

EUGEN VON BOEHM-BAWERK



THE POSITIVE THEORY OF CAPITAL

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CONTENTS:

[Translator's Preface](#)

[Author's Preface](#)

[Introduction](#)

[BOOK I: THE NATURE AND CONCEPTION OF CAPITAL](#)

[Book I, Chapter I: Man and Nature](#)

[Book I, Chapter II: The Nature of Capital](#)

[Book I, Chapter III: Historical Development of the Conception](#)

[Book I, Chapter IV: The True Conception of Capital](#)

[Book I, Chapter V: The Competing Conceptions of Capital](#)

[Book I, Chapter VI: Social and Private Capital](#)

[BOOK II: CAPITAL AS INSTRUMENT OF PRODUCTION](#)

[Book II, Chapter I: Introductory](#)

[Book II, Chapter II: Capitalist Production](#)

[Book II, Chapter III: The Function of Capital in Production](#)

[Book II, Chapter IV: The Theory of The Formation of Capital](#)

[Book II, Chapter V: Formation of Capital in a Community](#)

[Book II, Chapter VI: Possible Objections](#)

[BOOK III: VALUE](#)

[Book III, Chapter I: The Two Conceptions of Value](#) [Ref.](#)
[121](#)

[Book III, Chapter II: Nature and Origin of Subjective Value](#)

[Book III, Chapter III: The Amount of Value](#)
[Book III, Chapter IV: The Marginal Utility](#)
[Book III, Chapter V: Complications](#)
[Book III, Chapter VI: What Determines Marginal Utility](#)
[Book III, Chapter VII: Alternative Uses](#)
[Book III, Chapter VIII: Subjective Exchange Value](#)
[Book III, Chapter IX: The Value of Complementary Goods](#)
[Book III, Chapter X: The Value of Productive Goods. Value and Costs.](#)

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[BOOK IV: PRICE](#)

[Book IV, Chapter I: The Fundamental Law](#)
[Book IV, Chapter II: Isolated Exchange](#)
[Book IV, Chapter III: One-Sided Competition](#)
[Book IV, Chapter IV: Two-Sided Competition](#)
[Book IV, Chapter V: The Law of Supply and Demand](#)
[Book IV, Chapter VI: The Individual Determinants of Price](#)
[Book IV, Chapter VII: The Law of Costs](#)

[BOOK V: PRESENT AND FUTURE](#)

[Book V, Chapter I: Present and Future in Economic Life](#)
[Book V, Chapter II: Differences in Want and Provision for Want](#)
[Book V, Chapter III: Underestimate of the Future](#)
[Book V, Chapter IV: The Technical Superiority of Present Goods](#)
[Book V, Chapter V: Co-operation of the Three Factors](#)

[BOOK VI: THE SOURCE OF INTEREST](#)

[Book VI, Chapter I: The Loan and Loan Interest](#)
[Book VI, Chapter II: The Profit of Capitalist Undertaking. Principles of Explanation.](#)

Book VI, Chapter III: The Profit of Capitalist Undertaking. Complications.

Book VI, Chapter IV: The Profit of Capitalist Undertaking. The Labour Market.

Book VI, Chapter V: The Profit of Capitalist Undertaking. The General Subsistence Market.

Book VI, Chapter VI: The Profit of Capitalist Undertaking. The General Subsistence Market—(continued).

Book VI, Chapter VII: Interest From Durable Goods

Book VI, Chapter VIII: Interest From Durable Goods—(continued).

Book VI, Chapter IX: Results

Book VI, Chapter X: Interest Under Socialism

BOOK VII: THE RATE OF INTEREST

Book VII, Chapter I: The Rate in Isolated Exchange

Book VII, Chapter II: The Rate in Market Transactions

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Book VII, Chapter III: The Rate in Market Transactions—(continued).

Book VII, Chapter IV: The Market for Capital in Its Full Development

Book VII, Chapter V: The Market for Capital in Its Full Development—(continued).

APPENDIX TO Book VI, Chapter V

Footnotes

Translator's Preface

In his *Geschichte und Kritik der Kapitalzins-Theorieen* (1884), which I translated in 1890 under the title of *Capital and Interest*, Professor Böhm-Bawerk, after passing in critical review the various opinions, practical and theoretical, held from the earliest times on the subject of interest, ended with the words: "On the foundation thus laid, I shall try to find for the vexed problem a solution which invents nothing and assumes nothing, but simply and truly attempts to deduce the phenomena of the formation of interest from the simplest natural and psychological principles of our science." The *Positive Theory of Capital*, published in Innsbruck in 1888, and here rendered into English, is the fulfilment of that promise.

The criticisms directed against the various theories of Interest in the former work may be briefly summarised as follows.

