

# **Anarchist Notes on the Theory of Money, Credit, and Capital**

## **Part I: Theory**

**Kevin A. Carson**



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## **Introduction**

### **The Questions to Be Addressed**

Part I of this two-part paper will examine a number of loosely related and considerably overlapping conceptual issues concerning the nature of money and credit: metallism vs. chartalism, money theories of credit vs. credit theories of money, and advance vs. synchronization economics. They all hinge, in one way or another, on the question of whether money and credit are “real” material entities, on the one hand, that must be in some way “saved” or “accumulated” before they can be “lent” or “invested,” or simply units of account for allocating resources and tracking the balance of exchange of material goods, on the other. That is, is money a store of value — a commodity with intrinsic value in its own right — and does credit require a stock of past savings to be lent against?

Joseph A. Schumpeter, in his *History of Economic Analysis*, devotes considerable attention to the distinction between Money Theories of credit and Credit Theories of money, as well as to the closely related distinction between Metallist and Cartalist theories of money. He also considers another distinction — that between advance economics and synchronization economics — which overlaps considerably with my distinction between credit as lending against savings vs. credit as an accounting mechanism. Schumpeter’s concept of advance and economics, broadly, subsumes such defenses of profit and net interest as the labor-fund doctrine, abstention/waiting, and time preference.

Modern economics has, since its origins in the 17th century, simply accepted at face value the assumption that credit must be issued “against” some previously accumulated store of wealth — an assumption that reflected the institutional origins of modern banking in the issue of credit by tradesmen like goldsmiths who dealt in precious metals. As Glyn Davies wrote: “The growth of the economy depended largely on the effective mobilization of savings and their distribution via an efficient capital market in a way in which any risk to shareholders was limited to the share of capital subscribed by them.”<sup>1</sup>

Likewise, an introductory textbook on banking and finance states at the outset, as a simple fact of nature, that financial markets are

markets in which funds are transferred from people who have an excess of available funds to people who have a shortage. Financial markets, such as bond and stock markets, are crucial to promoting greater economic efficiency by channeling funds from people who do not have a productive

<sup>1</sup>Glyn Davies, *A History of Money: From Ancient Times to the Present Day* (Cardiff: University of Wales Press, 2002), p. 318.

use for them to those who do. Indeed, well-functioning financial markets are a key factor in producing high economic growth, and poorly performing financial markets are one reason that many countries in the world remain desperately poor.<sup>2</sup>

...Banks and other financial institutions are what make financial markets work. Without them, financial markets would not be able to move funds from people who save to people who have productive investment opportunities. Thus financial institutions play a crucial role in the economy.<sup>3</sup>

Financial markets perform the essential economic function of channeling funds from households, firms, and governments that have saved surplus funds by spending less than their income to those that have a shortage of funds because they wish to spend more than their income.<sup>4</sup>

Frederic Mishkin, author of the college textbook on banking and finance from which the above passages were taken, not only operates from both a money theory of credit and a theory of capital investment as an advance without question, but is remarkably unreflective and incurious about the possibility of alternatives.

The national debate [over the 2008 bank bailout] pitted Wall Street against Main Street: Many people who sided with struggling homeowners saw the proposed federal bailout of financial institutions as government hypocrisy. How could injecting capital into the financial system help those fearful of losing their jobs or, worse yet, those who found themselves suddenly without work?

The central role of financial institutions in the workings of the economy... was being overlooked. Banks and other financial institutions make financial markets work by moving funds from people who save to people who have productive investment opportunities. That bank branch on Main Street was not going to be able to lend freely to a small business owner or recent college graduate looking to fund a new car purchase until capital once again flowed.<sup>5</sup>

This tendency reaches an extreme close to fundamentalism with the Austrian economists:

No supply of loanable funds could exist without previous savings, that is, without abstention from some possible consumption of present goods (an excess of current production over current consumption)... There would be no interest or time-preference rate. Or rather, the interest rate would be infinitely high, which, anywhere outside of the Garden of Eden, would be

<sup>2</sup>Frederic S. Mishkin, *The Economics of Money, Banking, and Financial Markets*. Twelfth Edition (New York, NY: Pearson, 2013, 2016, 2019), p. 2.

