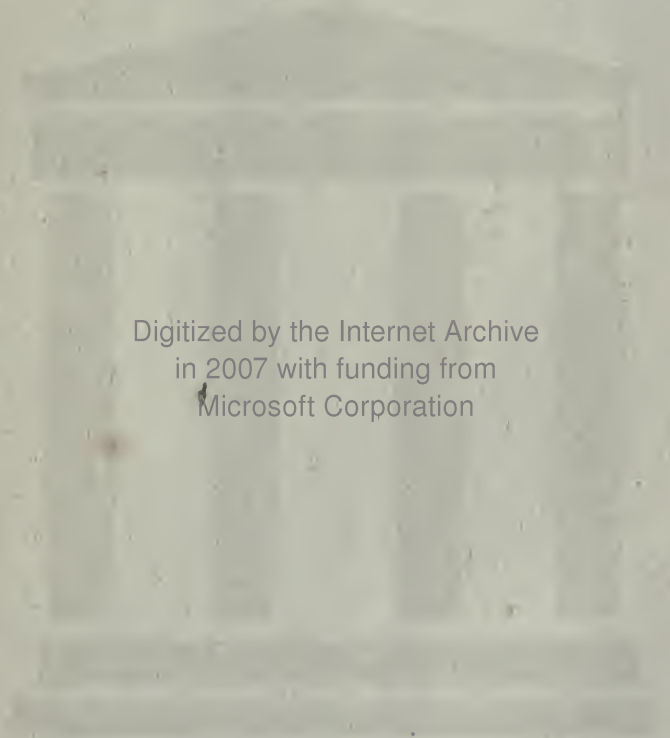
Readings in Economics

TAYLOR



Some Readings in Economics

PREPARED FOR THE USE OF STUDENTS IN COURSE I,
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BY

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PREFACE.

My primary object in preparing this book has been to get into the hands of the students who take Course 1 in Political Economy, collateral reading bearing on certain topics which usually give us a good deal of trouble. A secondary purpose has been to place within reach of the class certain passages which for one reason and another are particularly deserving of the student's attention, even though the topics involved have not proved particularly difficult of comprehension. As respects both of these objects, much more, doubtless, ought to be done. But this little will be better than nothing; and I hope to make it more nearly adequate in a later edition.

CONTENTS.

READING I.

SUBJECTIVE VALUE.

During what is commonly spoken of as the classical period of Political Economy—roughly from 1770 to 1870—the idea attached by most economists to the term value was what is more definitely characterized as *exchange value,* by which is usually meant the power to command for its possessor through exchange other goods, or briefly *power in exchange.* But within the last forty years there has developed another conception of value which many economists have come to look on as the real root idea, and which almost all recognize as a conception that is quite useful, if not indispensable, in connection with certain problems of economic theory.* This later idea of value is most frequently designated *subjective* value, following the Austrian writers who have done most to explain it. It is usually defined as "the significance for us which concrete goods acquire through the fact, that we are conscious of being dependent upon the power to dispose of them, for the satisfaction of our wants." More briefly expressed, value in this sense is "the felt significance of things upon which the satisfaction of our wants depends." In my own teaching I am in the habit of changing slightly what one might call the psychological location of the characteristic element,—defining "subjective value as the property or state of *being prized—set store by.*"

The nature of subjective value and the process whereby it comes to exist, are among the first matters presented to

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* No one proposes that subjective value shall displace exchange value as the conception which has most practical significance in economic discussions.

the student of economics; and they are at the same time matters of considerable difficulty. It seems desirable, therefore, that we should supply at once some fairly adequate discussion of these points. I have chosen for this purpose two readings from Von Wieser and Boehm-Bawerk, two of the most eminent writers of the Austrian school; and to these I have added a brief confirmatory presentation of these matters from an eminent Dutch economist, Pierson. By way of a caution, it ought perhaps to be said that by no means all teachers of economics are in accord with the writers quoted in making *utility* the sole cause and determinant of subjective value. We are not yet convinced that difficulty of attainment—*cost in labor and other sacrifices*—plays no part in the matter. Still all would agree that the explanations given by Austrian writers are beautifully ingenious and clear; and that they can not fail to help the student to a better understanding of subjective value.

A. *Originally only the human has importance for man. Thought for one's self, interest in one's self, comes by nature. Towards things, on the other hand, man is originally indifferent, and his interest in them only awakens in so far as he finds them connected with human interests and destinies. This takes various forms; such as pity, when the lower animals are seen to suffer just as man does, or religious or poetic emotion, when observation of the living in nature awakens suspicion of the connection of all life, or, finally, economic valuation, when things are conceived of as instruments to and conditions of human well-being. This is the coldest form that our interest takes, as it regards things simply as means to human ends; it is, however, at the same time, the most far-reaching, as it embraces most things, and claims not only existence, but property.

Our natural indifference towards things is nevertheless so great that it requires a special compulsion, a peremptory

* Von Wieser—Natural Value (1888), translation 1893, Macmillan & Co. Book I, Chapter VII.

challenge, to make us look upon them as objects of importance, objects possessing value. Nor does the mere observation that things are "of use" to us, and that the use has for us importance or value exert this compulsion. Where we employ goods for our own uses, but where at the same time these goods are at our disposal in absolutely assured superfluity, we use them, but concern ourselves no more about them than about the sands of the sea. Whether they increase or decrease—always supposing that the superfluity remains—we merely think, "What does it matter? we have always enough and more than enough of them"! In Paradise nothing would have value but satisfactions—neither things nor goods. Because there one could have everything, one would not be dependent on anything.

On the other hand, where there is not an assured superfluity, interest awakens in the train of self-seeking calculation, and communicates itself to such good as we notice ourselves using and not caring to lose. Men in general thus lay their account with things, as the egoist with persons. And here we are not speaking only of cases of real need, of extremest want, where the little that one has is guarded with an Argus eye; nor of objects of great scarceness or rarity, such as a work of art which is quite unique, and whose loss it would be impossible to replace. We refer also to cases where people are fairly prosperous, but nevertheless require to economise; and even to cases of extreme wealth—always supposing it is not assured natural superfluity—where, in many respects, a man has everything, but where, all the same, the "everything" requires continual guarding, administration, and renewal. In these circumstances there is not a single change in a man's possessions which is entirely indifferent. Every addition brings some addition of enjoyment; every loss, even the slightest, disturbs, makes some gap, and breaks the expected line of enjoyments. Happiness and sorrow are dependent on our possessions; the destinies of goods mean the destinies of men. There is an intimate association of ideas between human interests and goods. Goods, indifferent in themselves, receive value from that value which their employments have.

Goods which are to be had in an assured and natural superfluity are called Free goods; all others are Economic goods. Thus only economic goods can possess value. The value of goods, according to Menger's definition, is "the importance which concrete goods, or quantities of goods, receive for us from the fact that we are conscious of being dependent on our disposal over them for the satisfaction of our wants."

It should be noticed that no part of free goods receives value; neither that part which is superfluous, and cannot therefore be used, nor yet that part which is used. Of the water which flows abundantly from some spring, neither that portion which fills the jar, nor that which overflows has value. The value of goods, although it has its origin in use, does not all the same reflect the utility: there are cases in which great use is obtained, where nevertheless no value—*i. e.*, no value of goods—is created. The theorist, therefore, who would explain value must not content himself with explaining the change in amounts of utility; he must go further and examine those laws by which amounts of utility are changed into amounts of value. It may be suspected—and we shall find this suspicion confirmed in what follows—that value, owing in many cases so little of its origin to utility, is, even where it has so originated, equally far from always containing the full amount of utility. If the use of a good in the individual case be so far removed from its general usefulness, its value, if our suspicion is indeed confirmed, must be even further removed from that general usefulness—and here is opened up to us a second point of view from which we may explain and make intelligible the contradictions which experience points out between value and usefulness.

B. *All goods without exception—indeed according to the very conception of them as "good"—possess a certain relation to human wellbeing. There are, however, two essentially distinct grades of this relation. A good belongs

* Boehm-Bawerk—Positive Theory of Capital (1888), translation 1891. Macmillan & Co. Book III, Chapter II.

to the lower grade when it possesses the general *capacity* to subserve human weal. The higher grade, on the other hand, demands that a good should be more than merely a sufficient cause; it must be an indispensable condition of human wellbeing—a *condition* of such a kind that some gratification stands or falls with the having or wanting of the good. In the expressive vocabulary of everyday life we find a separate designation for these grades. The lower is called Usefulness, the higher Value. This distinction, already recognised in common speech, we must try to make as clear and well-marked as its fundamental importance for the whole theory of value deserves.

A man dwells beside a bubbling spring of water. He has filled his cup, and the spring goes on pouring out enough to fill a hundred other cups every minute. Another man is travelling in the desert. A long day's journey over glowing sand still divides him from the nearest oasis, and he has come to his last cup of water. What is the relation in each case between the cup of water and the wellbeing of its owner?

A single glance shows us that the relation is very dissimilar; but wherein lies the difference? Simply that, in the former case, we have only the lower grade of the relation we call wellbeing, that of usefulness; in the latter case we have the higher grade as well. In the first case, just as in the second, the cup of water is useful, that is, capable of satisfying a want, and, moreover, in exactly the same degree: for evidently the refreshing qualities of the water—the qualities on which its capacity to quench thirst is based, such as coolness, taste, etc.,—are not in the least degree weakened by the fact that other cups of water chance to possess similar properties; nor, in the second case, are these refreshing qualities in the least augmented by the accidental circumstance that there is no other water near. On the other hand, the two cases become essentially distinct when considered with reference to the second grade. Looking at the former case we must say that the possession of the cup of water does not provide the man with one single satisfaction more, nor its loss with one satisfaction less, than he could have obtained without it. If he has that particular

cup of water he can quench his thirst with it; if he has not that cup—well, he can quench his thirst quite as well with one of the hundred others which the spring puts freely at his disposal every minute of the day. If he likes, therefore, he may make that one cup the *cause* of his satisfaction by quenching his thirst with it; an *indispensable condition* of his satisfaction it cannot be; for his wellbeing it is dispensable, unimportant, indifferent.

It is quite otherwise in the second case. Here we must say that, if our traveller had not that one last cup, he could not quench his thirst; he must bear its pangs unassuaged, perhaps even succumb to them. In the cup of water then, in this case, we see not merely a sufficient cause, but the indispensable condition, the *sine qua non* of human wellbeing. Here it is of consequence, even of urgency; it possesses importance for his wellbeing.

Now it is not too much to say that the distinction here drawn is one of the most fruitful and fundamental in the whole range of our science. It does not owe its existence to the microscope nor to any hair-splitting distinctions of the logician. It has its life in the world of men, who know it and use it and take it as guide for their common attitude towards the world of goods, not only as regards the intellectual estimate they apply to these goods, but as regards their actual business transactions. About goods which are only useful the practical business man is careless and indifferent. The academic knowledge that a good may be "of use" cannot evoke any efficient interest in that good, in face of the other knowledge that the same use may be obtained without it. Such goods are practically naught as regards our wellbeing, and we treat them as such; we are not put about when we lose them, and we make no effort to gain them. Who would fret at, or make an effort to prevent, the spilling of a cup of water at the spring, or the escape of a cubic foot of atmospheric air? Where, on the other hand, the sharpened glance of the economic man recognises that some satisfaction, wellbeing, gratification, is connected with a particular good, there the effective interest which we take in our own wellbeing is transferred to the good which we recognise as its condition; we see and

value our own welfare in it; we recognise its importance for us as value; and finally, we develop an anxiety, proportioned to the greatness of that importance, to acquire and hold the good.

Thus, formally defined, value is the importance which a good or complex of goods possesses with respect to the wellbeing of a subject. Any addition to this definition, regarding the kind and reason of the importance, is, strictly speaking, not necessary, since goods can only have an effective importance for human wellbeing in one way, viz., by being the indispensable condition, the *sine qua non,* of some one utility which subserves it. In view of the fact, however, that in other definitions of volue it is very often translated as an "importance," while the importance spoken of rests, erroneously, on a simple *capability* of utility, or, not less erroneously, on the necessity of costs, or the like, we shall define it, unambiguously and exactly, as: That importance which goods or complexes of goods acquire, as the recognised condition of a utility which makes for the wellbeing of a subject, and would not be obtained without them.

All goods have usefulness, but all goods have not value. For the emergence of value there must be scarcity as well as usefulness—not absolute scarcity, but scarcity relative to the demand for the particular class of goods. To put it more exactly: goods acquire value when the whole available stock of them is not sufficient to cover the wants depending on them for satisfaction, or when the stock would not be sufficient without these particular goods. On the other hand, those goods remain valueless which are offered in such superfluity that all the wants which they are fitted to satisfy are completely supplied, and when, beyond that, there is a surplus which can find no further employment in the satisfaction of want, and which, at the same time, is large enough to spare the goods or quantities of goods that we are valuing without imperilling the satisfaction of any one want.

After what has been said as to the nature of value, it should not be very difficult to prove these propositions. When the supply of goods is not sufficient, and some of the

wants which they are adapted to satisfy must remain unsatisfied, it is clear that the loss of even a single good involves the loss of a possible satisfaction, while the addition of a single good involves the acquisition of a satisfaction otherwise impossible; and it is clear, consequently, that some gratification or form of wellbeing depends on the existence of that good. Conversely, it is quite as clear that, if goods of any class are to be had in superfluity, there is no harm done if one of the goods be lost—since it can be immediately replaced from the superfluous stock; nor any utillty got if another such good be added—since it cannot be employed in any useful way. Suppose, for instance, that a peasant requires ten gallons of water per day, and no more, for general purposes—say, for his own drinking, for that of his family and servants, for watering his cattle, for cleansing, flushing, etc.,—and suppose that the only spring within reach supplies no more than eight gallons a day. It is quite evident that he cannot spare one single gallon from his water-supply without suffering, to a more or less sensible extent, as regards the wants and aims of his economy. Every gallon in this case is the condition of a definite sphere of usefulness. Even if the spring supplied just ten gallons a day this would still be true. But if the spring supplied twenty gallons per day, it is just as obvious that the loss of one gallon would not do the slightest injury to our peasant. He can only employ ten gallons usefully, and he must let the other ten gallons flow away unused. If one gallon is spilled it is replaced from the overflow, and the only effect is that now the unusable surplus is reduced from ten gallons to nine.

Now as it is the insufficient, or the barely sufficient, goods that are the objects of economical care—the goods we "economise" or endeavor to acquire and keep,—while such goods as are to be had in superfluity are free to everybody, we may express the above propositions shortly in the following form: All economical goods have value; all free goods are valueless. In any case it must steadily be borne in mind that it is only relations of *quantity* that decide whether any particular good is merely capable of use, or is also the *condition* of a utility for us.

C. *When an article belongs to the class of economic goods a definite quantity of it possesses *value*. We shall have to consider this word a little before proceeding any further. It is a word that has given rise to so much controversy and misconception, that some people have felt justified in advising that its use should be altogether avoided in an economic treatise. But one of the writers who has been most insistent on this point, W. Stanley Jevons, has failed to adhere to his own advice. In many of his later writings he refers to the value of things, thus proving that he cannot dispense with the word.

Nor can it be dispensed with. And even if it could, the expression Ratio of Exchange, which Jevons suggests as a substitute, is the very last that should be recommended. Value and ratio of exchange express two conceptions between which we must distinguish carefully. The relative values of things exercise a great influence upon the ratio in which these things are exchanged for each other. We shall presently see, however, that there could be no such thing as exchange, but for the fact that different people attach different values to a given quantity of the same thing. But as there can be only one ratio of exchange at any given time in any given market, it is evident that value and ratio of exchange cannot mean the same thing. The causes which determine the rates at which things are exchanged for one another merit our attention in the highest degree; but before we can understand them clearly we must first of all be clear as to the value which things possess irrespective altogether of exchange.† We may observe in passing, that data for throwing light on this subject are to be found in the writings of Jevons himself.

What do you mean when you say that we attach value to a thing? The expression may have a twofold bearing. It may have reference to a *class* of things. If we say that we place value upon air, sunshine, drinking-water, friendship, art, we simply declare that we regard them as goods.

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* Pierson—Principles of Economics (1896), translation published by the Macmillan Co., 1902. Part I, Chapter I, pp. 51-53.

[† Pierson uses the phrase "value irrespective of exchange" where current writing uses "subjective value."—Editor.]

To value a thing implies that we are unwilling to be without it and that we desire to obtain it. There is an intimate connection between the conceptions expressed by the words value and endearment, hence the twofold meaning of the words *carus, cher, dear, theuer.* When we say that we attach value to art, we mean that we like art, and that we consider it a disadvantage to be deprived of the enjoyment which it affords.

The expression value may, however, be used in another sense as well, namely, that in which we use it with reference, not to a certain class, but *to a definite quantity of things.** This certainly is the sense in which we use the word when we say that air or water, for example, have no value. We do not mean that air and water can be dispensed with, but that we place no value upon a *cubic foot* of one or on or a *gallon* of the other. Frequently we attach great value to a certain kind of thing without attaching the least value to a definite quantity of it. On the other hand, it is self-evident that when a certain kind of thing is useless, any quantity of it, no matter how great, will also be useless. But if we are supplied with an article in such abundance as to make it belong to the class of commodities which we have called non-economic, a pound or a gollon or a cubic foot of that article has no value whatever.

When we make use of the word value, it is absolutely essential that we should state clearly whether we use it in relation to classes of things or quantities of things. There must be no room for the least uncertainty on this point; for it may sometimes be said with truth of one and the same thing, that it has value, and that it has no value. Speaking of air in general, we may say that it has value. But under ordinary circumstances no one would consider it a loss if the existing supply were to be diminished by a few cubic feet. Thus we are equally justified in saying that air has no value.

We know that the term value in exchange is always used in relation to definite quantities, and never in relation to particular kinds of things. The value in exchange of coffee

* [The editor's italics.]

is that of a pound of coffee. It is out intention, therefore, to use the word value invariably in this sense, even when we are speaking of value irrespective of exchange. We would have it clearly understood that, in whatever connection the word may occur in the present work, it will always be used in relation to definite quantities. By value irrespective of exchange is meant *the importance which particular commodities or quantities of commodities have acquired in our estimation through our recognition of the fact that we need them for the satisfaction of our wants.**

From what has been said it will be clear that to attach value to a thing and to regard a thing as belonging to the group of economic goods are two ways of expressing the same thought. Things are goods because they are useful to us. They possess value because we can spare no portion of them. If their utility increases they acquire increased value; but if they become at the same time more abundant, their value diminishes and may even disappear altogether. The relation between the value which we place upon a pound of gold and that which we place upon a pound of bread is no index of the degree of estimation [of gold and bread viewed as *classes* of things] ;† it simply shows how far the extent of our requirements in the matter of gold and bread, viewed in connection with the existing supply of each, will cause us to regard it as an inconvenience whenever we lose, or as an advantage whenever we gain, a pound of either.

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* [Editor's italics.]

† It is of course an index of the degree of estimation in which we hold *these specific quantities* of the articles named.—Editor.]

READING II.

THE COOPERATIVE CHARACTER OF THE PRESENT ECONOMIC ORDER.

One of the most conspicuous facts about the existing economic order is that, although in the highest degree individualistic, it is, after all, really coöperative. Although each of us acts on his own responsibility, independently of others, there being no formal concert of action, yet in reality we are coöperating in accomplishing the ultimate objects of our efforts; since the goods which we actually enjoy as the fruit of our efforts are chiefly the products of other people's efforts. Further this coöperation of ours, though informal and largely unconscious, is not chaotic, unregulated. On the contrary, it shows a high degree of order and rationality. It is automatically regulated in a way which, generally speaking, secures far better results than any experiment in organized coöperation has thus far been able to achieve. These facts are effectively brought out in the following extracts from Whately and Adam Smith, though economists of our day would scarcely approve the theological ideas which influenced these writers, especially Whately.

A. *As it is, many of the most important objects [which society must seek] are accomplished by the joint agency of persons who never think of them, nor have any idea of

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* Whately—Introductory Lectures in Political Economy (1831). From Lecture IV.

acting in concert; and that, with a certainty, completeness, and regularity, which probably the most diligent benevolence under the guidance of the greatest human wisdom, could never have attained.

For instance, let any one propose to himself the problem of supplying with daily provisions of all kinds such a city as our metropolis, containing above a million of inhabitants. Let him imagine himself a head-commissary, entrusted with the office of furnishing to this enormous host their daily rations. Any considerable failure in the supply, even for a single day, might produce the most frightful distress; since the spot on which they are cantoned produces absolutely nothing. Some indeed of the articles consumed admit of being reserved in public or private stores, for a considerable time; but many, including most articles of animal food, and many of vegetable, are of the most perishable nature. As a deficient supply of these even for a few days, would occasion great inconvenience, so, a redundancy of them would produce a corresponding waste. Moreover, in a district of such vast extent, as this "province" (as it has been aptly called) "covered with houses," it is essential that the supplies should be so distributed among the different quarters, as to be brought almost to the doors of the inhabitants; at least within such a distance, that they may, without an inconvenient waste of time and labour, procure their daily shares.

Moreover, whereas the supply of provisions for an army or garrison is comparatively *uniform in kind*: here the greatest possible *variety* is required, suitable to the wants of various classes of consumers.

Again, this immense population is extremely fluctuating in number; and the increase or diminution depends on causes, of which, though some may, others can not, be distinctly foreseen. The difference of several weeks in the arrival, for instance, of one of the great commercial fleets, or in the assembly or dissolution of a parliament, which cause a great variation in the population, it is often impossible to foresee.

Lastly, and above all, the daily supplies of each article must be so nicely adjusted to the stock from which it is

drawn—to the scanty, or more or less abundant, harvest—importation—or other source of supply—to the interval which is to elapse before a fresh stock can be furnished, and to the probable abundance of the new supply that as little distress as possible may be undergone;—that on the one hand the population may not unnecessarily be put upon short allowance of the article, and that on the other hand they may be preserved from the more dreadful risk of famine, which would ensue from their continuing a free consumption when the store was insufficient to hold out.

Now let any one consider this problem in all its bearings, reflecting on the enormous and fluctuating number of persons to be fed—the immense quantity, and the variety, of the provisions to be furnished, the importance of a convenient distribution of them, and the necessity of husbanding them discreetly; and then let him reflect on the anxious toil which such a task would impose on a Board of the most experienced and intelligent commissaries; who after all would be able to discharge their office but very inadequately.

Yet this object is accomplished far better than it could be by any effort of human wisdom, through the agency of men, who think each of nothing beyond his own immediate interest,—who, with that object in view, perform their respective parts with cheerful zeal,—and combine unconsciously to employ the wisest means for effecting an object, the vastness of which it would bewilder them even to contemplate.

Early and long familiarity is apt to generate a careless, —I might almost say, a stupid indifference, to many objects, which, if new to us, would excite a great and a just admiration; and many are inclined even to hold cheap a stranger, who expresses wonder at what seems to us very natural and simple, merely because we have been used to it; while in fact perhaps our apathy is a more just subject of contempt than his astonishment. Moyhanger, a New-Zealander who was brought to England, was struck with especial wonder, in his visit to London, at the mystery, as it appeared to him, how such an immense population could be fed; as he saw neither cattle nor crops. Many of the

Londoners, who would perhaps have laughed at the savage's admiration, would probably have been found never to have even thought of the mechanism which is here at work.

It is really wonderful to consider with what ease and regularity this important end is accomplished, day after day, and year after year, through the sagacity and vigilance of private interest operating on the numerous class, of wholesale, and more especially, retail, dealers. Each of these watches attentively the demands of the neighborhood, or of the market he frequents, for such commodities as he deals in. The apprehension, on the one hand, of not realizing all the profit he might, and, on the other hand, of having his goods left on his hands, either by his laying in too large a stock, or by his rival's underselling him,—these, acting like antagonist muscles, regulate the extent of his dealings, and the prices at which he buys and sells. An abundant supply causes him to lower his prices, and thus enables the public to enjoy that abundance; while he is guided only by the apprehension of being undersold; and, on the other hand, an actual or apprehended scarcity causes him to demand a higher price, or to keep back his goods in expectation of a rise.

For doing this, corn-dealers in particular are often exposed to odium, as if they were the cause of the scarcity; while in reality they are performing the important service of husbanding the supply in proportion to its efficiency, and thus warding off the calamity of famine; in the same manner as the commander of a garrison or a ship, regulates the allowances according to the stock, and the time it is to last. But the dealers deserve neither censure for the scarcity which they are ignorantly supposed to produce, nor credit for the important public service which they in reality perform. They are merely occupied in gaining a fair livelihood. And in the pursuit of this object, without any comprehensive wisdom, or any need of it, they coöperate, unknowingly, in conducting a system which, we may safely say, no human wisdom directed to that end could have conducted so well:—the system by which this enormous population is fed from day to day.

B. *It is the great multiplication of the productions of all the different arts, in consequence of the division of labour, which occasions, in a well-governed society, that universal opulence which extends itself to the lowest ranks of the people. Every workman has a great quantity of his own work to dispose of beyond what he himself has occasion for; and every other workman being exactly in the same situation he is enabled to exchange a great quantity of his own goods for a great quantity, or, what comes to the same thing, for the price of a great quantity of theirs. He supplies them abundantly with what they have occasion for, and they accommodate him as amply with what he has occasion for, and a general plenty diffuses itself through all the different ranks of the society.

Observe the accommodation of the most common artificer or day-labourer in a civilized and thriving country, and you will perceive that the number of people of whose industry a part, though but a small part, has been employed in procuring him this accommodation, exceeds all computation. The woolen coat, for example, which covers the day-labourer, as coarse and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must all join their different arts in order to complete even this homely production. How many merchants and carriers, besides, must have been employed in transporting the materials from some of those workmen to others who often live in a very distant part of the country! how much commerce and navigation in particular, how many ship-builders, sailors, sail-makers, rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world! What a variety of labour too is necessary in order to produce the tools of the meanest of those workmen. To say nothing of such complicated machines as the ship of the sailor, the mill of the fuller, or even the loom of the weaver, let us

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*Adam Smith—An inquiry into the Nature and Causes of the Wealth of Nations, (1776). Book I, Chapter I.

consider only what a variety of labour is requisite in order to form that very simple machine, the shears with which the shepherd clips the wool. The miner, the builder of the furnace for smelting the ore, the feller of the timber, the burner of the charcoal to be made use of in the smelting-house, the brick-maker, the bricklayer, the workmen who attend the furnace, the mill-wright, the forger, the smith, must all of them join their different arts in order to produce them. Were we to examine, in the same manner, all the different parts of his dress and household furniture, the coarse linen shirt which he wears next his skin, the shoes which cover his feet, the bed which he lies on, and all the different parts which compose it, the kitchen grate at which he prepares his victuals, the coals which he makes use of for that purpose, dug from the bowels of the earth, and brought to him perhaps by a long sea and a long land carriage, all the other utensils of his kitchen, all the furniture of his table, the knives, and forks, the earthen or pewter plates upon which he serves up and divides his victuals, the different hands employed in preparing his bread and his beer, the glass window which lets in the heat and the light, and keeps out the wind and the rain, with all the knowledge and art requisite for preparing that beautiful and happy invention, without which these northern parts of the world could scarce have afforded a very comfortable habitation, together with the tools of all the different workmen employed in producing those different conveniences; if we examine, I say, all these things, and consider what a variety of labour is employed about each of them, we shall be sensible that without the assistance and coöperation of many thousands, the very meanest person in a civilized country could not be provided, even according to, what we very falsely imagine, the easy and simple manner in which he is commonly accommodated. Compared, indeed, with the more extravagant luxury of the great, his accommodation must no doubt appear extremely simple and easy; and yet it may be true, perhaps, that the accommodation of an European prince does not always so much exceed that of an industrious and frugal peasant, as the accommodation of the latter exceeds that of many an African king, the absolute master of the lives and liberties of ten thousand naked savages.

READING III.

COMMERCE IS PRODUCTIVE—ADDS TO NATIONAL WEALTH.

A. *What has been already stated is sufficient to expose the sophism of the Economists, who contended, that as a full equivalent must be always given for commodities brought from abroad, it was impossible foreign commerce could add any thing to national wealth. How, they asked, can the wealth of a country be increased by giving equal values for equal values? They admitted that commerce made a better distribution of the wealth of the world; but as it did nothing more than substitute one sort of wealth for another, they denied it could make any addition to its amount. At first sight, this sophistical and delusive statement appears sufficiently conclusive; but a few words will suffice to demonstrate its fallacy. Those who suppose that commerce cannot be a means of increasing the wealth of both parties engaged in it, and that if one of them gains any thing, it must be at the expense of the other, entirely misconceive its nature and objects. It may cost as much to produce the cloth with which the English purchase the wine of Portugal, as it does to produce the latter; and it may even cost more. But then it must be observed, that, in making the exchange, the value of the wine is estimated by its cost in Portugal, which has peculiar facilities for its production, and not by what it would cost to produce it in England were the trade put an end to; while, in like manner, the value of the cloth is estimated by its cost in England, and not by what it would cost were it produced in Portugal. The advantage of the intercourse consists in its enabling each country to obtain commodities, which it

*McCulloch—Principles of Political Economy, 4th ed., 1849. Part I, Chapter V, pp. 146-148.

could either not produce at all, or which it would cost a comparatively large sum to produce directly at home, for what it costs to produce them under the most favourable circumstances, and with the least possible expense. In no respect, therefore, can the gain of the one be said to be a loss to the other. Their intercourse is evidently productive of mutual advantage. Through its means each is supplied with produce for which it has a demand, by a less sacrifice of labour and expense than would otherwise be required; so that the wealth of both parties is not only better distributed, but is, at the same time, vastly augmented, by thus judiciously availing themselves of each other's peculiar capacities and powers.

To set this principle in a clearer point of view, let it be supposed that, with a certain outlay, we may either manufacture 10,000 yards of cloth or raise 1,000 quarters of wheat, and that with the same outlay the Poles can manufacture 5,000 yards of cloth or raise 2,000 quarters of wheat. Under these circumstances, it is plain, were a free intercourse established between this country and Poland, that we should, by exporting cloth to the latter, get twice the quantity of corn in exchange for any given outlay that we should get by employing the same sum in the culture of land at home; while, on their side, the Poles would get through this exchange, twice as much cloth in return for their expenditure on corn as they would have got had they tried directly to manufacture it. Now, this supposed case being identical, in respect of principle, with every case that really occurs in the practice of commerce, every one must see how ridiculous it is to contend that the latter is not a means of adding to the productiveness of labour, and, consequently, of increasing wealth! Were our intercourse with Portugal and the West Indies put an end to, it would be impossible, perhaps, to produce port wine, sugar, and coffee, directly in this country; and though it were possible, it would, at any rate, cost fifty or a hundred times as much to produce them here as it costs to produce the equivalents exported to pay for them.

B. *Whether exchange should be considered to be productive of wealth is an old question of debate among economists. The Physiocrats used to answer it in the negative. When we look at the fact of exchange separately, and reduced to its legal basis, as a simple transfer of property, as a *quid pro quo*: we certainly cannot term it an act of production; for it follows from its very definition that its function is not to produce new wealth, but to transfer already existing wealth. Clearly, the sale of a piece of land cannot be called an act of production. Moreover, as sale and purchase are the two faces of exchange, if to sell is to produce, so likewise is to buy; and we should all of us be producing every time we make a purchase. That would be a confusion of language.

But we must not look at exchange in this light. We must regard it as the last in that series of acts of production which begins with invention, also an immaterial act, and continues through the whole series of agricultural, manufacturing, and transporting industries, forwarding products, stage by stage, towards their final destination, the hands of the person who is to use them. Change of form, of place, and of ownership are all three equally indispensable for the final result; and surely the last named is not the least important.

Yet the Physiocrats attempted to show that exchange was profitable to no one. For, said they, all exchange, if it is equitable, presupposes the equivalence of the two values exchanged, and consequently implies that there is neither gain nor loss on either side. It is true that one party may be cheated; but in that case, one man's profit is easily balanced by the other's loss, so that altogether the final result is nought (see Quesnay, Dialogues sur le Commerce, and Le Trosne, De l'Interet social). This is nothing but sophistry, and was refuted by Condillac long ago. We need only remark that, if no exchange ever led to profit, or if every exchange necessarily implies fraud, it would be difficult to understand why men have persisted in practising exchange

*From Gide's Principles of Political Economy. Copyright 1891 and 1903, by D. C. Heath & Co. By permission. First American Edition, pp. 170-172.

for so many centuries. As a matter of fact, the values exchanged are not equivalent. What I yield in the process of exchange is always worth less to me than what I acquire; for clearly without that motive I should not surrender it at all, and my fellow-exchanger goes through the same train of reasoning for his part. Each of us considers that he receives from the exchange more than he gives, and we are both of us correct. There is no contradiction between these opposite judgments and conflicting preferences, for we know that the utility of each thing is purely subjective, and varies according to the wants and desires of each individual.

READING IV.

SHOULD THE PERSONS WHO PERFORM SERVICES BE CALLED PRODUCERS?

The question, who ought to be called producers, and the closely related question, what should be included under wealth, have been the occasion of very considerable differences of opinion from the beginning of economic science. In fact unanimity as to the proper answers to these questions is still lacking. A considerable number continue to follow Mill in limiting wealth to *objects, commodities,* and so restricting the term producer to a person who contributes directly or indirectly to the bringing into existence of commodities. Of course all admit that the persons who perform true services are highly useful people and deserve compensation; but, according to many writers, such persons can not properly be called producers.

But, while not a few cling to the earlier conception of wealth as including only commodities, probably the more general practice of our day, anyhow in America, is to include services under the term wealth and to include those who perform services under the term producers. Doubtless this broader use of the terms, particularly of wealth, seems in some connections rather forced. Services obviously can not constitute a part of *accumulated* wealth; and all of us probably mean by a rich man one who has large commodity wealth. Still a definition of producer which permits its application to the man who *makes* a lawn mower, but not to the man who *uses* that mower to cut the grass on a customer's lawn, is also very forced;—such a definition seems, in fact, highly unreasonable. Manifestly the ultimate end

of the efforts of both men is the mowed lawn. To that end both contribute and in ways which present no vital differences. Both are equally necessary. Both, it would seem, should receive the same designation.

A further reason for the more liberal interpretation is to be found in the fact that, if the men who furnish services are denied the title producer, they are quite likely to be thought of as in some way economically *inferior* to the true producers—the people who contribute to the furnishing of commodities. The uninstructed public, anyhow, find it very easy to make non-producer synonomous with parasite,—one who takes but does not give. Even trained public teachers, not economists, often refer to the service-producing classes as "making a living out of the true producers."

The following passages from McCulloch furnish a quite early presentation of the case for a broad use of producer.

*Most writers on Political Economy have entered into lengthened discussions with respect to the difference between what they have termed productive and unproductive labor. But it is not easy to discover any real ground for most of those discussions, or for the distinctions that have been set up between one sort of labor and another. The subject is not one in which there is apparently any difficulty. It is not at the species of labor carried on, but at its *results,* that we should look. So long as an individual employs himself in any way not detrimental to others, and accomplishes the object he has in view, his labor is obviously productive; while, if he do not accomplish it, or obtain some sort of equivalent advantage from the exertion of the labor, it is as obviously unproductive. This definition seems sufficiently clear, and leads to no perplexities; and it will be shown, in another chapter, that it is not possible to adopt any other without being involved in endless difficulties and contradictions.

*McCulloch—Principles of Political Economy, 4th ed. 1849: Part I, Chapter I, p. 74.

*Dr. Smith has given another criterion of productive and unproductive consumption; but his opinions on this subject, though ingenious, and supported with his usual ability, appear to be destitute of any solid foundation. He divides society into two great classes; the first consisting of those who fix, or, as he terms it, "realise their labor in some particular subject, or vendible commodity, which lasts, for some time at least, after that labor is past"; and the second, of those whose labor leaves nothing in existence after the moment of exertion, but perishes in the act of performance. The former are said by Smith to be productive, the latter unproductive, laborers. Not that, in making this distinction, he meant to undervalue the services performed by the unproductive class, or to deny that they are often of the highest utility, for he admits that such is frequently the case; but he contends that these services, however useful, add nothing to the wealth of the country, and, consequently, that the commodities consumed by this class are unproductively consumed, and have a tendency to impoverish, not to enrich. But, to avoid the chance of misrepresentation, we shall give Smith's opinions in his own words.

"There is one sort of labor," says he, "which adds to the value of the subject upon which it is bestowed; there is another which has no such effect. The former, as it produces a value, may be called productive; the latter, unproductive labor. Thus, the labor of a manufacturer adds, generally, to the value of the materials which he works upon, that of his own maintenance, and of his master's profit. The labor of a menial servant, on the contrary, adds to the value of nothing. Though the manufacturer has his wages advanced to him by his master, he, in reality, costs him no expense, the value of those wages being generally restored, together with a profit, in the improved value of the subject upon which his labor is bestowed; but the maintenance of a menial servant never is restored. A man grows rich by employing a multitude of manufacturers; he grows poor by maintaining a multitude of menial servants. The labor of the latter, however, has its value, and deserves its reward,

*McCulloch, Part IV, pp. 583-586.

as well as that of the former. But the labor of the manufacturer fixes and realises itself in some particular subject or vendible commodity which lasts, for some time at least, after that labour is past. It is, as it were, a certain quantity of labor stocked and stored up, to be employed, if necessary, upon some other occasion. That subject, or, what is the same thing, the price of that subject, can afterwards, if necessary, put into motion a quantity of labor equal to that which had originally produced it. The labor of the menial servant, on the contrary, does not fix or realise itself in any particular subject or vendible commodity. His services generally perish in the very instant of their performance, and seldom leave any trace or value behind them, for which an equal quantity of service could afterwards be procured.

"The labor of some of the most respectable orders in the society is, like that of menial servants, unproductive of any value, and does not fix or realise itself in any permanent subject or vendible commodity which endures after that labor is past, and for which an equal quantity of labor could afterward be procured. The sovereign, for example, with all the officers both of justice and war who serve under him, the whole army and navy, are unproductive laborers. They are the servants of the public, and are maintained by a part of the annual produce of the industry of other people. Their service, how honourable, how necessary, or how useful soever, produces nothing for which an equal quantity of service can afterwards be procured. The protection, security, and defence of the commonwealth, the effect of their labor this year, will not purchase its protection, security, and defence for the year to come. In the same class must be ranked some, both of the gravest and most important, and some of the most frivolous professions—churchmen, lawyers, physicians, men of letters of all kinds; players, buffoons, musicians, opera-singers, opera-dancers, etc. The labor of the meanest of these has a certain value, regulated by the very same principles which regulate that of every other sort of labor; and that of the noblest and most useful produces nothing which could afterwards purchase or procure an equal quantity of labor. Like the declamation of the actor, the harangue of the orator, or the tune of the

musician, the work of all of them perishes in the very instant of its production."

But though these statements be plausible, it will not, we apprehend, be difficult to show the fallacy of the distinction Smith has endeavored to establish. To begin with his strongest case, that of the menial servant: He says, that his labor is unproductive, because it is not realized in a vendible commodity, while the labor of the manufacturer is productive, because it is so realised. But what, may we ask, are the results of the labour of the manufacturer? Do they not consist of comforts and conveniences required for the use and accommodation of society? The manufacturer is not a producer of matter, but of utility only. And is it not obvious that the menial servant belongs to the same class, and is also a producer of utility? It is universally allowed that the husbandman who raises corn, beef, and other articles of provision, is a productive laborer; but if so, why is the cook or menial servant who prepares and dresses these articles, and fits them for use, to be set down as unproductive? It is clear there is no difference whatever in the nature of their services—that they are either both productive, or both unproductive. To have a fire, it is quite as indispensable that coals should be carried from the cellar to the grate, as that they should be carried from the bottom of the mine to the surface of the earth; and if it be said that the miner is a productive laborer, must we not say as much of the servant employed to make and mend the fire? The whole of Smith's reasoning proceeds on a false hypothesis: he has made a distinction where there is none, and where it is not in the nature of things there can be any. The end of all human exertion is the same—that is, to increase the sum of necessaries, comforts, and enjoyments; and it must be left to the judgment of every one to determine what production of these he will have in the shape of menial services, and what in the shape of material products. [In the remainder of McCulloch's discussion he unfortunately shifts his ground, arguing that the man who furnishes services is a true producer *because he contributes indirectly to the production of commodities.* The true ground for including service furnishers among the producers is the one

brought out above: *they are responsible for the existence of utilities.* The thing really wanted by the consumer of coal is the warmth given by the fire. The getting of this—the ultimate utility—he owes to many people; and, among these, the one who raises the coal from the mine to the surface has no more right to be called a producer than the one who puts the coal on the fire.]