The Productivity theories—those which, more or less explicitly, attribute the existence of interest to the productive power of capital—are dismissed as confusing quantity of product with value of product, either in the way of tacitly assuming the identity of the two, or of failing to show any necessary connection between them. The problem of capital is a problem of surplus value, and value does not come from the side of production but from the side of consumption. Capital is productive, but interest is not its product.

The Use theories, which are more or less scientific expansion of the familiar formula, "Interest is the price paid for the use of capital," are shown to base interest, which is notoriously an income obtained from all kinds of capital, on an analogy drawn from one special kind of capital, viz. durable goods. The idea that the use of capital

is something distinct from the using-up of capital, and interest something different from the price of the principal, becomes untenable when the true economic nature of the "good" is understood as the sum of its material uses or services. If consumption is only a single exhaustive use, and use only a prolonged consumption, the payment for "use" of Capital must be included in the price of capital.

In the Abstinence theory, which makes interest a compensation, made to the owner of capital, for his renunciation of immediate consumption, Böhm-Bawerk sees a confusion of the origin and accumulation of capital with the source and cause of interest. Abstinence will account for the owner having a sum to lend, but it will not account for that sum growing 3% larger in a year's time.

Lastly, the Socialist or Exploitation theory, which makes interest simply a gain from exploited labour, is shown to be a theory which could only arise on the negative basis of the unsatisfactory accounts hitherto given, and on the positive basis of a mistaken value theory. When an income obtained without work and without risk was claimed as the reward of abstinence, and when all value was ascribed to the action of material labourers, it was inevitable that there should rise a reactionary theory proving that interest was robbery. Thus the board was swept clean for the Positive Theory.

A translator who does his duty must pass the work he renders through his own mind. The necessity this imposes on him of understanding his author, and getting at his point of view, should make him peculiarly sensitive to certain difficulties which are not removed by simple translation. Modes of thought, arrangement, manner of working, may remain foreign. A translator's preface, then, is not without justification if it anticipates some of the questions that are sure to arise in the minds of readers more accustomed, perhaps, to English economics. Now as the main difficulty of the present work is that alluded to by Professor Böhm-

Bawerk in his own Preface, that the strikingly simple outlines of his theory are obscured by the very elaboration and completeness with which it is worked out, perhaps the best service I can do is to give a short direct summary of the main argument, expanding on one or two points which seem to me to require commentary.

Economic science being based on an analysis of the industrial life, the first question in a theory of capital is one of terminology: What does the practical world mean, and what has it hitherto meant, by the word Capital? Here we find in common acceptance not one but two conceptions, both based more or less on Adam Smith's old distinction between National Capital and Individual Capital. It is quite necessary for scientific progress that the exact distinction between these two conceptions should be fully recognised, but it would be useless to refuse the name to either of them: the practical world would not follow us. On looking closer at the two, however, we can see that one of the conceptions really includes the other, and that the difficulty may be avoided by adding an appropriate predicate to each. Taking as basis the old root idea of "an interest-bearing sum of money," we may define capital in its widest sense (or Acquisitive Capital), as the complex of products destined to the Acquisition of goods. Under this, as narrower category, we put the conception that came later in time. but perhaps better deserves the name without predicate, that of Social or Productive Capital, comprising all products destined for the production of fresh wealth; briefly, the complex of Intermediate Products. Thus we happily preserve in both conceptions the popular idea of "income bearing": society as a whole can only obtain an income by "producing" new wealth, while the individual may "acquire" it as well by the transfer of old wealth.

By these definitions Land and Labour are excluded from capital. They have certain analogies, even close analogies, with it, but scientific accuracy is not gained by making

definitions so wide as to conceal really discrepant elements. The definition of Social Capital also excludes the Maintenance of Labourers; for, obviously, to include the direct and most obvious means of living would be to take away all possibility of distinguishing between capital and consumption wealth.

The subject, then, naturally divides itself into two parts:—Capital in the narrower, but more widely important, meaning of the Instrument of Production, and Capital as the Source of Income.

First, of the Instrument of Production. In the economical world man finds himself a being of infinite want, confronted with a universe full of potential wealth but with no tools except hands and brains to give him possession of it. Incapable of creating anything, he yet finds himself endowed with a power of moving things, which, as he masters the secrets of nature's working, gradually enables him to imprison, impress, or suspend the action of her powers, and so make her his servant. In various concrete ways he adapts or rearranges nature—never, of course, changing her laws or acting contrary to them, but varying the causal connection of natural processes in such a way that, to a large extent, he remakes the natural world to suit his purposes. Thus, between man and his natural environment there gradually grows up a third term, a machinery for the fuller satisfaction of man's life, and to this, in general terms, we give the name Capital. But, however the growth of wealth and industry disguise the fact, in all production of wealth there are only two original forces at work, nature's powers and man's powers. Human powers, as always limited, and as always put forth "at the cost of" brain or tissue, are all "economic"; but in the great treasury of natural forces there are some powers so universal in their scope and working that they do not enter into calculations of cost. As we say, using two phrases whose full significance we do not always realise, we do not

"economise" the free gifts of nature—they "cost" us nothing; although they enter into the operations of all production, they do not enter into "economic" consideration. The original factors of production, then, are man and nature: the strictly economic factors of production are labour and those natural forces (called by metonymy Land) which are limited and capable of being monopolised. But Capital, however much credit it gets and deserves for its work in present-day production, is no independent factor alongside of these. In one aspect it may be called "stored-up labour," in another—and more truly—"natural force stored up by labour"; but in capital itself, alike in its origin and in its working, there is nothing that is not accounted for by the other two factors.