<sup>3</sup>*Ibid.*, p. 5.

<sup>4</sup>*Ibid.*, p. 22.

<sup>5</sup>*Ibid.*, p. 163.

tantamount to leading a merely animal existence, that is, of eking out a primitive subsistence by facing reality with nothing but one's bare hands and only a desire for instant gratification.<sup>6</sup>

I argue in the final chapter of Part I that such backward-looking views of money and credit, as things which must be “backed” by independent accumulations of value, are based on artificial scarcity, and serve to limit the function of issuing them to a monopoly class of owners of accumulated wealth. As such, they are — along with other artificial scarcities like landlordism and intellectual property — a major contributor to the exploitative nature of class society.

<sup>6</sup>Hoppe, “The Misesian Case Against Keynes.” Originally published in *Dissent on Keynes, A Critical Appraisal of Economics*, ed. Mark Skousen (New York: Praeger, 1992), pp. 199–223. Hosted at Mises.org <<https://mises.org/mises-daily/misesian-case-against-keynes>>.

## I. Money Theories of Credit vs. Credit Theories of Money

**Concepts and Definitions.** The distinctions between metallism and cartalism, and between money theories of credit and credit theories of money, overlap considerably.

Metallism, as a doctrine (“the fundamental theories on which the modern science of political economy is based”), was aptly summed up by one of its greatest critics, Alfred Mitchell-Innes, in 1913:

- That under primitive conditions men lived and live by barter;
- That as life becomes more complex barter no longer suffices as a method of exchanging commodities, and by common consent one particular commodity is fixed on which is generally acceptable and which therefore, everyone will take in exchange for the things he produces or the services he renders and which each in turn can equally pass on to others in exchange for whatever he may want; That this commodity thus becomes a "medium of exchange and measure of value."
- That a sale is the exchange of a commodity for this intermediate commodity which is called "money;"
- That many different commodities have at various times and places served as this medium of exchange — cattle, iron, salt, shells, dried cod, tobacco, sugar, nails, etc.;
- That gradually the metals... came to be regarded as being by their inherent qualities more suitable for this purpose than any other commodities and these metals early became by common consent the only medium of exchange;
- That a certain fixed weight of one of these metals of a known fineness became a standard of value, and to guarantee this weight and quality it became incumbent on governments to issue pieces of metal stamped with their peculiar sign, the forging of which was punishable with severe penalties...;
- That to economize the use of the metals and to prevent their constant transport a machinery called "credit" has grown up in modern days, by means of which, instead of handing over a certain weight of metal at each transaction, a promise to do so is given, which under favorable circumstances has the same value as the metal itself. Credit is called a substitute for gold.

So universal is the belief in these theories among economists that they have grown to be considered almost as axioms which hardly require proof, and nothing is more noticeable in economic works than the scant historical evidence on which they rest, and the absence of critical examination of their worth.<sup>7</sup>

Modern economics, going back to its early modern sources, simply started from the unquestioned assumption that “money” was a separate commodity, with a distinct value of its own (Glyn Davies: “commodity money based on the age-old concept of intrinsic value”<sup>8</sup>), rather than simply a unit of measure of the goods exchanged. It accepted at face value, at the outset, a set of arrangements which had been created by states which coined specie money, made payments, and collected taxes in it.

This conventional metallist view of money is reflected in the widely accepted and repeated — but unsubstantiated — nursery fable of specie money as a “universal commodity” that emerged in response to the problem of “dual coincidence of wants” in barter.

Although it has virtually no backing in the findings of anthropology, this theory is commonly repeated in economics texts and texts on the history of money to this day. As Davies wrote in his *History of Money*:

The most obvious and important drawback of barter is that concerned with the absence of a generalized or common standard of values, i.e. the price systems available with money. Problems of accounting multiply enormously as wealth and the varieties of exchangeable goods increase, so that whereas the accounting problems in simple societies may be surmountable, the foundations of modern society would crumble without money.<sup>9</sup>

Implicit in such arguments is the assumption that a quantitative unit of account, as such, cannot function as a common denominator for exchanged goods unless it is “backed” by some commodity with a market value of its own.