READING V.

WHY METHODS OF PRODUCTION USING MUCH CAPITAL ARE MORE EFFICIENT THAN METHODS USING LITTLE CAPITAL.

There has been much objection to the claim that capital is truly productive; and probably most economists would admit that productiveness can not be affirmed of capital in just the same sense as it is of labor and land. But, however this may be, there can be no doubt that capitalistic methods of using labor and land are far more productive than non-capitalistic, and that methods using much capital are more productive than methods using little capital. One of the most important reasons for this is strikingly brought out in the following from Boehm-Bawerk's Positive Theory of Capital.

*The end and aim of all production is the making of things with which to satisfy our wants; that is to say, the making of goods for immediate consumption, or Consumption Goods. The method of their production we have already looked at in a general way. We combine our own natural powers and natural powers of the external world in such a way that, under natural law, the desired material good must come into existence. But this is a very general description indeed of the matter, and looking at it closer there comes in sight an important distinction which we have not as yet considered. It has reference to the distance which lies between the expenditure of human labour in the combined production and the appearance of the desired good. We either put forth our labor just before the goal

*Boehm-Bawerk—Positive Theory of Capital (1888). Translation published by Macmillan & Co., 1891. Book I, Chapter II, pp. 17-22.

is reached, or we, intentionally, take a roundabout way. That is to say, we may put forth our labour in such a way that it at once completes the circle of conditions necessary for the emergence of the desired good, and thus the existence of the good immediately follows the expenditure of the labour; or we may associate our labour first with the more remote causes of the good, with the object of obtaining, not the desired good itself, but a proximate cause of the good; which cause, again, must be associated with other suitable materials and powers, till, finally,—perhaps through a considerable number of intermediate members,—the finished good, the instrument of human satisfaction, is obtained.

The nature and importance of this distinction will be best seen from a few examples; and, as these will, to a considerable extent, form a demonstration of what is really one of the most fundamental propositions in our theory, I must risk being tedious.

A peasant requires drinking water. The spring is some distance from his house. There are various ways in which he may supply his daily wants. First, he may go to the spring each time he is thirsty, and drink out of his hollowed hand. This is the most direct way; satisfaction follows immediately on exertion. But it is an inconvenient way, for our peasant has to take his way to the well as often as he is thirsty. And it is an insufficient way, for he can never collect and store any great quantity such as he requires for various other purposes. Second, he may take a log of wood, hollow it out into a kind of pail, and carry his day's supply from the spring to his cottage. The advantage is obvious, but it necessitates a roundabout way of considerable length. The man must spend, perhaps, a day in cutting out the pail; before doing so he must have felled a tree in the forest; to do this, again, he must have made an axe, and so on. But there is still a third way; instead of felling one tree he fells a number of trees, splits and hollows them, lays them end for end, and so constructs a runnel or rhone which brings a full head of water to his cottage. Here, obviously, between the expenditure of the labour and the obtaining of the water we have a very roundabout way, but then, the result is ever so much greater. Our peasant needs no longer

take his weary way from house to well with the heavy pail on his shoulder, and yet he has a constant and full supply of the freshest water at his very door.

Another example. I require stone for building a house. There is a rich vein of excellent sandstone in a neighboring hill. How is it to be got out? First, I may work the loose stones back and forward with my bare fingers, and break off what can be broken off. This is the most direct, but also the least productive way. Second, I may take a piece of iron, make a hammer and chisel out of it, and use them on the hard stone—a roundabout way, which, of course, leads to a very much better result than the former. Third method —Having a hammer and chisel I use them to drill a hole in the rock; next I turn my attention to procuring charcoal, sulphur, and nitre, and mixing them in a powder, then I pour the powder into the hole, and the explosion that follows splits the stone into convenient pieces—still more of a roundabout way, but one, which, as experience shows, is as much superior to the second way in result as the second was to the first.

Yet another example. I am short-sighted, and wish to have a pair of spectacles. For this I require ground and polished glasses, and a steel framework. But all that nature offers toward that end is silicious earth and iron ore. How am I to transform these into spectacles? Work as I may, it is as impossible for me to make spectacles directly out of silicious earth as it would be to make the steel frames out of iron ore. Here there is no immediate or direct method of production. There is nothing for it but to take the roundabout way, and, indeed, a very roundabout way. I must take the silicious earth and fuel, and build furnaces for smelting the glass from the silicious earth; the glass thus obtained has to be carefully purified, worked, and cooled by a series of processes; finally, the glass thus prepared—again by means of ingenious instruments carefully constructed beforehand—is ground and polished into the lens fit for short-sighted eyes. Similarly, I must smelt the ore in the blast furnace, change the raw iron into steel, and make the frame therefrom—processes which cannot be carried through without a long series of tools and buildings

that, on their part again, require great amounts of previous labour. Thus, by an exceedingly roundabout way the end is attained.

The lesson to be drawn from all these examples alike is obvious. It is—that a greater result is obtained by producing goods in roundabout ways than by producing them directly. Where a good can be produced in either way, we have the fact that, by the indirect way, a greater product can be got with equal labour, or the same product with less labour. But, beyond this, the superiority of the indirect way manifests itself in being the only way in which certain goods can be obtained; if I might say so, it is so much the better that it is often the only way!

That roundabout methods lead to greater results than direct methods is one of the most important and fundamental propositions in the whole theory of production. It must be emphatically stated that the only basis of this proposition is the experience of practical life. Economic theory does not and cannot show *a priori* that it must be so; but the unanimous experience of all the technique of production says that it is so. And this is sufficient; all the more that the facts of experience which tell us this are commonplace and familiar to everybody. But why is it so? The economist might quite well decline to answer this question. For the fact that the greater product is obtained by methods of production that begin far back is essentially a purely technical fact, and to explain questions of technique does not fall within the economist's sphere. For instance, that tropical lands are more fruitful than the polar zone; that the alloy of which coins is made stands more wear and tear than pure metal; that a railroad is better for transport than an ordinary turnpike road;—all these are matters of fact with which the economist reckons, but which his science does not call on him to explain. But this is exactly one of those cases where, in the economist's own interest—the interest he has in limiting and defining his own task—it is exceedingly desirable to go beyond the specific economic sphere. If the sober physical truth is once made clear, political economy cannot indulge in any fancies or fictions about it; and, in such questions, political economy has never been

behind in the desire and the attempt to substitute its own imaginings! Although, then, this law is already sufficiently accredited by experience, I attach particular value to explaining its cause, and, after what has been said as to the nature of production, this should not be very difficult.

In the last resort all our productive efforts amount to shiftings and combinations of matter. We must know how to bring together the right forms of matter at the right moment, in order that from those associated forces the desired result, the product wanted, may follow. But, as we saw, the natural forms of matter are often so infinitely large, often so infinitely fine, that human hands are too weak or too coarse to control them. We are as powerless to overcome the cohesion of the wall of rock when we want building stone as we are, from carbon, nitrogen, hydrogen, oxygen, phosphor, potash, etc., to put together a single grain of wheat. But there are other powers which can easily do what is denied to us, and these are the powers of nature. There are natural powers which far exceed the possibilities of human power in greatness, and there are other natural powers in the microscopic world which can make combinations that put our clumsy fingers to shame. If we can succeed in making those forces our allies in the work of production, the limits of human possibility will be infinitely extended. And this we have done.

The condition of our success is, that we are able to control the materials on which the power that helps us depends, more easily than the materials which are to be transformed into the desired good. Happily this condition can be very often complied with. Our weak yielding hand cannot overcome the cohesion of the rock, but the hard wedge of iron can; the wedge and the hammer to drive it we can happily master with little trouble. We cannot gather the atoms of phosphorus and potash out of the ground, and the atoms of carbon and oxygen out of the atmospheric air, and put them together in the shape of the corn of wheat; but the organic chemical powers of the seed can put this magical process in motion, while we on our part can very easily bury the seed in the place of its secret working, the bosom of the earth. Often, of course, we are not able

directly to master the form of matter on which the friendly power depends, but in the same way as we would like it to help us, do we help ourselves against it; we try to secure the alliance of a second natural power which brings the form of matter that bears the first power under our control. We wish to bring the well water into the house. Wooden rhones would force it to obey our will, and take the path we prescribe, but our hands have not the power to make the forest trees into rhones. We have not far to look, however, for an expedient. We ask the help of a second ally in the axe and the gouge; their assistance gives us the rhones; then the rhones bring us the water. And what in this illustration is done through the mediation of two or three members may be done with equal or greater result, through five, ten, or twenty members. Just as we control and guide the immediate matter of which the good is composed by one friendly power, and that power by a second, so can we control and guide the second by a third, the third by a fourth, this, again, by a fifth, and so on,—always going back to more remote causes of the final result—till in the series we come at last to one cause which we can control conveniently by our own natural powers. This is the true importance which attaches to our entering on roundabout ways of production, and this is the reason of the result associated with them; every roundabout way means the enlisting in our service of a power which is stronger or more cunning than the human hand; every extension of the roundabout way means an addition to the powers which enter into the service of man, and the shifting of some portion of the burden of production from the scarce and costly labour of human beings to the prodigal powers of nature.

And now we may put into words an idea which has long waited for expression, and must certainly have occurred to the reader; the kind of production which works in these wise circuitous methods is nothing else than what economists call Capitalist Production, as opposed to that production which goes directly at its object, as the Germans say, *"mit der nackten Faust."* And Capital is nothing but the complex of intermediate products which appear on the several stages of the roundabout journey.

READING VI.

THE PRECISE FUNCTION OF THE ENTREPRENEUR, AND THE TRUE NATURE OF ENTREPRENEUR'S PROFIT.

In the opinion of the editor, one of the least satisfactory features of current text books in Economics is the treatment of the entrepreneur, and particularly the characterization of his true economic function. The most common theories taught are (1) that this function is *assembling* the different productive factors, (2) *managing* industry, or (3) both of these combined. The sound doctrine, it seems to the writer, can be expressed only by this phrase,—"assuming the final responsibility of production." In substance, this doctrine was presented in Mangoldt's *Lehre vom Unternehmergewinn,* published in 1855; and a few years since it was warmly advocated by Mr. Hawley in several articles in the Quarterly Journal of Economics. Personally I am disposed to lay somewhat less stress than the writers named on the *risk* element. I consider "assuming the responsibility of production" to be somewhat broader than "assuming the risk of production." It suggests other disutilities besides the bearing of risk, though this one is doubtless the most important of all such disutilities. But, while I should be disposed to change Mangoldt's emphasis somewhat, his presentation of the matter seems to me on the whole very satisfactory.

*The essence of every industry consists in the offering

* Mangoldt—Die Lehre vom Unternehmergewinn (1855), pp. 34-47. The translation is very liberal, but not, I think, unfaithful to the original.

of sacrifices in comfort, goods, or utilities to the end of gaining satisfaction through a return aimed at which more than outweighs the deprivations suffered and the sacrifices undergone. The totality of operations and institutions assigned to such an end, we designate in general by the phrase "the business." The relation between the sacrifices to be undergone and the result to be gained, we call the return of the business. This return is a secure one, if both of its factors are of dimensions known in advance, while it is an insecure or risky one, if the one or the other of these cannot be determined in advance.

We distinguish autonomous industries and industries for exchange. In the case of the former, the utilizing of capital and labor obtained from outside is not excluded, but that which results from their consumption is destined for the use of the owner of the business himself. In the case of production for exchange, on the contrary, the product is destined for exchange. The producer and consumer are two separate personalities.

The output of the business can, in both cases, be a secure one or a more or less risky one. The attainment of the economic aim of the farmer is equally dependent on the weather and the season, whether he cultivates the ground merely for his own ends, or intends to bring his products to market; but the criterion for estimating his return is, in the two cases, a different one. In the first case, he measures his return according to its utility; in the second place, according to the exchange value of his products. In the former, bad harvests are always injurious, in the latter, on account of the disproportionate rising of the price, they are often an advantage.

In autonomous industries, the uncertainty of the return always affects the producer, who is, at the same time, the consumer. There is, therefore, no occasion given for distinguishing whether he takes this upon himself in the former capacity or in the latter. The only distinction which must be made is between secure, and insecure, enterprises. It is otherwise with industries conducted for exchange; here the uncertainty of the return can fall upon the consumer, but it can also fall upon the producer. In the former case, we

say the enterprise is "undertaken to order." Thus, the wage-earner undertakes to furnish labor in exchange for a determinate wage; and similarly the capitalist undertakes to furnish utilities of capital in exchange for a determinate interest. In the second case, we call the business "an undertaking for the market," or a speculative undertaking. An undertaking for the market, then, is an enterprise, the return of which is destined for exchange,—in which, therefore, the uncertainty with respect to the return falls upon the producer. By an entrepreneur we mean one who is the owner of such a business.

But, now, with this element, the concept "undertaking" is completely exhausted; and when Riedel describes an economic undertaking as the systematic assembling of different factors of production for an economic end, we cannot agree with him. It is doubtless true that in a stage of civilization which has attained to any considerable development, there are, generally speaking, very few goods to the production of which labor, capital, and natural forces do not all contribute; and so, of course, it will seldom or never happen that, in any given undertaking, there is no assembling of the different factors of production. Nevertheless, this is by no means necessary; and, if it is practically possible to produce a commodity through the application of mere labor forces, then the person who does this must pass for an entrepreneur, *provided only that the value of his product is not determined in advance.** On the other hand, it is plain that even the wage laborer, who surely is not the entrepreneur, often assembles systematically different factors of production; in fact, this happens every time the laborer employs a tool. Thus, it is not in the assembling of different factors in production, but *in their application at his own risk,** that the essence of an undertaking lies. Real life very seldom furnishes example of pure "undertaking to order"; that is, few examples of the complete exclusion, for the person conducting a business, of all uncertainty in respect to the remuneration for a service ren-

*Editor's italics.

dered. Strictly interpreted, every possibility of a change in the subjective estimate of the service, or the remuneration, offers such an uncertainty; and, on that account, since such a possibility is excluded only by a perfect simultaneity of service and payment, every business which needs for its carrying through any time whatever, could not, in the strictest sense of the word, be undertaken to order. But, if we hold only to the objective measuring of valuation, then the continuance of many uncertainties in those businesses which are "undertaken to order," a mixing in, as it were, of undertaking for the market, must not be misinterpreted. If the payment is merely promised at the conclusion of the enterprise, not immediately made, there always remains a certain risks as respects its realization. If it does not consist in an object which the entrepreneur himself can use, but in one which he, in order to satisfy his own needs, will first exchange, for example money, there will remain numberless possibilities of change in its exchange value. Just so it is with the services which one producing to order, promises; since, on the other hand, the measure of the capital, utilities, and labor powers which must be applied therefore, and on the other hand, the measure of the recompense to be paid therefor, are seldom to be determined in advance; just as in real life the persons undertaking to order extensive enterprises like furnishing war supplies, great buildings, etc., appear, in fact, as entrepreneurs of an important class. On the other hand, most undertakings for the market are wont to involve undertakings to order, particularly in their relation to the owners of the factors of production employed, for the use of which the entrepreneur promises in advance a determinate recompense, as also in their relation to particular customers to whom in like manner he undertakes to deliver a determinate product, or to furnish a determinate service. Thus it is clear that many "undertakings for the market" are really made up of businesses which are merely "undertakings to order."

In spite of all these minglings of undertaking for the market and undertaking to order and of all the transitional forms from the one to the other which real life offers, science must hold fast to the distinguishing of the two,

since upon this depends the more precise knowledge of many economic phenomena. . . .

The more completely the uncertainty of the return falls upon the producer, the more completely is the business an undertaking for the market, and *vice versa.* In fact, there are undertakings which carry production so far that they bring on the market the completed product, on which account naturally the risk of the consumer is reduced to a minimum. On the contrary, there are others which only go so far as to keep ready the means for complete production with the understanding that these will first be brought into use as the result of a concrete demand,—an order. Here the consumer has, in respect to the product to be exchanged, only a very limited security. If we further speak of complete and incomplete undertakings and entrepreneurs, then we shall at all times understand this distinction in the sense of the above antithesis. A clothing and furniture factory, for example, we call a complete undertaking; but a custom-tailoring establishment, or carpenter's shop, an incomplete undertaking. *Assuming the burden of the fluctuations in the expenditure which must be made in any business and in the results attained is,** accordingly, the distinctive mark of the entrepreneur. Of course, it is not possible to undertake a business without the possession of a certain amount of property and of certain personal characteristics. In order to obtain control of outside labor forces one needs capital; and, in order to get hold of outside capital one must be able to furnish security from his own property, or gain credit through personal characteristics. Further, nothing is more natural than that one who undertakes a business for the market should devote the capital which he himself possesses as also his own personal labor power to his own undertaking, rather than hire it out to another party. As a rule, therefore, entrepreneurs participate in their own undertakings with their own capital, as also with their personal activity. Nevertheless, however manifestly such may be the case, it remains no less a mistake for us to look on either the employing of the entrepreneur's capital,

*Editor's italics.

or the performing by him of personal services, as the characteristic mark of "undertaking for the market."

While the possession of a certain amount of property is necessary to undertaking the rôle of entrepreneur, nevertheless, this necessary property bears no definite ratio to the extent of the enterprise, nor is it necessary that the entrepreneur's own capital should be invested in his own undertaking. Most businesses are conducted, to a greater or less extent, with outside capital; and, especially at favorable conjunctures, credit is almost exclusively employed for their extension. On the other hand, we often find that entrepreneurs possess capital which they do not employ in their own business, but have loaned out productively. It is not, therefore, possession of property which characterizes the position of the entrepreneur. Indeed, one can think of the entrepreneur as having no property whatever, if his personal characteristics have given him credit enough to place at his disposal the necessary funds of other persons.

Just as little should one seek in the personal activity of the entrepreneurs in respect to their businesses, the essential peculiarity which makes them entrepreneurs. With respect to those services which are commonly furnished by wage laborers, it is customary to look on it as a mere accident, which for scientific analysis has no significance, if it is the entrepreneur himself who performs those services; and it has been quite properly said that the entrepreneur in this respect is to be considered as a wage laborer employed by himself. On the contrary, it has been customary to look on certain kinds of labor as being inseparable from the conception of the entrepreneur, and which, on that account, he could not turn over to any representative without ceasing to be an entrepreneur. Under this class, for example, Hermann reckons the assembling of the necessary capital, the over-seeing of the business, the gaining of credit and connections, and assuming the burden of the irregularity of the gain. Of all these the last, plainly, is the only one which does not belong in the category of services resting upon personal efforts, but is to be classified under the assumption of the risk. The first named services are, in fact, such as can very well be furnished by salaried

laborers; and it is by no means necessary that a man should perform them himself in order to be an entrepreneur. Proof that this is really so is given us by a phenomenon which in our own time is being more and more extended, and which appears flatly to contradict that presupposition. We allude to the corporation. Here the entrepreneur is a mere moral person, which consequently, is not capable of performing itself any kind of labor. Instead, it secures the control and conduct of the business through organs which are to be distinguished from itself; and which only out of considerations of practical convenience are mostly chosen from its own members. The activity of the totality is entirely limited to a final right of oversight and control, the exercise of which one can scarcely look upon as labor. . . .

Riedel shares in essentials the view of Hermann. According to him, there is an activity of the entrepreneur which, indeed, can be called labor but which is distinguished from all other forms of industrial labor in that *it cannot be furnished for other persons,*—that for it, when used in the service of others, no price can be obtained which the entrepreneur can bring into the account among the costs, as being an income which (in becoming an entrepreneur) he had renounced. "This labor of the entrepreneur," he continues, "which is to be recognized in the organizing, planning, and overseeing of the business, is inseparable from the concept of an independent entrepreneur. If the entrepreneur, as people often inexactly say, causes himself to be represented by any other person, in that he hires a manager for the business, there will still remain a necessity for his own activity, unless he is merely to give his name to the undertaking while another person constitutes the true entrepreneur. Even if the labor of the entrepreneur be limited to this, namely, finding suitable managers for the business and controlling such persons, this anyhow would remain and would continue to be the highest type of labor which is employed in an industry."

What was said above against Hermann holds, however, against Riedel. The labor of organizing, planning, and over-seeing is obviously very easily separable from the concept of the independent entrepreneur; and a business man

who renounces all activity on his own part, like the silent partner, does not on that account cease to be a true entrepreneur. That which alone is inseparable from the concept of entrepreneur is, on the one hand, owning the output of the undertaking,—control over the product brought forth, and, on the other hand, assuming responsibility for whatever losses may occur. Both of these characteristics are, in fact, inseparable from the concept "entrepreneur." Whoever conducts a business on his own reckoning, of him it is thereby affirmed that all losses whatsoever fall upon him. But a loss is nothing else than a discrepancy between the return and costs,—a falling short in the value of the former as compared with the value of the latter. Consequently, in order that any one should be in a position to suffer such a loss, he must be the only one coming into relation with these two elements through which that loss is determined; in other words, he must be the one who meets the cost and obtains the product. And, since all factors in production can receive their recompense only from the product, so must they obtain this through the entrepreneur. Therefore, we can also designate the entrepreneur as that individual who comes into possession of the output of production, and then sees that those agents who have coöperated with him in the productive process get their share in that output.

Whatever remains over after replacing the goods used in production, and after providing the compensation to be granted to other parties for their assistance in furnishing labor or the use of capital, belongs to the entrepreneur, and forms his income from the undertaking. In so far as this does not amount to anything more than those sums which could have been obtained through the direct exchange of his own labor and services, it is to be looked upon as a compensation for these, that is, as wages and interest. In so far, however, as it exceeds this amount, it appears as a pure income, resting upon his position as entrepreneur, and is, on this account, designated by the phrase "entrepreneur's profit."

Entrepreneur's profit is, thus, that portion of the income from an undertaking which falls to the entrepreneur as such. From this follows:

1. Under entrepreneur's profit are not to be reckoned those parts of the product which merely replace the goods used in production, since these are not clear income at all. Here belongs not only the replacement of the circulating capital, but also the replacement of the parts of the fixed capital really used up,—indeed, these are to be reckoned as virtually a part of the circulating capital. But, still further, the typical undertaking is not to be reckoned as a production process which takes place only once; or as one which is to be repeated only a limited number of times, but rather as one of manifold recurrence, yes, even as a process which endures for an indefinitely long period, a process which, so to speak, is eternal. Certain losses which in a production process carried on only once would appear as a not-to-be-estimated chance of accident, will here appear as a burden of the undertaking, regular in its nature, and to be divided equally over the whole product. If, therefore, in any particular economic period such losses do not enter in, still, by no means everything which, after the meeting of the usual costs, remains over, is to be treated as clear profit; rather from it must be set apart a considerable portion (reserve fund) with which to meet the loss anticipated from a later period. Or, in order to view this relation from another side, an undertaking can be maintained only on condition that the losses which it *regularly** suffers from time to time should be outweighed by a correspondingly greater output in the interval. This greater output appears as a sort of reimbursement for the risk run; but, in fact, it is the farthest removed from clear income, is, in truth, but *a mere replacement of capital.** In contrast with the above merely apparent profit, that part of the product which remains over and above the sum necessary to replace the capital used up and to pay the wages and interest, *after the completion of an undertaking,** belongs to the pure income of the entrepreneur; it is real entrpereneur's profit. As equivalent to such a completion of an undertaking, we must reckon the conclusion of a period long enough to permit us to assume that favorable and unfavorable circumstances

*Editor's italics.

have manifested their full activity. In the usual *annual** reckoning, it is indeed necessary, in many industries, to lay aside the surplus derived from a favorable outcome, in order to cover the losses of unfavorable years. After a longer period of time, however, we may reasonably assume that favorable and unfavorable conditions have in like measure exhausted themselves, and may then make a settlement and consider the surplus remaining as pure entrepreneur's profit.

†Wherever economic risk is present, there a prospect of increased return must be present also. If any one finds himself in possession of productive forces and if in a particular employment of those forces, whether in his own hands or in the service of others, a particular result or income is certain, in that case he will not devote those forces to another employment where a result of equal value is more or less doubtful, save on condition that, over against the possible loss, there stands a possible gain. This is without further discussion clear; the only question is, in what relation the possible gain must stand to the possible loss.

One will easily be ready with the answer that the danger of loss and the prospect of gain must reciprocally correspond, in respect to both the probability of their emergence and their amount; so that as the probability of gain becomes smaller, or that of loss greater, and the possible amount of the latter becomes more considerable, the possible gain must be greater and *vice versa*.‡ But the matter does not adjust itself so simply.

We must distinguish between mere irregularities in the return and real risks. The first appear in those undertakings which involve frequent repetition of similar operations. The porcelain manufacturer must assume that a certain number of firings will prove failures; the producer of champagne, that a certain number of bottles will burst; the merchant or mechanic, that, from a certain number of his customers, he will get no pay. Generally speaking, therefore, he will go into the undertaking only on condition that

*Editor's italics.

† Mangoldt, pp. 81-96.

‡ [Mangoldt frequently alludes to this later, designating it as "the rule above laid down."]

the returns from successful operation promise to offset the losses of the unsuccessful ones. This increased gain, however, as already explained in the second chapter, is not profit but merely replacement of capital, just as the losses suffered are to be reckoned among the costs of production. As a rule, it is to be supposed that competition will not permit a gain which exceeds the outlay of capital. Wherever this temporarily or permanently happens, the higher gain is to be conceived as a consequence of a failure of competition, consequently as a species of rent. Where, on the other hand, no conditions are present to restrict competition, it does not appear that there is any way whereby the proprietors of different kinds of businesses can succeed in getting a real premium (bonus) for the fluctuations in the proceeds of their undertakings. If, however, as proof that this does happen we are pointed to the gain which insurance companies actually do get, from which it is concluded, as for example in the case of Riedel, that the entrepreneur must be in such a position with respect to himself, then is this opinion a mistaken one to the extent at least that, to the persons who patronize the insurance companies, the losses against which they insure themselves are not mere irregularities in the proceeds of businesses, but real risks. The gain which undertakings that are not insured make, rests either on the fact that the entrepreneurs in question do not need insurance on account of the extent of the business, and in that case such gain falls under the category of a rent from large scale production, or it is the compensation for a risk which is really incurred, which case we have now to consider.

While, in the case of mere iregularities in the returns of business, gain and loss fall on the *same** economic subject and on this very account must reciprocally equalize themselves,—on condition of course that the statement with respect to the relation of the two (gain and loss) which was given above (p. 43) is sound,—real economic risk manifests itself in this particular that there is no prospect of the restoration of a loss suffered, as also none that a gain once made will need to be used for the replacement of past or

*Editor's italics.

future losses, that, in short, it is on *different** persons that the gain and loss fall. The cause of this may lie in the fact that an undertaking involves a single, or at least a limited, number of operations and after their performance is finally completed; but it may also lie in the fact that the cause of the loss is of such an exceptional kind that one can not assume that it will return with determinately repeated operations even though their number is very great. In such a case, as already said, that which one person has lost will not be restored to him; and, on the other hand, he who gets a return larger than costs does not need to deduct anything from his proceeds for the replacement of capital; but, instead, the whole excess is entrepreneur's profit. To this corresponds the experience of real life. Of the shareholders of the 12 English gas companies, which according to Schoen pay from 6 to 12 per cent, no one repays the losses of the other forty companies who do not even pay ordinary interest. Every lawyer of high standing can look on a part of his income as a consequence of the fact that many who have been striving for the same goal as himself, have not reached it; but it does not, on this account, occur to him thriftily to lay this part one side; instead, he consumes it just like any other income.

The question now arises whether for these relations the rule holds as stated above (p. 43), that the possible gain must vary directly as the risk, or what is the same thing, must vary inversely as the probability of such gain. Experience contradicts this under some circumstances anyhow. Thus, particularly in the case of poor nations, we see that undertakings which to fortunate entrepreneurs bring in far greater gains than the loss of the unfortunate ones, do not, after all, call forth an eager competition. Far oftener, however, is it the case that the gain of fortunate entrepreneurs fails by a large margin to offset the loss of unsuccessful undertakings of the same sort. It is a well-known fact that at present, in most kinds of speculation taken as a whole, far more is lost than won. Education, also, in so far as it is a real element in economic reckoning, belongs here. In

*Editor's italics.

all the higher callings, only a relatively small per cent of those who plan to enter them ever reach the goal. This, indeed, increases the profitableness of the places of those on whom fortune smiles; but who would affirm that the excess of income going to these fortunate ones corresponds to the total of the expenses incurred by their less successful competitors?

Finally, a weighty proof that people often are satisfied with the prospect of a gain the amount of which bears no sort of proportion to its improbability, is furnished by those public lotteries from which the state is able to raise a regular income without causing the players to desist from participating in the game because the total winnings of players fall below the total sums which they pay in.

We are able, therefore, to consider it as established in experience that the possible gain is over, as often as under, the amount of risk fixed by the circumstances of the case. What now are the causes upon which this rests,—which in one case hinder, and in another case induce, investment in an undertaking and so, through greater or smaller competition, hold the price in the former case above costs and in the latter below?

First to be mentioned here is the excessive confidence which many men have in their luck, as also the over-estimate of their own powers which is often displayed. Although everybody knows that a combination of many favorable conditions is necessary to the success of any undertaking, still it seems to most people so incredible that this combination will be wanting in their particular case that they do not take this possibility into consideration; perhaps they even more recklessly go forward on the assumption that they can not lack the ability to secure the very greatest advantage even out of the given circumstances. They attribute the failure of most undertakings to the ill-luck or unskillfulness of the entrepreneur, things from which they are already free or will keep themselves free. In this way it not seldom happens that entrepreneurs can be found for a business, even if it does not promise a return which is proportionate to the real risk. But, on the other hand, it also happens at times that instances of failure which are

often repeated, or particularly startling, so weaken the inclination to engage in some particular sort of undertaking that the existing establishments in this line are able to remain for a considerable period more or less free from the pressure of competition and so are able to yield a gain which secures more than proportional indemnification for the risk run. At this point, national character is of the greatest significance. If self-confidence and persistence are dominant characteristics, then competition will be very eager. A tendency to over-confidence,—which just as readily passes over into discouragement,—and fickleness, work in the opposite direction. . . .

Further, the indeterminateness of the probability of success comes into consideration. Up to this point we have assumed that it is certain how much a given undertaking would be in a position to return under favorable conditions, and also that the proportion of successful to unsuccessful enterprises would be known. But this is scarcely ever true in the fullest sense, and often not even approximately so. If, for example, it concerns the furnishing of a new product or the employment of new industrial forces the productivity of which has not yet been tested, the entrepreneur can not set out from a determinate probability as respects the returns from his undertaking. This hovers, rather, in more or less complete uncertainty; the probability is itself only probable. Under these circumstances, a reasonable business man must assume the existence of only the least probability, and can go into the undertaking only on condition that the possible proceeds correspond to this least probability. In consequence, until the probability of success becomes definite, the return usually exceeds the proportions indicated by the real risk. Fortunate entrepreneurs gain more than unfortunate ones lose. But, on the other hand, a conspicuously favorable outcome of this kind is easily overestimated and becomes the cause of a later congestion of the particular industry concerned. . . .

Finally, when one takes into consideration the deeper aspects of the rule laid down,* he finds that rule subject to a third limitation, to which von Thünen has already called

* See p. 43.

attention. The rule relates, not to the objective amount, but to the *subjective estimate* of the expense of production and its remuneration. If, in a given case, the possibility of losing the cost incurred is just as great as the possibility of a successful outcome, then we rightly demand that, in the latter case, the total return should be twice as great as the possible loss, but twice as great, not in its objective significance, which may be something quite different. For not seldom it occurs that the pain of a loss incurred shows a ratio to the satisfaction resulting from a gain made, quite different from that between the quantities of value which express that gain and loss. For example, the loss of a cow, which is worth 40 dollars, involves greater hardships for one who depends on it for his livelihood than the satisfaction which the gaining of 40 dollars would give him. From any surplus which one may possess he may venture something on an undertaking, even if the possible return does not perfectly correspond to the probability of success. If a man who has a large income takes a chance in a lottery, we could not call him a poor business man even though the entire amount obtained by winners does not equal the total money paid in. On the other hand, the man who, in such a case, stakes his whole property will act in an unbusinesslike way, even if there is a greater possibility that he will get back a far more considerable sum. For, if he loses, the misfortune will give him pain greater than the satisfaction he would derive from even a greater piece of good luck.

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Herein lies the actual explanation of the fact that the returns to be expected continually stand above, rather than below, the amount indicated by the ratio of cost to risk, or, what is the same thing, why the total return from all undertakings of the same kind can continually exceed the outlay incurred, as well as fall short of it. Further, this same principle furnishes the elements which must be of influence in bringing about the one result or the other. The return must be greater, the more painful one feels any loss whatsoever, the less one has susceptibility to the joy of winning and *vice versa*. On the first ground, the return

must be greater where large, than where small, sums are staked,—greater with a poor nation than with a rich one: on the second ground, the return must be greater with a stationary people than with one occupied in the swift development of its resources, whose efforts are exclusively devoted to increasing its possessions,—greater with less, than more, daring enterprises, for the appetite for winning is wont to grow more swiftly, than the amount of winnings. Accordingly, the risk premium, *i. e.,* that part of the entrepreneur's profit which one may look on as compensation for the risk incurred, is according to the circumstances a different one: *i. e.,* it changes not only in proportion to the degree of risk present, but also independently of this, so that the same kind of enterprises can at different times command a different risk premium, and conversely two contemporaneous undertakings with different risks can have in prospect equal risk premiums.

[Then follow comments on differences in the disposition to take risks at different stages of development, and among different peoples.]

To summarize briefly what has been said, we must not conceive the risk premium as meaning that the entrepreneur must in the long run experience a gain and a loss of equal amount. But, because assuming this risk is bound up with a sense of insecurity and care, he may reasonably set up a claim for a certain surplus. We have tried to make clear that, in so far as one can expect to meet deficiences which may occur with surpluses, there is nothing to be said of real risk and consequently nothing to be said of a risk premium. These come in only when it must be supposed that one is liable to suffer a loss without being able to idemnify himself. In that case, of course, there must be a *prospect* of higher gain. How high this possible gain must go and how far it can vary from the amount of the costs fruitlessly expended, whether above or below, depends partly on the nature of the business, partly on the character of the people, and partly on the grade of culture and well-being which it has reached and the rapidity with which it has reached that grade. But, of the gain really made, the entire excess above costs personally expended is entrepreneur's profit. . . .

READING VII.

SPECIALIZATION AND COMMERCIAL FREEDOM.

Every person who has given the slightest attention to economic matters is easily convinced that a high degree of productive efficiency is impossible without a high degree of specialization, whether this respects labor or land or capital. Further, no one would deny that if specialization is indispensable, then the conditions upon which specialization depends are also indispensable. But, when we set about giving this second proposition concrete application, when we put forward one particular condition as a requisite of high efficiency, because it is a requisite of specialization, then we find many disposed to hesitate, or even to turn back. The particular condition to which I allude is *freedom of trade,* freedom of industrial intercourse. Exchange is obviously the necessary correlate of specialization, division of labor. So, a great degree of freedom in exchange is the necessary correlate of a great degree of specialization. For we cannot afford to devote one man or one machine to doing one very little thing, unless we need to have that little thing done times enough to keep the one man or machine busy. In turn, we can not need to have the little thing done thus many times, unless we are producing on a very large scale. But, again, we can not be producing on a very large scale, unless we are producing for a large market. Finally, our market can not be very large, unless there is a large degree of freedom in trade. The following passage from Adam Smith is still one of the best general presentations of this matter.

*As it is the power of exchanging that gives occasion to the division of labour, so the extent of this division must always be limited by the extent of that power, or in other words, by the extent of the market. When the market is very small, no person can have any encouragement to dedicate himself entirely to one employment, for want of the power to exchange all that surplus part of the produce of his own labour, which is over and above his own consumption, for such part of the produce of other men's labour as he has occasion for.

There are some sorts of industry, even of the lowest kind, which can be carried on nowhere but in a great town. A porter, for example can find employment and subsistence in no other place. A village is by much too narrow a sphere for him; even an ordinary market town is scarce large enough to afford him constant occupation. In the lone houses and very small villages which are scattered about in so desert a country as the Highlands of Scotland, every farmer must be butcher, baker, and brewer for his own family. In such situations we can scarce expect to find even a smith, a carpenter, or a mason, within less than twenty miles of another of the same trade. The scattered families that live at eight or ten miles distance from the nearest of them, must learn to perform themselves a great number of little pieces of work, for which in more populous countries they would call in the assistance of those workmen. Country workmen are almost everywhere obliged to apply themselves to all the different branches of industry that have so much affinity to one another as to be employed about the same sort of materials. A country carpenter deals in every sort of work that is made of wood; a country smith in every sort of work that is made of iron. The former is not only a carpenter, but a joiner, a cabinet maker, and even a carver in wood, as well as a wheelwright, a ploughwright, a cart and wagon maker. The employments of the latter are still more various. It is impossible there should be such a trade as even that of a nailer in the remote and inland parts of the Highlands of

* Adam Smith, Book I, Chapter III.

Scotland. Such a workman, at the rate of a thousand nails a day and three hundred working days in the year, will make three hundred thousand nails in the year. But in such a situation it would be impossible to dispose of one thousand, that is, of one day's work in the whole year.

As, by means of water-carriage, a more extensive market is open to every sort of industry than what land-carriage alone can afford it, so it is upon the sea-cost, and along the banks of navigable rivers, that industry of every kind naturally begins to subdivide and improve itself, and it is frequently not till a long time after, that those improvements extend themselves to the inland parts of the country. A broad-wheeled wagon, attended by two men, and drawn by eight horses, in about six weeks' time carries and brings back between London and Edinburgh near four ton weight of goods. In about the same time a ship navigated by six or eight men, and sailing between the ports of London and Leith, frequently carries and brings back two hundred ton weight of goods. Six or eight men, therefore, by the way of water-carriage, can carry and bring back in the same time the same quantity of goods between London and Edinburgh, as fifty broad-wheeled wagons, attended by a hundred men, and drawn by four hundred horses. Upon two hundred tons of goods, therefore, carried by the cheapest land-carriage from London to Edinburgh, there must be charged the maintenance of a hundred men for three weeks. and both the maintenance and, what is nearly equal to the maintenance, the wear and tear of four hundred horses as well as of fifty great wagons. Whereas, upon the same quantity of goods carried by water, there is to be charged only the maintenance of six or eight men, and the wear and tear of a ship of two hundred tons burden, together with the value of the superior risk, or the difference of the insurance between land and water-carriage. Were there no other communication between those two places, therefore, but by land carriage, as no goods could be transported from the one to the other, except such whose price was very considerable in proportion to their weight, they could carry on but a small part of that commerce which at present subsists between them, and consequently could give but a small

part of that encouragement which they at present mutually afford to each other's industry. There could be little or no commerce of any kind between the distant parts of the world. What goods could bear the expense of land-carriage between London and Calcutta? Or if there were any so precious as to be able to support this expense, with what safety could they be transported through the territories of so many barbarous nations? Those two cities, however, at present carry on a very considerable commerce with each other, and by mutually affording a market, give a good deal of encouragement to each other's industry.

Since such therefore are the advantages of water-carriage, it is natural that the first improvements of art and industry should be made where this conveniency opens the whole world for a market to the produce of every sort of labour, and that they should always be much later in extending themselves into the inland parts of the country. The inland parts of the country can for a long time have no other market for the greater part of their goods, but the country which lies round about them, and separates them from the sea coast, and the great navigable rivers. The extent of their market therefore must for a long time be in proportion to the riches and populousness of that country, and consequently their improvement must always be posterior to the improvement of that country. In our North American colonies the plantations have constantly followed either the sea coast or the banks of the navigable rivers, and have scarce anywhere extended themselves to any considerable distance from both.

The nations that, according to the best authenticated history, appear to have been first civilized, were those that dwelt around the coast of the Mediterranean Sea. That sea, by far the greatest inlet that is known in the world, having no tides, nor consequently any waves except such as are caused by the wind only, was, by the smoothness of its surface, as well as by by the multitude of its islands, and the proximity of its neighboring shores, extremely favorable to the infant navigation of the world; when, from their ignorance of the compass, men were afraid to quit the view of the coast, and from the imperfection of the art of

ship-building, to abandon themselves to the boisterous waves of the ocean. To pass beyond the pillars of Hercules, that is, to sail out of the Straits of Gibraltar, was, in the ancient world, long considered as a most wonderful and dangerous exploit of navigation. It was late before even the Phoenicians and Carthaginians, the most skilful navigators and shipbuilders of those old times, attempted it, and they were for a long time the only nations that did attempt it.

