Bonds, Notes, and Lease Rights. In all of these cases, the existence of the real wealth behind them is well known and acknowledged. For practical purposes, therefore, the proposition that wealth and property are coextensive is already established.

Of the remaining cases some seem a little obscure at first, but they may be readily solved if we bear in mind a few general principles:

The first thought which should guide us is that, given any particular property right, we should first discover the benefits or "services" secured by that right, then the physical means by which those services are obtained. These means are not always identical with the "cause" of those services. For instance, real estate with a southern exposure is especially desired because of the sunlight which falls upon it. The sun may be called the *cause* of the sunlight, but the land is the practical *means* of obtaining it. To own or not to own the land is to obtain or not to obtain the sunlight which goes with it. It is the land which puts the sunlight at the disposal of its owner. On the other hand, when a lamp gives its light it is not only means, but also cause.