We say, in its origin and its working, and it is advisable to emphasise that these are distinct things. The origin of capital is due to two factors, Industry and Saving, both being indispensable. It should be noted, however, that what is saved is not capital but productive power. The primitive labourer works overtime, produces a surplus subsistence, and spends it in making tools: his saving is saving of strength to make tools. The modern worker produces a surplus over his subsistence: gives that over to banks and other agencies to be spent in building factories, erecting machinery, etc.: what is saved is the natural forces thus put in position to turn out consumption goods. But when we know the origin of capital, we have still to ask: What is the nature and character of the production carried on by means of capital? The answer may be put in the following way. The aim of production is essentially the making or procuring of a living. The animal finds a certain provision spontaneously offered it in nature; goes straight toward that provision; and never gets beyond it. Man, on the other hand, even in the simplest state, takes an indirect course. He allies natural with his own (still natural) forces; and he gets behind these natural forces, setting them against each

other, or co-operating with each other in carrying out his instructions. He steals fire from heaven, and turns it against the gods. The end is always the consumption good—the good which exhausts itself in ministering to man's life in its higher and lower forms; the factors are always labour and nature; but the way in which the end is reached is here indirect, lengthy, and roundabout. From the rude spade, which the savage first uses as a medium between his bare hands and the fruits or roots he lives on, down to the many years' production process stretching between the sinking of the shaft for coal or iron and the flying shuttles turning out the cloth which finds its goal in covering bare backs, is simply an evolution of the roundabout method. The course of economic progress puts increasing intervals between preparatory and finishing labour, decreasing the stock by increasing the tools; and at every new stage labour embodies itself in further intermediate products or capital. The characteristic result is twofold. As we should expect from the accumulation and concentration of natural forces, this capitalist method is immensely productive as compared with direct or unassisted labour. On the other side, however, is to be put the sacrifice of Time necessarily involved in the indirect process. The relation of these two aides must be carefully noted. As time plays a greater part in production—as the average period is extended—the absolute productiveness of the capitalist process increases, but the relative productiveness decreases. That is to say: when the process has reached a certain point, it becomes subject to a law of diminishing returns.

The function, then, of capital in production may be said to be that of allowing labour and natural powers to work out their economic effects in processes that take time, or the utilisation of natural forces in roundabout methods. Or, if we adopt the peculiarly modern view that man is the economic Ziepulnkt, we may say that capital gives time to

labour to avail itself of those powers of nature which become available only at a considerable sacrifice of time.

So much for the function of capital, and one is apt to jump to the conclusion that, having shown how capitalist industry produces a great quantity of products as compared with unassisted labour, the sole and sufficient origin of interest has been indicated. A little consideration will show that we are yet on the threshold of that inquiry. The concrete result—the *raison d'être*—of a factory is the mass of products it sends to market. These are the transformed shapes of raw and auxiliary materials, machinery generally, and labour; and the price realised for them repays the outlay on materials, keeps up the machinery, and pays the wages—including all the wages of intellect. But beyond the repaying of all these costs it is a familiar fact that, in normal production, the prices realised leave a surplus. This surplus is not accounted for by profits, although often confused with them. Profit is either employer's wage (and is thus already included), or it is the chance of a happy conjuncture that allows a higher price to be obtained than is normal—which chance is continually being levelled down by competition. But this surplus is recognised as something due to the owner of capital without claim of personal work from him, and it is a surplus of value which competition cannot wipe out. In Böhm-Bawerk's former book, *Capital and Interest*, it was exhaustively proved that no theory had yet shown what capital does, or forbears from doing, that it should get this surplus under the name of interest. It is not a payment for the labour embodied in concrete capital, for that labour is presumably fully paid for—say, by the machine maker to his men and to himself—and does not warrant a further continuous payment. It is not a payment for the working of natural forces embodied in the machine, for the value of the machine consists in nothing else than in the working of these forces, and in the price is already paid all the forces

that the machine will put forth and mediate. And it is not wear and tear, nor is it insurance against risk, for in all normal undertakings these are provided for by separate replacement and insurance funds. For proof of these statements I must refer the reader to that book, or the brief summary of it in the preface. What must be emphasised here is that the explanation of capital as the Instrument of Production is exhausted when it is shown that it allows nature and labour to work out their effects in lengthy processes. The source of interest will not be found simply within the sphere of production, for the reason that interest is a problem of surplus value, and value takes us into the sphere of distribution. Thus we come to the next division of the present work, Capital as it appears in the sphere of Distribution, or Capital as the source of the income called Interest.