Of all the countries on the coast of the Mediterranean Sea, Egypt seems to have been the first in which either agriculture or manufactures were cultivated and improved to any considerable degree. Upper Egypt extends itself nowhere above a few miles from the Nile, and in Lower Egypt that great river breaks itself into many different canals, which, with the assistance of a little art, seem to have afforded a communication by water-carriage, not only between all the great towns, but between all the considerable villages, and even to many farm-houses in the country; nearly in the same manner as the Rhine and the Maese do in Holland at present. The extent and easiness of this inland navigation was probably one of the principal causes of the early improvement of Egypt.

READING VIII.

EFFICIENCY OF THE INDIVIDUAL LABORER.

*65. The Efficiency of the Individual Laborer.—The degree in which the labor of an individual shall be efficient in the creation of values, *i. e.*, the production of wealth, depends upon several causes.

First: His inherited strength, his original endowment of physical force. This endowment varies greatly, not only as between individuals of the same community but as between communities, races and nations. Into the causes of the differences in this respect existing, it is not necessary to enter. That inquiry belongs to the physiologist and the ethnologist. The economist has to do only with the fact. In the matter of sheer lifting-strength alone, the individuals of one race may, on the average, surpass those of other races by fifty, one hundred or two hundred per cent.; while in the matter of the use of that strength, in operations at once difficult and delicate, the range of existing differences is very much wider.

66. Relation of Food to Industrial Efficiency.—A second reason for the higher industrial efficiency of the laborers of one class or nation than belongs to those of another, is found in the quantity and quality of the food consumed by the laborers of the two classes or nations, respectively. The human stomach bears much the same relation to the whole frame as the furnace to the steam engine. In the one, as in the other, must all the forces which are to drive the machine be generated. In the one, as in the other, the force generated will, within certain limits, increase with the material supplied. With more fuel, the engine will do more work. With more food, the man will do more work.

But not proportionally more. To a great extent the re-

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*Francis A. Walker—Political Economy. Copyright 1887 by Henry Holt & Co. By permission. From Part II, Chapter II.

turn made, in force, to the introduction of new fuel into the furnace varies according to a principle which is strongly analogous to that which governs the returns made, in crops, to the application of new labor to land. Thus, if we suppose that, with a furnace of a given height of chimney, 3 lbs. of coal to the square foot of grate surface, are supplied, we should have, resulting from the consumption, a certain amount of force available to do the engine's work. But that amount would be small. A great part of all the heat generated would be lost by radiation in the tubes and through the cooling effect of the water in the boilers. Now, suppose that, instead of 3 lbs., six are consumed. Will the efficiency of the engine be doubled merely? No, the engine will do easily three times as much work. If nine lbs. are used, the power will be still further increased, not only positively but proportionally, that is, there will not only be more power, but more power for each pound of coal. If 12 lbs. are consumed, there may be a still further addition to the force generated, not only positively but proportionally. It might be easily found that, with this amount of fuel, the resulting force would be, not four times as much as with 3 lbs., but eight or ten.

The parallelism which exists between the economy of applying labor to land and the economy of supplying fuel to the furnace is broken at one point. Labor may be applied to land indefinitely with an increase of absolute, though not always of relative production.* But coal can not be added indefinitely to the fire beneath the boiler.

67. The Economy of Supplying Food to the Human Machine is in a High Degree Analogous.—If, for example, a laborer were supplied with only 100 oz. per week, of a certain kind of food, the laboring power which would be generated by the digestion and assimilation of that food would be very slight. After a course of such diet, the man would crawl feebly to his task; would work with a very slight degree of energy when he first started out, and would soon become exhausted. Were 125 oz. given to the laborer, he would be able, with no greater strain on his

* [This is, to say the least, doubtful.—Editor.]

constitution, to accomplish an amount of work which would be not merely one quarter more, but largely in excess of it. He would perhaps be able to do one-half as much more. Were his subsistence to rise to 150 oz. there would be a still further gain. His efficiency would be to his efficiency when receiving 125 oz., not as 6 to 5, but as 7, or perhaps 8, to 5. With 150 oz., the laborer's diet might be regarded as sufficient for comfort, health and a reasonable development of muscular strength. Let the amount of food be carried up to 200 oz., and we should have a liberal, generous diet, ample to supply all the waste of the tissues, and to keep the fires of the body burning briskly, generating force enough to allow the laborer to put forth great muscular exertions through long periods of time.

Up to a certain limit, then, with food as with fuel, the true economy of consumption is found in increasing the supply. Niggardliness is waste, and waste of the worst sort. But, just as there is a maximum limit with the fuel, so there is with food. After that limit is reached, the increase of food does not imply a proportional increase of force, if, indeed, any increase at all; and after a certain still higher point is reached, the increase of food brings mischief.

68. Under-Fed Laborers.—The consideration here presented is of great importance in explaining the varying efficiency of labor. Probably the inhabitants of the United States constitute the only large population in the world who are thoroughly well-nourished; that is, who have enough of wholesome food to secure the greatest economy of consumption. "Many a French factory hand," writes Lord Brabazon, "never has any thing better for his breakfast than a large slice of common sour bread, rubbed over with an onion, so as to give it a flavor." "Meat," says a careful observer, "is rarely tasted by the working classes in Holland. It forms no part of the bill of fare, either for the man or his family." Of the laborers of Belgium, an official report states: "Very many have for their entire subsistence but potatoes, with a little grease, brown or black bread, often bad; and for their drink a tincture of chicory." Even through large portions of happy England, the fabled

land of the beef-eater, there is a mass of unimpeachable testimony to show that the working classes are able to obtain less nourishment by far than is necessary to the highest efficiency of their labor. "In the west of England," wrote Professor Fawcett, in 1864, "it is impossible for an agricultural laborer to eat meat more than once a week." Of the peasantry of Devonshire, Canon Girdlestone wrote: "'The laborer breakfasts on tea-kettle broth—hot water poured on bread and flavored with onions—dines on bread and hard cheese, at 2d. a pound, with cider very washy and sour; and sups on potatoes or cabbage, greased with a tiny bit of fat bacon. He seldom more than sees or smells butcher's meat.'

Now, as to the want of true economy in thus reducing the consumption of food among the working classes, there can not be a moment's question. The case may perhaps be best put by saying that if cattle were not kept better nourished than are the majority of laborers in the world, it would not "pay" to have cattle at all. It would be better to do without them entirely. Barely to keep them alive would require a large expenditure of food, and to give them, in addition to this, only enough to secure a low grade of muscular strength and activity, would not make them worth their keep.

69. Influence of Sanitary Conditions on the Efficiency of Labor.—A third reason for the higher industrial efficiency of the laborers of one class or nation than of another, is found in different sanitary conditions, especially those which concern the quality of the air. The food which is taken into the animal system is converted into blood which is kept in a state of purity by being oxidized in the lungs, through the process of breathing. In this process, the foul and stupefying element, carbon, is thrown off into the atmosphere, and the life-giving element, oxygen, is taken into the system. That this may be done, there should be, in all inclosed habitations, a sufficiency of space to each person and a free access of fresh air. Human beings confined in small, unventilated rooms inevitably lose vigor; the process of the oxidation of the blood being checked, the process of making blood, through the diges-

tion and assimilation of the food taken into the stomach, is checked. With foul air, therefore, a smaller amount of muscular force is generated from the same amount of food. Not only so, but the food taken into the system may become an actual obstruction and cause of disease, through the failure of digestion and assimilation. Moreover, in close rooms, unventilated and uncleaned, the germs of certain diseases, known as filth-diseases, viz., typhus and typhoid fevers, scarlet fever, diphtheria and others, are preserved and readily communicated, to the impairment of health and the destruction of life.

70. The cause here adduced is not of slight importance in accounting for the differences in the labor power of different communities and nations of men.

As the people of the United States are the best nourished, so they are, by a long interval, the best sheltered people in the world. It is impossible for an American who has not traveled widely, to form an adequate conception of the manner in which the laborers of other countries are housed. "Hovels, cellars, mere dark dens," wrote Mr. Inglis of the city homes in Ireland, in 1834, "damp, filthy, stagnant, unwholesome places."

In 1861, one-third of the population of Scotland lived in houses of one room only; another third in houses of two rooms. In England the character of the country cottages and of the dwellings of the poorer classes in the cities is even worse than in Scotland. Cases are not infrequent where families of 7 to 13 members occupy a single bedroom.

Of the cottages of Devonshire, Canon Girdlestone says: "They are, as a rule, not fit to house pigs in." The cottages of the County of Durham were thus described by the Poor Law Commissioners of 1842. "The average size of these sheds is about 24 by 16 feet. They are dark and unwholesome; the windows do not open, and many of them are not larger than 20 feet by 16; and into this space are crowded eight, ten, or even twelve persons."

71. If this is the way Englishmen have to live in the country, we might expect to hear worse things of the towns, where land is sometimes worth as many silver crowns as would cover its surface. Some years ago Mr.

Edwin Chadwick declared that more filth, worse physical suffering and mental disorder than John Howard described in his account of the prisons of his day, were to be found among the cellar populations of the working people of Liverpool, Manchester, or Leeds, and in large portions of the Metropolis. Much has of late been done, both by private philanthropic effort and under the authority of law to cure the evils described; yet still much that is hideous remains.

It is in such homes that the greater part of the present laborers of the world were born and reared. And it is in homes like these, that, in their estate as laborers, they have to live, to eat, to rest and to sleep after the exhausting toil of the day. It is not to be wondered at that children grow up puny and deformed; that scrofula and rheumatism become deeply seated in the constitution; that the blood grows foul and the pulse feeble; that the efficiency of the laborer falls to a low point, while his power to labor at all becomes liable to be prematurely terminated.

72. The Laborer's Intelligence.—A fourth reason for the superior efficiency of the laborers of one class or nation over those of another, is found in their higher intelligence. Intelligence is a powerful factor in industrial efficiency. I speak not now of technical knowledge, but of clearness of mind, quickness of apprehension, strength of memory, and the power of consecutive thought, in no more than the degree in which these may fairly be expected to be found in a nation where popular education has existed for generations; in the degree, for instance, in which they are found in New England, in Saxony, in parts of Scotland.

The intelligent is more useful than the unintelligent laborer:

(a) Because he requires a far shorter apprenticeship. He can learn his trade in a half, a third, or a quarter the time which the other requires. (b) Because he can do his work with little or no superintendence. He is able to carry instructions in his mind, and to apply them with discretion to the varying conditions of his work. (c) Because he is less wasteful of materials. In some branches of manufacture the value of the materials used is equal to the amount paid in wages. In others it is twice, thrice, and even ten

times as much. A very little difference in the degree of thoughtfulness, foresight and regard for instructions, on the part of the laborer, may make a great difference in the net product.

73. (d) Because he readily learns to use machinery, however delicate or intricate. The extent to which labor is saved and power increased by the use of machinery hardly needs illustration here. It is only the intelligent workman who can freely avail himself of this great help. Brains are not alone required for the invention of machines; they are wanted for their adjustment, their ordinary use, and their occasional repair. He who is to use a machine need not be the same man as he who made it; but, to a great extent, he should be the same kind of a man.

74. Race Characteristics Regarding Machinery.—The capability of dealing with costly and delicate machines varies greatly between different races and nations of men. Notwithstanding the prodigious increase in the power of producing cotton goods, through the inventions of Watts, Arkwright, and Sitgreaves, vast quantities of cotton are still spun or woven by hand. In some of the countries of Europe, as Turkey and Greece, the ordinary "mechanical powers," the screw, the lever, the inclined plane, etc., are used but little, or not at all, the lifting or pulling being done by direct physical force, at, of course, the expenditure of a vast amount of animal strength. Even in highly civilized nations the application of agricultural machinery is limited by the inability of the peasantry to use it. The Judges of the World's Fair of 1852 reported that there was probably as much sound, practical labor-saving invention and machinery unused, at that time, as was used; and that it was so far unused, "solely in consequence of the ignorance and incompetence of the work-people."

75. Machinery in the United States.—The United States is the only country in the world, excepting some of the English colonies, in which it can be safely assumed of the average laborer that, after a reasonable period of experiment and trial, he will be able to use delicate and costly machinery to the advantage of his employer. In all other countries, even the most civilized, it is only picked laborers

who can use intricate machinery without doing more damage than their labor is worth.

76. Cheerfulness and Hopefulness in Labor.—A fifth reason for the higher efficiency of the laborers of one class or nation than of another, is found in greater cheerfulness and hopefulness, growing out of higher self-respect and social ambition, and a more direct and certain interest in the product of industry.

The first three causes which have been adduced are purely physical, affecting the laborer's muscular force and capability of endurance. The fourth cause adduced, viz., the laborer's general intelligence, determines his intellectual qualification for his work, his ability to direct his bodily powers, such as they are, to the production of wealth, with the maximum of effect and the minimum of waste. The cause now adduced is moral, affecting the will.

The importance of this cause is most conspicuously seen in the wastefulness and inefficiency of slave labor. Always and everywhere, that labor has been found to be vastly inferior to the labor of freemen. Even the stimulus of the lash fails to command the faculties which instantly spring into activity under the inspiration of an ample reward. Fear is far less potent than hope in evoking the energies of mind or body; while efforts made under the influence of the former passion are far more exhausting than those made under the influence of the latter.

77. Nearness and Directness of the Reward.—Even among free laborers, the degree in which the physical and intellectual powers may be engaged in the production of wealth depends greatly on the directness and certainty of the reward. This is proved by the difference everywhere observed between the exertions of wage laborers and those of men working on their own account. The wage laborer necessarily becomes, in a great degree, a time server, an eye pleaser. He saves himself as much as he can; he counts his hours; he measures the work he does. But more than this, a laborer not merely will not, he can not, the laws of human nature remaining the same, work as hard for another as he would if working as his own man.

On the other hand, he who is working for himself keeps

no grudging account of his time or exertion. If the proprietor of land, he knows that every stroke of his arm is creating wealth which he and his children are to enjoy; that every straw saved is his own. He watches against waste with unfailing eagerness. His vines, his plants, his animals, his fences, his buildings, are borne upon his mind; and no care or pains are withheld to guard them against the almost infinite forms of injury which beset these species of wealth. He is early afield, for the day is not long enough for all he wishes to do; and when night falls, he still lingers, tying up his vines, tinkering his sheds, tending his cattle, bringing home the harvest.

Even beyond the mere love of wealth, of what can be bought and sold, enters the love of his land, which is his own, which was his father's, which shall be his son's after him; and he works upon it, sparing himself little more than does the mother caring for her child. "Give a man the secure possession of a bleak rock," said Arthur Young, "and he will turn it into a garden." The vineyards of the Rhine, built up, in many cases, of earth brought in baskets up the sides of the mountains, are speaking witnesses to the truth of this saying; while many of the richest fields of Holland and Belgium, once drifting wastes, illustrate that other saying of the eminent traveller: "The magic of property turns sand into gold."

78. Influence of Bad Laws in Producing Idleness. —Doubtless much of the indolence we have been accustomed to regard as constitutional with certain races and nations, and as indicating lack of physical endurance or feebleness of will is due simply to the absence of incentive, resulting from unjust laws or bad social institutions. It would be enough to make one laugh to hear the Scotch spoken of as lazy. The energy and perseverance of that people have been illustrated in every quarter of the globe. Yet, three or four generations ago, the Scottish people, says Professor Hearn, "were conspicuous for their incorrigible indolence." The ample explanation was found in the almost universal system of short leases or of tenancy at will. A single wise action of legislation cured this defect; and with it disappeared the laziness of the Scotchman.

Not half so long ago as that, the Irish were a proverb over Europe, for indolence and shiftlessness. Arthur Young describes them as "lazy to an excess at work," but "spiritedly active at play." The Irishman of that day was spiritedly active at play, because the fun was sure to be all his own. There were no laws or institutions which robbed him of his sport. He was lazy to an excess at work, because invidious laws, social proscription and the customs relating to land kept from him a large part of the natural fruits of his labor. Every country of the globe has witnessed, since 1850, the indomitable pluck and energy of the Irish at work under equal laws and with "a fair chance."

79. The Varying Efficiency of Labor.—I have indicated the chief causes which influence the efficiency of the individual laborer in the production of wealth. The joint effect of all these is very considerable. Industrial operations conducted upon a large scale have shown that wide differences exist in the working power of men of different nations. In comparing the cost of constructing railroads in India and in England, for instance, it was found that, though the Indian laborer received but 4½ to 6d. a day, and the English laborer, 3s. to 3s6d., the sub-contracts in the two countries were let at the same prices. The English cotton spinner is paid as many shillings as the East India spinner gets pence; yet the cotton cloth of England undersells that of India in Indian markets. As between England and Russia, it is found that a weaver in the former country tends from two to three times as many looms as in the latter, the English looms, moving, moreover, at a higher rate of speed.

As between England and France, the superiority of the labor of the former country has been repeatedly shown in great competitive experiments. Mr. Brassey states that, in the construction of certain French railways, it was found that the working capacity of the Englishman was to that of the Frenchman as five to three. Superior as are the workmen of England to those of other countries of Europe, they are, in turn, surpassed, on the average, by those of the United States, in the respects of strength, intelligent direction of force, and ability to use machinery to advantage.

READING IX.

THE LAW OF DIMINISHING RETURNS.

The conventional discussion of the Law of Diminishing Returns seems to many of us defective in several respects. Three of the most important faults are the following: (1) It is common to confuse two quite different cases: (a) the law as applied to a single piece of land and (b) the law as applied to all land or, better, to agricultural industry as a whole. (2) It is common, in stating the law, to give the impression that it is true only of land, whereas in fact it is quite as true of men, animals used in industry, machines, tools, etc. (3) It is common to ignore altogether the fact that to be under the operation of the so-called law of diminishing returns is merely to be in *a particular one of several possible stages or conditions as respects the effect on output of increasing the amount of the auxiliary element applied to any productive factor,* (*e. g.,* increasing the labor expended on a piece of land, or the oats fed to a horse, or the coal fed to a furnace, etc.) For, of course, circumstances may be such that adding 25% to the expenditure on a piece of land adds *more* than 25% to the crop, instead of less. So, circumstances may be such that adding to expenditure adds *nothing* to the crop, even subtracts from it. I have had considerable difficulty in getting any readings to cover these points; but the following from Nicholson's Principles will be helpful. The student will also do well to read, in this connection, sections 66 and 67 from Reading VIII.

*As is naturally suggested by the explanation of the terms just made, it will be advantageous to give to the law (in the case of arable land and wheat) two forms of statement according as we consider *first* a unit (say acre) of land of the same fertility, and *secondly,* the whole land of different qualities of any country or industrial area.

I. As applied to one portion of land, the law may be thus worded: "If to any piece of land (other things remaining the same) labor and capital (of the same efficiency per unit) be applied continuously, beyond a certain point, the return per unit will diminish." In explanation, it may be remarked that the phrase "beyond a certain point" refers not to the time but to the quantity of the applications of labour and capital. Thus, in the use of ammonia or other chemical manure, all that is meant is, that if more than a certain quantity is applied the benefit will begin to diminish, and, indeed, an excessive quantity would be absolutely injurious; whether much or little, however, is used, it may all be applied at the same time. . . .

It may be pointed out further as regards the production of wheat with the same methods, that, when the return begins to diminish, it continues to decrease very rapidly, and indeed soon reaches the vanishing point. In fact, for practical purposes, the law really amounts to this: that with certain modes of cultivation only a limited amount of capital and labor can be applied to a piece of land. The conception of successive separate doses of capital each with a corresponding return, separately marked off from those preceding, is apt to give very false impressions. It is often assumed, for example, that every additional dose must give some return; it is forgotten that the return would soon become negative or the labour positively injurious.

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. . . But when the practical difficulties are set aside, and the law is guarded by the requisite hypothesis, the first thing that will probably strike

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* Nicholson—Principles of Political Economy. Copyright 1893 by Macmillan & Co. (A. & C. Black). By permission. From Book I, Chapter X.

the critical reader is, that a law precisely similar applies, not only to a piece of corn-growing land, but also to every form of auxiliary material capital,—buildings, machinery, and the like,—and applies equally to labouring cattle and to labouring men. In a factory of a certain size, with certain methods of production only a limited amount of capital and labour can be employed; after a certain point is reached there will be a diminishing return to successive doses of capital and to additional pairs of hands. In a steam-engine, up to a certain point, the motive power will increase with every additional unit of coal burned; but after this point is reached the return will diminish, and ultimately the fire may be choked or the boiler burst. A ship cannot be navigated at all without a certain number of sailors; and in this case also it is easy to formulate a law of increasing return which gradually merges into a law of diminishing return. Similarly, the food of horses and the food of men may be said to follow this same law (after a certain point), with regard to the efficiency of the labour which they perform.

If, then, the law as applied to land is to be something more than a particular case of μηδὲν ἄγαν, and is of such peculiar importance as to deserve Mill's description of it as the most important proposition in political economy, we should expect to discover some peculiar property in which land differs from other forms of capital or instruments of production. Such a differential quality is found in the limited quantity of land or more strictly of superior land.

In any single factory there is a limit to the advantageous increase of the labour and machinery employed; but, for practical purposes, the number of factories can be indefinitely increased, and equal quantities of labour and capital will give at least equal returns. If only time is allowed, old machinery can be replaced by new, and thus any advantage obtained by one factory will soon be open to others. But with land it is not so; the better land is limited and the differences in productive power are comparatively permanent.

Accordingly, in old countries in which all the land best adapted to agriculture or (to take the same example as before) to corn-growing has been taken up, the produce can

only be increased so long as the arts of production remain the same, either by more intensive cultivation of the land (with the diminishing return already explained) or by more extensive cultivation in the recourse to inferior land.

The limit of intensive cultivation is soon reached, apart from improvements. As a matter of fact, in the case of wheat, it is probable that the land which yields fifty bushels an acre will cost no more and possibly less to cultivate than the land which yields only fifteen. Accordingly, whether the increase in produce is a cause or an effect of the increase in population (a point to be discussed later), it can only be obtained, in the absence of improvements, by the cultivation of inferior land. Thus we arrive at the second form of the law of diminishing return applicable to a country or industrial area embracing lands of different qualities.

II.* "After a certain point is reached, every additional acre taken into cultivation, the arts of production remaining the same, gives a diminishing return to a given amount of labour and capital."

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* [The numeral and quotation marks are inserted by the editor.]

READING X.

THE TYPICAL MONETARY SYSTEM.

While the detailed study of money must be left for a special course, the student of Elementary Economics needs very early to master the principal facts of the subject. The following is intended as a descriptive account of a typical modern system, containing "several different kinds of money, each performing a different office in the system and all organized into a more or less coherent whole, with its scale of denominations, its standard, its various funds, and so on." Doubtless most actual systems contain inconsistent, anomolous, elements; for accident has played a large part in their origination. Still they are true systems, and, on careful study, prove to be more harmonious than is commonly supposed.

I. THE DENOMINATION SYSTEM.*

The first element to be remarked in any monetary system is *the system of denominations,* that is, the *names with which quantities of money are expressed, e. g.,* dollar, dime, eagle. The necessity for some means of expressing quantities of money is easily seen. Since money is the common thing which exchanges against all other goods and since these goods range in value from almost nothing to millions of dollars, it is necessary that we should be able to make up sums of money from the highest to the lowest, and in some way to describe or express these sums. Conceivably this could be done by the use of the ordinary denominations by which weight or bulk is expressed. As a matter of fact

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* Taylor—Chapters on Money. Copyright 1906 by F. M. Taylor. From Chapter II.

this seems to have been the practice in all early systems. The monetary denominations were originally nothing but *weight* denominations, *e. g.*, the Hebrew shekel, the Roman as, the English pound.

But, while a procedure like that described is possible. it is natural and inevitable that we should come to have denominations which express quantities of *money* rather than quantities of *metal.* First, just as soon as money became fully differentiated from the mere stuff of which it was made, men would tend to dissociate a given denomination when applied to money from the same denomination when applied to metal. Secondly, this dissociation would become necessary as soon as governments introduced the practice of debasing coin, reducing its weight or fineness, so that a shekel or pound of gold coin meant much less than a shekel or pound of gold bullion. Accordingly, every well-developed monetary system has a full set of denominations of its own, the connection of which with weight denominations, if there is any, no one thinks of in the ordinary course of business.

Monetary denominations may be divided into Primary and Secondary. The Primary denomination is what we more often call the *Monetary Unit*—that denomination which is thought of as *fundamental* in the system, the other denominations being referred to it in defining their value. The primary denomination or monetary unit in the United States is a dollar; in England, a pound; in France, a franc; in Germany, a mark; and so on. The Secondary denominations are those which are looked on as derived from the monetary unit—being multiples or fractional parts of that unit. Thus in the United States, the law provides for the mill or thousandth of the dollar, the cent or hundredth of a dollar, the dime or tenth of a dollar, and so on. Frequently a system will contain secondary denominations outside those regularly authorized which survive from some older order. In our case the survival is illustrated by the shilling, still used, though much less often than fifty years ago.

II. THE MONETARY STANDARD.

A. General Account.

The second essential element in a monetary system is *the monetary standard.* The special office of the standard is to *fix the meaning or value of the primary denomination or monetary unit.* The precise significance of this statement is most easily explained by comparison with an analogous case, the standard of liquid measure. As we all know, there are in the United States at the present time thousands upon thousands of vessels for measuring liquids which contain a gallon or some multiple or fraction of a gallon. Some of these measures are made of wood, some of tin, some of stoneware, and so on. Some are cylindrical in shape, some like the frustum of a cone, and so on. But nevertheless, in one particular, they are all alike or at least intended to be alike. As respects their capacity to hold liquids each is supposed to be equal to every other. And this equality is of prime importance. For, if gallon measures were not substantially equal in this particular, the significance of the gallon would be constantly changing, and so the way would be opened for an infinite amount of trouble, error, or cheating. Now, how is this equality among gallon measures attained? How is it brought about that the gallon shall always signify just one thing? Simply by requiring that a gallon measure shall be able to hold a certain fixed amount by weight of some one substance, no more and no less. The substance chosen is pure water under certain conditions of temperature and air pressure. The amount is 8.33 pounds. This fact we express by saying that 8.33 pounds of pure water is the standard of liquid measure in the United States.

Now the case of money is in this respect substantially the same as that of liquid measure. As we are all aware, the money unit—one dollar—has very many different forms. It shows itself now in the guise of a gold dollar, now as a silver dollar, now as a greenback dollar, now as a bank note dollar, now as two fifty cent pieces, and so on. In like manner it takes the form of private checks, John Smith's check, or H. Jones' check, thus making possible millions

of various manifestations of the dollar. Now all of these are different and in themselves have very different degrees of value. The gold dollar, for example, is worth just as much whether it is coined or melted into a shapeless lump. The silver dollar, on the other hand, is worth as much as the gold when it is coined, but less than half as much when it is melted up. The paper is practically worth nothing in itself. Nevertheless, in spite of the differences in intrinsic* value, all these different dollars are equal in exchange value. What is that one thing to which they each are equal, which *determines conclusively what one dollar shall mean* in all these various manifestations? That one thing is a piece of gold, nine-tenths fine, weighing 25.8 grains. Within the boundaries of the United States, in every conceivable connection, unless otherwise specified, one dollar means the amount of value which attaches to 25.8 grains of gold, no more, no less. If 25.8 grains of gold increase in value 10 per cent, so does the dollar. Hence we say that gold is the standard of value or the monetary standard of the United States. To summarize this explanation in the form of a definition,—the monetary standard in any system, is *that thing the value of which fixes the value of the monetary unit.*

From the above discussion it appears that our monetary standard is not one of the moneys used in the system, but rather a certain *definite quantity of a particular metal,* gold. That is, the value of one dollar in the various relations of business is in the last issue determined, not by the value of a gold coin, but by the value of the quantity of gold put into a gold coin. It should, however, be noted that the gold coin itself is the *immediate* standard; since it is the value of that coin which in the first instance fixes the value of every other form of money. By this I mean that a dollar in these other kinds of money, instead of being directly kept equal to 25.8 grains of gold bullion, is really kept equal to gold coin only; and that, consequently, its being kept

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* That is, value belonging to it *as a substance.* The writer does not sympathize with the current denunciation of the word "intrinsic."

equal to the bullion also depends on whether gold coin is kept there. That is, if gold coin and bullion separate, the coin becoming more valuable than the bullion, the dollar follows gold coin rather than gold bullion .

As a result of this explanation, it seems to be necessary to distinguish for the typical monetary system an *immediate* or *proximate* standard and an *ultimate* standard. The immediate standard is the principal money, standard money, the actual coin, to which all other moneys are rated; the ultimate standard is that thing which determines the value of standard money, and so *ultimately* determines the value of the unit. In case there is nothing behind the standard money determining its value, then it is at once the immediate and the ultimate standard of the system. However, the typical system is one wherein the value of the immediate standard, *i. e.,* standard money, is kept constantly equal to that of the gold bullion in it, which bullion, therefore, ultimately fixes the value of the dollar and so is the ultimate standard. To secure this equality in value of the gold dollar and the bullion in it, two conditions are provided or permitted. First, the government coins gratuitiously (or substantially so) all the gold people offer for this purpose. Secondly, people are allowed to melt the coins into bullion, if they wish to do so. Under these conditions there can be no material difference in value between gold coins and the bullion in them.

The using of a certain quantity of some metal as the ultimate monetary standard gives rise to some rather curious problems, as well as to some popular errors which to the student seem very foolish. If the United States makes 25.8 grains of gold its monetary standard, *i. e.,* makes it the thing which fixes the value of one dollar, then of course the price of 25.8 grains of standard gold must be just one dollar,—nothing can change it but a change in the law. Further, since an ounce of gold contains 25.8 grains just 18.60+ times, the price of an ounce of gold must be just $18.60+, so long as the law is unchanged. But of course we must not understand from this, as people sometimes do, that the value of gold—its *power* to buy goods in general—can not change.

Its *price* can not change, because it is itself the thing which determines the value of the unit in which prices are estimated. In other words, the price of gold is the value of gold measured in a certain fixed quantity of gold, which of course can not change. An ounce of gold when measured in 25.8 grains of gold will always give the same answer, 18.60+; or expressed in money, it will be $18.60+. But the value of gold as measured in all other goods ten years from now may be greater or less than it is today. But in that case the value of the *dollar* will have changed to just exactly the same extent and so the *price* of gold will be exactly the same as now.

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III. THE DIFFERENT KINDS OF MONEY.

In the two sections preceding, we have studied the first two factors or elements in a monetary system; viz., the denomination system, and the standard. We must now take up the money itself, the stock of coins and bills in actual use.

A. The Surface Distinctions among Moneys.

Almost any group of objects can be classified in a variety of ways. To this rule moneys are no exception. How many and what kinds there are depends on the point from which we view them. Some classifications are on the basis of composition, some on that of legal standing, some on that of function, and so on. We shall find it convenient to be familiar with most of these. In presenting them I shall begin with the more superficial distinctions among moneys, reserving their classification *on the basis of function* for the last.

In the United States at the present time, there are eight authorized kinds of money. In addition to these, there are two, viz., treasury notes of 1890 and legal tender certificates, the issue of which has recently been discontinued and their retirement provided for. There are, finally, a few thousand dollars in various obsolete treasury notes and bank notes, the issue of which ceased long ago, but which have never been presented for redemption, and which are probably, to

a small extent, used as money still. The eight authorized moneys are

1. Gold money (coin or bullion).
2. Silver dollars.
3. Silver fractional coins.
4. Minor coins, nickel and bronze.
5. United States treasury notes (legal tenders) (greenbacks).
6. National Bank notes.
7. Certificates for gold coin or bullion.
8. Certificates for silver dollars.

Of these eight moneys, two; viz., gold certificates and silver certificates, can be at least temporarily disposed of by counting them under the corresponding metallic moneys; for these certificates are in the strictest sense representative money and, hence, for most purposes should not be recognized as having any separate existence. Corresponding to every dollar in circulation in the certificate form, there is locked up in the vaults of the United States treasury an equivalent amount of metal in coin or bullion, waiting to be delivered to the man who presents the certificate. That is, the certificates are warehouse receipts, such as the manager of a wheat elevator gives to the owners of the wheat which is stored in the elevator. These certificates, therefore, do not constitute another kind of money in addition to the corresponding coin. They are rather documents which indicate the ownership of the coin. . . .

The number of moneys which we have to consider in studying the system of the United States is thus reduced from eight to six. Classifying these on the basis of composition, the first four go together as metallic money, the fifth and sixth as paper money. Again, the four kinds of metallic money naturally break into two groups, full weight coin and base or overrated coin. The former means coin which has substantially the full amount of metal necessary to make its bullion value the same as its money value. It includes only gold money, though, as already indicated, this must be understood to mean some gold in bar form as well as coin. Overrated coin is that which has an exchange

value greater than its bullion value. It includes with us silver dollars, silver fractional coin, nickels, and bronze coin.

The coins made of nickel and bronze commonly go together as minor or token coins. As the designation token coin implies, this money is frankly a mere substitute. It never pretended to be real money. It was always a sort of metallic due bill or note which was used as a convenient substitute for the real thing. Fractional silver commonly goes by the name of subsidiary coin; and silver dollars are often classed with them. There are no longer any good reasons for distinguishing minor and subsidiary coins. Indeed, speaking broadly, it is quite proper to put together token coin, subsidiary silver, and silver dollars as subsidiary or token money; though there are some peculiarities of the silver dollar which must be brought out before we get through.

Metallic money should be distinguished again with respect to *the conditions of issue.* In the United States gold is freely and gratuitously coined, or gratuitously coined on private account; that is, any one can take gold bullion to the mint and get coin in exchange without charge for coinage or for anything save parting, assaying, and the alloy. The other metallic moneys are coined only on government account. By this we mean that the government buys the metal, has it made into coin, and pays out this coin as occasion requires, or sells it to individuals in exchange for other money. The difference in value between the bullion which goes into the fractional coins and the coins themselves, goes to the government as a profit, and is commonly called *seigniorage.* Some governments, in minting freely coined or standard money, make a charge for the work more or less in excess of cost, thus making a profit on this kind of money as well as on subsidiary coin. Such a charge is also known as seigniorage. A charge which merely covers cost or less is known as *brassage.*

Turning, now, to *paper-money,* and omitting certificates as not properly to be distinguished from the money they represent, we have two sorts; viz., treasury notes and bank notes. As the name note implies, both of these are promises to pay money, and are issued, the one by the United States

treasury, the other by some national bank. The treasury notes are payable only in gold, the bank notes in any legal tender money. Of these forms of paper, the bank note is more typical, having a counterpart in almost every monetary system. The treasury note is less universal, but is found in several countries. Some nations, however, which do not circulate treasury notes have a special bank note almost as different from the ordinary one as is the treasury note. That is, they have a note issued by a great central bank having special rights, which note also has special prerogatives, often, for example, being legal tender.

Circulating notes give rise to some other distinctions which should be noted. Ordinarily they are promises to pay on demand and ordinarily the promise is kept. In that case they are said to be *redeemable* or *convertible*. At times, however, the issuer stops paying them on demand; in which case he is said to have suspended specie or legal money payments, and the notes are called *irredeemable* or *inconvertible*. Sometimes the issuer omits the words "on demand," simply saying that he will pay the bearer so much. In some cases notes are made payable after some contingent event, like the success of the revolutionary government which issues them.

In the United States, if notes issued by the Treasury are irredeemable and at the same time legal tender, they are often called *fiat* money. . . .

Another way of looking at our different moneys is from the standpoint of their legal tender status. How far does the law authorize a debtor to force them on an unwilling creditor? This really gives two questions, (1) is a money legal tender in all relations? (2) is it legal tender to any amount? If we answer yes, to both of these questions in the case of any particular money, it is to be characterized as a *universal and unlimited* legal tender. If it can be paid only in special cases, but then to an unlimited amount, it is a *partial unlimited* legal tender. And so on. From this standpoint our moneys, including certificates, fall into four classes. (1) Gold coin and silver dollars (also treasury notes of 1890) are a universal and unlimited legal tender. (2) Subsidiary and minor coins are a universal but limited

legal tender, the former to the amount of ten dollars, the latter to the amount of twenty-five cents. (3) Treasury notes are a universal commercial or private tender, but a partial tender in the relations of the Federal government and outside parties. They are not legal tender in payment of interest on the public debt nor of duties on imports,* nor in redeeming other treasury notes. (4) Bank notes and certificates are commercially, or in private relations, non-legal tender, but are legal tender to national banks, and a partial tender in payments between the Federal government and the public.

B. The Distinction of Principal and Subordinate Moneys.

So much for the more superficial classification of moneys. We must now go into the deeper phases of this matter. One of the most fundamental distinctions among moneys is that of (1) *Principal* or *Standard,* and (2) *Subordinate* moneys. It is scarcely necessary to say that, if we are going to have different kinds of money at all, and this was certainly inevitable, this fact would necessarily give rise to the question *how shall these various moneys be related to one another.* Several plans are thinkable, and indeed have been one time or another realized. The different moneys might be quite independent of one another, no effort being made to maintain any community among them even in respect to denomination. In the same time and place silver coin might be used for some money purposes, gold bullion for others, and every day products for others. But manifestly it would be quite inconvenient to carry on such a system or lack of system, and a highly advanced society would certainly replace it with a better order,—would in some way co-ordinate the moneys into one system, with a common set of denominations and with moneys of the same denomination equal in value.

This result, again, we might attain in any one of several ways. The different moneys might be co-ordinate in rank and mutually independent, but managed in such a way as to keep them equal in value. Thus for several centuries

*This limitation has not been enforced since 1879.

in most European countries, both silver and gold were full money and co-ordinate in rank; but an attempt was made to keep them together by recoining one or the other from time to time and putting in more or less metal as might be necessary to make the two kinds just equal in value. A similar result might perhaps be reached by keeping each of the moneys, while still independent of every other, equal in value to some outside thing, though I do not know of any historic case illustrating this plan.

But, while it is theoretically possible to have a system wherein the different moneys are co-ordinate in rank though kept equal in value by wise management, the practice of our own day is to *treat one of the moneys as principal and all the others as subordinate*. The principal money, which we shall usually designate as standard money, is made to set the pace, to fix proximately the meaning of the money unit; while the subordinate moneys are kept equal to it, either by providing for their convertibility into it. or by so managing them that convertibility will be unnecessary or will be effected indirectly. The relation between the two classes of money is often brought out by designating them respectively as Real money and Representative or Credit money. Even where the subordinate moneys are not redeemable in real money, they are convertible into that money by various roundabout processes and hence in a sense are credit moneys—promises to pay real money.

In a typical system of the sort described, if the subordinate moneys were brought into existence to meet a felt want, they are given the characteristics which fit them to satisfy that want and at the same time insure that these moneys shall not encroach on any function not their own and therefore shall not endanger the system as a whole. If any particular one of the subordinate moneys is the product of accident rather than of an effort to satisfy some special need, we still try to find a function for it and to fit it for that function in order to insure the harmonious working of the whole. And I think I may truly say that greater success is attained in this particular than is commonly supposed. Even the system of the United States, which is often spoken of as a mere aggregate of unrelated moneys,

having their origin in the accidents of practical politics, has a high degree of unity and coherency, the result partly of unconscious evolution and partly of wise legislation.

C. Standard Money.

We will now proceed to set forth more fully the *real nature and functions of these different moneys.* The essential nature of standard money has already been suggested in calling it the *principal* money. It is the money which sets the pace for moneys in general, the only one which is self-dependent, or at least dependent, not on some other money, but on something quite outside all the moneys. It is the money to which all other moneys are subordinate, the one on which all other moneys are more or less dependent. Standard money is often said to be the only real money, all others being merely representatives of it.

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Finally, it should be added that in almost all modern money systems the most characteristic and decisive marks of standard money are two legal prerogatives, (1) *full legal tender* and (2) *free coinage.* In giving any money these two prerogatives, the purpose of the legislature is to make such money the standard money and to make the metal from which it is coined the ultimate standard. If these ends are not accomplished, it is because of some inconsistent provisions or because of errors in administration.

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We have considered the nature of standard money. We come next to the *functions* assigned to it as a part of the monetary stock. Standard money, as we have seen, is the pace-setting money, the one which fixes the proper value of inferior or subordinate moneys, and the one which immediately fixes the value of the money unit in other relations. But some special provisions are necessary to keep inferior moneys up to the mark set by standard money; for all the inferior moneys are intrinsically worth much less than their face value and in the absence of hindering forces would naturally fall away from their face value,—a result which, for various reasons, is in the highest degree undesirable. Further, there is probably no really effective method of

holding inferior moneys up to standard money which does not involve the presence in the monetary stock of a considerable amount of standard money. For, though it is doubtless true that good management, particularly a rigid limitation of the amount, can do much toward holding up the value of any non-standard money, still there is only one sure way of doing the work, viz., *to keep such non-standard money directly convertible* into standard money. Persons needing to exchange any inferior money for standard money must be able to do so without material difficulty or else the inferior money will become less valuable. But to insure this condition it is almost indispensable that at one or more points in the system there should be maintained funds of standard money from which this kind of money will be given in exchange for one or more of the inferior moneys to all persons who may apply. One of the most important functions, therefore, of the actual stock of standard money is *to make up these funds or reserves* which need to be kept for the redemption of inferior moneys, and *in doing this to maintain the parity of inferior moneys.*

A second function of standard money which is accomplished along with the first, though it should be distinguished from the latter, is *maintaining standard money in its place,* that is, keeping the place filled by the same money. It was just explained above that, unless something is done to hinder such a result, inferior moneys are likely to fall in value from the standard and that this is for various reasons quite undesirable. One of the most important of these reasons is the fact, which will later be explained, that, if one of the inferior moneys, *which is at the same time a full legal tender,** becomes cheaper than standard money, it will oust from the position of standard money the present incumbent and itself usurp the place. As this would mean a sudden change in the value of the money unit, thus altering without warning the meaning of all existing contracts, it is plainly something to be avoided at almost any cost. It is thus of prime importance that those inferior moneys which are

*This may happen in the case of a money which is only by *custom* a good tender.

legal tender should be kept convertible on demand into standard money, as a condition necessary to the maintaining of standard money in its place. This then constitutes one of the most important uses, indeed the most important use, to which the stock of standard money is put, viz., making up the reserves from which legal tender inferior moneys* are redeemed, and so keeping standard money in its place.

We have just seen that the most important uses of standard money in any system are to maintain the parity of inferior moneys and to maintain standard money in its place. These functions might be called *systemic* or organic, that is, their business is to keep the money system as a whole in good running order. But it must not be supposed from this that standard money never does any of the ordinary, regular, work of money as a medium of exchange. In some European countries and in certain parts of this country—on the Pacific Coast particularly—gold is still employed as a common medium of exchange and means of payment for transactions needing money of the middle denominations, say from about two dollars to twenty. But by all odds the most important case where standard money is still employed for ordinary monetary purposes is in international trade, where it is the usual means of payment between international bankers. The explanation of this point needs a new paragraph.

In general there is in international trade very little direct payment with money between buyer and seller. What happens is that the seller turns over to his banker his claim for money on the buyer, or the buyer turns over to the seller a claim gotten from *his* banker on some bank in the seller's country. In either case, the seller gets his pay from a bank in his own country, while the buyer makes payment to a bank in his own country. This leaves some banks in the buyer's country in debt to some banks in the seller's country. Naturally this one debt will not be settled by itself; since there will be sales of goods in the opposite direction producing debts in the opposite direction, and these two

*At least *one* inferior legal tender money.

opposing debts can easily be offset against each other, thus making unnecessary the sending of money either way. What happens to these two debts tends to happen to all the reciprocal claims of two countries on each other. That is, those on each side will get into the hands of bankers and will be offset against those on the other side, thus tending to eliminate all use of money in this sort of trade. But it will turn out at times that the balance between the bankers of one country and the bankers of some group set over against it, persists in going one way for some weeks; that is, the country is continuously a creditor or continuously a debtor. In such a case it will usually be necessary that the money itself should be sent one way or the other. But for this purpose none of the subordinate moneys of any country will answer; for their value being largely fictitious, due to laws or customs which are merely local, the bankers of other countries will not accept them, but insist on receiving money which has metallic value and receiving such money at a rate corresponding to its metallic value. Standard metallic money, therefore, is employed for this purpose.

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E. Circulation Moneys.

Having disposed of standard and quasi-standard money, the remaining kinds may be grouped together as *Circulation Money*. As the name indicates, these are moneys specially fitted, and almost exclusively used, to serve as the everyday medium of exchange. They are being passed from hand to hand in payment for goods or services or are being held ready for this use in the near future.* In general, circulation money needs to show very great *variety* as respects *denomination*; since, being actively employed in effecting all sorts of transactions, it needs to be available in almost every imaginable amount. Of course we can not attain this

* It must not, however, be supposed that the moneys already considered, standard and quasi-standard, are never used for circulation purposes. They still perform this function in some measure, but they are not specially adapted for the purpose,—are in some cases intentionally made unfit for the purpose,—and tend to leave the work of circulation to specially devised moneys.

by having an infinite number of denominations. Instead we make up irregular amounts by effecting the proper combination among several different denominations. Still this necessitates a considerable variety. Again, because circulation money must show variety in denomination, it must also show *variety* in *composition*. We can not very well make cents out of gold or dollars out of copper. For smaller moneys we employ cheap metals, using three different ones for denominations under twenty-five cents. For larger denominations gold is used more or less, but, generally speaking, nothing will do in this country but paper.

Classified in a somewhat superficial way, the circulation moneys of the United States, excluding standard and quasi-standard moneys, are three, (1) bank notes for larger denominations ($10 and upwards), (2) fiat silver or its certificates for the medium denominations (one dollar to five), and (3) base or subsidiary coin (including fractional silver, nickel, and bronze), for the small denominations The first of these, bank notes, we can not well consider in detail, at this stage of our study. Their general character, however, is plain enough. They are credit money, promises to pay lawful money on demand or at sight, issued by banks, and commonly used as money. The second kind of circulation money, fiat silver, is more or less an anomaly, an accident, a fifth wheel. In function and nature it most resembles base or subsidiary coin; hence its peculiarities will be most easily explained after we have considered subsidiary coin. We begin, then, with the latter.

The existence of base or token or *subsidiary money* has its explanation in two facts. First, as long as a metal of any considerable value is chosen as the standard, coins made of that metal will be too small for convenient use where small denominations are wanted, and so some representative or substitute money will be needed. Secondly, paper money is too frail to be suitable for the work which small denomination money has to do. Accordingly, the moneys of small denominations need to be representative or substitute moneys made of cheap metals other than the standard metal. That is, we need in the circulation one or more metallic moneys—coined moneys—different from the stand-

ard money as to their composition, yet all the time subordinate to standard money, not displacing it, and having their value fixed by it. Such moneys are properly called subsidiary. In the United States they include bronze cents, nickels, silver fractional coins (to which name subsidiary coin is most strictly applied), and silver dollars when circulating as coin. In essence, then, subsidiary money is a metallic representative, or substitute, money used chiefly for purposes of circulation.

Let us now give a more detailed account of the characteristics which belong to this kind of money in the United States at the present time. As the first characteristic we have the fact already brought out, viz., its manufacture from some *metal different from standard metal.* But this first characteristic naturally leads to one or more others. If subsidiary money is made of some substance different from that used in standard money, there will always be some chance that such subsidiary money will get to be different in value from standard money, with more or less disastrous consequences. Thus the metal of which money of this sort is made might rise in value, till the coins became worth more as metal than their nominal value as coins. This condition would naturally cause money of this sort to be withdrawn from circulation and sold as bullion, thus depriving the country of this very necessary form of currency. Precisely this happened in the United States about 1850. At that time in law both silver and gold had the status of standard money; they were full legal tender and freely coined. But the new supplies of gold from California had cheapened gold, as compared with silver. Gold consequently became the standard, as will be explained in Chapter V; and silver half-dollars, quarters, and dimes commanded a premium of two or three cents on the dollar, and soon disappeared from circulation. How did we remedy the matter? Simply by making these coins lighter. Instead of 412.5 grains of silver to the dollar, we used 384 grains.* This made the silver in a dollar's worth of coins worth about 96 cents; and, so, no one cared to melt them for the

* In 1853.

silver they contained. This gives us the second characteristic of subsidiary money, *shortness in weight,* or being overrated.

But, as in so many other cases, a device for meeting one difficulty creates new ones of its own. We steer away from Scylla only to strand upon Charybdis. If subsidiary money is made short in weight, what is to hinder its becoming less valuable than standard money and, as a consequence, ceasing to be current as money or, if remaining current, causing endless trouble and risk or even usurping the place of standard money? These are serious difficulties; but the best ways of meeting them had been largely worked out in the experience of Great Britain before the United States made the change; so that all we had to do was to employ the methods which had already proved efficacious. In order to keep our subsidiary coins at par and, in doing so, to shut out the chance of their displacing standard money, *the amount issued was strictly limited*; and to insure this limitation they were *issued only on account of the government, i. e.,* the mint stopped manufacturing these coins for private persons altogether. Still further to guard against the possibility that this inferior money would usurp the place of standard money, its tender was limited to a comparatively small amount, which provision also insured individuals against the inconvenience of having excessive amounts of small money forced upon them. Finally, in 1871 and 1879, to perfect the system, placing parity beyond question and guarding individuals and communities against any possibilities of excessive stocks of this kind of money, we provided for its redemption in lawful money at the treasury of the United States, just as if these coins were demand notes.

We have, then, as the characteristics of a fully developed subsidiary money (1) being composed of some *metal inferior* to the standard metal, (2) being short in weight or *overrated,* (3) having the status of *universal legal tender,* (4) having their *legal tender limited as to amount,* (5) being issued in strictly *limited amount,* (6) being issued on *government account* only, and (7) being kept *redeemable* in lawful money at the pleasure of the holder.

In the above account of subsidiary money, I have de-

scribed the system existing in the United States at the present time. In one respect at least this system is not altogether typical. Subsidiary money is not usually kept redeemable. Further, recent experience seems to show that the fourth characteristic, limitation of legal tender, is not essential. In fact, of the seven characteristics named, three only seem really necessary, (1) made of inferior metal, (2) overrated, and (3) limited in coinage. However, the more elaborate provisions of our system are doubtless a real gain as *insuring* results which would otherwise depend on skillful management or good luck.

We are now prepared to understand the case of the *fiat silver,* which was mentioned above as the second kind of circulation money and the consideration of which was postponed to this point. This money, when circulating as coin rather than in the form of certificates, must be viewed as in essence a subsidiary coin. It lacks indeed the fourth and seventh characteristics; *i .e.,* it is not a limited, but a full, legal tender and it is not redeemable. But after all it behaves as a regular subsidiary coin; it remains quite subordinate to standard money. We must add, however, that it can not be reckoned as a really satisfactory subsidiary money. As at present constituted, it constantly exposes our system to one serious danger. Not being redeemable, it is always liable to become less valuable than standard money; and, in that case, being a full legal tender it would certainly drive out standard money and itself usurp the place.

In this account of fiat silver I have had in mind all the time the actual silver dollars. The *certificates* issued on the deposit of silver dollars present a peculiar case. As already explained on page 46, we do not, ordinarily, need to distinguish between certificates and the coin which they represent. In the case before us, however, this statement is not quite true. Silver dollars and silver certificates play quite different rôles in our monetary system. Silver dollars, the coins, are a large-denomination subsidiary money. Silver certificates are a small-denomination paper money. Further this difference effects quite important practical results. The need of the country for silver dollars as a species of sub-

sidiary money is quite limited, absorbing only about one-ninth of those issued. But the need for silver certificates, as a small-denomination paper circulation money, is almost unlimited. Consequently, by circulating our silver money in both its coin and certificate forms, we manage to keep it all busy and out of mischief.

The net result of this is to justify the statement that this kind of money is still more or less an anomaly, a fifth wheel. Doubtless it is not seriously wrong to divide our circulation money into two sorts, (1) bank notes and (2) subsidiary money and its certificates. But this is sacrificing precision to simplicity. A truer statement is that we have three circulation moneys (1) bank notes, (2) subsidiary coin, and (3) a mixed sort, fiat silver and its certificates.

READING XI.

SPECULATIVE TRADING HAS REAL ECONOMIC FUNCTIONS.

*Few things have called forth greater extremes of praise and blame than modern organized speculation. On one side it is strongly denounced, either as being morally wrong in itself, or as being in addition to this a disastrous influence in business. This view is, perhaps, that of a large majority of respectable persons outside of business life, and of the greater part of the newspaper press. On the other side the system is as strongly upheld. . . .

The criticism directed against speculation is made from two somewhat conflicting points of view. The first is that speculation is merely gambling and has no reference to actual trade, except that it consists in betting on the course of prices. The second is that speculation is all powerful in trade, which has become completely demoralized by its subjection to fictitious speculative conditions. The former view is utterly beside the mark. However the gaming instinct may control it, the fact must be recognized that speculation is an important factor in the commercial world, and dominates trade in the field in which it acts. Speculation in any case is not mere gambling. Whether it is better or worse than gambling is a question on which opinions will long differ.

The close resemblance in many ways between gambling and speculation has obscured the essential point of difference. Both depend upon uncertainties. Both involve the risk of present possession for the sake of future gain. In speculation, as in gambling, the occurrence of a certain event results in gain for one party, while an occurrence of a different kind results in loss. What distinctions can be

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*H. C. Emery—Speculation on the Stock and Produce Exchanges of the United States (1896). Columbia University Studies, pp. 96-109 and 159-165.

made between them? . . . . Gambling is a transaction in which one party pays over a sum of money from his own wealth because of the occurrence of a chance event. Speculation is a transaction in which one acquires by purchase the right to a certain property (not specifically designated perhaps), and gains (or loses) for himself the difference between the value of the property at the time of the sale and its value at the time of purchase. The difference is a significant one. In gambling one party must lose just what the other wins. In speculation this is not necessarily so. A dealer in wheat may buy of a farmer and sell to a speculator, and the wheat be sold at a constantly rising price through a line of speculators, till bought by a miller for grinding at the highest price of all. Neither the dealer nor the miller loses by the transaction, which is not speculative on their part, yet each speculator in turn wins. The reason is that there has been an actual increase in value. The gains of the speculators result from the division among them of this increase. The charge is made against speculation, that it is like gambling, because it is unproductive, and consists in the transfer of money from one pocket to another. The charge is misleading, if not false. Speculation does not directly produce wealth, but there is a real increase or decrease in the value of property due to outside causes, and this gain or loss in value is shared by the speculators. It is true that speculative gains and losses far exceed the ultimate increase or decrease in the value of the aggregate of the commodities dealt in, but this is because new rights of property are created at every speculation, with a corresponding enormous accumulation of speculative "differences" to be settled. How much of such business is desirable, how far it is marked by the same spirit as gambling, are questions not raised at this point. We shall not hesitate to speak of some transactions in general terms as of a gambling nature, yet it is well to keep clear this objective and economic distinction between gambling and speculation. Both depend on uncertainties, but, whereas gambling consists in placing money on artificially created risks of some fortuitous event, speculation consists in assuming the inevitable economic risks of changes in value.

It is this element of risk that we have the key to the function of speculation. It is often said that all business is to a certain extent speculative; in other words, there is an uncertainty as to the ultimate profits. These risks are inherent in all business, and are no more artificial than the whole commercial order under which we live. They are risks which thrust themselves upon business men and which business men must meet. Especially are these risks dependent on changes in value, and it is the assumption of such risks that constitutes speculation.

The central feature in the economic organization of modern society is the market. From the point of view of the individual, the production and distribution of commodities are carried on with a view to their exchange. The regulator of exchange, and therefore of production, is value. Consequently the producer will expend his energies on such commodities as will have the greatest market value as compared with the expenses of production, just as the merchant will take them to the market where they will command the highest price. But this adjustment of production and distribution according to values will be accurate only in proportion to the success of the producer and consumer in ascertaining such values. The producer produces only when he thinks he can get a return greater than his outlay. The merchant buys only when he thinks he can sell at a higher price. In both cases there is always the risk that before the production is completed, or the sale made, the value of the commodity may fall. Similarly, there is a chance that it may rise. In the one case there is a loss; in the other a gain, to the producer or the merchant. Hence it may fairly be said that the test of the perfection of the organization of trade is the promptness with which such changes are learned and the accuracy with which they are predicted. It is by a due appreciation of this fact that one comes to a realization of the importance of organized speculation. If it is found to be the means of making the needed prediction, it will also prove itself the chief directive influence in the economic field in which it prevails. In such event the idea of its being an artificial device for gambling purposes will give way to a conception of speculation as a natural growth to meet an actual want.

Organized speculation, that is, such speculation as was described in the last chapter, is a comparatively recent development, and a consequence of new economic conditions. Nothing will so clearly show its real nature as a glance at the economic changes which have made it necessary.

Changes of value become important only where the system of exchange is already developed. When every man produced for himself alone, he was forced to undergo risks of production, but only when he began to produce more than he wanted for his own use, did he become subject to uncertainty in finding a market for his goods. The primitive man who started on a hunt, or who planted corn, necessarily took a risk of failure. The game might be scarce, or the crop might fail. These were risks of production, and were borne necessarily by the producer. But as soon as our primitive man began to kill more game or raise more corn than was needed for individual use, in the hope of bartering his surplus for more desired commodities, he began to incur a risk of quite another kind. However successful his production, it would profit him nothing unless he found others who wanted his commodities and had other commodities to exchange, that is, unless there was a demand for his goods. In other words, as soon as exchange set in, trade risks began. The things which he produced could not be of certain value, and, in so far as he took these risks of value, he might be said to speculate.

In such a system the functions of the producer and trader were combined in one person, who bore both the risks of production and of trade. In the case of many commodities this condition prevailed during a considerable period of development. In the course of time, however, the extension of exchanges brought out a distinctly trading class. Trade, as distinct from exchange, means buying in order to sell again with a view to gain from the transaction. Evidently the exchange of goods does not necessitate a trading class, and much exchange takes place to-day without the intervention of the trader. But any great extension of exchanges is impossible without such a class, and it is only when the producer and the trader are differentiated that real commerce begins.

This trading class stood ready at any time to take over the extra product of the individual producer and assume the responsibility of its exchange. Thus the trading risks, the risks, that is, of a change in value, were shifted to the shoulders of the new class, and the members of this class in turn, so far as they assumed such risks, became the speculators for the community.

With the development of trade and the growth of intercourse among traders, these risks tended to become less The more that men gave up the idea of producing goods mainly for their own consumption, the more steady became the market for articles of ordinary use. The functions of merchant and of transporter of goods, at first united, became separated to a considerable extent, and the traveling merchant, who still survives in our pedlar, gave way more and more to the stationary trader, especially in the cities of any size. The growth of great centers of trade and of special markets (the earlier counterpart of modern "exchanges"), the constant meeting of traders, their great gatherings in the important fairs and yearly markets, all tended to increase the knowledge of market conditions and so to diminish the risks of fluctuations in value. Of great importance, too, were the merchants' organizations, which are represented, in a sense, to-day by chambers of commerce, produce exchanges, and similar institutions. Such organizations brought the most intelligent traders together and diffused information through a wider group.

By all these means the risk which the ordinary trader ran became lessened. Many of the local influences no longer affected his profits, and, as knowledge increased the uncertainties of one age became the certainties of the next. The slight losses due to unforeseen circumstances were perhaps in the long run offset by similar gains, so that a moderate profit became assured to the average trader under average circumstances.

There still remained, however, at the basis of all trade, the possibility of unexpected gain or loss. Especially was this so in regard to agricultural products, the supply of which is dependent on uncontrollable conditions of weather and climate, and also in regard to goods from distant

sources of supply. In so far as traders assumed these risks they became speculators. But the great mass of traders were not greatly affected. In the course of the history of trade, a tendency toward a multiplication of the grades of middlemen appeared, and a distinction between wholesale and retail trade was made. Where this occurred the risks fell chiefly on the wholesale merchants. The retailers, dealing in small quantities and observant of the local demand, had little to fear from sudden changes in supply. It was, then, through the large merchants that the chief economic functions of trade were fulfilled. Their business necessitated the development of large centers of supply with ample means for storage, a detailed knowledge of the demand and supply in every locality, and the best estimate possible of future conditions. In this stage of trade the prediction of the future is the uncertain and all-important element. Such a system of great merchants carrying large stocks assuming the important risks, and thus regulating the supply, is evidently the existing system of trade in many commodities, and was, not long ago, the uniform system in nearly all trade of large extent.

It is often hardly realized what a complete transformation in trade conditions this country has brought about, especially in the case of agricultural staples. Indeed, one may say the last half-century, for the new movement had but begun before 1850. The transformation has been from many local markets to one world market. The cause of the transformation is found in the development of steam transportation and telegraphic communication. It is hardly too much to say that the Industrial Revolution of a hundred years ago has been matched in later years by a Commercial Revolution of equal importance.

Before this change the important markets were in the main independent of each other. To be sure, in all articles of international trade the conditions at all the sources of supply had their ultimate effect on distant values, and yet even in these cases the communication was so slow that the conditions might change entirely before their effect would be felt. Even the amount of international trade in such staples as cotton and wool, which for the earlier period was

considerable, seems comparatively insignificant by the side of the enormous trade in those commodities to-day. In the main then it is true that the earlier markets were of a circumscribed area; that, save over long periods, the supply and demand within this limited area were the regulators of price, and that these local conditions were consequently the chief concern of even those merchants who dealt on a large scale. Under such circumstances these merchants bore the speculative risks as a part of their business, and were perhaps fully competent to cope with such risks as might arise.

All this was changed by the commercial revolution. The facilities of instantaneous communication and of rapid transportation from one end of the world to the other soon tore down the barriers about the local market. The stores of a given city, even the crop of a given country, could no longer control the price in any market. To-day the wheat of Russia and of the United States can be turned into Liverpool market as quickly as could the supplies of the inland counties a hundred years ago; while long before its arrival the Liverpool merchant knows just how much wheat has been shipped and when it may be expected. The Liverpool price is as quickly affected by a cable from India, or Argentina, or Dakota, as formerly by the news of a bad crop in the surrounding country. The same is true in regard to cotton and coffee, and many of the other articles of international trade.

With this change the market for all the great staples became a world market, and the total demand and total supply began to determine a single price for all places. The chances of local fluctuations in price became greatly lessened, for the local scarcity or abundance might be offset by opposite conditions elsewhere. At the same time the fluctuations possible because of these distant conditions became of much more importance. Formerly the merchant, from a thorough knowledge of his own market, was well-prepared to assume its speculative risks. Now he was called on to face a wider *Konjunktur,* and to assume the risk of changing values dependent on world-wide conditions.

This was a burden which the merchant body was hardly prepared to bear. With the advance in knowledge, the

trading element and the speculative element in their business had come to be more sharply distinguished, and the more important the speculative element became, the greater was the burden on those who pursued their business for its trading profit. As merchants they were primarily concerned with buying, storing, and moving their actual commodities, and had little time to watch the ever shifting conditions of the world market. What was now needed by the trader was a distinct body of men prepared to relieve him of the speculative element of his business, that is, of the risks of distant and future changes, just as *he** had formerly relieved the producer of his distinctly trading risks. A new body was wanted to cope with the *Konjunktur*. And as the need grew, the speculative class became differentiated from the trading body as the latter had been differentiated from the producing body. The speculator was to assume these risks by standing ready at any moment to take over the commodity of the merchant, or to agree to deliver it to him, at an established market price. The importance of this development can hardly be overestimated. The peculiar feature is, not that speculation has increased, but that **speculation has become the business of a special class.* Previously the speculators had been traders seeking their own markets and moving their own goods. Now they became a third class, distinct from both producers and exchangers. Whereas formerly each man bore his own risks, the new class has arisen to relieve him of these risks; instead of all traders speculating a little, a special class speculates much.

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†It remains to briefly examine the particular way in which the speculative market performs its second function, the assumption of risks. The trader is primarily concerned with getting a profit from differences of price in different markets. He buys in the producer's market and sells in the consumer's. In a sense the same is true of the manufacturer. He buys material and labor, and attempts to sell

*Editor's italics.
† Pp. 159-165.

his product for something more than the cost of production. This difference between markets is constant and normal and constitutes the reward for the services of the middleman and manufacturer. To ensure such normal profits, their desire is to escape the risks of fluctuations within the same market. This, to a large extent, the speculative market enables them to do. In the first place, the holder of any commodity may sell it to a speculator if he fears a coming fall in value, or a buyer can buy of a speculator for future delivery the actual commodity he needs, if he fears a rise. But the speculative market affords a better method of insurance by means of "hedging" transactions. Under this method, for every trade transaction a corresponding transaction of the opposite kind is made in the speculative market. If a man buys for trade purposes, he sells short on the exchange an equal amount, and covers his short line as soon as he disposes of his first purchase. He has made two equal and opposite transactions, and if the price moves either way he loses on one and gains on the other. In this way he makes himself largely independent of speculative fluctuations.

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The same method is adopted by the elevator men, the exporters and the manufacturers. The big elevator companies, in the central markets are among the largest purchasers of wheat. Curiously enough, the development of the elevator system, which began as a separation of the functions of trading and storing and looked toward a more complete division of labor, has resulted in an opposite tendency. The big elevators once constructed, could not remain empty, and their owners perforce turned buyers in order to utilize their capacity and earn storage. It is clear that these enormous holdings, for long periods, would under the old method involve tremendous risks. Imagine an elevator company holding 5,000,000 bushels of wheat against the fluctuations of the market for several months. Conservative business would be impossible. Now, however, these risks are all thrown on the speculative class.

The same is true of the millers. Millers own large stores of wheat in country and terminal elevators, which is

insured by the same process. As soon as the miller buys in the country, or elsewhere, for grinding purposes, he sells an equivalent amount by telegraph on some exchange. Then when he disposes of his flour, he covers at the same moment his hedging sales by corresponding purchases. Since flour in the main fluctuates with the value of wheat, this affords nearly complete protection. The manufacturer of cotton, on the other hand, usually protects himself by purchases. Spinners do not hold such large stocks of their raw material as do the large millers, and often sell their product for delivery at home or abroad at some future time, while not in possession of any cotton at the moment. Immediately on placing such an order, purchases of the required amount of cotton may be made on the Cotton Exchange, and as soon as the spot cotton for manufacture is secured, the long interest on the exchange is sold out. He is insured by his purchases, as the miller by his sales.

This practice of hedging is now universal in the trade in grain and cotton. Not to hedge, is considered the most reckless kind of business among large dealers and millers That is, the man who keeps out of the speculative market is said to be a speculator. The spinner, however, uses the "future" market much less than the dealer or miller. Dealers and exporters hedge all their purchases. Nine-tenths of the cotton shipped to Liverpool is hedged there or in New York. Probably over ninety per cent of the great wheat holdings in the elevators of Duluth and Minneapolis are sold against in this way. Some of the most prominent elevator men of Chicago claim that every bushel which they buy for storage is invariably protected by a hedging sale. It may be that the men who control the elevator companies are independently "plungers" in the market, but this has nothing to do with their regular elevator business. Some millers or elevators may also carry a small amount, as a legitimate speculation; but in the main the rule of the trade is, to insure everything at all times and under all circumstances. It may be that in exceptional cases insurance is impracticable. For example a miller, who finds an unlisted quality of wheat grown in so small an area that it fluctuates independently of contract wheat, may not be willing to

insure for fear of losing at both ends of the transaction. This is perhaps still more true of the spinner using particular qualities of staple. For such persons the speculative market is of doubtful advantage.

Under these conditions the ultimate profits of the dealer or exporter depend both upon the prices in his hedging transactions and the prices in his trade transactions. In the first place he finds he can buy his wheat or cotton at a certain price; then he must choose the best market in which to hedge. This is his first calculation. In the case of cotton, it may be in New Orleans or New York or Liverpool. In the case of wheat it may be in New York or Chicago or St. Louis or the Northwestern markets, or even in Liverpool. When now he comes to sell his real commodity, he must cover his short sale in the market where it was made, but he may sell his commodity in any market at home or abroad entirely apart from any exchange. Here comes in his second calculation. Spot markets are always varying a little in price due to differences of local demand, changing freight rates and so forth. These factors all determine the place of ultimate sale and the amount of profit. In any case this profit is now purely a trader's profit. The chance of speculative gains or losses from wide fluctuations has disappeared. It may be that instead of making more on one transaction than he loses on the other, the reverse may be true, in which case, however, the loss is a trader's, not a speculator's loss.

A difference of quality may be important in determining profits. An exporter may buy cotton for delivery at Memphis, and hedge in New York. If he meets with a demand from some European spinner for that particular grade, he may sell to him at a good figure, while perhaps covering his New York contract at a low price for middling. If there is no good market for his grade at the Southern ports, or abroad, he may find it better to ship to New York and deliver on what were originally intended for hedging contracts. Particularly is this true when his cotton proves to be of an inferior quality. In the same way when elevator companies have sold against their wheat in the market where it is stored, they will either deliver on their sales, or cover

and sell later for cash, according to the conditions of spot and future prices at the moment.

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With the complete shifting of risks of violent fluctuations to the shoulders of the speculative class, the margin of profit between producer and consumer has become very much narrowed. Under the old methods of forty years ago the trader had to allow a margin of five or ten cents or more a bushel on wheat to cover a possible fall in value. Today traders will carry wheat on a margin of a fraction of a cent, and the allowance for risk is practically nothing. Indeed sometimes a dealer will buy wheat in the country at the same price at which he makes his simultaneous sale on the exchange, trusting to the later transaction for his profit. In the same way the margin between wheat and flour has been reduced from more than fifty cents to less than ten cents a barrel. The cotton dealer and the exporter will now buy within fifty cents per bale of the price in the central market where formerly a margin of $2.50 or $3.00 per bale was required. Sometimes cotton is even bought in the South and hedged in Liverpool at the same price. The reduction of the middle-man's margin inures to the direct advantage of either the producer or consumer, or of both.

READING XII.

THE PRINCIPLE THAT GOODS CONSTITUTE THE DEMAND FOR GOODS, AND SOME OF ITS MOST IMPORTANT COROLLARIES.

A principle of much importance in dealing with various popular fallacies is that which affirms that the real demand for goods is determined by the total amount of goods produced and offered for sale. We can increase our demand for goods only by increasing our production of goods. What we shall be able to buy is determined by what we have to sell. The total stock of goods is Janus-faced, constituting at once the total supply of goods and the total demand for goods. This principle, with several important applications, is well brought out in the extracts which follow.

*It is common to hear adventurers in the different channels of industry assert, that their difficulty lies not in the production, but in the disposal of commodities; that products would always be abundant, if there were but a ready demand, or market for them. When the demand for their commodities is slow, difficult, and productive of little advantage, they pronounce money to be scarce; the grand object of their desire is, a consumption brisk enough to quicken sales and keep up prices. But ask them what peculiar causes and circumstances facilitate the demand for their products, and you will soon perceive that most of them have extremely vague notions of these matters; that their observation of facts is imperfect, and their explanation still more so; that they treat doubtful points as matter

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* Say—A Treatise on Political Economy (1803). 6th Am. Ed. Book I, Chapter XV, pp. 132-139.

of certainty, often pray for what is directly opposite to their interests, and importunately solicit from authority a protection of the most mischievous tendency.

To enable us to form clear and correct practical notions in regard to markets for the products of industry, we must carefully analyse the best established and most certain facts, and apply to them the inferences we have already deduced from a similar way of proceeding; and thus perhaps we may arrive at new and important truths, that may serve to enlighten the views of the agents of industry, and to give confidence to the measures of governments anxious to afford the encouragement.

A man, who applies his labour to the investing of objects with value by the creation of utility of some sort, cannot expect that value to be appreciated and paid for, unless where other men have the means of purchasing it. Now, of what do those means consist? Of other values, of other products, likewise the fruits of industry, capital and land. Which leads us to a conclusion, that may at first sight appear paradoxical; viz., that it is production which opens a demand for products.

Should a tradesman say, "I do not want other products for my wollens, I want money," there could be little difficulty in convincing him, that his customers cannot pay him in money, without first having procured it by the sale of some other commodities of their own. "Yonder farmer," he may be told, "will buy your woolens, if his crops be good, and will buy more or less according to their abundance or scantiness. He can buy none at all, if his crops fail altogether. Neither can you buy his wool or his corn yourself, unless you contrive to get woolens or some other article to buy withal. You say, you only want money; I say, you want other commodities and not money. For what, in point of fact, do you want money? Is it not for the purchase of raw materials or stock for your trade, or victuals for your support. Wherefore, it is products that you want, and not money. The silver coin you will have received on the sale of your own products, and given in the purchase of those of other people, will the next moment execute the same office between other contracting parties, and so from one

to another to infinity; just as a public vehicle successively transports objects one after another. . . ."

Thus, to say that sales are dull, owing to the scarcity of money, is to mistake the means for the cause, an error that proceeds from the circumstance, that almost all produce is in the first instance exchanged for money, before it is ultimately converted into other produce; and the commodity which recurs so repeatedly in use, appears to vulgar apprehensions the most important of commodities, and the end and object of all transactions, whereas it is only the medium. Sales cannot be said to be dull because money is scarce, but because other products are so. There is always money enough to conduct the circulation and mutual interchange of values, when those values really exist. Should the increase of traffic require more money to facilitate it, the want is easily supplied, and is a strong indication of prosperity—a proof that a great abundance of values has been created, which it is wished to exchange for other values. In such cases, merchants know well enough how to find substitutes for the product serving as the medium of exchange or money; and money itself soon pours in for this reason, that all produce naturally gravitates to that place where it is most in demand. It is a good sign when the business is too great for the money; just in the same way as it is a good sign when the goods are too plentiful for the warehouses.

When a superabundant article can find no vent, the scarcity of money has so little to do with the obstruction of its sale, that the sellers would gladly receive its value in goods for their own consumption at the current price of the day: they would not ask for money, or have any occasion for that product, since the only use they could make of it would be to convert it forthwith into articles of their own consumption.

This observation is applicable to all cases where there is a supply of commodities or of services in the market. They will universally find the most extensive demand in those places, where the most of values* are produced; be-

* [Throughout this passage Say uses values where we would use goods.]

cause in no other places are the sole means of purchase created, *i. e.*, values. Money performs but a momentary function in this double exchange; and when the transaction is finally closed, it will always be found that one kind of commodity has been exchanged for another.

It is worth while to remark that a product is no sooner created than it, from that instant, affords a market for other products to the full extent of its own value. When the producer has put the finishing hand to his product, he is most anxious to sell it immediately, lest its value should diminish in his hands. Nor is he less anxious to dispose of the money he may get for it; for the value of money is also perishable. But the only way of getting rid of money is in the purchase of some product or other. Thus, the mere circumstance of the creation of one product immediately opens a vent for other products.

For this reason a good harvest is favourable, not only to the agriculturalist, but likewise to the dealers in all commodities generally. The greater the crop, the larger are the purchases of the growers. A bad harvest, on the contrary, hurts the sale of commodities at large. And so it is also with the products of manufacture and commerce. The success of one branch of commerce supplies more ample means of purchase, and consequently opens a market for the products of all the other branches; on the other hand, the stagnation of one channel of manufacture or of commerce is felt in all the rest.

[After further illustrations of this principle that products constitute the demand for products, Say deduces some of its applications.]

It is quite impossible that the purchase of one product can be effected otherwise than by the value of another.

From this important truth may be deduced the following important conclusions:

I. That, in every community the more numerous are the producers and the more various their productions, the more prompt, numerous and extensive are the markets of those productions; and, by a natural consequence, the more profitable are they to the producers; for price rises with the demand. But this advantage is to be derived from real pro-

duction alone, and not from a forced circulation of products; for a value once created is not augmented in its passage from one hand to another, nor by being seized and expended by the government, instead of by an individual. The man that lives upon the productions of other people originates no demand for those productions; he merely puts himself in the place of the producer, to the great injury of production, as we shall presently see.

2. That each individual is interested in the general prosperity of all, and that the success of one branch of industry promotes that of all the others. In fact, whatever profession or line of business a man may devote himself to, he is the better paid and the more readily finds employment, in proportion as he sees others thriving equally around him. A man of talent that scarcely vegetates in a retrograde state of society, would find a thousand ways of turning his faculties to account in a thriving community that could afford to employ and reward his ability. A merchant established in a rich and populous town sells to a much larger amount than one who sets up in a poor district, with a population sunk in indolence and apathy. What could an active manufacturer or an intelligent merchant do in a small, deserted and semi-barbarous town in a remote corner of Poland or Westphalia? Though in no fear of a competitor, he could sell but little, because little was produced: whilst at Paris, Amsterdam, or London, in spite of the competition of a hundred dealers in his own line, he might do business on the largest scale. The reason is obvious: he is surrounded with people who produce largely in an infinity of ways, and who make purchases, each with his respective products, that is to say, with the money arising from the sale of what he may have produced.

This is the true source of the gains made by the town's people out of the country people, and again by the latter out of the former: both of them have wherewith to buy more largely, the more amply they themselves produce. A city, standing in the centre of a rich surrounding country feels no want of rich and numerous customers; and, on the other hand, the vicinity of an opulent city gives additional value to the produce of the country. The division of nations into

agricultural, manufacturing, and commercial, is idle enough. For the success of a people in agriculture is a stimulus to its manufacturing and commercial prosperity: and the flourishing condition of its manufacture and commerce reflects a benefit upon its agriculture also.

The position of a nation, in respect of its neighbors, is analogous to the relation of one of its provinces to the others, or of the country to the town: it has an interest in their prosperity, being sure to profit by their opulence. The government of the United States therefore, acted most wisely in their attempt, about the year 1802, to civilize their savage neighbors, the Creek Indians. The design was to introduce habits of industry amongst them, and make them producers, capable of carrying on a barter trade with the States of the Union, for there is nothing to be got by dealing with a people that have nothing to pay. It is useful and honorable to mankind that one nation among so many should conduct itself uniformly upon liberal principles. The brilliant results of this enlightened policy will demonstrate that the systems and theories really destructive and fallacious are, the exclusive and jealous maxims acted upon by the old European governments, and by them most impudently styled *practical truths,* for no other reason, as it would seem, than because they have the misfortune to put them in practice. The United States will have the honor of proving experimentally that true policy goes hand in hand with moderation and true humanity.

3. From this fruitful principle we may draw this further conclusion that it is no injury to the internal or national industry and production to buy and import commodities from abroad; for nothing can be bought from strangers except with native products which find a vent in this external traffic. Should it be objected that this foreign produce may have been bought with specie, I answer, specie is not always a native product, but must have been bought itself with the products of native industry; so that, whether the foreign articles be paid for in specie or in home products the vent for national industry is the same in both cases.

4. The same principle leads to the conclusion that the encouragement of mere consumption is no benefit to com-

merce; for the difficulty lies in supplying the means, not in stimulating the desire of consumption; and we have seen that production alone furnishes those means. Thus it is the aim of good government to stimulate production, of bad government to encourage consumption.

B. The Impossibility of General Over-Production.

*Because this phenomenon of over-supply, and consequent inconvenience or loss to the producer or dealer, may exist in the case of any one commodity whatever, many persons, including some distinguished political economists, have thought that it may exist with regard to all commodities; that there may be a general over-production of wealth; a supply of commodities in the aggregate, surpassing the demand; and a consequent depressed condition of all classes of producers. . . . When these writers speak of the supply of commodities as outrunning the demand, it is not clear which of the two elements of demand they have in view—the desire to possess, or the means of purchase; whether their meaning is that there are, in such cases, more consumable products in existence than the public desires to consume, or merely more than it is able to pay for. In this uncertainty, it is necessary to examine both suppositions.

First, let us suppose that the quantity of commodities produced is not greater than the community would be glad to consume: is it, in that case, possible that there should be a deficiency of demand for all commodities, for want of the means of payment? Those who think so cannot have considered what it is which constitutes the means of payment for commodities. It is simply, commodities. Each person's means of paying for the productions of other people consists of those which he himself possesses. All sellers are inevitably and *ex vi termini* buyers. Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market, but we should, by the same stroke, double the purchasing power. Every-

*Mill—Principles of Political Economy (1848). Book III, Chapter XIV, pp. 106-110, Appleton's Ed.

body would bring a double demand as well as supply: everybody would be able to buy twice as much because every one would have twice as much to offer in exchange. It is probable, indeed, that there would now be a superfluity of certain things. Although the community would willingly double its aggregate consumption, it may already have as much as it desires of some commodities, and it may prefer to do more than double its consumption of others, or to exercise its increased purchasing power on some new thing. If so, the supply will adapt itself accordingly, and the values of things will continue to conform to their cost of production. At any rate, it is a sheer absurdity that all things should fall in value, and that producers should, in consequence, be insufficiently remunerated. If values remain the same, what becomes of prices is immaterial, since the remuneration of producers does not depend on how much money, but on how much of consumable articles, they obtain for their goods. Besides, money is a commodity; and if all commodities are supposed to be doubled in quantity, we must suppose money to be doubled too, and then prices would no more fall than values would.