If we begin, as usual, by asking what business people understand by interest, we shall be told practically that a sum of money paid down now—say £100—will buy a greater sum—say £103 or £105—this day twelve months. Or if I owe £100 now for goods received, and do not pay the debt for a year, I have to add a certain amount under the title of interest.

The most obvious fact here is that the payment of interest has some very definite connection with the time when payment is made. This suggests the general question: What is the place and influence of time on the value of goods. And the answer is: It is an empirical fact of undoubted universality that present goods are valued more highly than future goods of like kind and amount.

For this three causes may be given. First, is the difference between the circumstances of want and the provision for want in present and in future. In any case, if want is pressing and provision is scarce, value is high. But the pressure of want in the present is always with us, while as regards provision in the future it is generally true omne

ignotum pro mirifico. Thus present goods obtain a permanent importance from felt present wants, and future goods a permanent unimportance from anticipated future provision. Most men, accordingly,—people in immediate distress and beginners of all sorts being types—are willing to pledge their future for a really inadequate present sum. Second, is the general underestimate of the future, common to humanity, and traceable to want of imagination, defect of will, or feeling of life's uncertainty. Children and savages are typical of the improvidence which is more or less striking in all classes. It may be that this cause is not on the same level with the first, and tends to less importance with social progress. But, in the world as it is, it is certain that the things of the future are of less value to us simply because they are future. And, third, is the technical superiority of present goods. As we have already seen, in the hands of labour wealth increases enormously with the extension in time of the production process. Goods available now have accordingly the promise and potency of being greatly multiplied in the future, while goods coming into our disposal only in the future must undergo another period of production before the same abundance is reaped. Of these three causes the first two are cumulative, the second alternative. The first group alone would account for a difference in value between present and future goods: the appearance of the latter makes the difference not only apparent but measurable.

If, then, from so many aides and classes—from the young who expect to be better off, from the rich and improvident who wish to enjoy the present, from the industrious who wish to add to their wealth; that is to say, from probably the majority of mankind—there comes an underestimate of the future compared with the present, it is easily explained why, as a rule, present goods have a greater value than future goods of like kind and amount.

In this empirical and psychological fact, for the full treatment of which the reader is referred to Book V., our author finds the source of interest in its three principal forms.

The simplest case of interest is that in which it appears in the loan for consumption. Here we have a real and true exchange of a smaller amount of present money, or present goods, for a larger amount of future money or goods. The sum returned, "principal" plus interest, is the market valuation and equivalent of the "principal" lent. The apparent difference in value is simply due to our forgetting that £100 in our hands now is not the same thing as £100 a year hence. This Agio on present goods is interest. In other words, interest is a complementary part of the price; a part equivalent of the "principal" lent.

In this simple case interest is more evidently the result of the first two causes just mentioned. Apart altogether from an organised system of production this agio would emerge, and has emerged, as something claimed by the saving from the unthrifty. But so long as there was no organic production, the circumstances of borrowers and lenders were too diverse and arbitrary to allow of a measured rate of interest. But when the third factor comes into play, time becomes a condition of surplus product, and interest becomes measurable in terms of time.

The second and principal form assumed, then, by interest is that in which it appears is part of the so-called "profit of undertaking." A capitalist employer hires land, buys raw and auxiliary materials, machinery, power, and labour. He sets these to co-operate in the making of a product. The product is the new shape taken on by all these productive goods, and we should naturally expect that the price obtained for it would exactly cover and reimburse the value of all the goods consumed in making it. But, as we know, after all ordinary costs are accounted for, the price obtained in normal economic circumstances shows a

surplus of value. The explanation of the surplus is that productive goods, while materially and physically present, are, to economical consideration, future goods: that is to say, they are products in the making. The wants to which they minister, and from which alone they get their value, are future wants. On the admitted ground of equivalence between costs and products, then, the value of the means of production must be the same as the value of the goods into which they pass. But these goods being in the meantime future goods, and suffering from the discount which, as we have seen, is made on all future goods, the value of means of production must suffer the same discount. The undertaker intentionally turns his wealth into productive goods: that is to say, he exchanges his money for raw materials, workshops, machinery, labour. In the production process these ripen into present goods, with the full value of present goods. The price he receives for these recoups all his expenditure plus interest. Interest thus proves itself, as before, the difference between the formerly future and now present goods.