A general over-supply, or excess of all commodities above the demand, so far as demand consists in means of payment, is thus shown to be an impossibility. But it may perhaps be supposed that it is not the ability to purchase, but the desire to possess, that falls short, and that the general produce of industry may be greater than the community desires to consume—the part, at least, of the community which has an equivalent to give. It is evident enough, that produce makes a market for produce, and that there is wealth in the country with which to purchase all the wealth in the country; but those who have the means, may not have the wants, and those who have the wants may be without the means. A portion, therefore, of the commodities produced may be unable to find a market, from the absence of means in those who have the desire to consume, and the want of desire in those who have the means.

This is much the most plausible form of the doctrine, and does not, like that which we first examined, involve a contradiction. There may easily be a greater quantity

of any particular commodity than is desired by those who have the ability to purchase, and it is abstractedly conceivable that this might be the case with all commodities. The error is in not perceiving that though all who have an equivalent to give, *might* be fully provided with every consumable article which they desire, the fact that they go on adding to the production proves that this is not *actually* the case. Assume the most favorable hypothesis for the purpose, that of a limited community, every member of which possesses as much of necessaries and of all known luxuries as he desires: and since it is not conceivable that persons whose wants were completely satisfied would labor and economize to obtain what they did not desire, suppose that a foreigner arrives, and produces an additional quantity of something of which there was already enough. Here, it will be said, is over-production; true, I reply; over-production of that particular article: the community wanted no more of that, but it wanted something. The old inhabitants, indeed, wanted nothing; but did not the foreigner himself want something? When he produced the superfluous article, was he laboring without a motive? He has produced, but the wrong thing instead of the right. He wanted, perhaps, food, and has produced watches, with which everybody was sufficiently supplied. The new comer brought with him into the country a demand for commodities, equal to all that he could produce by his industry, and it was his business to see that the supply he brought should be suitable to that demand. If he could not produce something capable of exciting a new want or desire in the community, for the satisfaction of which some one would grow more food and give it to him in exchange, he had the alternative of growing food for himself; either on fresh land, if there was any unoccupied, or as a tenant, or partner, or servant, of some former occupier, willing to be partially relieved from labor. He has produced a thing not wanted, instead of what was wanted; and he himself, perhaps, is not the kind of producer who is wanted; but there is no over-production; production is not excessive, but merely ill assorted. We saw before, that whoever brings additional commodities to the market, brings an additional power of

purchase; we now see that he brings also an additional desire to consume; since if he had not that desire, he would not have troubled himself to produce. Neither of the elements of demand, therefore, can be wanting, when there is an additional supply; though it is perfectly possible that the demand may be for one thing, and the supply may unfortunately consist of another.

C. The Destruction of Goods Does Not Increase the Demand for Goods.

*Have you ever had occasion to witness the fury of the honest burgess, Jaques Bonhomme, when his scapegrace son has broken a pane of glass? If you have, you can not fail to have observed that all the bystanders, were there thirty of them, lay their heads together to offer the unfortunate proprietor this never-failing consolation, that there is good in every misfortune, and that such accidents give a fillip to trade. Everybody must live. If no windows were broken, what would become of the glaziers? Now, this formula of condolence contains a theory which it is proper to lay hold of in this very simple case, because it is exactly the same theory which unfortunately governs the greater part of our economic institutions.

Assuming that it becomes necessary to expend six francs in repairing the damage, if you mean to say that the accident brings in six francs to the glazier, and to that extent encourages his trade, I grant it fairly and frankly, and admit that you reason justly.

The glazier arrives, does his work, pockets his money, rubs his hands, and blesses the scapegrace son. *That is what we see.*

But if, by way of deduction, you come to conclude, as is too often done, that it is a good thing to break windows—that it makes money circulate—and that encouragement to trade in general is the result, I am obliged to cry, halt! Your theory stops at what we see, and takes no account of *what we don't see.*

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* Bastiat—What is Seen and What is not Seen (1850). Quoted by Walker.

We don't see that since our burgess has been obliged to spend his six francs on one thing, he can no longer spend them on another.

We don't see that if he had not this pane to replace, he would have replaced, for example, his shoes, which are down at the heels; or have placed a new book on his shelf. In short, he would have employed his six francs in a way in which he can not now employ them. Let us see, then, how the account stands with trade in general. The pane being broken, the glazier's trade is benefited to the extent of six francs. *That is what we see.*

If the pane had not been broken, the shoemaker's or some other trade would have been encouraged to the extent of six francs. *That is what we don't see.* And if we take into account what we don't see, which is a negative fact, as well as what we do see, which is a positive fact, we shall discover that trade in general, or the aggregate of national industry, has no interest, one way or other, whether windows are broken or not.

Let us see, again, how the account stands with Jaques Bonhomme. On the last hypothesis, that of the pane being broken, he spends six francs, and gets neither more nor less than he had before, namely, the use and enjoyment of a pane of glass. On the other hypothesis, namely, that the accident had not happened, he would have expended six francs on shoes, and would have had the enjoyment both of the shoes and of the pane of glass.

Now as the good burgess, Jaques Bonhomme, constitutes a fraction of society at large, we are forced to conclude that society, taken in the aggregate, and after all accounts of labor and enjoyment have been squared, has lost the value of the pane which has been broken.

READING XIII.

TRADE IS NECESSARILY RECIPROCAL.

One of the most widespread and persistent of popular errors with respect to economic matters is the notion that buying things outside one's own community diminishes the total demand for home products. This error, along with several others of importance, has its origin in a failure to comprehend the principle which heads this reading. Trade is necessarily reciprocal. We can not sell to the rest of the world, unless we buy from them; for neither would they be able otherwise to pay for their purchases from us, nor, what is the same thing looked at from the opposite point of view, would we be able to get our pay for what we had sold. This principle is effectively brought out in the following from McCulloch.

*But admitting . . . that the total abolition of the protective system were to force a few thousand work-people to withdraw from their present occupations, it would necessarily, at the same time, open equivalent new ones for their reception. Such a measure could not diminish the aggregate demand for labor. Suppose that under a system of low duties, or of perfectly free trade, we imported the whole or a part of the silks and linens now manufactured at home: it is clear, inasmuch as neither the French nor Germans would send us their commodities gratis, that we should have to give them an equal amount of British commodities in exchange; so that such of our artificers as had been engaged in the silk and linen manufactures, and were thrown out of them, would, in future, obtain employment in the

* McCulloch—The Principles of Political Economy, fourth edition (1849). Part I, Chapter V.

production of the articles that must be exported as equivalents to the foreigner. A country in which commerce has been restricted may, by giving it additional freedom, partially change the species of labor in demand, and make it be employed more productively; but it cannot lessen its quantity. Should the imports of such country this year amount to five or ten millions more than they did last year, it will have to provide for their payment, either directly or indirectly, by an equal increase in the exports of its peculiar products. And, therefore, if exportation be desirable—and the most ardent admirers of the restrictive system admit it to be such—importation must be so also, for the two are indissolubly connected; and to separate them, even in imagination, implies a total ignorance of the most obvious principles. All commerce, whether carried on between individuals of the same or of different countries, is founded on a fair principle of reciprocity. Buying and selling are in it what action and reaction are in physics, equal and contrary. Those who will not buy from others, render it impossible for others to buy from them. Every sale infers an equal purchase, and every purchase an equal sale. Hence, to prohibit buying is exactly the same thing, in effect, as to prohibit selling. . . . In whatever degree, therefore, an unfettered trade may lead us to receive supplies from other countries, in the same degree it will render them our customers, will promote our manufactures, and extend our trade. To suppose that commerce may be too free, is to suppose that the channel into which labor is turned may be too productive, that the objects of demand may be too much multiplied, and their price too much reduced: it is like supposing that agriculture may be too much improved and the crops rendered too luxuriant!

The principles now established, demonstrate the groundless nature of the complaints so frequently made, of the prevalence of a taste for foreign commodities. We get nothing from abroad except as an equivalent for something else; and the individual who uses only Polish wheat, Saxon cloth, and French silks and wine, gives, by occasioning the exportation of an equal amount of British produce, precisely the same encouragement to industry here, that he

would give were he to consume nothing not directly produced amongst us. The Portuguese do not send us a single bottle of port, without our sending to them, or to those to whom they are indebted, its worth in cottons, hardware, or some sort of produce; so that whether we use the wine, or its equivalent, is, except as a matter of taste, of no importance whatever.

What has now been stated goes far to settle the disputed question in regard to the influence of absentee expenditure. If an English gentleman, living at home, and using none but foreign articles, gives the same encouragement to industry that he would do were he to use none but British articles, he must, it is obvious, do the same should he go abroad. Whatever he may get from the foreigner, when at Paris or Brussels, must be paid for, directly or indirectly, in British articles, quite in the same way as when he is resident in London. Nor is it easy to imagine any grounds for pronouncing his expenditure in the latter more beneficial to this country than in the former.*

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* We do not mean, by any thing now stated, nor did we ever mean, by anything we have stated on other occasions, to maintain that absenteeism may not be, in several respects, injurious. It would be easy, indeed, to show that England and Scotland have been largely benefited by the residence of the great landed proprietors on their estates. No one can doubt that they have been highly instrumental in introducing the manners and in diffusing a taste for the conveniences and enjoyments of a more refined society; and that the improved communications between different places, the expensive and commodious farm-buildings, and the plantations with which the country is sheltered and ornamented, are to be, in a great degree, ascribed to their residence. . . . The question really at issue refers merely to the spending of revenue, and has nothing to do with the improvement of estates; and, notwithstanding all the clamour that has been raised on the subject, we have yet to learn that absenteeism is, in this respect, in any degree injurious.

READING XIV.

THE REAL BALANCE OF TRADE.

A matter to which the general public is wont to attach a very high degree of importance is the so-called balance of trade, by which is meant the difference between the total of goods, not including money, imported by a nation and the total expended by the same nation. Now, it is quite certain that the significance of this matter is much exaggerated by the public; still it is doubtless of considerable importance in connection with various economic problems. Properly enough, therefore, it receives considerable attention from students of these problems. Now, one of the first things to be learned about this balance of trade is that what is commonly understood to be the balance, *i. e.*, the balance of *recorded* exports and imports, is very far from being the *real* balance. A nation may *seem* to be exporting goods in excess of what it imports by a thousand millions, when in reality its exports and imports are almost exactly equal. In general the explanation of this is to be found in the fact that *recorded* exports and imports are not the only ones. In addition to them there are sold to, or bought from, other countries a large number of commodities or services which could not, or anyhow do not, appear on any official record In the case of imports, these unrecorded goods are partly (1) commodities brought in without the knowledge of customs authorities, partly (2) goods or services bought and consumed by home citizens temporarily resident in foreign countries, and partly (3) services received from foreign countries which are consumed in the home country; *e. g.*, the carrying of goods, the use of foreign capital, the ser-

vices of foreign bankers and brokers. Just such unrecorded goods may, of course, be present on the export side. The real, true, balance of trade obviously includes these unrecorded sales and purchases as well as the recorded ones. And, while we can never have sufficient data to compute this true balance with precision, we can, and must, take into account these unrecorded goods when we try to interpret the apparent or reported balance.

The following passage from Gide will serve to explain and illustrate the matter under discussion, though he prefers to use the expression "the balance of debits and credits" for what I have called "the *real balance of trade*"

*The term balance of trade designates the relation between imports and exports. Statistics show that the imports and exports of a country are rarely equal. The balance of trade is either in favor of exports or of imports; that is to say, a nation exports more than it imports, or imports more than it exports. The latter case is the more frequent. The United States, however, since 1893 has always imported less than it exported; we have, in other words, had what is called a "favorable balance of trade." During the last five fiscal years of our foreign commerce the value of merchandise exported and imported was, in round figures, as follows:

YEAR	EXPORTS	IMPORTS
1898.....	$1,231,000,000	$616,000,000
1899.....	1,227,000,000	697,000,000
1900.....	1,394,000,000	850,000,000
1901.....	1,488,000,000	823,000,000
1902.....	1,382,000,000	903,000,000
Totals.....	$6,722,000,000	$3,889,000,000

* From Gide's Principles of Political Economy. Copyright 1891 and 1903, by D. C. Heath & Co. By permission. Second American Ed., Book III, Chapter IV.

These figures indicate that during a period of only five years the United States has sold to foreign countries $2,833,000,000 worth of goods more than it has bought from them; this is equivalent to an average annual excess of exports over imports amounting to more than $566,000,000. Must we therefore conclude that foreign nations are every year obliged to pay us, on an average, more than half a billion dollars in money? This is scarcely probable, for the amount of money circulating in this country has not increased perceptibly. A good test of the validity of the assumption that foreign nations pay us this enormous amount annually is furnished by the statistics of gold and silver imports and exports. (We have already learned that in international trade paper money is of no avail, and that international engagements must be met in gold and silver.) The official statistics for gold and silver exports and imports during the last five fiscal years show, in round numbers, the following totals:

YEAR	EXPORTS	IMPORTS
1898.....	$71,000,000	$151,000,000
1899.....	84,000,000	120,000,000
1900.....	105,000,000	80,000,000
1901.....	117,000,000	102,000,000
1902.....	98,000,000	80,000,000
Totals.....	$475,000,000	$533,000,000

The excess of imports over exports during this period was $58,000,000, or an annual average of little more than $11,000,000. Thus it would appear that we are annually selling an excess of $566,000,000 worth of merchandise to foreign nations, and receiving $11,000,000 in gold and silver in payment for this excess. Such a conclusion is manifestly absurd. Evidently, drawing conclusions with regard to the prosperity of a nation after a mere glance at its "balance of trade" is not quite so simple a matter as is sometimes supposed.

Let us now consider France as an example of the opposite state of affairs. Here are the figures for her special

commerce during the five years from 1897 to 1901, in round millions:

YEAR	EXPORTS	IMPORTS
1897.....	$720,000,000	$791,000,000
1898.....	702,000,000	895,000,000
1899.....	831,000,000	904,000,000
1900.....	822,000,000	940,000,000
1901.....	833,000,000	943,000,000
Totals.....	$3,908,000,000	$4,473,000,000

Thus in a period of only five years France purchased abroad $565,000,000 worth of goods more than she sold, which amounts to an annual excess of imports over exports of $113,000,000. Must we conclude from these figures that France is annually obliged to pay this amount of money to foreign countries? The most superficial observation demonstrates that the amount of money in circulation there has not diminished. It has even increased. The statistics regarding the exports and imports of gold and silver for the same period as that considered above are as follows:

YEAR	EXPORTS	IMPORTS
1897.....	$ 65,000,000	$ 94,000,000
1898.....	100,000,000	78,000,000
1899.....	76,000,000	101,000,000
1900.....	67,000,000	121,000,000
1901.....	57,000,000	105,000,000
Totals.....	$365,000,000	$499,000,000

The supply of gold and silver money in France, therefore, has increased during this period by $134,000,000, *i. e.*, nearly $27,000,000 annually.

If we consider the case of England, the statistics are still more surprising. The annual excess of imports over exports averages $1,200,000,000. In other words, one year of foreign commerce at this rate would suffice to drain the country twice of all its metallic money; for the United Kingdom has but $600,000,000 in coin of all kinds. Yet this money is by no means drained from the country by

foreign trade. On the contrary, here, as in France, the imports of precious metals surpass the exports.

What, then, is the key to the enigma? Simply this: In order to ascertain whether the foreign trade of a country is in equilibrium, we must consider not only the balance of its imports and its exports,—as the public is accustomed to doing,—but the balance of its credits and its debits. Now the balance of credits and debits (or the balance of accounts) is not the same as the balance of trade. To be sure, exportation is one way, and the chief way, of making foreign countries our debtors. Yet there are other ways of doing this. Similarly, though imports constitute our principal debt to foreign nations they are not the sole source of our indebtedness to them. What, then, are these international claims or debts, distinct and different from exports and imports, which have aptly been termed invisible exports and imports? They are numerous, but three of them stand out prominently in importance:

(1) The cost of transportation of exported goods, *i. e.*, freight and insurance. If the exporting country has charge of the transportation of its goods, it has a claim on other countries that certainly will not be counted among its exports, inasmuch as the claim arises only after commodities have left the home port and are on the way to their destination. On this account, England has large claims against other nations, estimated at more than $440,000,000 per annum; for England not only carries all her own exports, but also transports a large share of the goods of other countries; and she certainly does not perform this service gratuitously. The United States, on the other hand, pays foreign nations for transportation and insurance, more than $200,000,000 annually. France pays annually to foreign nations about $70,000,000 for the same service, since she transports in her own vessels only half her exports and one-third of her imports.

(2) The interest on capital invested abroad. Rich countries, and, as a rule, old countries, invest abroad a large part of their savings, and for this reason receive each year large amounts of money or of commodities from foreign nations. These receipts usually take the form of stock cou-

pons, shares, debentures, farm rents, and profits in industrial and commercial enterprises. The tribute that England in this manner receives each year from foreign countries and from her own colonies is estimated at $400,000,000. India and the Australian colonies, for instance, have negotiated in England almost the sum total of their loans. How numerous, moreover, are the enterprises throughout the world that are in the hands of English financiers or promoters! Englishmen are said to have acquired land in the United States having a total area equal to that of Ireland. France, too, has numerous claims on foreign nations, chiefly in Europe; they are estimated at more than $4,000,000,000, and represent an annual revenue of $230,000,000 Probably $3,000,000,000 of foreign capital is invested in the United States, and this amount is increased in prosperous years. Thus the United States owes about $120,000,000 annually for interest on foreign capital.

In this respect, Spain, Turkey, Egypt, India, and the South American republics appear as debtors. But it should be observed that whenever these countries issue a loan, and so long as this loan is not fully subscribed, they become for the time creditors of the countries which take up the loan and which therefore send them funds.

(3) The expenses incurred by foreigners living in the country. As the money spent by these foreign visitors or residents generally is not the product of their labor within the country but is drawn from their estates or from capital invested at home, all countries which are resorted to by wealthy foreigners are constantly receiving large sums of money from abroad. When brought into the country in the pockets of visitors or sent them through the mails, this money does not figure in the statistics of imports. From this point of view France, Italy, and Switzerland are creditors of England, the United States, and Russia for considerable amounts. The latest French census, for example, indicates that there are in France 66,000 foreigners, living mostly on independent incomes; the number of those that stay but a short time is certainly much larger than this. Now suppose that each of these foreign residents spends $2,000 a year (certainly a low estimate for people who are there

for amusement); this would mean an annual tribute of $132,000,000 paid by those who are staying for longer periods. This sum comes from the respective home countries of these foreigners and pays, so to speak, the bill for their boarding expenses in France.

It is estimated that Americans spend about $50,000,000 in foreign travel each year, and that tourists spend $40,000,000 annually in Switzerland.

These are the principal items to be considered in this connection. They are more than sufficient to restore the equilibrium of international trade and solve the enigma referred to above. If, for example, in the case of France, we find her debit account to consist of $900,000,000 for goods imported, $72,000,000 for the transportation of goods carried under foreign flags, and $100,000,000 (let us say) for French citizens travelling abroad, or for French property held by foreigners, the sum total of debits would be about $1,070,000,000. If, on the other hand, we credit her with exports to the value of $800,000,000, plus $220,000,000 as interest on French capital invested abroad, and $132,000,000 spent by foreigners living in France, the sum total of credits is about $1,150,000,000. Thus France has a good balance in her favor. A similar calculation would show a similar state of affairs in England and, in fact, for most of the older European creditor nations which appear to have an "unfavorable balance of trade."

We must therefore conclude that the foreign trade of a country is in equilibrium not when exports and imports are equal in value (which never happens), but when its credits and its debits are equal.

How the Balance of Accounts is Maintained.

We must abandon the old and absurd idea, often expressed by well-known newspapers, that a country which imports more than it exports is rapidly approaching ruin. The problem, however, is merely somewhat altered by substituting the more important "balance of accounts" for the "balance of trade." With this change the problem reads: Is there risk of ruin when a country is obliged,—all things considered,—to pay foreign nations more than it receives from them?

We must certainly reply affirmatively to this question. Yet we must recognize certain counteracting forces which operate very effectively and which tend to obviate this evil.

Persons who have payments to make abroad endeavor to settle them by some other means than the exportation of money, because sending money is inconvenient, and because the money sent is not generally legal tender in the country where the debts must be paid. Therefore debtors try to buy bills of exchange payable in these foreign countries in order to obviate the danger, inconvenience, and expense of transporting gold and silver. Bills of exchange, as we have seen, form the ordinary means of paying international debts. But if a country owes more abroad than foreign nations owe her, it is clear that foreign bills of exchange, *i. e.*, claims on foreign debtors, will be relatively scarce. These bills will therefore be in great demand, and by virtue of the law of demand and supply they will sell at a higher price than their normal value. In other words, they will be at a premium. Now it is plain that this premium, bringing profit to all those dealers who have claims on foreign nations and who therefore have bills of exchange to sell (and this class consists evidently of all exporters), will stimulate the exportation of goods to foreign countries; inversely, the necessity to pay this premium, and the consequently disadvantageous situation of all those who must make payments abroad (that is to say, all importers) will discourage imports. The result will be an increase of exports and a decrease of imports,—precisely the remedy best suited to the situation.

Nor is this all. Let us admit the inequality of debits and credits involves a continual drain of money from a country. The flight and consequent scarcity of money causes a fall in prices; and although a fall in prices has some disadvantages, yet in this particular case it has the advantage of stimulating purchases by foreigners, since trade always seeks the market in which one can buy cheapest. At the same time the amount of purchases made abroad by the debtor nation will of course decrease, because commodities can now be bought quite as cheaply at home. It is a well-known fact that goods are not taken

away from dear markets to cheap markets any more than water runs up hill. In short, the situation just described tends to encourage exportation and discourage importation—securing the same beneficent result as that discussed in the preceding paragraph.

If paper money has been issued to take the place of metallic money, the result is the same. Metallic money will then be at a premium; the greater the amount of paper money, the higher the premium. The producers of a country find it profitable to sell abroad, because then they are paid in metallic money, which brings a premium, and thus involves additional profit. Hence this condition of affairs encourages increased exportation. Importation, on the other hand, is slackened, because foreign producers do not like to sell in a country having a depreciated paper money; or if they do sell, they raise their prices, and this, again, restricts sales.

To sum up, then: There is a sort of automatism in the balance of accounts that tends to restore the equilibrium whenever it is disturbed—in much the same manner that regulators on steam engines tend always to maintain a uniform speed. The current of trade cannot forever continue in one direction any more than the tide of the sea, sooner or later it must change and after metallic money has been taken out of a country there are natural forces which tend to bring it back again.

Statistics, as well as simple observation, show that money plays only a small part—usually less than 10 per cent of the total amount—in international trade. . . . We must therefore admit that the balance of accounts regulates itself, and that credits and debits tend of their own accord to reach an equilibrium. This, in fact, is what the school of Bastiat would call an "economic harmony."

Experience, moreover, demonstrates that whenever the ratification of a commercial treaty or any other circumstance gives rise to a great increase of imports, this is invariably accompanied by a corresponding increase of exports. Whenever, on the other hand, a protective tariff causes a decrease in the volume of a nation's imports, it is a natural consequence that its exports will likewise diminish.

READING XV.

ADAM SMITH ON CERTAIN COMMON ERRORS WITH REGARD TO MONEY.

For several centuries European statesmen and thinkers entertained greatly exaggerated notions as to the amount of attention which governments ought to give to the maintenance of a large stock of money as a condition of industrial prosperity. Indeed, to judge from much of the writing of those days, not a few persons looked on money as the only true wealth, and considered the increasing of the stock of money to be the only method by which national wealth could be increased. The whole system of doctrines clustered about this central idea is known as Mercantilism. It is supposed to be dead, and so its discussion needless even for the elementary student. But in fact mercantilism in its essential features is still very much alive,—probably will never die. Men hold its ideas, not as derived from the thinkers of the seventeenth century, but as notions which naturally, almost instinctively, arise in every man's mind because of certain commonplace facts of experience. Money being able to buy for us everything else, and the process of using it to buy these other things being a very easy one while the getting of it in exchange for our own goods is often quite difficult, we not unnaturally come to look on it as the all important thing. In consequence, we build up doctrines with respect to money which are often very absurd and very pernicious. The stock of money present in any community is felt to be a thing of almost immeasurable significance, a thing which should be held sacred. The man who sends

out a single dollar of it is a public enemy; one who brings in a dollar is a universal benefactor. The advantage which some man does to a little village by deciding to buy its goods, is explained as due to the fact that "he puts money into circulation." If times are hard, men say it is because money is scarce, though the bank vaults are overflowing. An excess of exports is looked on as a favorable condition of trade on the ground that it is likely to bring in money. The prevalence of these and similar ideas make it very desirable that the student should read Adam Smith's very telling critique of Mercantilism.

*That wealth consists in money, or in gold and silver, is a popular notion which naturally arises from the double function of money, as the instrument of commerce, and as the measure of value. In consequence of its being the instrument of commerce, when we have money we can more readily obtain whatever else we have occasion for, than by means of any other commodity. The great affair, we always find, is to get money. When that is obtained, there is no difficulty in making any subsequent purchase. In consequence of its being the measure of value, we estimate that of all other commodities by the quantity of money which they will exchange for. We say of a rich man that he is worth a great deal, and of a poor man that he is worth very little money. . . . To grow rich is to get money; and wealth and money, in short, are in common language, considered as in every respect synonymous.

A rich country, in the same manner as a rich man, is supposed to be a country abounding in money; and to heap up gold and silver in any country is supposed to be the readiest way to enrich it. For some time after the discovery of America, the first inquiry of the Spaniards, when they arrived upon any unknown coast, used to be, if there was any gold or silver to be found in the neighborhood? By the information which they received, they judged whether it

* Adam Smith—Wealth of Nations. Book IV, Chapter I.

was worth while to make a settlement there, or if the country was worth the conquering. Plano Carpino, a monk, sent ambassador from the king of France to one of the sons of the famous Gengis Khan, says that the Tartars used frequently to ask him, if there was plenty of sheep and oxen in the kingdom of France. Their inquiry had the same object with that of the Spaniards. They wanted to know if the country was rich enough to be worth the conquering. Among the Tartars, as among all other nations of shepherds, who are generally ignorant of the use of money, cattle are the instruments of commerce and the measures of value. Wealth, therefore, according to them, consisted in cattle, as according to the Spaniards it consisted in gold and silver. Of the two, the Tartar notion, perhaps, was the nearest to the truth.

Mr. Locke remarks a distinction between money and other movable goods. All other movable goods, he says, are of so consumable a nature, that the wealth which consists in them cannot be much depended on, and a nation which abounds in them one year may, without any exportation, but merely by their own waste and extravagance, be in great want of them the next. Money, on the contrary, is a steady friend, which, though it may travel about from hand to hand, yet if it can be kept from going out of the country, is not very liable to be wasted and consumed. Gold and silver, therefore, are, according to him, the most solid and substantial part of the movable wealth of a nation, and to multiply those metals ought, he thinks, upon that account, to be the great object of its political economy.

Others admit, that if a nation could be separated from all the world, it would be of no consequence how much or how little money circulated in it. The consumable goods which were circulated by means of this money, would only be exchanged for a greater or a smaller number of pieces; but the real wealth or poverty of the country, they allow, would depend altogether upon the abundance or scarcity of those consumable goods. But it is otherwise, they think, with countries which have connections with foreign nations, and which are obliged to carry on foreign wars, and to maintain fleets and armies in distant countries. This, they say, can-

not be done, but by sending abroad money to pay them with; and a nation cannot send much money abroad, unless it has a good deal at home. Every such nation, therefore, must endeavor in time of peace to accumulate gold and silver, that, when occasion requires, it may have wherewithal to carry on foreign wars.

In consequence of these popular notions, all the different nations of Europe have studied, though to little purpose, every possible means of accumulating gold and silver in their respective countries. Spain and Portugal, the proprietors of the principal mines which supply Europe with those metals, have either prohibited their exportation under the severest penalties, or subjected it to a considerable duty. The like prohibition seems anciently to have made a part of the policy of most other European nations. It is even to be found, where we should least of all expect to find it, in some old Scotch acts of parliament, which forbid, under heavy penalties, the carrying gold or silver *forth of the kingdom*. The like policy anciently took place in the kingdoms of France and England.

When those countries became commercial, the merchants found this prohibition, upon many occasions, extremely inconvenient. They could frequently buy more advantageously with gold and silver than with any other commodity, the foreign goods which they wanted, either to import into their own, or to carry to some other foreign country. They remonstrated, therefore, against this prohibition as hurtful to trade.

They represented, first, that the exportation of gold and silver in order to purchase foreign goods, did not always diminish the quantity of those metals in the kingdom. That, on the contrary, it might frequently increase that quantity; because, if the consumption of foreign goods was not thereby increased in the country, those goods might be re-exported to foreign countries, and, being there sold for a large profit, might bring back much more treasure than was originally sent out to purchase them. Mr. Mun compares this operation of foreign trade to the seedtime and harvest of agriculture. "If we only behold," says he, "the actions of the husbandman in the seedtime, when he casteth

away much good corn into the ground, we shall account him rather a madman than a husbandman. But when we consider his labours in harvest, which is the end of his endeavours, we shall find the worth and plentiful increase of his actions."

They represented, secondly, that this prohibition could not hinder the exportation of gold and silver, which, on account of the smallness of their bulk in proportion to their value, could easily be smuggled abroad. That this exportation could only be prevented by a proper attention to, what they called, the balance of trade. That when the country exported to a greater value than it imported, a balance became due to it from foreign nations, which was necessarily paid to it in gold and silver, and thereby increased the quantity of those metals in the kingdom. But that when it imported to a greater value than it exported, a contrary balance became due to the foreign nations, which was necessarily paid to them in the same manner, and thereby diminished that quantity. . . .

Those arguments were partly solid and partly sophistical. They were solid so far as they asserted that the exportation of gold and silver in trade might frequently be advantageous to the country. They were solid too, in asserting that no prohibition could prevent their exportation, when private people found any advantage in exporting them. But they were sophistical in supposing, that either to preserve or to augment the quantity of those metals required more the attention of government, than to preserve or to augment the quantity of any other useful commodities, which the freedom of trade, without any such attention, never fails to supply in the proper quantity.

Such as they were, however, those arguments convinced the people to whom they were addressed. They were addressed by merchants to parliaments, and to the councils of princes, to nobles, and to country gentlemen; by those who were supposed to understand trade, to those who were conscious to themselves that they knew nothing about the matter. That foreign trade enriched the country, experience demonstrated to the nobles and country gentlemen, as well as to the merchants; but how, or in what manner, none

of them well knew. The merchants knew perfectly in what manner it enriched themselves. It was their business to know it. But to know in what manner it enriched the country, was no part of their business. This subject never came into their consideration, but when they had occasion to apply to their country for some change in the laws relating to foreign trade. It then became necessary to say something about the beneficial effects of foreign trade, and the manner in which those effects were obstructed by the laws as they then stood. To the judges who were to decide the business, it appeared a most satisfactory account of the matter, when they were told that foreign trade brought money into the country, but that the laws in question hindered it from bringing so much as it otherwise would do. Those arguments therefore produced the wished-for effect. The prohibition of exporting gold and silver was in France and England confined to the coin of those respective countries. The exportation of foreign coin and of bullion was made free. In Holland, and in some other places, this liberty was extended even to the coin of the country. The attention of government was turned away from guarding against the exportation of gold and silver, to watch over the balance of trade, as the only cause which could occasion any augmentation or diminution of those metals. From one fruitless care it was turned away to another care much more intricate, much more embarrassing, and just equally fruitless. The title of Mun's book, England's Treasure in Foreign Trade, became a fundamental maxim in the political economy, not of England only, but of all other commercial countries. The inland or home trade, the most important of all, the trade in which an equal capital affords the greatest revenue, and creates the greatest employment to the people of the country, was considered as subsidiary only to foreign trade. It neither brought money into the country, it was said, nor carried any out of it. The country therefore could never become either richer or poorer by means of it, except so far as its prosperity or decay might indirectly influence the state of foreign trade.

A country that has no mines of its own must undoubtedly draw its gold and silver from foreign countries, in the

same manner as one that has no vineyards of its own must draw its wines. It does not seem necessary, however, that the attention of government should be more turned towards the one than towards the other object. A country that has wherewithal to buy wine, will always get the wine which it has occasion for; and a country that has wherewithal to buy gold and silver, will never be in want of those metals. They are to be bought for a certain price like all other commodities, and as they are the price of all other commodities, so all other commodities are the price of those metals. We trust with perfect security that the freedom of trade, without any attention of government, will always supply us with the wine which we have occasion for; and we may trust with equal security that it will always supply us with all the gold and silver which we can afford to purchase or to employ, either in circulating our commodities, or in other uses.

The quantity of every commodity which human industry can either purchase or produce, naturally regulates itself in every country according to the effectual demand, or according to the demand of those who are willing to pay the whole rent,* labour, and profits which must be paid in order to prepare and bring it to market. But no commodities regulate themselves more easily or more exactly according to this effectual demand than gold and silver; because, on account of the small bulk and great value of those metals, no commodities can be more easily transported from one place to another, from the places where they are cheap, to those where they are dear, from the places where they exceed, to those where they fall short, of this effectual demand. . . .

When the quantity of gold and silver imported into any country exceeds the effectual demand, no vigilance of government can prevent their exportation. All the sanguinary laws of Spain and Portugal are not able to keep their gold and silver at home. The continual importations from Peru and Brazil exceed the effectual demand of those countries, and sink the price† of these metals there below that in the

* [The insertion here of "rent" implies a doctrine with respect to costs which is usually considered fallacious.]

† [Throughout this passage Smith uses "price" where most would prefer to say "value."]

neighboring countries. If, on the contrary, in any particular country their quantity fell short of the effectual demand, so as to raise their price above that of the neighboring countries, the government would have no occasion to take any pains to import them. If it were even to take pains to prevent their importation, it would not be able to effectuate it. . . . All the sanguinary laws of the customs are not able to prevent the importation of the teas of the Dutch and Gottenburg East India companies; because somewhat cheaper than those of the British company. A pound of tea, however, is about a hundred times the bulk of one of the highest prices, sixteen shillings, that is commonly paid for it in silver, and more than two thousand times the bulk of the same price in gold, and consequently just so many times more difficult to smuggle.

It is partly owing to the easy transportation of gold and silver from the places where they abound to those where they are wanted, that the price of those metals does not fluctuate continually like that of the greater part of other commodities, which are hindered by their bulk from shifting their situation, when the market happens to be either over or understocked with them. The price* of those metals, indeed, is not altogether exempted from variation, but the changes to which it is liable are generally slow, gradual, and uniform. In Europe, for example, it is supposed, without much foundation perhaps, that during the course of the present and preceding century, they have been constantly, but gradually, sinking in their value, on account of the continual importations from the Spanish West Indies. But to make any sudden change in the price of gold and silver, so as to raise or lower at once, sensibly and remarkably, the money price of all other commodities, requires such a revolution in commerce as that occasioned by the discovery of America.

If, notwithstanding all this, gold and silver should at

* The *money* price of gold,—and that is what price commonly means in our day,—can not vary so long as it is the monetary standard is changed by law. Hence the student should read "value" for price throughout this paragraph.]

any time fall short in a country which has wherewithal to purchase them, there are more expedients for supplying their place than that of almost any other commodity. If the materials of manufacture are wanted, industry must stop. If provisions are wanted, the people must starve. But if money is wanted, barter will supply its place, though with a good deal of inconveniency. Buying and selling upon credit, and the different dealers compensating their credits with one another, once a month or once a year, will supply it with less inconveniency. A well-regulated paper money will supply it, not only without any inconveniency, but, in some cases, with some advantages. Upon every account, therefore, the attention of government never was so unnecessarily employed, as when directed to watch over the preservation or increase of the quantity of money in any country.

No complaint, however, is more common than that of a scarcity of money. Money, like wine, must always be scarce with those who have neither wherewithal to buy it, nor credit to borrow it. Those who have either, will seldom be in want either of the money or of the wine which they have occasion for. This complaint, however, of the scarcity of money, is not always confined to improvident spendthrifts. It is sometimes general through a whole mercantile town, and the country in the neighborhood. Over-trading is the common cause of it. Sober men, whose projects have been disproportioned to their capitals, are as likely to have neither wherewithal to buy money, nor credit to borrow it, as prodigals whose expense has been disproportioned to their revenue. Before their projects can be brought to bear, their stock is gone, and their credit with it. They run about everywhere to borrow money, and everybody tells them that they have none to lend. Even such general complaints of the scarcity of money do not always prove that the usual number of gold and silver pieces are not circulating in the country, but that many people want those pieces who have nothing to give for them. When the profits of trade happen to be greater than ordinary, over-trading becomes a general error both among great and small dealers. They do not always send more money abroad than usual, but they buy upon credit, both at home and abroad, an unusual quantity

of goods, which they send to some distant market, in hopes that the returns will come in before the demand for payment. The demand comes before the returns, and they have nothing at hand with which they can either purchase money or give solid security for borrowing. . . .

It would be too ridiculous to go about seriously to prove that wealth does not consist in money, or in gold and silver, but in what money purchases, and is valuable only for purchasing. Money, no doubt, makes always a part of the national capital; but it has already been shown that it generally makes but a small part, and always the most unprofitable part of it.

It is not because wealth consists more essentially in money than in goods, that the merchant finds it generally more easy to buy goods with money, than to buy money with goods; but because money is the known and established instrument of commerce, for which everything is readily given in exchange, but which is not always with equal readiness to be got in exchange for everything. The greater part of goods, besides, are more perishable than money, and he may frequently sustain a much greater loss by keeping them. When his goods are upon hand, too, he is more liable to such demands for money as he may not be able to answer, than when he has got their price in his coffers. Over and above all this, his profit arises more directly from selling than from buying, and he is upon all these accounts generally much more anxious to exchange his goods for money, than his money for goods. But though a particular merchant, with abundance of goods in his warehouse, may sometimes be ruined by not being able to sell them in time, a nation or country is not liable to the same accident. The whole capital of a merchant frequently consists in perishable goods destined for purchasing money. But it is but a very small part of the annual produce of the land and labour of a country which can ever be destined for purchasing gold and silver from their neighbors. The far greater part is circulated and consumed among themselves; and even of the surplus which is sent abroad, the greater part is generally destined for the purchase of other foreign

goods. Though gold and silver . . . could not be had in exchange for . . . the goods destined to purchase them, the nation would not be ruined. It might, indeed, suffer some loss and inconveniency, and be forced upon some of those expedients which are necessary for supplying the place of money. The annual produce of its land and labour, however, would be the same, or very nearly the same, as usual, because the same, or very nearly the same, consumable capital would be employed in maintaining it. And though goods do not always draw money so readily as money draws goods, in the long run they draw it more necessarily than even it draws them. Goods can serve many other purposes besides purchasing money, but money can serve no other purpose besides purchasing goods. Money, therefore, necessarily runs after goods, but goods do not always or necessarily run after money. The man who buys, does not always mean to sell again, but frequently to use or to consume; whereas he who sells, always means to buy again. The one may frequently have done the whole, but the other can never have done more than the one-half of his business. It is not for its own sake that men desire money, but for the sake of what they can purchase with it.

Consumable commodities, it is said, are soon destroyed; whereas gold and silver are of a more durable nature, and, were it not for this continual exportation, might be accumulated for ages together, to the incredible augmentation of the real wealth of the country. Nothing, therefore, it is pretended, can be more disadvantageous to any country than the trade which consists in the exchange of such lasting for such perishable commodities. We do not, however, reckon that trade disadvantageous which consists in the exchange of the hardware of England for the wines of France; and yet hardware is a very durable commodity, and, were it not for this continual exportation, might, too, be accumulated for ages together, to the incredible augmentation of the pots and pans of the country. But it readily occurs that the number of such utensils is in every country necessarily limited by the use which there is for them; that it would be absurd to have more pots and pans than were necessary for cooking the victuals usually consumed there; and that if

the quantity of victuals were to increase, the number of pots and pans would readily increase along with it, a part of the increased quantity of victuals being employed in purchasing them, or in maintaining an additional number of workmen whose business it was to make them. It should as readily occur that the quantity of gold and silver is in every country limited by the use which there is for those metals; that their use consists in circulating commodities as coin, and in affording a species of household furniture as plate; that the quantity of coin in every country is regulated by the value of the commodities which are to be circulated by it: increase that value, and immediately a part of it will be sent abroad to purchase, wherever it is to be had, the additional quantity of coin requisite for circulating them: that the quantity of plate is regulated by the number and wealth of those private families who choose to indulge themselves in that sort of magnificence: increase the number and wealth of such families, and a part of this increased wealth will most probably be employed in purchasing, wherever it is to be found, an additional quantity of plate: that to attempt to increase the wealth of any country, either by introducing or by detaining in it an unnecessary quantity of gold and silver, is as absurd as it would be to attempt to increase the good cheer of private families, by obliging them to keep an unnecessary number of kitchen utensils. As the expense of purchasing those unnecessary utensils would diminish instead of increasing either the quantity or goodness of the family provisions; so the expense of purchasing an unnecessary quantity of gold and silver must, in every country, as necessarily diminish the wealth which feeds, cloaths, and lodges, which maintains and employs the people. Gold and silver, whether in the shape of coin or of plate, are utensils, it must be remembered, as much as the furniture of the kitchen. Increase the use for them, increase the consumable commodities which are to be circulated, managed, and prepared by means of them, and you will infallibly increase the quantity; but if you attempt, by extraordinary means, to increase the quantity, you will as infallibly diminish the use and even the quantity too, which in those metals can never be greater than what the use requires.