There is a third case of interest which has some features so puzzling as to demand separate consideration: this is the case of income obtained from Durable Goods, usually called Hire or Lease, and, in one case, Rent. The distinction between a perishable and a durable good is that, while both are the sums of their respective uses or services, the durable good is a sum extending over a period of time. But on our theory the later services of such a good must have a less value than the proximate services, and the total value of the good will be a sum of diminishing amounts. The "capital value" of such a good, then, will be to all appearance much less than the sum of the values really obtained during its lifetime. Here, as in the former cases, the services originally undervalued ripen to full present value in the hands of the owner, and the difference between the past and the present values, after providing for

replacement of the good, is Interest. Thus if the owner of capital throws his parent wealth into the form of stone and lime, he possesses, in the durable shape of a house, a sum of future uses discounted according to their futurity. As each year passes one annual service is realised, and its value is thrown off, while each service still to be realised is one year nearer the present, and is thus one year more valuable. The house, as now containing one rent less, is less valuable, and this loss falls to be deducted from the gross return as wear and tear. But what is lost, be it noted, is not one annual service estimated at present value; it is the last future service of which the good is still capable,—for if all the services have moved up one step in value it is the value of the last service that drops off. The difference between the present service realised (gross rent) and the last service now deducted (economic wear and tear) is the net return of interest. Thus, again, we find that interest is the difference between the formerly future and now present goods.

It will be seen that in this we have a theory, not only of durable consumption goods such as houses, and of durable productive goods such as machinery, factories, and fixed capital generally, but a theory which carries us beyond our formal definition of Capital into the sphere of Land. In land we have a durable good whose services will be rendered to generations unborn: the "last" service is, therefore, to the calculations of the present, nil: there is no economic wear and tear—no need of any fund for replacement—and the gross return suffers no deduction but is all interest. To put it concretely. A man buys land as he buys fixed capital;—to get an interest from it. He buys its annual services or rents for a sum which represents the future services diminished in perspective. In other words the "capitalised value" is not an infinite number of years' rents but so many years' purchase. In his hands the future uses ripen into present: he gets the present value of what he bought as future

value: as there is no wear and tear, nothing of this need be set aside for replacement: the whole gross rent is net interest. Ricardo, in pointing to the "original and indestructible powers of the soil" as the cause of rent, was right so far as his explanation indicated why the gross return was also the net, but wrong so far as it indicated that rent was due to the productiveness of this peculiar kind of durable good. The interest on a mine and the rent from land are essentially the same, although the one should wear out in thirty years while the other is "indestructible."

These are the simple outlines of the Positive Theory. By it all three kinds of interest are traced to the one identical source, the increasing value of what are, either naturally or economically, future goods, as they ripen into present goods. But when dealing with the principal form of interest, that in which it appears as part of the profit of undertaking, Dr. Böhm-Bawerk makes a long excursus into the relation of wealth to labour, which is not the least suggestive and valuable part of the work. As it suffers somewhat, however, from its position in the text, I shall take the liberty of putting it in my own way.

There are three markets in which the particular kind of "future goods" known as means of production are exchanged against finished present goods—practically against money: these are the Labour market, the Land market, and the market for Concrete Capital. Taking the Labour market as the most typical and the most difficult, its prominent features are these. On the one side are the Capitalist Undertakers. These are men presumably possessed of a surplus of wealth which they cannot advantageously use in their own consumption; to them personally, therefore, the present goods which constitute their surplus have per se no advantage over future goods. But in this surplus they have the means of waiting over lengthy processes of production. As their wealth increases the average period of production is extended, and with

every extension the absolute productiveness of the process increases. On the other side is the majority of the population, the Wage-Earners. Their circumstances, as a class, are such that they cannot engage in any independent production that takes time. Even if they could, their production period would necessarily be short, and in competition with the long process the handicap would be too heavy. It may be assumed, therefore, that they will rather take service as "hands" than risk independent production.

Evidently the big battalions are on the side of the capitalist, and in regard to this particular kind of present good, Labour, it seems to need no further demonstration that the price of it, namely Wage, will always be less than that of product, and thus allow the employer an interest. This is, in general terms and in a more dispassionate way, the Socialist answer. But, while admitting, as we very well may, that there is enough and to spare of exploitation in profit generally, the question is by no means so simple as Socialist theory would have it. If there is force on the one side there are certain forces which work steadily on the other. The Trade Unions give the labourers a certain power of waiting, and tend to force employers, as a class, to give up at least that portion of profit which is pure exploitation. Yet wage would not be explained if it were shown to be, in many cases, the exploitation of profit! The inter-competition of capitalists, again, has surely been effective enough of late decades to force the remuneration of capital towards an economic—as distinguished from an exploitation—level. If there is no economic level of interest, why has it not been wiped out of existence altogether? The argument is one that Socialism itself often uses; that, in some respects, the dependence of capital is as absolute as that of labour. It is necessary even for the status quo of wealth that the capitalist should bury his surplus in the fertile womb of earth, or in the living powers of man.