Were they ever to be accumulated beyond this quantity, their transportation is so easy, and the loss which attends their lying idle and unemployed so great, that no law could prevent their being immediately sent out of the country.

It is not always necessary to accumulate gold and silver, in order to enable a country to carry on foreign wars, and to maintain fleets and armies in distant countries. Fleets and armies are maintained, not with gold and silver, but with consumable goods. The nation which, from the annual produce of its domestic industry, from the annual revenue arising out of its lands, labour, and consumable stock, has wherewithal to purchase those consumable goods in distant countries, can maintain foreign wars there.

A nation may purchase the pay and provisions of an army in a distant country three different ways; by sending abroad either, first, some part of its accumulated gold and silver; or secondly, some part of the annual produce of its manufactures; or last of all, some part of its annual rude produce.

The gold and silver which can properly be considered as accumulated or stored up in any country, may be distinguished into three parts; first, the circulating money; secondly, the plate of private families; and last of all, the money which may have been collected by many years' parsimony, and laid up in the treasury of the prince.

It can seldom happen that much can be spared from the circulating money of the country; because in that there can seldom be much redundancy. The value of goods annually bought and sold in any country requires a certain quantity of money to circulate and distribute them to their proper consumers, and can give employment to no more. The channel of circulation necessarily draws to itself a sum sufficient to fill it, and never admits any more. Something, however, is generally withdrawn from this channel in the case of foreign war. By the great number of people who are maintained abroad, fewer are maintained at home. Fewer goods are circulated there, and less money becomes necessary to circulate them. An extraordinary quantity of paper money, of some sort or other too, such as exchequer notes,

navy bills, and bank bills of England, is generally issued upon such occasions, and by supplying the place of circulating gold and silver, gives an opportunity of sending a greater quantity of it abroad. All this, however, could afford but a poor resource for maintaining a foreign war of great expense and several years' duration.

The melting down the plate of private families, has upon every occasion been found a still more insignificant one. The French, in the beginning of the last war, did not derive so much advantage from this expedient as to compensate the loss of the fashion.

The accumulated treasures of the prince have, in former times, afforded a much greater and more lasting resource. In the present times, if you except the king of Prussia, to accumulate treasure seems to be no part of the policy of European princes.

The funds which maintained the foreign wars of the present century, the most expensive perhaps which history records, seem to have had little dependency upon the exportation either of the circulating money or of the plate of private families, or of the treasure of the prince. The last French war cost Great Britain upwards of ninety millions, including not only the seventy-five millions of new debt that was contracted, but the additional two shillings in the pound land tax, and what was annually borrowed of the sinking fund. More than two-thirds of this expense was laid out in distant countries; in Germany, Portugal, America, in the ports of the Mediterranean, in the East and West Indies. The kings of England had no accumulated treasure. We never heard of any extraordinary quantity of plate being melted down. The circulating gold and silver of the country had not been supposed to exceed eighteen millions. Since the late recoinage of the gold, however, it is believed to have been a good deal under-rated. Let us suppose, therefore, according to the most exaggerated computation which I remember to have either seen or heard of, that, gold and silver together, it amounted to thirty millions. Had the war been carried on by means of our money, the whole of it must, even according to this computation, have been sent out and returned again at least twice, in a period

of between six and seven years. Should this be supposed, it would afford the most decisive argument to demonstrate how unnecessary it is for government to watch over the preservation of money, since upon this supposition the whole money of the country must have gone from it and returned to it again, two different times in so short a period, without anybody's knowing anything of the matter. The channel of circulation, however, never appeared more empty than usual during any part of this period. Few people wanted money who had wherewithal to pay for it. The profits of foreign trade, indeed, were greater than usual during the whole war; but especially towards the end of it. This occasioned, what it always occasions, a general over-trading in all the parts of Great Britain; and this again occasioned the usual complaint of the scarcity of money, which always follows over-trading. Many people wanted it, who had neither wherewithal to buy it, nor credit to borrow it; and because the debtors found it difficult to borrow, the creditors found it difficult to get payment. Gold and silver, however, were generally to be had for their value, by those who had that value to give for them.

The enormous expense of the late war, therefore, must have been chiefly defrayed, not by the exportation of gold and silver, but by that of British commodities of some kind or other. When the government, or those who acted under them, contracted with a merchant for a remittance to some foreign country, he would naturally endeavour to pay his foreign correspondent, upon whom he had granted a bill, by sending abroad rather commodities than gold and silver. If the commodities of Great Britain were not in demand in that country, he would endeavour to send them to some other country, in which he could purchase a bill upon that country. The transportation of commodities, when properly suited to the market, is always attended with a considerable profit: whereas that of gold and silver is scarce ever attended with any. When those metals are sent abroad in order to purchase foreign commodities, the merchant's profit arises, not from the purchase, but from the sale of the returns. But when they are sent abroad merely to pay a debt, he gets no returns, and consequently no profit. He naturally, there-

fore, exerts his invention to find out a way of paying his foreign debts rather by the exportation of commodities than by that of gold and silver. The great quantity of British goods exported during the course of the late war, without bringing back any returns, is accordingly remarked by the author of "The Present State of the Nation."

[In the preceding paragraph Smith's account of the fact is correct, but his explanation, for our day at least, is quite inadequate. Neither government nor importers who have bills to meet abroad set about exporting goods to meet those bills. The real working of matters is as follows: The great need of government or importers for foreign exchange to meet their bills abroad raises the price or rate of exchange. This increases the profits of exporters, since their exporting makes them sellers of foreign exchange. But the increased profits of exportation enable exporters to lower prices slightly with the result that they are able to sell more than otherwise. Thus, the large volume of bills to be met abroad, which are created by government expenditure abroad or by excessive importing, automatically swells the exports made by a quite different class of persons. See Reading XVI.]

Besides the three sorts of gold and silver above mentioned, there is in all great commercial countries a good deal of bullion alternately imported and exported for the purposes of foreign trade. This bullion, as it circulates among different commercial countries in the same manner as the national coin circulates in every particular country, may be considered as the money of the great mercantile republic. The national coin receives its movement and direction from the commodities circulated within the precincts of each particular country: the money of the mercantile republic, from those circulated between different countries. Both are employed in facilitating exchanges, the one between different individuals of the same, the other between those of different nations. Part of this money of the great mercantile republic may have been, and probably was, employed in carrying on the late war. In time of a general war, it is natural to suppose that a movement and direction should be impressed upon it, different from what it usually follows in profound

peace; that it should circulate more about the seat of war, and be more employed in purchasing there, and in the neighbouring countries, the pay and provisions of the different armies. But whatever part of this money of the mercantile republic Great Britain may have annually employed in this manner, it must have been annually purchased, either with British commodities, or with something else that had been purchased with them; which still brings us back to commodities, to the annual produce of the land and labour of the country, as the ultimate resources which enabled us to carry on the war. . . .

The commodities most proper for being transported to distant countries, in order to purchase there, either the pay and provisions of an army, or some part of the money of the mercantile republic to be employed in purchasing them, seem to be the finer and more improved manufactures; such as contain a great value in a small bulk, and can, therefore, be exported to a great distance at little expense. A country whose industry produces a great annual surplus of such manufactures, which are usually exported to foreign countries, may carry on for many years a very expensive foreign war, without either exporting any considerable quantity of gold and silver, or even having any such quantity to export. A considerable part of the annual surplus of its manufactures must, indeed, in this case be exported, without bringing back any returns to the country, though it does to the merchant; the government purchasing of the merchant his bills upon foreign countries, in order to purchase there the pay and provisions of an army. . . .

No foreign war of great expense or duration could conveniently be carried on by the exportation of the rude produce of the soil. The expense of sending such a quantity of it to a foreign country as might purchase the pay and provisions of an army, would be too great. Few countries, too, produce much more rude produce than what is sufficient for the subsistence of their own inhabitants. To send abroad any great quantity of it, therefore, would be to send abroad a part of the necessary subsistence of the people. It is otherwise with the exportation of manufactures. The maintenance of the people employed in them is kept at home,

and only the surplus part of their work is exported. Mr. Hume frequently takes notice of the inability of the ancient kings of England to carry on, without interruption, any foreign war of any long duration. The English, in those days, had nothing wherewithal to purchase the pay and provisions of their armies in foreign countries, but either the rude produce of the soil, of which no considerable part could be spared from the home consumption, or a few manufactures of the coarsest kind, of which, as well as of the rude produce, the transportation was too expensive. . . .

The importation of gold and silver is not the principal, much less the sole, benefit which a nation derives from its foreign trade. Between whatever places foreign trade is carried on, they all of them derive two distinct benefits from it. It carries out that surplus part of the produce of their land and labour for which there is no demand among them, and brings back in return for it something else for which there is a demand.* . . . By means of it, the narrowness of the home market does not hinder the division of labour in any particular branch of art or manufacture from being carried to the highest perfection. By opening a more extensive market for whatever part of the produce of their labour may exceed the home consumption, it encourages them to improve its productive powers, and to augment its annual produce to the utmost, and thereby to increase the real revenue and wealth of the society. . . .

I thought it necessary, though at the hazard of being tedious, to examine at full length this popular notion that wealth consists in money, or in gold and silver. Money in common language, as I have already observed, frequently signifies wealth; and this ambiguity of expression has rendered this popular notion so familiar to us, that even they who are convinced of its absurdity are very apt to forget their own principles, and in the course of their reasonings to take it for granted as a certain and undeniable truth.

* [This sentence gives a very inadequate account of the gain from trade. The two following are much better.]

Some of the best English writers upon commerce set out with observing that the wealth of a country consists, not in its gold and silver only, but in its lands, houses, and consumable goods of all different kinds. In the course of their reasonings, however, the lands, houses, and consumable goods seem to slip out of their memory, and the strain of their argument frequently supposes that all wealth consists in gold and silver, and that to multiply those metals is the great object of national industry and commerce.

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READING XVI.

THE MAINTENANCE OF THE MONETARY STOCK OF A COUNTRY AUTOMATICALLY SECURED.

A. *Principle 1. *The dealings of a country with other countries in respect to goods and capital do not commonly lead to net movements of money to or from the first country, until the claims for and against that country growing out of said dealings have failed, for a measurable period, to balance each other.*

A very notable popular fallacy—one of the most widespread of those which have to do with economic matters—concerns the effect on a country's monetary stock of its dealings with other countries. It is constantly assumed that buying any goods or services from another country naturally means losing some of our stock of money to that country. If we give up producing some particular commodity for the making of which we show comparatively little fitness, and go to buying that commodity from our neighbors, people at once bewail the fact as certain to draw away some of our money. They even go so far as to fancy that, if we allow perfect freedom of trade, *all* our money will be drained away. One of the chief reasons for setting forth the principle now before us is that it shows such anxieties to be, in part at least, needless. These anxieties will be still more thoroughly disposed of under Principle 4.

The dealings of one country with another, or, more exactly, of the people of one country with those of another, do not in themselves lead to net money movements. They do so only under the condition named in the principle. In the first place, if international dealings were commonly effected *with money directly,* there would be few or no net movements, assuming that we have in mind intervals of at

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*Taylor—Some Chapters on Money. Copyrighted 1906, by F. M. Taylor. From Chapter IV, pp. 119-123 and 128-134.

least a few months in length. The reason is plain. No sensible person wants money for money's sake. Our neighbor is anxious to get our money by selling us his products, not in order that he may keep that money, but in order that he may use it to buy our products. This is plain within the limits of our own town; and in no essential respects does the trade within the town differ from the trade between it and other towns, or from the trade between the country as a whole and other countries. The merchant in Detroit wants the money which he gets from Ann Arbor people for no other purposes than the money which he gets from Detroit people; that is, to use in buying flour, celery, raspberries, and other things, many of which are produced in various places outside of Detroit, Ann Arbor among them. That is, we can be sure that, if trade between Ann Arbor and Detroit were carried on with money, that money which we sent to Detroit to buy goods, or an equivalent amount, would come back to buy Ann Arbor goods. In short, under normal conditions when trade is carried on with money, that money is like the shuttle in the loom ever flying forth and back, out and in, never tending to stay either in our town or the other town. Doubtless, even in normal times there will be temporary accumulations at either end. But we can be well assured that these will be only temporary, quickly correcting themselves; for in interlocal trade, as in home trade, money is wanted as pay for our goods only that it may be used in buying other peoples' goods.

But, in the second place, under the régime actually prevailing in interlocal trade, it is a matter of course that movements of money do not take place save under the condition named in the principle. Indeed, it has already been fairly established in our preliminary analysis. Under modern conditions, the reciprocal claims and obligations between the dealers of different countries which grow out of their trade dealings are transformed into claims and obligations between the bankers or exchange dealers of those countries; and, between these bankers, money itself actually goes only when their reciprocal claims fail to balance. We only need to add that such failure to balance must be of appreciable duration, a few weeks anyhow; since the first resort of an

exchange dealer with an adverse balance will commonly be to borrow from his correspondent,—money being sent only when it becomes evident that the adverse balance is not going to be turned into a favorable one within a very short time.

We have seen that the principle before us is true as applied to trade relations. We must now show that it is also true as applied to *investment* transactions—the lending of capital by the people of one place to the people of another place. In the first place, transfers of capital between communities, like trade payments between communities, *primarily take the form of debts between the bankers of the different communities.* A person in England who lends capital to an American railroad, by purchasing its bonds, does not, in consummating the operation, send over money to that railroad. The bonds are paid for, just as cotton on wheat would be paid for; *i. e.,* either (1) by the New York broker's drawing a bill on London for their value or (2) by the London broker's sending a bill (draft) drawn by some London exchange dealer on his New York correspondent. That is, payment for bonds—the lending of capital by English people to American railroads—*in the first instance,* takes the form, not of money sent, but of a debt created *against* some London house and *in favor* of some New York house.

We have learned, in the preceding paragraph, that, in its first stage anyhow, a movement of capital from one country to another means only a movement of credit. But, while such a shifting of capital does not mean a movement of money at the outset, would it not necessarily mean this *in the end*? For transactions in capital, unlike trade transactions, are almost certainly *one-sided.* Europe lends to America; but, generally speaking, America does not lend to Europe. The Eastern states lend to the Western, but the Western do not lend to the Eastern. In consequence, European exchange houses would never have any claims on American houses to balance those claims held by Americans against them which had grown out of the buying of American bonds—the lending of capital to American corporations. It would seem, therefore, that money would have to go.

The above reasoning is plausible, but it overlooks one very important element. It is true that the debts of European exchange houses to American houses growing out of the shifting of capital to America, can not be matched by debts running in the opposite direction *which have the same origin*. But another alternative is possible. America by hypothesis has an abundance of claims on Europe due to the fact that Europe has purchased American bonds—lent America capital; and, of course, America will insist on enforcing these claims, using them to get something which she wants. Further, she *may* use them to get money. But *will* she? Is money the thing she wants? Probably not. The *real* wants of borrowing railroads are, not money, but rails, cars, locomotives, etc. If they do not wish to buy these things abroad, they at least wish to have somebody use, in producing them here, labor and capital which must be released from the production of something else, by buying that something else abroad. Accordingly, the possession of an excess of claims on Europe is likely to increase America's purchases in Europe or in some place where claims on Europe are wanted. That is, the debt of European exchange houses to American exchange houses arising out of the fact that Europe is lending us capital, is likely to be matched with a debt of American houses to European houses arising out of the fact that Americans *have bought from Europe more goods than usual*. In such case, of course, these debts will be cancelled and no money will go either way. We are justified, then, in saying that investment transactions between countries, like trade transactions between countries, do not of necessity involve corresponding movements of money.

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In introducing Principle 1 of this chapter, I called attention to some popular fallacies with respect to the effect on a country's monetary stock of its dealings with other countries. In that connection, the point particularly combated was that every purchase abroad means the loss of some money. I wish, now, to go into this matter a little more deeply, and show that, generally speaking, all anxieties of this sort are entirely needless, that, save in special cases, to

be explained later, money drains can safely be left to correction by natural causes. The principle is as follows.

Principle 4. *Every net movement of money tends to be stopped, or even reversed, by the automatic reversal of that condition which is necessary to bring it about, or by the action of conditions which its own continuance establishes.*

First, the movement may be stopped by the automatic reversal of that condition which is necessary to bring it about. To establish this contention, it will be necessary to give a little fuller explanation of "exchange" than we have yet attempted. Let me once more remind the student, of the now familiar fact that settlement between the merchants of different countries is made, not directly, but through the assistance of exchange dealers. That is, the claims of each community on other communities growing out of their mutual transactions, get into the hands of their exchange dealers, who settle with the exchange dealers of the other communities. Now, this inevitably means that there is developed a regular traffic in such claims, *i. e.,* they are bought and sold like flour or iron. Every day the prices of such claims per unit of value are quoted in every important newspaper. Like the prices of other things, the price of "exchange,"—which is the name given to a claim or right to receive money in another country—rises and falls, according as the demand rises or falls, or as the supply falls or rises. Thus exchange on London ranges from about $4.835 per English sovereign to about $4.895, its natural par being $4.866+. If we are selling Europe much more than we are buying from her, so that claims on Europe are very abundant in New York, London exchange will drop to, say, $4.84 or $4.835. If, on the other hand, we are buying much more than we are selling, so that the demand for claims on Europe is very much greater than the supply, the price will go up to, say, $4.89 or $4.895.

But not only does the price of "exchange" rise and fall, these risings and fallings have a vital relation to the movements of gold. Looking at the most proximate determination of the matter, the going or coming of gold is entirely a matter of the price, or rate of exchange. If the rate is as high as $4.895, this means that there is on the market

practically no exchange having its origin in sale by us to the rest of the world; so that, if any is wanted, it must be created by sending gold. This rate further means that the exchange dealer can *afford* to send gold in order to create exchange which he can sell at the prevailing price; for, at that price, he will get his money back with a fair profit. Below that point, however, e. g., at $4.885, he could not afford to send gold for this purpose; since the cost added to the natural price of the bullion, $4.866, would exceed the price obtained for the exchange sold against his shipment. Accordingly, if anything happens, when exchange is at $4.895, to *make the supply abundant and bring down the price,* the exporting of gold for exchange purposes will at once become unprofitable and, hence, will at once cease.

But let us take another step. Not only does the exporting of gold depend on the rate of exchange, this is also true of the *exporting of goods.* The rate which makes it profitable to export gold also makes it more than usually easy to export goods, to induce foreigners to buy goods. Thus, suppose you are a wheat exporter and hope to make a 10,000 bushels sale to a certain Liverpool miller. If you do so, you will have ready for sale to your banker a draft on your customer for, say, £1650. Now, if with exchange at par the proceeds of this draft, $8,028.90, would give a fair profit on the deal, it is plain that with exchange at $4.895 they would give you an additional profit of $47.85. Plainly, then, you could afford to shade the price a little in order to make a sale more likely, *i. e.,* you could offer a price of 80 cents per bushel rather than one of 80¼ cents. And I hardly need say that, in large transactions of this sort, a difference of ¼ of a cent, or even ⅛ of a cent, often determines for, or against, a sale. It follows, therefore, that a high rate of exchange acts as a stimulus to increase exports.

But what, now, will be the consequence of the increase in exports due to the high price of exchange? Manifestly, those exports will put some foreigners in debt to us, will, therefore, increase the supply of claims on other countries, *i. e.,* of exchange. But, in increasing the supply of exchange, they will tend to lower the rate of exchange till it is less than $4.895. But this is the rate necessary if gold is still

to be exported. Hence the increase in exports due to the high rate of exchange will tend to stop the export of gold.

The chain of reasoning is now complete. The gold can not go until exchange reaches a very high rate. But a high rate of exchange stimulates exports; the increase in exports presses down the rate of exchange; and the lowered rate of exchange stops the outflow of gold. That is, as affirmed by the principle before us, the outflow of money tends to be stopped by the automatic reversal of that condition which alone makes it possible.

The above argument was directed to establishing one part of the principle before us. Let us now show that the other part is true. A persistent net movement of money tends to be stopped or even reversed "by the action of *conditions which its own continuance establishes.*" In other words, a money drain is self-corrective.

The first way in which a money drain puts a check on itself is to cause an inflow of floating capital,—*i. e.*, a kind of capital controlled by the quasi-international banking or exchange houses of such centers as London, Paris, and New York which they constantly shift from country to country, as greater or less profit is anticipated. The process by which a money drain tends to cause an inflow of this capital and so to stop itself is the following. First a money drain from any country,—which will of course be a drain from its chief commercial and banking center,—tends to make the stock of money in that center relatively small. This will affect especially the surplus reserve of the banks, since it is from this reserve that the money for export will be taken. But, secondly, this depletion of the surplus reserve will tend to raise temporarily the rate of discount* on short-time loans; since the rate on this sort of loan is almost entirely dependent on the size of the surplus reserve. Thirdly, the high rate of discount, thus established, will make the country a desirable market for lenders, and so will tend to draw in the floating capital of neighboring countries. But, finally, as such a movement must in the nature of the case be a rapid one, it will almost necessarily stop the gold drain, if it does not set up a counter movement.

* That is, interest collected in advance.

This is the first way, then, in which the outflow of money tends to check itself. It makes money scarce, which makes discount high, which causes the inflow of capital (or stops its outflow), which in the end stops or checks the outflow of money. In ordinary cases, this process is adequate to stop an excessive drain. But, if it does not prove to be so, a new and slightly different series of reactions follow and usually effect the desired result.

Under modern conditions, there are many securities, stocks and bonds, having an international character, *i. e.*, of such a standing that investors in different countries make a practice of buying them whenever the conditions are favorable. Now, the prices of such securities are soon affected by the causes which, as we saw above, led to the inflow of floating capital and, so, to the inflow of money. That is, when the bank reserves of New York become scanty and the rate of discount rises, if this be long enough continued, it quite probably leads to a fall in the prices of securities. For a large part of the buying and owning of securities at any moment is based on borrowed capital; and, therefore, if money is hard to get, the inclination of people to buy these securities, or even to hold them, is diminished. In consequence, the demand falls off, perhaps the supply increases, and inevitably their prices will fall. But, if the prices of securities fall, foreigners will be encouraged to buy them. In turn, this buying by foreigners will give New York a supply of exchange on Europe. As a result, the rate of exchange will fall below the gold point, thus making its export no longer profitable. Thereupon the drain will cease; and, if the buying of New York securities goes far enough, it will be replaced by an opposite movement.

Thus we have a complete chain of causes set in motion by the outflow of money itself which inevitably effects a stoppage of that outflow; *outflow of money* causes (1) *low bank reserve* which causes (2) *high rate of discount* which causes (3) *prices of securities to fall* which causes (4) *foreign buying* which causes (5) *abundant exchange* which causes (6) *a fall in the rate* which causes (7) *a stoppage of the outflow.*

There is yet a third chain of causation which comes into

operation, probably a little later, than the others. The same high rate of discount, which causes a fall in securities, if long enough continued, leads to a fall in the prices of the great export staples, such as cotton and wheat, which are speculated in like securities, and this fall in price leads to increased buying by foreigners, which makes foreign exchange abundant, which lowers the rate, which checks the outflow of money.

Finally, it is perfectly certain that, if the outflow could, and should, go on long enough to produce a scarcity of money in the country as a whole,—a general scarcity,—there would result *a general fall in prices* which would stimulate foreign buying all along the line, until the direction of the money movement was completely reversed.

Corollary. *There is never any danger that an export of money will go on till a country is denuded of money.*

We have just seen how money movements tend to be stopped or even reversed automatically. There can be no doubt that this tendency would triumph over opposing tendencies, long before a country was denuded of money, in fact, long before its stock had been materially depleted. Thus, the banks of New York rarely have a surplus reserve of more than 25 or 30 millions, commonly less than half this. A very moderate export movement will soon reduce the surplus to zero, or even change it to a deficiency. With such a deficiency, money capital commands a famine price, and an outflow of money is simply impossible.

[The points brought out in the above discussion are presented more or less fully in the following passages from Gide.]

B. Imports of Goods Naturally Stimulate Exports and Vice Versa.

*Let us suppose that (because of excessive imports) the price of the foreign bill of exchange rises above par, *i. e.*, that the merchant who has drawn upon his foreign

* From Gide's Principles of Political Economy. Copyright 1891 and 1903, by D. C. Heath & Co. By permission. Book II, Part II, Chapter VII, pp. 296-297.

buyer a bill for £100 can sell it for £111. It is clear, then, that those £11 are so much added to his profits on the sale. Instead of gaining 10 per cent, as he perhaps expected, he gains 11 per cent. These additional profits for all those who have sold abroad will induce a large number of merchants to follow their example; in other words, "the rise in the rate of exchange acts as a premium on exportation."

For instance, after the war of 1870 the exports of France increased enormously for several years. Why? Because, the huge payments that the French had to make to Germany having caused foreign paper to rise greatly above par, the profits that exporters obtained from the paper they drew on their foreign debtors were such that they could content themselves with an extremely small profit on the price of their goods, and could, if necessary, sell them at a loss. Thus the French had come to sell to the foreigner, less in order to gain on the price of the goods than to gain on the price of the bill.

Now, in direct ratio to the increase of exports will be the multiplication of the bills of exchange to which they give rise, and the value of these bills, according to the general law of supply and demand, will fall progressively, until it has descended below par.

Inversely, if the paper falls below par, it is easy to prove by the same reasoning that this depreciation will entail a loss on the merchants who have sold goods abroad, and will consequently tend to reduce exports, and then by reaction to reduce the supply of foreign paper, until its value has risen again to par.

In the whole matter there is nothing more than the ordinary mechanism of supply and demand, which, whenever the value of a commodity is disturbed from its equilibrium, tends to bring it back to that position, either by an increase or by a restriction of production.

Nevertheless, this general law produces in this instance a very curious effect, the consequences of which are very important from the point of view of international trade. Whenever the balance of trade is unfavorable to a country, *i. e.*, when its imports exceed the exports, the resulting rise in the rate of exchange tends to reverse the position and to

make the balance of trade favorable by increasing exports and reducing imports. The rate of exchange, then, constantly acts on trade like those regulators of steam-engines, which always tend to restore the velocity of the engine to a state of equilibrium, and a variation of a few pence is thus enough to restore to equilibrium balances which amount in value to many thousand millions sterling.

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C. How a Rise in the Rate of Discount Checks an Outflow of Money.

*Take a nation that is likely to be obliged to ship large amounts of specie abroad. A rise in the rate of discount, effected at the right time, reverses the economic situation by making the country a creditor of foreign nations for considerable sums, and thus gives rise to an influx of money from abroad, or at least prevents the outflow of a nation's own supply of money. Let us consider what really takes place in such a case as this.

The first result of a rise in the rate of discount is the *depreciation of all commercial paper.* A bill of exchange for $1,000, which sold for $970 when the rate was 3 per cent, can be negotiated only for $930 when the rate has risen to 7 per cent; this is equivalent to a fall in value of more than 4 per cent. Henceforward the bankers of all nations, especially so-called arbitrage brokers, will purchase bills of exchange in this country, because they can be bought here at a low price; foreign nations will thus become our debtors to the extent of these purchases.

The second result is the depreciation of all stock-exchange securities. Every financier knows that the stock exchange is greatly interested in the rate of discount, and that a rise in the rate of discount almost always entails a fall in the value of stocks. Stock-exchange securities (especially those that are designated as international, because they are quoted on the principal stock-exchanges of the world), are frequently employed by merchants or at least

* From Gide's Principles of Political Economy. Copyright 1891 and 1903, by D. C. Heath & Co. By permission. American edition, pp. 391-393.

by bankers in place of commercial paper, to pay their debts abroad. Business men who cannot negotiate their commercial paper, or can do so only at a heavy loss, prefer to get money by selling whatever shares or stock securities they may possess. Hence these stocks tend to fall in value, just as commercial paper falls. But as a fall in the value of commercial paper results in an increased demand for it on the part of foreign bankers, similarly a decline in the value of stock-exchange securities gives rise to increased purchases of them by foreign capitalists; and thus the United States will become the creditor of foreign nations to the extent of these purchases.

Finally, if the rise in discount is great, and sufficiently lasting, it will cause a third result, viz., a fall in the price of commodities. We have just explained that business men who need money begin to obtain it by negotiating their commercial paper. When that resource fails or becomes too costly, they make use of whatever stock securities they possess; and finally, if these various measures do not suffice, they must, in order to get money, sell the goods they have on hand. The natural consequence of this last measure is a general fall in prices. But this fall produces the same effects as those already considered, only on a larger scale: it stimulates purchases from abroad, increases the exportation of goods from this country, and thus makes the United States a creditor of foreign nations to the amount of these purchases.

All these effects may be summed up by declaring that a rise in the rate of discount creates an artificial scarcity of money, and thus involves a general decline in values. This is undoubtedly an evil. But it also gives rise, as a consequence, to large purchases from abroad and to the importation of money. The ultimate effect is therefore beneficial, and is precisely the remedy best suited to the situation.

READING XVII.

THE DETERMINATION OF SUBJECTIVE VALUE BY MARGINAL UTILITY.

It is probable that marginal utility has been somewhat overworked in recent economic literature, particularly by writers of the Austrian School. Still there can be no doubt that this concept must play a considerable part in explaining certain cases of value. The student, therefore, can not afford to neglect it. One of the best expositions of the process whereby this factor would determine value in an ideally simple case is to be found in the following from Boehm-Bawerk.

*In asking what is the principle that regulates the amount of value, we pass to a sphere where lies the chief task of a theory of value, and where at the same time lie its greatest difficulties. These difficulties are the result of a peculiar coincidence of circumstances. From one point of view the true principle almost suggests itself. If the value of a good is its importance to human wellbeing, and if the "importance" means that some portion of our well-being is dependent on our having the good, it is clear that the amount of the good's value must be determined by the amount of wellbeing which depends on it. Goods will have high value if our wellbeing depends on them to any important extent, low value if it does not.

But from another point of view, there are certain facts in the economical world which seem to give the lie to this very simple and natural explanation. Everybody knows that, in practical economic life, precious stones possess a

* Boehm-Bawerk—Positive Theory of Capital, (1888). Translation published by Macmillan & Co. 1891. Book III, Chapters III and IV.

high value, while bread and iron have a moderate value, and air and water usually no value at all. Now everybody knows that without air and water we simply could not exist, and that the uses of bread and iron are extremely important, while precious stones, for the most part, only satisfy the love of ornament, and have, accordingly, a very inferior importance for human wellbeing. It would appear, then, that one who holds fast by the principle that the amount of a good's value is determined by the importance of the services which it may render to human wellbeing, must expect to find in precious stones a low value, in bread and iron a high value, and in water and light the very highest value. But facts show that exactly the opposite of this is the case.

This startling phenomenon has been a veritable rock of offence in the theory of value. The highest utility accompanied by the smallest value is a strange paradox. It is true that, in confusing Usefulness and Use Value, economists did not apprehend and describe the state of the case quite exactly. When they falsely ascribed to the iron a high "use value" and to the diamond a low "use value," the only reason for surprise was that the "exchange value" of these goods went so entirely in the opposite direction. But this was only to change the name of the opposition, not to take away any of its sharpness. There were plenty of attempts to bridge the fatal contradiction by involved explanations, but these were unsuccessful; and so it happens that, from Adam Smith's time to our own, innumerable theorists have despaired of finding the nature and measure of value in any relation to human wellbeing, and have fallen back upon quite foreign and often wonderful lines of explanation, such as labor or labor time, costs of production, resistance of nature to man, and the like. But, unable to get rid of the feeling that the value of goods must have something to do with utility and human wellbeing, they put down the want of harmony between the utility and the value of goods as a rare and perplexing contradiction, a *contradiction economique.*

In what follows I mean to prove that the older theory had no need to abandon the most natural explanation. The

measure of the utility which depends on a good is, actually and everywhere, the measure of value for that good. To prove this nothing more is necessary than a dispassionate but keen casuistical investigation into the question, What is the gain to our wellbeing that, in any given circumstances, depends on a good? I say deliberately "casuistical" investigation; for the entire theory of subjective value is, properly, nothing else than a system of casuistry, determining when, under what circumstances, and how far our wellbeing *is* dependent upon any particular good. It is very remarkable that the ordinary man in everyday life is constantly making casuistic distinctions of this kind, and making them with great certainty. He seldom makes a mistake, and he never makes a mistake in the principle. He may, of course, ascribe a trifling value to a diamond if he mistakes it for a glass bead. But the theoretical consideration—which is quite irrelevant here—that without water the human race could not continue in life, would never lead him to the casuistical conclusion that every gallon of water which flows from the village spring is a good of priceless value, or worth thousands of pounds. Our task, then, is to hold the mirror up to those casuistical distinctions which men make in the ordinary affairs of life, and to bring those laws, which the ordinary man instinctively handles with certainty, to clear and conscious presentation.

What human wellbeing may gain from a good, and thus the advantage which is dependent on a good, is, in most cases, the satisfaction of a want. The casuistical consideration that really determines how far a person's wellbeing depends upon a particular good is found in the answer to two questions: first, *which,* among two or more wants, depends on it? and second, what is the *urgency* of the dependent want or of its satisfaction?

For convenience we shall take the second question first. . . . [Then follows a discussion of the relative importance of different species of wants. This is omitted as not being needed for our particular purpose.]

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Turning now to the second question . . . we ask, Of

several or many wants which one is it that actually depends on a particular good?

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This resolves itself very simply when it is known which want it is that would *fail of its satisfaction* if that commodity were not present: that want is evidently the dependent one. And now it is easy to show that the want which failed of its satisfaction would not be that want which the particular commodity was, accidentally and capriciously, selected to satisfy, but would always be the *least important* among all the wants in question; that is to say, among all those wants which would formerly have been provided for out of the total stock of this class of goods.

Consideration for one's own convenience, as obvious as it is imperative, induces every reasonable man who acts economically to maintain a certain fixed order in the satisfaction of his wants. No one would be so foolish as to exhaust the resources at his command in satisfying trifling wants, or wants that could be easily ignored, and thus to deprive himself of the means of satisfying necessary wants. On the contrary, every one would take care to use the resources at his command, in the first instance, to provide for his most important wants; then for wants that come after these in importance; then for those of the third rank, and so on;—always arranging in such a way that the lesser wants were only provided for when all the higher wants had been supplied, and there still remained some means of satisfaction to spare. We act according to the same obvious and reasonable principles when our stock undergoes a change by the loss of one member of that stock. Naturally this will alter the plan according to which we have been employing our resources. Not all the wants we had arranged to satisfy can now be provided for, and some abatement in the totality of satisfaction is unavoidable. But, of course, the wise man will try to lay the burden on the least sensitive spot; that is to say, if the loss chances to be in a commodity which was destined to a more important use, he will not give up the satisfaction of this more important want, and, by holding on obstinately to his old plan, provide satisfaction for the less important wants. We may be sure

that he will satisfy the more important want, and will do so by withdrawing provision from that want, among all the wants hitherto marked out for provision, on the satisfaction of which *least* depends. . . .

The case, then, stands as follows. Wants which are more important than this "last" want will not be affected by the loss of the good, for their satisfaction is, as before, guaranteed in case of need by the replacement of substitutes. Nor will those wants be affected which are less important than this "marginal want," for they go unsatisfied whether the good is there or not. The only want affected is the last of those that otherwise would be satisfied; it will be satisfied if the good is there; it will not be satisfied if it is not there. It is thus the dependent want we were seeking.

Here then we have reached the goal of the present inquiry, and may formulate it thus: the value of a good is measured by the importance of that concrete want, or partial want, which is *least urgent* among the wants that are met from the available stock of similar goods. What determines the value of a good, then, is not its greatest utility, not its average utility, but the least utility which it, or one like it, might be reasonably employed in providing under the concrete economical conditions. To save ourselves the repetition of this circumstantial description—which, all the same, had to be somewhat circumstantial to be quite correct—we shall follow Wieser in calling this least utility—the utility that stands on the margin of the economically permissible—the economic Marginal Utility of the good. The law which governs amount of value, then, may be put in the following very simple formula: The value of a good is determined by the amount of its Marginal Utility.

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[The author then remarks on the great importance of this principle, and finishes with the following illustration.]

A colonial farmer, whose log-hut stands by itself in the primeval forest, far away from the busy haunts of men, has just harvested five sacks of corn. These must serve him till the next autumn. Being a thrifty soul he lays his plans for the employment of these sacks over the year.

One sack he absolutely requires for the sustenance of his life till the next harvest. A second he requires to supplement this bare living to the extent of keeping himself hale and vigorous. More corn than this, in the shape of bread and farinaceous food generally, he has no desire for. On the other hand, it would be very desirable to have some animal food, and he sets aside, therefore, a third sack to feed poultry. A fourth sack he destines for the making of coarse spirits. Suppose, now, that his various personal wants have been fully provided for by this apportionment of the four sacks, and that he cannot think of anything better to do with the fifth sack than feed a number of parrots, whose antics amuse him. Naturally these various methods of employing the corn are not equal in importance. If, to express this shortly in figures, we make out a scale of ten degrees of importance, our farmer will, naturally, give the highest figure 10 to the sustenance of his life; to the maintenance of his health he will give, say, the figure 8; then, going down the scale, he might give the figure 6 to the improvement of his fare by the addition of meat, the figure 4 to the enjoyment he gets from the liquor, and, finally, to the keeping of parrots, as expressing the least degree of importance, he will give the lowest possible figure 1. And now, putting ourselves in imagination at the standpoint of the farmer, we ask, What in these circumstances will be the importance, as regards his wellbeing, of *one* sack of corn?

This, as we know, will be most simply tested by inquiring, How much utility will he lose if a sack of corn gets lost? Suppose we carry out this in detail. Evidently our farmer would not be very wise if he thought of deducting the lost sack from his own consumption, and imperilled his health and life while using the corn as before to make brandy and feed parrots. On consideration we must see that only one course is conceivable: with the four sacks that remain our farmer will provide for the four most urgent groups of wants, and give up only the satisfaction of the last and least important, the marginal utility—in this case, the keeping of parrots. The only difference, then, that his having or not having the fifth sack of corn makes to his

wellbeing is that, in the one case, he may allow himself the pleasure of keeping parrots, in the other he may not; and he will rightly value a *single* sack of his stock according to this unimportant utility. And not only one sack, but *every* single sack; for, if the sacks are equal to one another, it will be all the same to our farmer whether he lose sack A or sack B, so long as, behind the one lost, there are still four other sacks for the satisfying of his more urgent wants.

To vary the illustration, assume that our farmer's wants remain the same, and that he has only three sacks of grain. What now is the value of one sack to him? The test again is quite easily applied. If he has three sacks he can and will provide for the three most important groups of wants. If he has only two sacks, he will be obliged to limit himself to the satisfying of the two most important groups and give up the satisfying of the third, that of animal food. The possession of the third sack—and the third sack, be it remembered, is not a definite sack but any of the three sacks, so long as there are other two behind it—directly carried with it, therefore, the satisfaction of his third most important want; that is, the last or least of those wants covered by the three sacks which constitute his total stock. Any estimate other than that according to the marginal utility would, in this case also, obviously run counter to facts, and would be quite incorrect.

Finally, suppose that our farmer's wants remain as before, and that he only possesses one single sack of corn. In this case it is perfectly clear that all less important methods of employing the corn are out of court, and that it will be devoted to and spent in sustaining the farmer's life—a function for which it just suffices. And it is clear that if this single sack fails the farmer will no longer be able to support himself in life. His possession of the sack, therefore, means life; his loss of it means death; the single sack of corn has the greatest conceivable importance for the wellbeing of the farmer. And all this is still in conformity with our principle of marginal utility. The greatest utility —the preservation of life—is here the sole, as well as the last or marginal utility.