But in the present state of economic development there is no question of mere preservation of wealth—there can scarcely be, so long as the seed sown returns some thirty, some fifty, some a hundred fold. The motive of the capitalist undertaker is certainly not preservation but increase. He changes his wealth into means of production in order that the value of the products should be more than the value of the costs. He is warranted by experience in assuming that, at the worst, the price realised will contain a certain minimum rate of interest; will, most probably, contain also a good wage for himself as master workman; and that, possibly, a happy conjuncture may give him a "profit" besides. (Of course I am speaking of the enlightened employer who knows that "wage," technically, is remuneration for work done, and does not claim as wage more than, say, the remuneration of a Prime Minister.) Where the employer and the capitalist are separate entities—as they always are to economic consideration—the motives also are distinct: the motive of the employer is wage and "profit"—using that ambiguous word in the loose meaning of gain beyond wage of superintendence and pure interest—while that of the capitalist is interest—with perhaps a chance of "profit." Now, as thus separated, the competition of capitals with each other becomes more intense; for capital becomes a suppliant, not only to the labourer who demands the minimum wage, but to the class of employers who expect a perhaps extravagant "wage of superintendence," and a "profit" besides. In this state of sharpened competition the insufficiency of the exploitation theory becomes manifest to experience. We are forced to see that there is a level of interest which no amount of competition normally levels away, and we conclude that this is the economic level. Where the inter-competition of capitals is the fiercest, the owner of wealth has not to content himself with the mere preservation and re-creation

of his wealth—much less pay a premium to labour for keeping it—but gets his minimum $2\frac{3}{4}\%$ or 3% of interest.

This explanation will be found if we turn from the question as between labourers and employers, and consider the larger question as between owners of present goods on the one side, and labourers and employers alike on the other. And here we come to Böhm-Bawerk's enunciation of a proposition which seems to me one of the most important in modern economics. It is that the supply of present goods, available in any community either as means of production to labourers or as subsistence to mere borrowers for consumption, is the sum of that community's existing wealth exclusive of land. No one nowadays hoards wealth, drawing on it as needed. Thanks to banking systems and facilities for investment, nearly all wealth that is not actually being consumed by the owners is made available to supply this double demand. Disregarding as before the demand for consumption, the effect of which is merely to lessen the amount of wealth available for productive borrowers—and remembering in passing that the *agio* on present goods is the joint result of these two collateral demands, we find this wealth confronting the demand of labour, transmitted through the employers for the means of subsistence during the production period. Now, thanks to well-known motives, wealth in normal circumstances increases faster than population. As it accumulates it becomes possible for the labourers to extend their processes. Seed-time and harvest become separated, not by months but by years, and the amount of wealth in a community, as enabling labour to bridge over the long time of growth, becomes visibly the condition of its average production period, and so of its average productiveness. Thus to him that hath much much is given: the rich nation is the heir of the economic promises.

From this it is not difficult to see that the value of means of production must always lag behind that of finished

products. There is always a demand for ampler means of living, and the condition of obtaining ampler means is—time to extend the production process. So long, then, as the wants of spiritual beings call for fuller and finer satisfactions, and so long as the working life rises to higher levels, so long will there be a premium put on the present wealth which makes more ample wealth possible. Thus we are justified in saying that the demand for means of production will always be greater than the supply, and interest, as the agio on such, will appear in the price of products.

The superficial resemblance of this Subsistence Fund to the generally discredited Wage Fund of the classical economists will not mislead any one who enters into the heart of Böhm-Bawerk's theory. The difference between the two will be found in the few pregnant sentences on pp. 419, 420. In case of misunderstanding, however, two cautions may be given here. One is that by "means of subsistence" must be understood, not simply food, nor even the common necessities and comforts of life, but all that goes to the maintenance of the workers, whatever their various levels of comfort. It is not a certain wage fund, provided arbitrarily by capitalist employers, that is available for the simple "subsistence" of the working classes: it is the entire wealth of the community that is available for the maintenance of all classes of workers. The caution is much needed quite outside of this connection. I am persuaded that many people think they have determined the "cost" and due reward of labour when they have found how many weekly wages of 20s. are contained in the community's stock of wealth. The mischief that this idea does, in making people think that a rise of wages is a social calamity, is, to my mind, very great. To economic consideration, however, the line is a vanishing one which divides Hodge's beer and bacon from Plugson's venison and champagne. Rightly considered, the prices of books, the stipends of clergymen

and teachers, the seats at theatres and concerts are "expenses of subsistence," just as much as the labourers' bread and cheese—unless we are to limit the category of "workers" to the 20s. a week class.