These estimates according to marginal utility are not

merely "academic." No one will doubt that our farmer on due occasion—say, on an offer made him for the corn—would act practically according to the same estimates Any one of us, placed in his position, would undoubtedly be inclined to let one of the five sacks go pretty cheap in consideration of and in correspondence with its small marginal utility. He would charge considerably more for one of the three sacks. And he would not let the irreplaceable *single* sack, with its enormous marginal utility, go for any price whatever.

Transfer, now, the field of illustration from the solitary in the primeval forest to the bustle of a highly organized economic community. Here we encounter, in an altogether dominating position, the empirical proposition that quantity of goods stands in inverse ratio to value of goods. The more goods of one kind there are in the market, the smaller, *ceteris paribus,* is the value of the single commodity, and *vice versa.* Every one knows that economic theory has made use of this empirical proposition—the most elementary propositon in the doctrine of price—to establish the law of "Supply and Demand." But this proposition maintains its validity quite apart from exchange and price. For instance, how much more value does a collector put upon the single specimen, which represents a class in his collection, than upon one of a dozen of such specimens! It is easy to show that well-authenticated facts of experience like these follow, as a natural consequence, from our theory of marginal utility. The more individual goods there are available in any class, the more completely can the wants to which they relate be satisfied, and the less important are the wants which are last satisfied—those whose satisfaction is imperilled by the failure of one of the goods. In other words, the more individual goods there are available in any class, the smaller is the marginal utility which determines the value. If, again, there are available so many individual goods of one class that, after all the wants to which they are relative are completely satisfied, there still remains a number of goods for which no further useful employment can be found, then the marginal utility is equal to zero, and a commodity of that particular class is valueless.

Here, then, we have an entirely natural explanation of the phenomenon which originally struck us as so surprising, that comparatively "useless" things, such as pearls and diamonds, have so high a value, while infinitely more "useful" things, like bread and iron, have a far less value, and water and air no value at all. Pearls and diamonds are to be had in such small quantities that the relative want is only satisfied to a trifling extent, and the point of marginal utility which the satisfaction reaches stands relatively high. Happily for us, on the other hand, bread and iron, water and light, are, as a rule, to be had in such quantities that the satisfaction of all the more important wants which depend on them is assured. Only very trifling concrete wants, or no wants at all, are dependent, for instance, on the command over a piece of bread or a glass of water. It is, of course, true that in abnormal circumstances—as, for instance, in besieged towns, or in desert journeys, where water and food are scarce, and small stores only suffice to meet the most urgent concrete wants of meat and drink—the marginal utility flies up. According to our principles the value of those goods, otherwise of so little account, must rise also, and the inference finds ample empirical confirmation in the enormous prices paid in such circumstances for the most wretched means of subsistence. Thus those very facts which, at first sight, seemed to contradict our theory that the amount of value is dependent on the amount of utility conditioned, on closer examination afford a striking confirmation of it.

READING XVIII.

HOW THE COST AND UTILITY THEORIES OF PRICE ARE RECONCILED BY THE AUSTRIAN SCHOOL.

In spite of the growth of monopolistic industries, the principle that price tends to be brought to equality with cost (expense) of production still applies to a very large number of commodities. That principle, consequently, continues to be of much practical significance. It is very easy, however, for the student who does any reading in current economic literature to get the impression that many, if not most, economists are giving up the doctrine, or at least treating it as a very trifling matter. This is particularly true when one reads the books that have been written under the influence of the school which makes utility the sole foundation stone of value,—the Austrian School. It seems desirable, therefore, to supply the student with some reading like the following, wherein an eminent British representative of the school in question affirms the reality and importance of the Cost principle, and explains how it is reconcilable with the Utility doctrine.

I hardly need add that many teachers of economics would not be satisfied with the concessions made by Professor Smart in the passage given. We believe that cost plays a more fundamental rôle than he admits. We think that, even in the ultimate processes of value determination, cost (disutility cost) probably plays a part. We are anyhow certain that the Austrian writers are quite wrong in giving marginal utility so large a rôle and cost so small a one. It is quite impossible that the marginal utility of pig iron,

or cotton, or silver, or any other one kind of raw material should have its value determined independently of other kinds of raw material. Just as nails, screws, rails, girders, ranges, etc., are all products from a common element—pig iron—the price of which common element must be determined for the whole stock of it taken together whatever be the use to which it is put, which price of this common element, when once fixed, must in turn determine the price of *most* of its products,—so pig iron, cotton, silver, and other raw materials are all products from common elements, labor, waiting, etc., the prices of which common elements must each be determined for the whole stock of that element taken together, whatever be the use to which it is put, which prices of the common elements, when once fixed, must in turn have a part at least in determining the prices of all the products of these common elements, e. g., pig iron, cotton, silver and so on. That is, the prices of all ordinary intermediate goods can not, even on the principles of the Austrian school, be determined by marginal utility solely, can not be determined independently of their cost in the *ultimate production goods,* nature's raw materials, labor, waiting, etc. In short, the field wherein marginal utility acts alone—if there be any such—can not possibly include anything more than the ultimate production goods just mentioned. *In determining the price of everything else in the world, cost must play some part.*

*We now have to compare the law of Value at which we have arrived with that generally adopted by English economists. It is a matter of common experience that, in the case of articles manufactured on a large scale—"freely produced," or "reproducible at will"—the price always tends towards equality with the costs of their production. On

*Smart—Introduction to the Theory of Value (1891). Published by Macmillan & Co. pp. 64-82.

this experience is founded the familiar law that the value of a good is determined by its cost. Speaking generally, Costs of Production are all the productive goods consumed in the making of a product,—raw and auxiliary materials, machinery, power, and labour. To speak more accurately we should substitute the term Expenses of Production, thus indicating that the naturally incommensurable "efforts and abstinences" are measured by the money paid for them. On this theory the value of a good comes from its *past.*

Now, on the theory above explained [*i. e.,* in the preceding chapters], we have to show that the causal connection runs the other way, from Product to Cost. Human want, it was said, is the first factor in Value. The relation of each man's resources to his varied wants determines what is the last want satisfied in each class of wants ,and so the Marginal Utility and subjective value of goods. The figures which buyers and sellers respectively put on their goods determine the competitors, determine the marginal pair or the last buyer, and so determine price. Through price the subjective valuations are carried back to means of production. As the typical labourer, the peasant, measures the value of his labour by the produce he raises, or the value of his implements by the additional crop they procure, so is all value reflected back from goods to that which makes them. Thus value comes, not from the past of goods but from their future; that is to say, from the side of consumption in satisfying want. Goods stand midway between production and consumption. In the old reading it was the former term that gave value; in the new, it is the latter.

Before going further we must more exactly define the connection between production and consumption goods.

All goods find their goal in satisfying the want of man. As Roscher finely says, *Ausgangspunkt, wie Zielpunkt unserer Wissenschaft ist der Mensch.* The consumption-good then—the good which is to find its destiny, and its life-work, in ministering to human life and want—is that for which and towards which we set in motion the whole machinery of industry. From the soil or the mine downward every productive instrument is, economically, a consumption-good *in the making.* This Menger has put in terms which are

now classical. He calls consumption-goods, goods of the first or lowest rank. The goods which co-operate in immediately producing these—the group of productive instruments used in the last stage of production—he calls goods of second rank. The factors of this second group, again, are goods of the third rank, and so on. Thus, if a loaf is the consumption-good or the good of first rank, the flour, the oven, and the baker's labour form the group of second rank; the wheat, the mill, the labour, and the material that makes the oven, the group of third rank; the land, the agricultural implements, the materials of the mill, etc., the group of fourth rank and so on. Now, as we know, consumption-goods receive their value from the dependence of some want upon them—from their being the condition of some satisfaction. Take, then, the good, a loaf of bread. The value of the loaf in the baker's shop is determined subjectively by its marginal utility to the consumers, and the valuations (based on this marginal utility) of buyers and sellers decide the market price at which the bread is put on the market. Looking back now at the continuity of production and consumption goods, we see that the last group of productive goods which issues in the bread is really the *loaf in the making*. If the baker had not that group he would not have the bread, and we should lose our marginal utility—the satisfaction of the want. What, then, depends on the having or losing the group of second rank? Simply the marginal utility of the finished good. Tracing back the loaf to more and more remote groups, we find, similarly, that what depends upon them all, is, at different points of time, the marginal utility of the finished consumption-good: that is to say, they are all, economically, the loaf in the making. In short, value depends on a relation to human wellbeing as indicated by the satisfaction of want; and productive goods only come into contact with human wellbeing through the final member of the chain, the consumption-good. No one values the iron ore, or the ragged "pig," for what it is in itself. Ingenious and delicate as may be the machine, no one puts together these cunning arrangements of wheels and pulleys and rollers for the sake of showing the machinist's skill, or the working of mechanical

powers. Even the smooth and gossamer yarn is not a thing which can satisfy any human want. All these goods are only "good" because they are cloth, or some other consumption-good, in the making. We "value" them, not because we see the iron fabrics passing, by wear and tear of the machine, into the warp, or the threads of human life being woven into the weft, but because, with prophetic eyes, we see the web covering the otherwise bare backs of men and women, and giving up its life in ministering to theirs.

The conduction of value, then, would seem to be, from product to means of production; and this would, probably, be generally recognised if every product were connected immediately with only one group of means of production. In the case of a wine grower it is easy enough to see that the value of the grapes is derived from the wine and the value of the vineyard from the grapes; that the price, for instance, at which he would let his land to a third party, or the number of labourers he could, economically, hire to assist him, is determined by average productiveness. Or suppose we value a good subjectively, say, at £100, there seems a very good reason why we should be willing to pay, say, £50 for the labour of raising raw material, £40 for manufacturing it, and £10 for delivering it. But in modern divided industry it is, of course, impossible for most of the intermediate producers to know anything about the marginal utility, or the price which the goods will obtain when finished. The labourer paid 20/ a week for lumbering will scarcely connect his wage with the price of the delicately carved cabinet which, among other final products, is the ultimate goal of his labour. Even the timber merchant, as a rule, will not make his calculations of the price he can pay for wood with any better knowledge of its final destiny. But each branch of production has an immediate product as well as an ultimate one, and in the marginal utility and price of this immediate product it finds its value and price. Thus though the conduction of value from anticipated final product back to intermediate product, and from that back to the very first product of all, may remain hidden from each producer, the organization of industry practically car-

ries the information from stage to stage. The weaver finds a market value already attached to yarn, and, measuring by that, he puts a value upon his labour and the raw material which he offers. But the cloth he weaves is the means of production for the next intermediate product, and gets its value from it again. And so the line of communication goes on down the ranks, till it comes to the final consumption-good.

The proof of this conduction is not far to seek: it is found in the common phenomenon of Dead Stock. However great the cost expended on an article, if the public will not have it, all the costs in Christendom will not give it a value; and, if the good continues to be dead stock, all the machinery and buildings by which it has been made lose their value, except in as far as they can be turned to other uses, and get another value from another product. Even labour suffers. Whatever the expense of his special training, the labourer can give no value to his work, and loses his wage to the extent that he cannot adapt his skill to other employments. Suppose that an article, of which there is a stock, goes out of fashion, the value and the price of it fall at once. The first thing the immediate manufacturer does is to ask himself if he can reduce his costs to suit the new price: if he cannot he abandons the manufacture, and it passes probably to some man who is able to produce more cheaply, it may be by reducing wages and salaries, by new processes and more complicated machinery, or, perhaps, by employing women instead of men. In any case the cost must conform to the value.*

A striking proof of this is given in the case of silver. Most people have a dim idea that silver, as one of the precious metals has a value almost innate. Yet after 1873 mine after mine was abandoned although the ores were as rich and the reefs as plentiful as ever. What was the cause?—Simply that silver was discarded as currency in certain countries: that is to say, silver fell in the estimation of great communities, and the loss of value was carried

* [Advocates of the cost doctrine would not accept this analysis as at all adequate.]

back till the price realised by the virgin silver was not enough to pay for the mining of it.

Of course the identity of value between final product and groups of higher and higher rank is not absolute. It would be strange if it were; for where all the groups get their value from the last product, and this gets its value from a thing so inconstant as human want and so elastic as human provision, it is to be expected that the calculation which conducts value back and back, will, often enough, be mistaken. Builders tempted, by high freights at a time of sudden demand, to lay down a ship, must reckon with the possibility that, ere it be finished, the tide of prosperity may have ebbed, and that the price realised for the ship may scarce repay the wages and prices paid in anticipation. And, besides these fluctuations which cannot be reduced to law, and are often the chances on which the employer (as distinguished from the capitalist) makes his great profits—and losses, there is one constant difference between the value of the productive groups and that of the final product; that is Interest. With this, however, we have no concern here.

Thus far the matter has been comparatively simple. We have looked at a concatentation of successive groups with one final product, and with, of course, one marginal utility and one value. But we have now to face the fact that productive groups may pass into a great number of final products, each with a different marginal utility and value. The more industry is divided, the more is this the case. Productive goods, such as coal, oil, labour, go more or less to the making of millions of products. And it is here that we find the *raison d'etre* of the law of cost as a convenient abbreviated expression of a deeper law. Let us follow the matter out methodically.

A stock of productive goods, which we shall call X, is capable of producing finished products A, B, and C. The value of these products for the time is, respectively, 100, 110, and 120. Which product will determine the value of a productive unit of X?—It will be the least of the three.

For, suppose so many units of the stock X get lost that it is impossible to make A, B, *and* C, the one given up will, of course, be A,—the employment of X which produces the least valuable product. Any other choice would be contrary to economic conduct. When we say, then, that means of production get their value from their product, we must be understood as meaning the value of their final or Marginal Product.

But, again, if B and C are articles of large common manufacture, they cannot long retain their value of 110 and 120; it is merely a question of time till their value falls to 100. Here we begin to see the plausibility of the idea that cost of production determines value.

To put this concretely. A man has a farm of 90 acres divided among three crops, which, in the circumstances of the market, give him three different returns. On 30 acres he grows wheat, which, we shall suppose, yields him a value represented by 100; on another 30 acres he grows potatoes, which yield him, say, 110; on another 30 acres he grows barley, which yields him 120. What is the value of the productive group made up of his labour and one-third of his land? (We leave out of account, for simplicity's sake, the other coöperating factors.) If the value were given to land and labour by the *actual* returns there would be three different values, and this really is the case where competition has not its full play. But, if there is no monopolist factor, these three values cannot be maintained. The value of the first product, 100, determines the value of the means of production, the labour and land, and it is only a question of time and competition till this value of the means of production has imposed itself on the potatoes and the barley, and reduced their price to the same comparative level as that of wheat.*

Here, then, we have the explanation of the law of cost of production. It is quite true that, in the case of goods reproducible at will, or, in our vocabulary, in cases where substitutes are immediately available either by exchange or from production, the costs of production determine the

* [See introductory note to this reading.]

value, and the formula is both true and convenient. All the same, it is merely a particular instance of the universal law of Marginal Utility. In all cases the marginal utility of the last product economically produced determines the value of the means of production; these means of production then become the intermediate standard; and the value of goods produced from them cannot, in the long run, be higher than the value got from the marginal product.

The practical working of the law may be seen from a personal experience of the writer. In the cotton thread trade there was for years a demand for a thread which should be a fair substitute for the much more expensive article, sewing silk. The prices of cotton thread and of silk thread respectively gave housewives and shopkeepers a rough guide to a subjective valuation, and the figure put upon this demand was something like 20/. (It could not be more for the reason that no cotton substitute was able to take the place of silk in any but a few of its least important uses.) This price, offered by shopkeepers to travellers, told the cotton-thread manufacturers what they could offer to cotton spinners for superior yarns, and what they could afford for more expensive chemicals and polishing machinery. As a consequence, after many experiments the silk substitute was produced, and sent into the market at a price of 20/ per gross. But once those superior yarns were made, the cotton spinners, increasing the production of them, found other outlets. Before long the thread makers saw that this silk substitute was not the *marginal* product of those particular yarns: that in fact other cotton threads of lower quality price were being made from the same yarns. These yarns then entered into the cost of silk substitute with the predetermined lower value given them by the other finished goods, and in a short time the price of the silk substitute fell from 20/ to 18/, in conformity with the value put upon the yarns by the new marginal product. The same phenomenon occurs whenever a demand for a new article or a modification of an old one arises, and is interpreted by the enterprise of manufacturers.

If, finally, we take the case of those most many-sided productive goods, Iron and Labour, the proof of our theory may be considered fully tested.

Leaving out complimentary factors, which do not disturb the action of the law and would complicate our statement, suppose that iron is the sole productive good in the making of those various iron wares we find selling at different prices in the ironmongers' shops. The general opinion is that it is the price of iron—disregarding other factors—that determines the price of iron wares, from nails to kitchen ranges. And what we have to prove is that the conduction of value really runs in the opposite direction—from nails and ranges to raw iron.

Suppose for the moment that the prices obtainable for these products range from 40/ to 48/ for a given unit. That is to say: the ton of iron, when manufactured into, say, nails fetches 40/, when manufactured into other articles, it fetches respectively 42/, 44/, 46/, 48/. These prices are the result of the condition of the market at the moment. The manufacturers of these products—we shall call them respectively A, B, C, D, and E—represent the demand for iron, and the price they will be able to offer for iron depends on the prices obtained by these articles.

On the other hand, the supply of raw iron held in store will naturally pass to the most capable buyers—the most capable manufacturers of iron wares—at the valuation of the last buyer. Suppose the stocks of iron are sufficient to meet the demand of E, D, and C, the valuation of C, the last buyer, will determine the price of iron at 44/ per ton. So far all has gone to show that it is the iron wares—through the marginal product—which determine the price of the productive good, iron.

But now we come to a feature which gives countenance to the old theory. So long as the prices of iron wares—always assuming that iron is the sole productive group employed in the manufacture—range from 40/ to 48/, while the market price of iron stands at 44/, it is a proof that competition has not done its work. What naturally follows? Producers D and E who are getting respectively 2/ and 4/ advantage over cost will increase the output of their par-

ticular iron wares till over-supply brings down the price to 44/. On the other hand, producers A and B, who get respectively 4/ and 2/ less than cost, will curtail their production, till decrease of supply raises their prices to 44/. Thus from above and from below, competition is always levelling prices to the cost of production. Here it is quite true that cost of production imposes itself on product. What is forgotten is that the cost of production is itself first determined by the marginal product.

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Thus we have found that what determines the value of productive goods where the product is one single good directly connected with them, and what determines it in the most complicated cases where the conduction of value is, first, to means of production and, then, back again to product, is always the marginal utility, the utility of the marginal product. As the vineyards of Tokay get their value from the wine of their grapes, and as cotton gets its value from the bare backs it covers, so do iron, coal, and labour get their value in the last resort—far as may be the course from post to finish—from the last employment into which they enter.

But the emphasis necessary to prove a difficult proposition may have given the impression that the present law is put forward in opposition to the old law of costs of production, and that both laws cannot be true. It may, then, be as well to remember that the whole of this book is a quest for the *fundamental* law of value. In the complicated circumstances of modern industry it is not easy to see the real nexus of cause and effect. In a developed market, where production speculates on demand, value naturally assumes the appearance of being determined beforehand. Human wants are tempted, as it were, instead of giving the initiative. Thus the impression is easily got, and with difficulty got rid of, that human want will pay the price which production dictates, the fact being that production must, in the long run, conform to the nature and measure of human want. And thus also, I am afraid, comes the idea, certainly common among the employing classes, that wages are dictated by them from above, instead of being produced by

the labourers themselves—an idea degenerating in many cases into the belief that combinations of workers to secure their share in the product are illegitimate interferences with capital.

What is contended is that the Law of Cost is a good working secondary law as regards articles reproducible at will under large and organised production; that is, of course, as regards the vast majority of goods produced. But it has always been taught by economists that it did not hold outside these cases. On the other hand, the Law of Marginal Utility is claimed as the universal and fundamental law of value. It has not been difficult to prove its validity in the simpler cases, and if now, in the later chapters, our law has been shown to be the real background of the empirical Law of Cost, the contention of the book is justified.

READING XIX.

THE LABOR THEORY OF VALUE.

An erroneous theory with respect to the determination of value which has acquired considerable importance because of its being much used by the advocates of socialism, is known as the labor theory of value. It teaches that the comparative values of objects are determined exclusively by the comparative amounts of labor entering into them. Thus, if a certain kind of watch costs forty days' labor while a certain kind of stove costs five days' labor, then the watch will be worth just eight times as much as the stove. In interpreting these statements, however, the student must guard against one very common misunderstanding. The word labor in the theory before us includes *all* the labor spent on the commodity in question, *past labor as well as present,* the labor spent in getting out the gold or iron ore, in transporting them to where they are wanted, preparing tools to work them, putting up buildings to work in, etc., etc. To illustrate, if the material for a coat costs $15, and the labor of making it costs $10, while the material for a desk costs $2 and the labor of making it costs $10, the socialist does not say that the coat and the desk have the same labor cost and so will have the same value. The quantities of labor spent on the materials for the coat and the desk must be taken into account as well as the quantities of labor spent in making desk and coat. The coat, therefore, should be worth $25; the desk $12.

But perhaps the reader will now wonder wherein advocates of the labor theory differ from other people. If they take into account the material of which the coat is made

as well as the labor of making it, do they not cover the whole case? Not quite. The socialist way of taking into account the materials of which things are made involves only taking into account the *labor* spent on those materials. It ignores altogether the fact that the making of those materials and the keeping of them for use has required *time,* that, therefore, they have had another cost besides labor, viz., waiting, and that this cost entering into goods in different proportions affects their comparative values just as truly as does labor.

The preceding statement of the defect in the labor theory suggests the proper method by which to show that it is quite untenable. Take the first point, that the making of material and keeping them for use,—that, in fact, every part of the productive process *requires time,*—this surely is too evident to need argument. But, again, it is almost equally evident that this time requisite of production *involves a sacrifice* to producers. No one likes to wait. In fact, many people object to waiting much more than working. Again, no one doubts that the time or waiting cost *varies for different goods.* The man who starts out to raise peaches must wait much longer for his return than he would have to if he were to devote his capital and labor to raising potatoes. If he chooses forestry rather than peach-raising, his waiting must be still more prolonged. Finally, these differences in the time cost of goods *must affect the comparative values* of those goods just as surely as do differences in labor cost. If a crop of peaches for which a fruit-grower has to wait, say, five years, should regularly prove to be worth no more than the potatoes which with the same expenditure of labor and capital he could have ready for the market in eight months, people would of course transfer their investment from peach-growing to potato raising. But the consequent falling-off in the output of peaches

would, of course, raise their value, while, on the other hand, the increase in the output of potatoes would lower their value, thus bringing about that inequality which is demanded by their inequality as respects cost in waiting.

In the above discussion of the labor theory, I have said nothing of the objection which is most commonly given as a conclusive disproof of that theory. I mean the objection that many things which cost no labor whatever have value. Doubtless this objection is in a way legitimate against many advocates of the labor theory, in that they do not indicate that they are speaking only of goods reproducible at will, but rather seem to assert the principle as true of all goods whatsoever. But this way of dealing with the doctrine is scarcely candid. Practically all economists agree that for a large number, perhaps the majority, of commodities cost (expense) of production *is* the decisive factor in price determination (See Reading XVIII). If in some cases marginal utility and price coincide, this is because marginal utility *adjusts itself to* price, not because it *determines* price. To be consistent, therefore, we are called on to prove the labor theory to be unsound, not by showing that some goods do not have their value determined or even modified by their labor cost, but rather by showing that, in the case of those goods which have their value influenced by labor, *such labor is not the only factor,—other costs also play a part.*

In view of the fact that socialists have been wont to trace their theory of value to Ricardo—one of the most eminent economists of the first generation after Adam Smith, I have thought it worth while to place before the student the following passage from Ricardo wherein is set forth the doctrine laid down above, that the comparative periods of time consumed in the production of different commodities influence their comparative values as truly as do their

comparative labor costs. No doubt Ricardo gave too much weight to labor costs; and too often ignored his own comments on the part played by differences in time. But it is certain that he rejected the pure labor theory; and his leaving the opposite impression more than once in later passages is to be explained, not as due to a relinquishing of his earlier idea, but as a result of careless writing and of a persistent habit of omitting, in subsequent allusions to any doctrine, those qualifications which he had once made with what seemed to him sufficient definiteness and emphasis.

*Suppose two men employ one hundred men each for a year in the construction of two machines, and another man employs the same number of men in cultivating corn, each of the machines at the end of the year will be of the same value as the corn, for they will each be produced by the same quantity of labor. Suppose one of the owners of one of the machines to employ it, with the assistance of one hundred men, the following year in making cloth, and the owner of the other machine to employ his also, with the assistance likewise of one hundred men, in making cotton goods, while the farmer continues to employ one hundred men as before in the cultivation of corn. During the second year they will all have employed the same quantity of labor, but the goods and machine together of the clothier and also of the cotton manufacturer, will be the result of the labour of two hundred men, employed for a year; or, rather, of the labor of one hundred men for two years; whereas the corn will be produced by the labour of one hundred men for one year, consequently if the corn be of the value of £500, the machine and cloth of the clothier together, ought to be of the value of £1,000, and the machine and cotton goods of the cotton manufacturer, ought to be also of twice the value of the corn. But they will be of more than twice the value of the corn, for the profit on the

* Ricardo—Principles of Political Economy and Taxation, 3d edition (1821). Chapter I, Section IV.

clothier's and cotton manufacturer's capital for the first year has been added to their capitals, while that of the farmer has been expended and enjoyed. On account then of the different degrees of durability of their capitals, or, which is the same thing, on account of the time which must elapse before one set of commodities can be brought to market, they will be valuable not exactly in proportion to the quantity of labor bestowed on them—they will not be as two to one, but something more, to compensate for the greater length of time which must elapse before the most valuable can be brought to market.

Suppose that for the labour of each workman £50 per annum were paid, or that £5,000 capital were employed and profits were 10 per cent, the value of each of the machines as well as of the corn, at the end of the first year, would be £5,500. The second year the manufacturers and farmer will again employ £5,000 each in the support of labour, and will therefore sell their goods for £5,500, but the men using the machines, to be on a par with the farmer, must not only obtain £5,500 for the equal capitals of £5,000 employed on labor, but they must obtain a further sum of £550 for the profit on £5,500 which they have invested in machinery, and consequently their goods must sell for £6,050. Here then are capitalists employing precisely the same quantity of labour annually on the production of their commodities, and yet the goods they produce differ in value on account of the different quantities of fixed capital, or accumulated labour, employed by each respectively. The cloth and cotton goods are of the same value, because they are the produce of equal quantities of labour, and equal quantities of fixed capital; but corn is not of the same value as these commodities, because it is produced, as far as regards fixed capital, under different circumstances.

READING XX.

THE ORIGIN OF AGRICULTURAL RENT.

There are various problems of Economics, particularly some connected with taxation, the solution of which depends on a proper understanding of the causes and conditions through which rent is brought into existence. Further, the continued reappearance in current treatises of certain defects of statement which characterized the earlier expositions of the true doctrine, make almost necessary a careful restatement of that doctrine with especial reference to the defects alluded to.

And, first, we must remind the student that teachers of economics, with few exceptions, use the term rent more narrowly than is common with the general public. By the latter, rent is thought of as a payment made for the privilege of enjoying the use of any material object, a piece of land, a house, a boat, or anything you please. As used by most economists, on the other hand, rent means only a payment made for the use of *land,*—that land, further, being conceived as unmodified by human art, or at least modified only in certain very fundamental, and substantially unalterable, ways. Thus, when I pay $350 a year for the use of a house and lot in Ann Arbor, $120, perhaps, will be conceived as paid for the use of the lot, while $230 is paid for the use of the house; in which case only the $120 is true rent, the $230 being more properly called hire and consisting of interest, profit, wages of management, and a fund for the maintenance of the capital involved. In short, rent —economic rent—is a sum paid for the use of a *natural* factor, while hire is paid for *artificial, produced,* factors. Doubt-

less one would often find it difficult, sometimes impossible, to distinguish these two things sharply and accurately. But, in the main, they are commonly cut apart with a fair degree of precision by the automatic working of the laws of price. For example, it is almost certain that, of the total tax collected from the owner of a house and lot, one portion is really paid by him, while another portion is in the end taken from the tenant in the shape of higher rent; and, what is more significant for our purpose, it is also quite certain that the dividing line between these two parts corresponds pretty closely to the line which separates that portion of the total value of the place which constitutes the value of the lot, from that other portion which constitutes the value of the house.

So much for the meaning of rent in economics; now for its *origin*. Speaking broadly, rent comes into existence exactly like the value of any other thing the quantity of which is absolutely fixed; that is, it comes into existence because the thing paid for—the use of land—has a marginal utility. In other words, if land of a given grade bears rent, it is certain that society has a use for every piece belonging to that grade,—that that piece, among all pieces of the grade in question, which is put to the least important use is after all put to some use. No piece can be spared. The grade in general has marginal utility, importance, significance. But, while in general rent, like similar cases of value where the stock of the particular form of wealth is absolutely fixed, owes its origin to the marginal utility of that for which rent is paid, it is usual in this case to go deeper, to inquire into the more ultimate causes of rent, particularly agricultural rent. Accordingly, the classic theory as to the origin of rent is a theory as to the deeper phases of the process whereby agricultural rent comes into existence.

In presenting the theory, it is perhaps best to begin with the hypothesis that all the land is of one grade—*i. e.*, can furnish produce (wheat we will say) at substantially one cost—and that its prouctive efficiency is absolutely fixed—it can raise, say, 30 bushels of wheat at a cost of 30 cents per bushel, no more and no less. Such a hypothesis is, of course, in the highest degree unreal, but will serve us best

in bringing out the essential cause of rent. After this is done, we will change the hypothesis into closer accord with facts and show how the same cause still operates to produce rent. So, then, let us imagine ourselves to be dealing with the small, completely isolated island of classical convention. On that island there are 1,000 acres of wheat land, each acre of which can produce 30 bushels, no more and no less at a cost of just 30 cents per bushel, not counting any charge for the use of land. If all the land is used, the output will then be 30,000 bushels costing $9,000.

Such being the purely technical conditions, let us now study the economics of the case. Let us suppose that at a certain time the demand for wheat at 30 cents is only 2,000 bushels, while it falls to 1,900 bushels at 31 cents, 1,850 at 32 cents, 1,800 at 33 cents, and so on. Under these conditions, could there be any rent? No; for, since the possible output of wheat is much greater than the demand at any price as high as cost, most of the land will not be used at all, and the potential competition of the owners of such land will hinder the owners of the land under cultivation from exacting any payment for the use of their land. Again, under the conditions supposed, what will be the price of wheat? Answer: it will be just thirty cents. It cannot be lower; for in that case what would not be produced at all. It can not be higher; for, it being possible at that cost to furnish more than is demanded at that price or higher, the competition of producers will hold price down to that figure. Finally, these two conclusions will still hold so long as demand at 30 cents is anything under 30,000 bushels, say 5,000, or 10,000, or 20,000, or anything up to 29,999.

But change slightly the conditions. Suppose that the demand increases, so that 31,000 bushels are wanted at 30 cents, 30,000 at 31 cents, 29,000 at 32 cents, and so on. Under these conditions price, plainly, will advance to 31 cents; for only 30,000 bushels can be produced and they are all wanted at 31 cents. But, since cost is only 30 cents, this new price will give farmers a surplus over ordinary returns to industry of 1 cent a bushel or 30 cents an acre. But this surplus will naturally invite producers who in other lines are getting merely the usual returns of industry

to offer to pay the land owner something for the right to use the land. The present tenant will raise the offer; the outsiders will come back with a higher bid; and so on till the competition of the two has caused substantially the whole thirty cents to be turned over to the land owner. *The surplus thus turned over is rent.**

Looking back over this case, we see that the immediate cause of the rent surplus is the appearance of a price in excess of the cost of production. But the cause of this higher price, and so the more ultimate cause of rent, is to be found in the fact that *the demand for wheat at a price higher than cost is at least equal to the whole possible output;* or, put the other end to, in the fact that the possible output is no more than equal to the demand at some price above cost.† And, with very slight change, these statements will explain the origin of rent in any possible case.

We have seen how rent originates in the very simple, but very unreal, case furnished by our first hypothesis. Let us now change the hypothesis so as to bring it a step nearer to the facts of life. To do this, we will suppose that the wheat land of our island, instead of being all of one grade, is of four grades, though as before the output of each acre in each grade is absolutely fixed. Thus, we will assume that there are 100 acres which will produce each 30 bushels at a cost per bushel of 30 cents, 200 acres which will produce each a little under 26 bushels at a cost per bushel of 35

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* The above explanation has assumed that land owner and farmer are different persons. This, of course, may not be the case. The land owner himself may work the land. But such a hypothesis does not alter the result. The fact that, under the conditions set forth, price inevitably rises above cost of production brings into existence a surplus. This surplus is first received by the farmer, and it *remains* with the farmer if he is also land owner; while, if he is only a tenant, he is driven by the free working of competition to turn over that surplus to the one who is the owner.

† A more common but less precise statement would be this: The ultimate cause of rent, in a case like that supposed, would be found in the fact that *the demand for wheat at the cost price exceeded the whole possible output,* or the whole possible output was smaller than demand at the cost price. This method of putting such cases assumes—which doubtless is commonly true—that a demand in excess of output at *one* price means a demand *at some higher price equal to* output.

cents, 300 acres which will produce each 22 1/2 bushels at a cost per bushel of 40 cents, and 400 acres which will produce each 20 bushels at a cost of 45 cents per bushel. In each case, greater expenditure will not increase output at all, while smaller expenditure will produce no output.

When, now, would rent appear, under these new conditions? If the demand for wheat were limited to 2,000 bushels, then, as in the previous case, there would be no rent; since to produce that much wheat would require only two-thirds of the 100 acres of best land, leaving the other third, as also all poorer lands, idle, and the competition of the idle 33 1/3 acres of best land would shut out any charge for the use of the 66 2/3 acres actually under cultivation. In like manner, the price would be, as before, just equal to cost, 30 cents. Manifestly the same propositions would be true, were demand 2,100 bushels, or 2,200, or 2,300, or anything less than 3,000. But suppose, now, that the demand schedule becomes 3,100 bushels at 30 cents, 3,000 at 31 cents, 2,900 at 32 cents, and so on. At once price must rise to 31 cents; for the whole output which farmers can afford to raise so long as price is under 35 cents, is wanted at 31 cents. But a price of 31 cents gives a surplus over cost of 1 cent per bushel or 30 cents per acre on the best land; and this surplus, as in the former case, will be driven into the hands of land owners by the competition of possible tenants; that is, rent will now come into existence.

What, now, is the explanation of rent in this case? Substantially the same as before. The immediate cause is a rising of price above cost of production on the rent-bearing land. But the cause of that rising of price, *i. e.,* the more ultimate cause of rent, is the fact that the demand at some price above cost is at least equal to possible output on the best land, or, turned about, that the output *of the best grade of land* is not greater than the demand at some price above cost. In short, it is the limited stock and limited capacity, not this time of all land, but *of land of the best grade,* as compared with the demand for wheat, which causes rent. Land being of various grades, a scarcity of the best land makes itself felt in raising price and starting rent even though land as a whole can not be said to be

scarce. In such a case, the existence of rent might be said to depend in a way on the fact that lands were of different grades. But the particular implication (in that statement) on which rent depends is this, that *not all the lands are of the best grade,* rather than this, that there are inferior as well as superior grades.

The above shows how, in the hypothetical case under consideration, rent would *come into existence.* But there is another phase of the matter which deserves consideration. Let us suppose the demand schedule for wheat to advance by successive steps till it reads as follows: 3,000 wanted at 36 cents, 3,100 at 35 cents, 3,200 at 34 cents, and so on. What will now happen? At first sight it might seem that price would now become 36 cents; since 3,000 bushels, the whole product of the best land, is now wanted at 36 cents. But a new element has come in. According to the original hypothesis, there are 200 acres which can furnish each 26 bushels of wheat at a cost of 35 cents. But, by this time, price will have reached 35 cents, for 3,100 bushels are wanted at that price; consequently farmers can profitably work the 35 cent land and will of course begin to do so. But, since 5,200 bushels can be furnished off these second grade lands, the 3,100 bushels wanted at 35 cents can easily be supplied at this price. Price, therefore, will stop at 35 cents, instead of going to 36. Further, this would be the case, *i. e.,* price would remain stationary at 35 cents, even were demand to increase so that there were wanted at 35 cents 3,500 bushels or 4,000 or 5,000 or any number short of 3,000 plus 5,200, *i. e.,* 8,200. But, if price remains stationary at 35 cents throughout all these changes in demand, then obviously the surplus over cost will also remain stationary, and therefore rent also will remain stationary. In short, the cultivation of the inferior lands acts to check rent;—the existence of inferior land is not a condition on which the arising of rent depends,—as is often said—but rather a condition on which the keeping of rent within bounds depends.

In the hypothesis which has just been considered, we had already restored one of those two important facts of

the real world which, as will be remembered, were purposely dropped out of our first hypothesis. Let us now restore the second of those two facts. Let us suppose that the possible output of each acre of land, instead of being absolutely fixed, varies in some degree with the amount of expenditure. Let us suppose, further, that with an expenditure of $9 each acre of land reaches the point of diminishing returns. Beyond this increase in expenditure will for a time secure an increase in output but one less than proportionate to the increase in expenditure. Thus, suppose that, while $9 spent on the best land yields 30 bushels, $12 would yield 38 bushels; $15, 44 bushels; and $18, 47 bushels; after which no increase is possible. Similarly for the second grade of land, while $9 spent on it yields 26 bushels, $12 would yield 32 bushels; $15, 34 bushels; and $18, 38; after which no increase could be secured. And so on with the other grades of land. Under these conditions, as a little computation would show, when price reached 37 cents, output could be increased 800 bushels from the best land; when price reached 50 cents, output could be increased 600 bushels from first grade land and 1,200 bushels from second grade; when price reached 75 cents, output could be increased 800 bushels from second grade land and 1,200 from third grade land; and so on.

What, now, will be the effect of these new conditions? Let us suppose the demand schedule to have advanced till it reads as follows: 8,000 bushels wanted at 39 cents; 8,500, at 38 cents; 9,000 at 37 cents; 9,500, at 36 cents; and so on. Under our former hypothesis,—that the productivity of each grade of land was absolutely fixed,—this demand schedule combined with the output schedule would give us a price of 38 cents. It could not be above 38 cents; since this would cut demand down to at least 8,000, while 8,200 at least could be furnished for 35 cents. It could not be below 38 cents; since at that figure 8,500 bushels would be wanted and only 8,200 could be furnished, and so the competition of the unsuccessful buyers would hold it at that point. But, while under the first hypothesis the new demand schedule would give us a price of 38 cents, under the second hypothesis it would give a price of only 37 cents. For, under

this second hypothesis, when price reaches 37 cents we can, through the more intensive cultivation of the best land, increase output by 800 bushels, making a possible total at that figure of 9,000 bushels,—3,800 from the best land and 5,200 from the second best; and 9,000 bushels just satisfies the demand at 37 cents and so hinders a rise to 38 cents. Thus, the new hypothesis has hindered the price from rising as high as it would have risen under the old. But anything which hinders price from rising thereby hinders rent from rising. That is, the more intensive cultivation of soils already in use checks the rise of rent. The principle that even after the stage of highest net efficiency has been reached output can be increased though at increasing cost per unit, furnishes a condition under which rent may be checked. In other words, the so-called law of diminishing returns—which might better be named the law of *increasable returns at diminishing rate*—in one of its phases furnishes a possible check on the growth of rent; and from this standpoint takes its place along with the inferior soils which, as we saw above, play a similar part.

The discussion just preceding has shown how the law of diminishing returns acts to check the growth of rent. We can hardly leave the matter without remarking emphatically that, looked at in another of its phases, this same law is a *sine qua non* of rent. Because the returns from the same piece of land are *increasable,* therefore a check on rent is possible. But, because the possible increase is *at a diminishing rate,* therefore, before the increase which checks rent can take place, price must rise above cost on the old plan of cultivation, and it is this rising which causes rent. If output could be increased indefinitely without any falling off in the rate, there could never be any rent; for supply would always keep pace with demand at cost price, *i. e.,* without any rising of price above cost. We *could* have rent, were returns absolutely fixed; we *do* have rent with returns fixed by an elastic limit, *i. e.,* increasable but at a diminishing rate; but we *could not* have rent, were returns indefinitely increasable without any falling off in the rate.

We have set forth the process by which rent would come into existence under each of three different hypotheses, each

being modified so as to bring it nearer to actual conditions than its predecessor. As a matter of fact, even in its third form that hypothesis would, in many respects, show not a few differences from those conditions. One of these differences gives us a case which is of sufficient importance to deserve special consideration. In introducing the condition of different grades of land, it was assumed that these grades varied in productivity by considerable intervals. The best produced 30 bushels per acre; the second best, 26 bushels; the third, 22 1/2 bushels, and so on. But there can be little doubt that, in the actual world, lands vary in productivity by much slighter differences than these Still keeping as near as possible to our original figures, the best land yields, let us say, 30 bushels per acre; the second grade 29; the third, 28; and so on. (Very likely even these differences are too large.) Does this new condition compel us to alter our explanation of rent? Not in any essential feature. To simplify matters, let us ignore the output per acre, and simply assume that, without pushing cultivation beyond the point of highest net efficiency, wheat can be raised on the different grades according to the following schedule: on the best, 3,000 bushels at a cost of 30 cents per bushel; on the second grade, 5,000 bushels at a cost of 31 cents; on the third grade, 7,000 bushels at a cost of 32 cents a bushel; and so on,—it being assumed also that people do not take account of differences smaller than a cent. How, now, would rent come into existence? Our previous answers fit easily enough. As soon as demand at some price above 30 cents equals or exceeds 3,000 bushels,—the output from the best land—price will rise above 30 cents, thus giving a surplus over cost which will be retained by the farmer if he is also land owner but which, if he is only a tenant, will be driven by competition from his hands into those of the land owner. But what part is played by the new possibilities of production at 31 cents, 32 cents, and so on? Just such a part as was formerly played by the possibility of production at 35 cents. Since the output can be increased 5,000 bushels just as soon as a price of 31 cents is established, then, although the demand schedule may be one which under the former hypothesis would have raised price to 32

or 33 or 34 or 35 cents and so raised rent to corresponding heights, price may now be checked at 31 cents, and so rent kept at 1 cent a bushel or 30 cents an acre. Thus, suppose the demand schedule to be: 3,500 bushels at 35 cents; 4,000 at 34 cents; 4,500 at 33 cents; 5,000 at 32 cents; 5,500 at 31 cents; and so on. Under our former hypothesis, price would promptly rise to 35 cents, giving a rent on the best land of $1.50 per acre. But, under the new hypothesis, price could not rise above 31 cents, since at that price 8,000 bushels can be furnished and only 5,500 are wanted; and rent could, in consequence, reach only 30 cents per acre.*

The gist of the above discussion may be set forth in the following propositions. (1) Rent in general comes into existence when and because the demand for agricultural products at some price higher than cost on the best land—said land being cultivated up to the point of highest net efficiency—equals or exceeds the output of said land so cultivated. (2) Rent on any particular grade of land comes into existence when the demand for agricultural products at some price higher than cost on the grade of land under consideration, equals or exceeds the output on all land having a cost which is smaller than said price, the lands in all cases being cultivated to the point of highest net efficiency. (3) The detailed process whereby rent comes into exist-

* The conspicuous difference between the earlier case and the one just considered is to be found in the fact that, in the latter, cost of production plays a part in determining price and so in determining rent, not merely at *special stages,* as in the former case, but *all the time.* Thus, under the former hypothesis, whenever costs on the first and second grade lands are respectively 30 and 35 cents, after price has reached 31 cents and before it has reached 34 cents, it is temporarily emancipated from the influence of cost of production altogether. During that time, price is solely a question of the marginal utility of the possible output of the best land; and the precise amount of such marginal utility is not at all affected by cost. But, when, as in the later hypothesis, the second grade land can furnish wheat at 31 cents, third grade land at 32 cents, and so on, then marginal utility itself can be determined only as marginal cost is also determined, and so, of course, price can be determined only as marginal cost is determined. In fact during much of this interval price might temporarily ignore marginal utility altogether and follow marginal cost only.

ence is as follows: demand at some price higher than cost becomes at least as great as possible output of best land cultivated to point of diminishing returns; this causes price to rise above cost; this gives to the farmer a surplus over ordinary returns; the existence of this surplus leads to the competition of possible tenants in trying to secure the use of the land by paying a price therefor; and this competition goes on till the whole surplus is turned over to the land owner as rent. (4) Bringing into cultivation inferior soils tends to check the rise of rent. (5) Cultivating more intensively soils already in use tends to check the rise of rent.

A careful reading of the above explanation of rent ought to prepare the student to point out the faults of statement which have already been alluded to as present in many current accounts of the matter. Instead, therefore, of commenting in detail on those faults, I will give here a number of problems which embody some of the most important, with the idea that, in criticising these statements, the student will secure a thorough understanding of these principles. Some further problems will be added which require for solution a comprehension of the doctrines above set forth; though they do not involve the element of criticism.

(1) "Supposing the best land to yield 24 bushels to the acre; the second grade, 22 bushels; the third grade, 20 bushels; and so on, then, as soon as demand comes to exceed the capacity of the 24 bushel land, cultivation will be driven down to the 22 bushel tract, *whereupon rent will at once emerge.*" Paraphrase of the account of rent given in a very popular American text-book. Point out fault.

(2) "Rent rises out of the differences existing in the productiveness of different soils under cultivation at the same time." Criticise.

(3) "When increasing demand forces up the price of wheat and enables an increased supply to be furnished at a greater marginal expense, rent will appear." Point out the fault; and make a restatement which avoids that fault.

(4) "Economic rent *is a result* of this more intensive or more extensive investment (of capital and labor)." Criticise.

(5) "It is not necessary to the existence of rent that lands of different grades should be under cultivation at the same time; but it is necessary that different units of labor and capital employed in agriculture should be getting different returns, if not on different lands, at least on the same land." Show that this is not true.

(6) Show that an improvement in agricultural methods able to increase greatly the output of practically all lands without a proportionate increase in cost would tend to lower agricultural rent.

(7) "Farm rents should be abolished; for they mean just so much higher wheat and, therefore, just so much added to the cost of the workingman's food." Show that the above is not sound.

(8) Suppose the margin of cultivation (the boundary between the poorest land under cultivation and the next lower) should rise because the government had prohibited the cultivation of the lowest five of the grades previously under cultivation. What would tend to be the effect on the rent of the higher grades? What would tend to be the effect, if the margin were to rise because of improvements in agricultural methods?

READING XXI.

THE SUBSISTENCE OR COST THEORY OF WAGES

A doctrine with respect to the determination of wages which has had considerable vogue from the beginnings of economic writing, teaches that the wages of manual labor tend in the long run to equal the amount necessary for the support of laborers, including under support that which is necessary to maintain laborers' families. This doctrine is frequently attributed to Ricardo; but in fact it had, by his time, already become a commonplace of economic literature. In our day it has received much misinterpretation and much condemnation; though almost everyone professes to recognize in it a grain of truth. The misinterpretation is largely—not entirely—responsible for the condemnation. Subsistence for laborers, or the cost of labor, is understood to mean the *absolute minimum* necessary to keep a family alive, —hence the name given to the doctrine by the socialists, "the Iron or Brazen Law of Wages." As a matter of fact, probably all the classic economists held that the subsistence minimum varied with time and place. "What is necessary to support a laborer and his family" meant to Ricardo, Malthus, and McCulloch what is necessary, *according to the standard of living for laborers prevailing at the particular period in the particular place.* A doctrine which teaches that cost of subsistence, understood in the above sense, determines wages, may be untrue or of little importance; but it surely is not justly open to the burning denunciation which it has received from many persons. That the above account of the matter gives the correct interpretation of the classic teaching is made evident by the following passages from Ricardo and McCulloch.

A. *Labor, 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 labor is that price which is necessary to enable the laborers, one with another, to subsist and perpetuate their race, without either increase or diminution.

The power of the laborer to support himself, and the family which may be necessary to keep up the number of laborers, 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 labor, therefore, depends on the price of the food, necessaries, and conveniences required for the support of the laborer and his family. With a rise in the price of food and necessaries, the natural price of labor will rise; with the fall in their price, the natural price of labor will fall.

. . . .

The market price of labor is the price that is really paid for it, from the natural operation of the proportion of the supply to the demand; labor is dear when it is scarce, and cheap when it is plentiful. However much the market price of labor may deviate from its natural price, it has, like commodities, a tendency to conform to it.

It is when the market price of labor exceeds its natural price, that the condition of the laborer is flourishing and happy, that he has it in his power to command a greater proportion of the necessaries and enjoyments of life, and therefore to rear a healthy and numerous family. When, however, by the encouragement which high wages give to the increase of population, the number of laborers is increased, wages again fall to their natural price, and indeed from a reaction sometimes fall below it.

When the market price of labor is below its natural price, the condition of the laborers is most wretched: then poverty deprives them of those comforts which custom renders absolute necessaries. It is only after their privations

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*Ricardo—Principles of Political Economy and Taxation (1817). From Chapter V.

have reduced their number, or the demand for labor has increased, that the market price of labor will rise to its natural price, and that the laborers will have the moderate comforts which the natural rate of wages will afford.

Notwithstanding the tendency of wages to conform to their natural rate, their market rate may, in an improving society, for an indefinite period, be constantly above it; for no sooner may the impulse, which an increased capital gives to a new demand for labor, be obeyed, than another increase of capital may produce the same effect; and thus, if the increase of capital be gradual and constant, the demand for labor may give a continued stimulus to an increase of people.

It is not to be understood that the natural price of labor, estimated even in food or necessaries, is absolutely fixed and constant. It varies at different times in the same country, and very naturally differs in different countries. It essentially depends on the habits and customs of the people. An English laborer 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; yet these moderate demands of nature are often deemed sufficient in countries where "man's life is cheap," and his wants easily satisfied. Many of the conveniences now enjoyed in an English cottage, would have been thought luxuries at an earlier period of our history.

B. *Circumstances which Determine the Natural, or Necessary Rate of Wages.

There are certain limits, however difficult it may be to specify them, to the extent to which wages may be reduced. The cost of producing labor, like that of everything else, must be paid by the purchasers. The race of laborers would become extinct were they not supplied with food and other articles sufficient, at least, for their support and that of their families. This is the lowest limit to which the rate of wages can be permanently reduced; and for this reason

* McCulloch—Principles of Political Economy, 4th ed., 1849. Part III, Chapter II, pp. 406-416.

it has been called the *natural or necessary rate of wages.* The market, or actual rate of wages, may sink to the level of this rate; but it is impossible it should continue below it. It is not, as has already been shown, on the quantity of money received by the laborer, but on the quantity of food and other articles which that money will buy, that his ability to maintain himself, and rear his children, must depend. Hence the natural or necessary rate of wages is determined by the cost of the food, clothes, fuel, etc., required for the use and accommodation of laborers. And though a rise in the market or current rate of wages be seldom exactly coincident with a rise in the price of necessaries, they can never, except when the market rate of wages greatly exceeds the natural or necessary rate, be far separated. However high its price, the laborers must always receive a supply of produce adequate for their support; if they did not obtain this much, they would be destitute; and disease and death would continue to thin the population, until the reduced numbers bore such a proportion to the national capital* as enabled them to obtain the means of subsistence.

The opinion of those who contend that the rate of wages is in no degree influenced by the cost of the articles consumed by the laborers, has obviously originated in their confounding the principles which determine the market rate of wages at any given period, with those which determine their natural or necessary rate. No proposition can be better established than that the market rate of wages, at any given moment, is exclusively determined by the proportion between capital and population.† But in every inquiry of this nature, we should not only refer to particular points of time, but also to periods of some considerable duration; and if we do this, it will be immediately seen that the average rate of wages does not depend wholly on this proportion. The price of shoes, hats, etc., in this or that market, is plainly dependent on the extent of their supply compared with the demand of those who have the means

* [This implies McCulloch's acceptance of the so-called wage fund theory as being the principle which governs the market rate of wages. In our day, that doctrine is generally looked on as containing little if any truth.]

† [See preceding note.]

of purchasing; but it is quite obvious, that if this price sink below the sum required to pay the cost of producing shoes, etc., and bringing them to market, they will no longer be supplied—and such is the case with laborers They neither will, nor in fact can, be furnished, unless their wages be such as will, at an average, suffice to bring them up and maintain them. From whatever point of the economical compass we may set out, the cost of production is the principle to which we must always come at last. This cost determines the natural or necessary rate of wages, just as it determines the natural or necessary price of commodities. However low the demand for labor, still if the price of the articles necessary for the maintenance of the laborer be increased, the natural or necessary rate of wages must, in the end, be increased also. Let it be supposed that, owing to a scarcity, the price of the quartern loaf rises to 4s. or 5s. In this case it is plain, inasmuch as the same number of people would be seeking for employment, after the rise as before—and as a rise in the price of bread, occasioned by a scarcity, could not increase the demand for labor—that wages could not be increased. The poor would in consequence, be forced to economise; and the rise of price, how injurious soever in several respects, would be in so far advantageous, that it would immediately lessen consumption, and distribute the pressure equally over the year. But suppose that the rise, instead of being occasioned by the accidental occurrence of a scarcity, has been occasioned by an increased difficulty of production, and that it will be permanent, the question is,—will money wages continue at their former elevation, or will they rise? Now, in this case, it may be easily shown that they will rise; for it is abundantly obvious that the comforts of all classes of laborers would be greatly impaired by the rise in the price of bread; and those who, previously to its taking place, had only enough to subsist upon, would now be reduced to a state of destitution. Under such circumstances, an increase of mortality could not fail of taking place, while the greater difficulty of providing subsistence would interpose a powerful check to the formation of matrimonial connections and the increase of population. By this means,

therefore, the amount of the population, or the ratio of its increase, or both, would be diminished; and this diminution, by lessening the number of laborers, would, in the end, increase the proportion of capital to population, and enable them to obtain higher wages.

* * * * * * *

But, in endeavoring to show that the market rate cannot be permanently reduced below the natural or necessary rate of wages, it is not meant to represent the latter as fixed and unvarying. If a specified quantity of certain articles were absolutely necessary to enable laborers to subsist and continue their race, such quantity could not be diminished. But such is not the case. By the natural or necessary rate of wages, is meant only, in the words of Adam Smith, such a rate as will enable the laborers to obtain, "not only the commodities that are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without." Now it is plain, from this definition, that there can be no absolute standard of natural or necessary wages. It is impossible to say what commodities are indispensable for the support of life; for these, as well as the other articles required for the use of the lower orders, depend essentially on the physical circumstances under which every people is placed, and on custom and habit. The differences of climate, for example, by giving rise to different physical wants in the inhabitants of different countries, necessarily occasion corresponding variations in the necessary rate of wages. Work-people in cold climates, who must be warmly clad, and whose cottages must be built of solid materials and heated with fires, could not subsist on the same wages that would suffice to supply all the wants of those who inhabit more congenial climates, where clothing, lodging and fire are of inferior importance. Humboldt mentions, that there is a difference of nearly a *third* part in the cost of maintaining individuals and consequently in necessary wages, between the hot and temperate districts of Mexico; and there is still greater discrepancy in the rates of necessary wages in distant quarters. The food, too, of the laborers in different countries varies extremely.

In some it is both expensive and abundant, compared to what it is in others. In England, for example, they principally subsist on bread and beef, in Ireland on potatoes, and in China and Hindostan on rice. In many parts of France and Spain, an allowance of wine is considered indispensable to existence; and in England, the laboring class entertain nearly the same opinion with respect to beer: whereas the Chinese and Hindoos drink nothing but water. In Ireland the peasantry live, for the most part, in mud cabins, no better than the wigwams of the American Indians, without, in many instances, either a window or a chimney; while in England the cottages of the peasantry have all glass windows and chimneys, are well furnished, and are as much distinguished for their neatness, cleanliness, and comfort, as those of the Irish for their filth and misery. In consequence of these different habits, there is in these countries, an extreme difference, not in the rate of necessary wages merely, but in the actual or market rate—so much so, that while the average market price of a day's labor in England may be taken at from 20d. to 2s., it cannot be taken at more than 6d. or 7d. in Ireland, and 3d. in Hindostan! The customs of the people of the same countries, and the standard by which the natural rate of wages is determined at different periods, have been equally fluctuating and various. The habits of the English and Scotch laborers of the present day differ as widely from those of their ancestors in the reigns of Elizabeth, James I., and Charles I., as from those of the laborers of France and Spain. The standard of necessary wages has been raised; there has been a greater prevalence of moral restraint; the proportion of capital to population has been increased; and the poor have happily learned to form more elevated opinions respecting the amount and species of the necessaries and conveniences required for their subsistence.

The natural or necessary rate of wages is not, therefore, fixed and unvarying; and though it be true that the market rate of wages can never sink permanently below its contemporary necessary rate, it is no less true that the latter has a tendency to rise when the market rate rises, and to fall when it falls. The reason is, that the supply of laborers is

neither speedily increased when wages rise, nor speedily diminished when they fall. When wages rise, a period of eighteen or twenty years must elapse before the influence of the increased stimulus given by the rise to the principle of population can be felt in the labor market. During all this period, therefore, work-people have an increased command for necessaries and conveniences; their habits are, in consequence, improved; and as they learn to form higher notions of what is required for their support, the necessary rate of wages is augmented. But, on the other hand, when wages decline, either in consequence of a diminution of the capital appropriated to their payment, or of a disproportionate increase of population, no corresponding diminution takes place in the number of laborers, unless they have previously been subsisting on the smallest quantity of the cheapest species of food required to support mere animal existence. If the laborers have not been placed so very near the extreme limit of subsistence, their numbers will not be immediately reduced when wages fall, by an increase of mortality; but they will be gradually reduced, partly, as has already been shown, in that way, and partly by a diminished number of marriages and births; and in most countries, unless the fall were both sudden and extensive, it would require some years to make the effects of increased mortality, in diminishing the supply of labor in the market, sensibly felt; while the force of habit, and the ignorance of the people with respect to the circumstances which determine wages, would prevent any effectual check being given to the formation of matrimonial connexions, and consequently to the rate at which fresh laborers had previously been coming into market, until the misery occasioned by the restricted demand on the one hand, and the undiminished supply on the other, had been generally and widely felt.

It is this circumstance—the impossibility which usually obtains of speedily adjusting the supply of labor proportionally to variations in the rate of wages—that gives to these variations their peculiar and extraordinary influence over the wellbeing of the laboring classes. Were the supply of labor suddenly increased when wages rise, the rise would be of little of no advantage to the existing laborers. It

would increase their number, but it would not enable them to mount in the scale of society, or to acquire a greater command over necessaries and conveniences; and, on the other hand, were the supply of laborers suddenly diminished when wages fall, the fall would merely lessen their number, without having any tendency to degrade the habits or to lower the condition of those that survived. But, in the vast majority of instances, before a rise of wages can be in any degree countervailed by the increased number of laborers it may be supposed to bring into the market, time is afforded for the formation of new and improved tastes and habits. After the laborers have once acquired these tastes, population advances in a slower ratio, as compared with capital, than formerly; and the laborers will be disposed rather to defer the period of marriage, than, by entering on it prematurely, to depress their own condition and that of their children. But if the number of laborers cannot be suddenly increased when wages rise, neither can it be suddenly diminished when they fall; a fall of wages has, therefore, a precisely opposite effect, and is, in most cases, as injurious to the laborer as their rise is beneficial. In whatever way wages may be restored to their former level after they have fallen, whether it be by a decrease in the number of marriages, or by an increase in the number of deaths, or both, it is never, except in the exceedingly rare case already mentioned, suddenly effected. It must generally speaking, require a considerable time before it can be brought about: and, in consequence, an extreme risk arises, lest the tastes and habits of the laborers, and their opinions respecting what is necessary for their comfortable subsistence, should be lowered in the interim. When wages are considerably reduced, the poor are obliged to economise, or to submit to live on a smaller quantity of necessaries and conveniences, and those, too, of an inferior species; and the danger is, that the coarse and scanty fare which has thus been, in the first instance, forced on them by necessity, should in time become congenial from habit. Should this, unfortunately, be the case, the condition of the poor would be permanently depressed, and there would be nothing left that could raise wages to their former level—for the laborers would no

longer have a motive to exercise an increased degree of moral restraint; and unless they did this, they would have but little chance of again emerging from their depressed condition. Under the circumstances supposed, the cost of raising and supporting laborers would be reduced; and it is by this cost that the natural or necessary wages, to which the market rate is generally proportioned, is always regulated. This lowering of the opinions of the laboring class with respect to the mode in which they should live, is perhaps the most serious of all the evils that can befall them. Let them once become contented with a lower species of food, and an inferior standard of comfort, and they may bid a long adieu to anything better. And every reduction in the rate of wages, which is not of a very transient description, will most likely have this effect, if its debasing influence be not countervailed by an increased prevalence of moral restraint, and a diminished increase of population, or by the opening of new markets, or the discovery of new and improved processes by which the cost of necessaries and conveniences may be reduced. Should any such reduction take place, the condition of the laborers may not be injuriously affected by the fall of wages; but if nothing of this kind occur, the laborers can only regain their former command over necessaries and conveniences by the exercise of additional economy and forethought.

The example of such individuals, or bodies of individuals, as submit quietly to have their wages reduced, and who are content if they get only mere necessaries, should never be held up for public imitation. On the contrary everything should be done to make such apathy be esteemed discreditable. The best interests of society require that the rate of wages should be elevated as high as possible—that a taste for comforts and enjoyments should be widely diffused, and, if possible, interwoven with national habits and prejudices. Very low wages, by rendering it impossible for increased exertions to obtain any considerable increase of advantages, effectually hinder them from being made, and are of all others the most powerful cause of that idleness and apathy that contents itself with what can barely continue animal existence.

READING XXII.

WHY WAGES ARE UNEQUAL IN EMPLOYMENTS WHICH ARE OPEN TO THE COMPETITION OF SUBSTANTIALLY THE SAME CLASS OF PERSONS.

Laborers, including managers, professional people, artists, and so on, fall into a number of groups or strata between which there is little, if any, competition, because the workers of one group lack the particular natural endowments necessary to furnish the types of service produced by other groups. Between such groups or strata, therefore, inequality in wages is natural and inevitable. But that there should be inequalities *within* a given group, *on* a given stratum, is not quite so evident. Such, however, is the fact. Law, medicine, teaching, and so on, are all open to the competition of substantially the same classes of persons; yet the remunerations of workers of similar grade but in different ones of these professions are quite unequal. A like phenomenon displays itself between carpenters, bricklayers, shop-mechanics, *et al.* Some of the more important reasons for this are well brought out in the following much quoted passage from Adam Smith.

*The whole of the advantages and disadvantages of the different employments of labour and stock must, in the same neighborhood, be either perfectly equal or continually tending to equality. If in the same neighborhood there was any employment evidently either more or less advantageous than the rest, so many people would crowd into it in the one case, and so many would desert it in the other, that its advantages

* Adam Smith—Wealth of Nations. Book I, Chapter X.

would soon return to the level of other employments. This at least would be the case in a society where things were left to follow their natural course, where there was perfect liberty, and where every man was perfectly free both to choose what occupation he thought proper, and to change it as often as he thought proper. Every man's interest would prompt him to seek the advantageous, and to shun the disadvantageous employment.

Pecuniary wages and profit, indeed, are everywhere in Europe extremely different according to the different employments of labour and stock. But this difference arises partly from certain circumstances in the employments themselves, which, either really, or at least in the imaginations of men, make up for a small pecuniary gain in some, and counterbalance a great one in others; and partly from the policy of Europe, which nowhere leaves things at perfect liberty.

PART I.—*Inequalities arising from the Nature of the Employments themselves.*

The five following are the principal circumstances which, so far as I have been able to observe, make up for a small pecuniary gain in some employments, and counterbalance a great one in others: first, the agreeableness or disagreeableness of the employments themselves; secondly, the easiness and cheapness, or the difficulty and expense of learning them; thirdly, the constancy or inconstancy of employment in them; fourthly, the small or great trust which must be reposed in those who exercise them; and fifthly, the probability or improbability of success in them.

First, The wages of labour vary with the ease or hardship, the cleanliness or dirtiness, the honourableness or dishonourableness of the employment. Thus in most places, take the year round, a journeyman tailor earns less than a journeyman weaver. His work is much easier. A journeyman blacksmith, though an artificer, seldom earns so much in twelve hours as a collier, who is only a labourer, does in eight. His work is not quite so dirty, is less dangerous, and is carried on in daylight and above ground. Honour makes a great part of the reward of all honourable profes-

sions. . . . Disgrace has the contrary effect. The trade of a butcher is a brutal and an odious business; but it is in most places more profitable than the greater part of common trades. . . .

Disagreeableness and disgrace affect the profits of stock in the same manner as the wages of labour. The keeper of an inn or tavern, who is never master of his own house, and who is exposed to the brutality of every drunkard, exercises neither a very agreeable nor a very creditable business. But there is scarce any common trade in which a small stock yields so great a profit.

Secondly, The wages of labour vary with the easiness and cheapness, or the difficulty and expense of learning the business.

When an expensive machine is erected, the extraordinary work to be performed by it before it is worn out, it must be expected, will replace the capital laid out upon it, with at least the ordinary profits. A man educated at the expense of much labour and time to any of those employments which require extraordinary dexterity and skill, may be compared to one of those expensive machines. The work which he learns to perform, it must be expected, over and above the usual wages of common labour, will replace to him the whole expense of his education, with at least the ordinary profits of an equally valuable capital. It must do this too in a reasonable time, regard being had to the very uncertain duration of human life, in the same manner as to the more certain duration of the machine.

The difference between the wages of skilled labour and those of common labour, is founded upon this principle. . .

Education in the ingenious arts and in the liberal professions, is still more tedious and expensive. The pecuniary recompense, therefore, of painters and sculptors, of lawyers and physicians, ought to be much more liberal: and it is so accordingly.

* * * * * * *

Thirdly, The wages of labour in different occupations vary with the constancy or inconstancy of employment.

Employment is much more constant in some trades than in others. In the greater part of manufactures, a journey-

man may be pretty sure of employment almost every day in the year that he is able to work. A mason or bricklayer, on the contrary, can work neither in hard frost nor in foul weather, and his employment at all other times depends upon the occasional calls of his customers. He is liable, in consequence, to be frequently without any. What he earns, therefore, while he is employed, must not only maintain him while he is idle, but make him some compensation for those anxious and desponding moments which the thought of so precarious a situation must sometimes occasion. . . .

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Fourthly, The wages of labour vary according to the small or great trust which must be reposed in the workmen.

The wages of goldsmiths and jewellers are everywhere superior to those of many other workmen, not only of equal, but of much superior ingenuity, on account of the precious materials with which they are necessarily intrusted.

We trust our health to the physician; our fortune and sometimes our life and reputation to the lawyer and attorney. Such confidence could not safely be reposed in people of a very mean or low condition. Their reward must be such, therefore, as may give them that rank in the society which so important a trust requires. The long time and the great expense which must be laid out in their education, when combined with this circumstance, will necessarily enhance still further the price of their labour.

Fifthly, The wages of labour in different employments vary according to the probability or improbability of success in them.

The probability that any particular person shall ever be qualified for the employment to which he is educated, is very different in different occupations. In the greater part of mechanic trades success is almost certain, but very uncertain in the liberal professions. . . . In a perfectly fair lottery, those who draw the prizes ought to gain all that is lost by those who draw the blanks. In a profession where twenty fail for one that succeeds, that one ought to gain all that should have been gained by the unsuccessful twenty. The counsellor at law, who, perhaps, at near forty years

of age, begins to make something by his profession, ought to receive the retribution, not only of his own so tedious and expensive education, but of that of more than twenty others who are never likely to make anything by it. How extravagant soever the fees of counsellors at law may sometimes appear, their real retribution is never equal to this. . . . The lottery of the law, therefore, is very far from being a perfectly fair lottery; and that, as well as many other liberal and honourable professions is, in point of pecuniary gain, evidently under-recompensed.

Those professions keep their level, however, with other occupations, and, notwithstanding these discouragements, all the most generous and liberal spirts are eager to crowd into them. Two different causes contribute to recommend them. First, the desire of the reputation which attends upon superior excellence in any of them; and, secondly, the natural confidence which every man has more or less, not only in his own abilities, but in his own good fortune. . . .

READING XXIII.

THE ORIGIN OF INTEREST.

From the earliest times down to, and including, our own day, the question as to whether or not interest is legitimate has been one of much practical importance. But the *legitimacy* of interest is largely a question of the *origin* of interest. It, therefore, becomes of much importance to determine how interest comes to exist. Among the various theories on this matter which have been put forth from time to time, the one most widely accepted in our day makes interest a premium received by the person who relinquishes present goods in exchange for future goods, and, therefore, finds the explanation of interest in the greater value of present goods as compared with future goods. This doctrine has been given wide publicity through its advocacy by the Austrian economist, Boehm-Bawerk; and, while many do not accept completely that writer's putting of the case, almost all would probably admit that his doctrine is satisfactory for certain classes of cases, and anyhow is a useful element in any theory which they would consider adequate.

The following restatement of the doctrine by Pierson is chosen for presentation here, as being sufficiently brief for our space, and as bringing in an element in the causing of interest which is unduly neglected by Boehm-Bawerk, *i. e.*, the relative *scarcity* of present goods.

*Interest can always be obtained for capital; exchanges such as we have described take place every day. There are

* Pierson—Principles of Economics (1902), translation published by the Macmillan Co., 1906. Part I, Chapter IV, pp. 201-209.

always people who, for present money or goods, are prepared to promise a larger amount of future money or goods. The inference is obvious enough, but Von Boehm-Bawerk, the Austrian writer, was the first to state it in his well-known book on Capital. The inference is this. If a premium can be obtained on present as against future things, then present things must, on the whole, be more valuable than future things. To inquire into the origin of interest is an attempt to explain this difference of value.

A manufacturer sells goods on three months' credit and offers to deduct 1 per cent. from the price for ready-money payment. By the mere fact of his making such an offer to a man whose credit is good, he shows that he places greater value upon future things. A railway company raises a 3 per cent. loan of £500,000 at 10 per cent. below par and undertakes to redeem £10,000 of the stock each year at par. In this way the company obtains £450,000, but has to pay back, besides £50,000 in excess of that sum, interest amounting to £15,000 in the first year, £14,700 in the second, and so on, till in the fiftieth year there is still some interest (£300) to pay. Surely an unprofitable arrangement for this company, if Von Boehm-Bawerk's proposition could not be applied to it. A house can be let for a rent of £140 per annum; the taxes and cost of repairs amount to £40 per annum, so that the net rent yielded by the house is £100. How profitable it would be to build such a house as this, if future money possessed the same value as present money in the estimation of the owner of house property! The house would fetch, on sale, £100 multiplied by a figure corresponding to the number of years for which it could be expected to yield a net rental of £100.

The proposition which we have enunciated is little else than an application of the truth that every market price which is not purely speculative indicates a value, in which it has its origin. It would be impossible to conceive of any reason why a premium should always be put upon present as compared with future goods or money, were it not that the former are esteemed more valuable than the latter. If both afforded the same amount of enjoyment—or, to employ once more the well-known technical expression, if the mar-

ginal utility of both were the same—then it would be for future goods alone that any demand would exist, and the premium would soon disappear. And as a matter of fact it does sometimes almost disappear in a certain branch of the credit market which we shall make the subject of special inquiry later on. Whenever a large number of capitalists are unable, for the time, to find a means of employing the whole or part of their circulating capital, the rate of interest for short loans falls to a very low figure.

It may cause surprise that some people should have disputed Von Boehm-Bawerk's proposition. All they have been able to do in this respect has been to point to a number of cases in which future goods are chosen in preference to present goods. It must be admitted at once that these cases are not of rare occurrence. We like to provide ourselves with new clothing at the proper time, but always according to the needs of the moment. Even in the case of good that are not liable to perish or to go out of fashion, we prefer that our supply should not reach us too soon; who would care to have delivered to him now all the fuel, wine, or water that he was likely to use during the remainder of his life? Money admits of being lent and can therefore never be unwelcome; if this were not so, we should be equally averse to receiving money before we required it for use, as few houses have places where it could be stored with absolute safety. Our wishes and wants must be satisfied at the right moment. This *may* have the result that, at a given moment, we prefer present to future things, but the reverse is also possible, and frequently the case.

But what does this reasoning prove? The number of persons who use tobacco is certainly far below the number of those who do not; nevertheless, tobacco has value. Corn growers do not buy corn, in fact they take it to market; yet corn yields money. An article may have value, even though the demand for it be confined to a portion of mankind, even though another portion of mankind be glad to dispose of it. In the same way, goods or gold may be worth more in the present than in the future, even though many should prefer them in the future. Everything depends upon the urgency and extent of the demand in either direc-

tion, and in our case there is no uncertainty as to the side on which the demand is more urgent. If the number of people offering to supply, were to be equal to the number desiring to obtain, present in exchange for future things, and if supply and demand were equally extensive and equally pressing, it would be impossible for interest to emerge. The premium which present capital obtains when it is exchanged for future capital, proves incontestably that the former is scarce in relation to the latter.

It will be useful to pause here for a moment in order to point out an error into which certain socialists have fallen. Some writers, who have sacrificed accuracy to clearness, have wrongly represented interest as being the natural produce of capital, in the same way as apples are the produce of the apple-tree, or eggs the produce of fowl. This view of interest is fostered by the use of such an expression as "begetting interest." We have only to reflect for a moment in order to see that the income out of which interest on capital is paid is always obtained by means of labor. A sum of money, a stock of raw material, even a machine, produces nothing of itself.* It is the labor, not the capital, that is productive; the labor for which the money is paid, and which converts the raw materials into manufactured articles or works the machine. The socialists were right in pointing this out, but they sometimes combined incorrect views with their criticism.

If, said they, all wealth be produced by labor, then labor alone has a claim to the wealth produced. Interest is an unjust tax levied by the capitalist. He owes his power of levying this tax to the organisation of society, which concedes to him the direction of production and the ownership of the instruments of production, thus enabling him to dictate terms to the laborer. But the tax, though permitted, is none the less unjust. Capital *per se* produces nothing and has therefore no right to receive anything.

In testing the soundness of this argument we have to distinguish between what the laborer gives and what he receives. He tills the soil—for a crop that has yet to grow.

* [This is quite inadequate. It is just as correct to say that *labor* "produces nothing of itself."]

He works as a bricklayer—on a house that will not be finished for some months. He spins yarn—to serve as raw material for the weaver. Even if he be engaged in finishing goods for every-day use, these goods have still to be packed and sent off—sometimes to distant countries—so as to reach the shopkeepers, who have to sort them and deliver them to the actual consumers. In short, he supplies, or helps to supply, goods which will not fulfil the purposes for which they are destined till some future time. On the other hand, what he receives in return for his services consists entirely of finished products. It is a serious mistake to regard these two different kinds of things as being equal in value. It is also a mistake not to regard the exceedingly important work performed by the *entrepreneur* as labor; but we let that pass in order to lay the whole stress upon the error of treating future goods as equal in value to present goods.

A co-operative society for production is formed. Its members are perfectly fitted for their work. They muster such a number of trades between them that they can even build the premises and make the machinery required by the society. But they have no capital. Therefore they apply to some one willing to lend it to them, and get him to do so on terms with which they are quite satisfied. A fixed sum is lent them, with which they are to build the factory; they are also promised a succession of annual loans by way of advance upon the products, it being stipulated that these are always to be delivered to the lender as soon as they are finished. The first sum must be repaid out of the profits; the other advances are periodically recovered by the lender out of the proceeds of the sale of the products. He charges interest on his capital. And this interest, we are told, is an unjust tax, an appropriating of what belongs to the laborer! There is no more injustice in it than there is in the additional price charged by the merchant when he accepts inferior things in exchange for superior; or in the higher wage earned for superior labor. The capitalist enters into an agreement with the society, in virtue of which each party is entitled to be supplied with something by the other. But that which the capitalist is to supply exists already; that

which the society is to supply has yet to be created, and it will be years before some of it is created. There is no equality of value here; and if the capitalist insists that the future things which are to be supplied to him shall be more numerous than the present things which he is supplying, he only insists upon receiving his due.

Let us now endeavor to explain the premium which attaches to present goods. The explanation is to be found primarily in the fact that people cannot always draw upon their income in the time of need. Heavy demands may have to be met in the present. The merchant has to honor his bills; the farmer's crops are delayed or they fail; the workman loses his employment through sickness or other causes; the official has to settle bills requiring immediate payment, and it will be some weeks before he draws his salary. People in such circumstances as these are by nature disposed to assume that the difficulties will, before long, have disappeared, and in many cases they have good grounds for the assumption. The merchant assumes that before long he will have disposed of his stock; the farmer feels sure that he will have better crops next year; the workman, that he will find employment; the official, that he will shortly be comparatively affluent. For these reasons, goods or money in the future are regarded as less valuable than in the present, and people are willing to pay a premium on them in order to get them at once.

Future goods can only serve for the satisfaction of future wants; the wants of the present can only be satisfied with things which actually exist. Nor is it sufficient that there exists a supply of goods in general, there must be a supply of the particular kind of goods required; the corn grower wants to exchange his corn, and the sugar refiner his sugar, for other things, and those other things must be in existence if the exchanges are to be effected. Commerce provides for this. Thus commerce requires a large amount of present goods, especially in trade with non-European countries. A close inspection of the manner in which foreign exchange operations are conducted will show that countries out of Europe take a long time to supply the equivalent of the goods sold to them.

The machines, manufactured goods, and other things which we in Europe send to countries in other parts of the world, are ultimately paid for with the produce of those countries, but not until some months after the arrival of the goods from Europe, for those countries are not in a position to exchange with us on any other terms. From the European point of view, this is an exchange of present for future goods; and the fact, that the existence of the former is a necessary condition of the exchange, is of itself a reason why it should be possible to obtain a premium upon them.

But the chief cause of the phenomenon, which we are endeavouring to explain, lies in the fact that all production requires time. The person who produces must either himself possess the means for supplying his wants during the time that he is engaged in the work of production, or he must manage to find some one who will pay him for his services. And the more extensive the work, the greater the quantity of present goods—in other words, circulating capital—that will be required. Now we know that works which take a long time to complete are often very productive.* A person who builds houses in localities where the population is increasing will eventually be able to get good rents for them. Railway enterprises and land-improvement schemes frequently bring in large profits. In these cases people may have no hesitation in offering a high premium—expressed in future money or goods—for present money or goods, in the expectation that there will be an abundance of the former at their disposal later on.

It also takes time to manufacture implements and machinery, but great advantages are sometimes obtained by doing so. Not necessarily, however. The amount of advantage to be got by using a machine depends upon its cost and durability, and upon the extent to which labor

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* [A good many readers are certain to look on this passage as in effect admitting, what the author has before denied, that capital is truly productive, in that it constitutes a *power to wait*, the control of which enables entrepreneurs to choose methods of production which are more time-consuming, but, at the same time, more effective than other methods.]

can be saved by using it; in other words, upon the increased production that can be secured by its use. But daily experience shows that the conditions under which it is possible to get good results from the use of costly implements and machinery are fulfilled in a very large number of cases; and whenever this is so, an inducement is created for obtaining present goods, at a premium if necessary. Here again there is the prospect that the supply of future goods will be so abundant that some of them may easily be spared. Von Boehm-Bawerk calls the manufacture and use of machinery and implements "round-about production." The production of the article desired is here achieved in an indirect manner; an intermediate produce being first manufactured—something which possesses no value of itself, as it can only serve the purpose of an instrument for producing what is desired. The expression is well chosen, as it reminds us of the demand for capital arising out of the use of machinery.

Does all that has been said fully explain the origin of interest on capital; has it been made quite clear why a premium is obtained on present as compared with future money or goods? We should be mistaken if we thought so. We have shown that present needs may be very urgent; that commerce has need of circulating capital; that advantage is frequently to be got from the use of machinery. But all this merely proves that there must always be a demand for present, in exchange for future goods; not that this demand must result in a premium. One might argue as follows. Water is indispensable for life. If we had no water, we should die of thirst, the soil would yield nothing, we should have no power wherewith to drive our machinery, we should be unable to keep ourselves clean. Therefore water must be very dear. But we know that it can be had in most places for nothing, and we know why: because of its abundance. This illustration may show what is wanting to complete our explanation. The final reason why capital can procure interest is, that capital is relatively scarce The premium obtainable for present, in exchange for future things indicates, as we have seen, that the former are more valuable. But all value has its origin in scarcity Only

"economic goods" have value; that is, only those goods of which the supply falls short of the amount required. This general proposition must be applicable here. All that has been said above fails to explain the origin of interest, unless it can be assumed that the demand for capital exceeds the supply. But the existence of interest proves that we are justified in assuming this.