The other caution is that this wealth available for subsistence does not consist exclusively of goods already in the finished state. To put all wealth into this form, indeed, would be the greatest possible waste. What is required is, that the various means of subsistence should be ready when wanted, and this involves that, at any given time, the wealth of a country consists of products at all stages of maturity. To put it concretely:—At this moment the wheat is being sown that will feed human beings after next harvest, while the sapling is being planted that will not come to its full growth for a century to come: at the same moment, perhaps, the oak is being felled that began its growth a hundred years ago, and to-morrow the wood of it will enter into the framework of a threshing-machine which will extend its life-work over a score of harvests: sapling and tree, machine and wheat, are alike parts of that wealth which is available for the labourers' demand in its continuity.

Remembering these cautions we can see the full import of this conception. It defines the true relation of wealth to labour in the following terms: The function of existing wealth is to subsist the workers during the interval between the beginning and the end of the social production period. This strikes us as strange mainly because of the bourgeois idea that wealth is the end and goal of labours, and the more vicious idea that labour is a tax on life. For certain purposes of economic study we may think of labour as the means, and consumption wealth as the end of production, but the economist falls into error whenever he forgets that economic life is an endless circle, where wealth, as subsistence, passes into muscle and brain, and muscle and brain pass into wealth again. Even when we

rise—as the economist may do—to wider conceptions, and point to man's full free life as the goal of economic effort, we ought to recognise that the working life which we lead, and should lead, is at once an end and a mean. In working we live; and in working we produce wealth: this wealth, again, permits of freer work and fuller life. In correspondence with this, the type of labourer is not the man who produces on one day to consume on the next, but the man who consumes during his work day—who consumes while he produces—and, moreover, whose consumption increases with his production. The function of wealth, then, we say, is to support this working life, with its increasing claims, during its work. Thus instead of making wealth the final cause of industry—as the economist in virtue of his professional bias is apt to do—or making it the beginning and limit of industry—as the Wage Fund theory tended to do—this conception places wealth in the centre as the maintenance of the working world during its rise to higher and higher levels of working life. In other words, it puts the economic conception into line with the moral by making wealth simply the mean to the working life.

If, then, interest is so purely a natural phenomenon, why has it met with so much covert dislike, and so much scientific opposition? There are at least three reasons. First, the element on which all interest is based, namely time, has come to be a peculiarly important factor in modern production. All things come to him who waits, and, in economic life, this describes the capitalist. But this fact involves that the labouring classes who cannot wait, and cannot compete with the productiveness of lengthy processes, are put in a position of peculiar dependence: hence the possibility of exploitation of wage, of usurious rates of interest, of unjust rents. Second, from a moral point of view, there is much that is objectionable in the fact that interest allows certain classes to live without working and to make this possibility hereditary in their families.

Third, in this income there is no ratio between gain and desert. Those who have little must accept Savings Bank interest for their hard-earned shillings; those who have much have all the chances of bonds, mortgages, joint-stock investments and the like. All the same, so long as men do put a different valuation on present and future goods, interest cannot be prevented. Even a Socialist state could not prevent it: if by forcible means it were stopped between individuals it would still obtain between commune and labourer. The state in this case would replace the capitalist, and "exploit" the worker in the same way—although, it may be hoped, with a clearer view to the wellbeing of the exploited—but no organisation could make interest into wage.

In Book VII. Dr. Böhm-Bawerk passes to the most difficult part of the subject, the Rate of Interest. Here, however, we shall find him using terms which are scarcely intelligible without some knowledge of the theory of value enunciated by Jevons and Menger, and now held practically as the fundamental doctrine of the Austrian school. The formulation of this theory, so far as was necessary to the theory of capital, occupies Books III. and IV. of the present work. It is not possible, unfortunately, in the short space at my disposal, to give anything like an easy account of this theory. I have already found difficulty enough in putting it into the compass of my own Introduction to the Theory of Value, and all I can hope to do here is, perhaps, to assist the reader who finds any difficulty in the text.

The essential points are as follows. Value is altogether based on utility, and the amount of value is determined, not by average, but by final or marginal utility. The subjective value of a good, as distinguished from its utility, lies in its being the indispensable condition of some satisfaction of want: the amount of value it obtains is determined by the last use to which it, or a similar good of the stock, is put in the then circumstances of want and provision for want.

Thus the utility of a bushel of corn is given it by its power of supporting life: its value comes from the fact that it is so limited that some human want depends on it for satisfaction: the amount of its value is determined by the least use to which the bushel is economically put in the circumstances of the consumers on the one hand and the amount of the harvest on the other. Thus value has no absolute level; it is neither intrinsic nor relative to any personal or material average: it is always found in the relation of these two determinants of Want and Provision.

Price, or Exchange Value, again, is a superstructure on this subjective value, determined by the competition of buyers and sellers with each other and among themselves. Under a simple barter system each party in a market would put a subjective value on the goods changing hands, as having a direct bearing on his own wellbeing, and would base the amounts offered and asked on this valuation. With organised industry comes the money valuation, where the comparative use value of goods to people generally becomes reflected on a money scale, and it becomes more definite and intelligible to say a thing is worth so many shillings than to say it is worth so many other things which admit of direct valuation in terms of satisfaction of want. Buyers and sellers, then, come together in markets with a definite valuation in their minds of what the goods or the money is worth to them. Thanks to the differences in subjective scales, it is the interest of both parties, and it is possible for both parties, to get an advantage by the exchange, although their interests diverge in regard to the amount of advantage that each may get. In this competition the goods pass from the "most capable" sellers to the "most capable" buyers, and the price is fixed between the valuations of the two "marginal pairs," viz. the last buyer and seller and the first unsuccessful buyer and seller. The level, again, of these marginal pairs is determined by the relation of the wants of both parties to their economical

provision. It must be added that, in an organised economy, "utility" becomes a more complex conception. In the case of a manufacturer the utility of raw material is not the personal uses to which he can put his own products, but the uses to which he, as a manufacturer, can put the raw material, and these, again, are determined by the wants of his customers. The direct use of a good is here replaced by the employment of the good, and the "most useful " is translated into the " best paying," or "most remunerative." And this emergence of the professional producer, who makes for the market and to whom his produce has really no subjective value, simplifies the calculation of the marginal pairs by eliminating the subjective valuations of the sellers, and determines the price at the valuation of the last buyer.

This law does not, as one would suppose, come into collision with the old law that value is determined by costs of production. The Law of Costs is one amply confirmed by experience as regards the great mass of articles produced under free competition. But this empirical law was never thought to determine the value of goods produced under any other conditions. The point on which it requires amending is that it should be expressed as a law of equality between costs and products. The old theory not only said that the value of goods tended to an equality with that of the means of production, but went on to put the causal relation exactly the wrong way about. As we have said, it is human want that gives value to goods; and that value is thrown back upon the means of production without which the goods cannot come into existence, and which are really the goods in a previous state of existence. In developed economy it is true that there comes a reflex influence from costs to products. If a group of means of production is capable of making goods which for the moment have different marginal utilities, the value that is transferred to the costs is the value of the last or marginal product made

from these costs. In time, no doubt, competition forces this value again on to the other products, thus giving the impression that the value comes from the costs: but the fact is that the very value which these costs have, came from their product—not, however, from this or that particular product, but from the marginal one.

Now the immediate point of connection between the theory of value and the theory of interest is that the problem of interest, in all its manifestations, is nothing more than a problem of price, the commodity bought and sold being—Present Goods. When, then, we go on to the final question, the Amount or Rate of Interest, what we have to remember is that here, as in price transactions generally, we have a resultant of subjective valuations, and that the determining elements we have to deal with are the extent and intensity of the subjective valuations of buyers and sellers. We have already seen what is the extent of this supply, and we know the motives which weigh with the owners and determine its intensity. The demand, again, comes from those who borrow to consume, and those who borrow to produce. Of these two co-ordinate demands we shall, as before, confine ourselves to the more important and more difficult, and to its most important section, the Wage-Earners, referring the reader to Böhm-Bawerk's last two chapters for the other sections. One way of looking at this demand would be to consider it, not as a direct demand from the wage-earners, but as interpreted and in certain definite ways modified by the undertakers. But it is perhaps better to consider the undertaker as the owner of capital, and take the question simply as one between Wage-Earners and Capitalists. In the following argument, then, we assume that the demand comes exclusively from labour, that the entire supply and demand meet in one single market embracing the whole community, and that all branches of production show the same scale of surplus returns.

If wage were a fixed point—say determined at the subsistence level, as the Iron Law assumes—the calculation of the rate of interest would be comparatively easy. Say that every added £100 of capital permitted simply a further extension of process. Every extension of process assures an extra product. But where capitalist industry is well developed, the increments of product at each extension diminish relatively to those preceding, and there comes a point where the increase of product does not balance the expense of extension. To put it in familiar terms: an employer making 10% on his own capital, and offered loans at 4%, may profitably extend his business by borrowing although at every extension he makes a smaller profit. But when the extension made possible by the last loan returns him only 4%, there is no inducement to extend further. In this case the rate of interest would be determined by the "last dose of capital " economically applied, to use Thünen's phrase.

But the great difficulty is that wage is not a fixed amount. The value of labour to the employer depends upon anticipated product, and that product depends on productiveness, and productiveness depends on length of process, and thus we have no fixed point from which to start. Böhm-Bawerk's solution is the following. The fixed point which we cannot get in wage is got in another way. As in the theory of money it is well known that any quantity of currency, small or great, will effect the necessary exchanges, so here the available quantity of present goods offered for sale will buy up the whole of the available labour. This is due to the circumstances already spoken of—the need of the labourers to hire themselves out, and of the capitalists to hire out their wealth. The few cases of unemployed labour and capital may be left out of account, as, obviously, it is only because of bad organisation that there are such. When the proportion of wealth and of labourers changes, all that is required is to contract or