In contrast to metallism, David Graeber, in *Debt*, holds up Mitchell-Innes as the leading proponent of the credit theory of money.

Mitchell-Innes was an exponent of what came to be known as the Credit Theory of money.... Credit Theorists insisted that money is not a commodity but an accounting tool. In other words, it is not a “thing” at all. You can no more touch a dollar or a deutschmark than you can touch an hour or a cubic centimeter. Units of currency are merely abstract units of

7A. Mitchell-Innes, “What is Money?” *Banking Law journal* (May 1913). Reproduced without pagination at Community.Exchange.org <<https://www.community-exchange.org/docs/what%20is%20money.htm>>.

8Glyn Davies, *A History of Money: From Ancient Times to the Present Day* (Cardiff: University of Wales Press, 2002), p. 355.

9*Ibid.*, p. 15.

measurement. . . .<sup>10</sup>

\*Note that this does assume some means of calculating such values — that is, that money of account of some sort actually exists. This might seem obvious, but remarkable numbers of anthropologists seem to have missed it.<sup>11</sup>

Mitchell-Innes himself sums up the credit theory of money as the doctrine that “a sale and purchase is the exchange of a commodity for credit.”

From this main theory springs the sub-theory that the value of credit or money does not depend on the value of any metal or metals, but on the right which the creditor acquires to "payment," that is to say, to satisfaction for the credit, and on the obligation of the debtor to "pay" his debt and conversely on the right of the debtor to release himself from his debt by the tender of an equivalent debt owed by the creditor, and the obligation of the creditor to accept this tender in satisfaction of his credit.

Such is the fundamental theory, but in practice it is not necessary for a debtor to acquire credits on the same persons to whom he is debtor. We are all both buyers and sellers, so that we are all at the same time both debtors and creditors of each other, and by the wonderfully efficient machinery of the banks to which we sell our credits, and which thus become the clearing houses of commerce, the debts and credits of the whole community are centralized and set off against each other. In practice, therefore, any good credit will pay any debt.

Again in theory we create a debt every time we buy and acquire a credit every time we sell, but in practice this theory is also modified, at least in advanced commercial communities. When we are successful in business, we accumulate credits on a banker and we can then buy without creating new debts, by merely transferring to our sellers a part of our accumulated credits.<sup>12</sup>

The “whole mechanism of commerce,” he writes elsewhere, is the “constant creation of credits and debts, and their extinction by being cancelled against one another. . . . Credit and debt have nothing and never have had anything to do with gold and silver.”<sup>13</sup> Contrary to the view that government holds a monopoly on the issue of money, everyone who makes a payment “issues money just as surely as does a government which issues drafts on the Treasury, or which puts its stamp on

<sup>10</sup>David Graeber, *Debt: The first 5,000 Years* (Brooklyn and London: Melville House, 2011), p. 46.

<sup>11</sup>*Ibid.*, p. 397n.

<sup>12</sup> Mitchell-Innes, “The Credit Theory of Money,” *The Banking Law Journal* 31 (January-December 1914), p. 152. Hosted at Community.Exchange.org <<https://www.newmoneyhub.com/www/money/mitchell-innes/the-credit-theory-of-money.html>>.

<sup>13</sup> Mitchell-Innes, “What is Money?” *Banking Law journal* (May 1913). Reproduced without pagination at Community.Exchange.org <<https://www.community-exchange.org/docs/what%20is%20money.htm>>.

a piece of metal or a sheet of paper.”<sup>14</sup>

It follows that money has no material existence, and is simply an abstract unit of measurement. “The eye has never seen, not the hand touched, a dollar,” no more than anyone has seen or touched an ounce, a foot, or an hour. “A foot is the distance between two fixed points, but neither the distance nor the points have a corporeal existence.”<sup>15</sup>

(We should note — a matter which we will examine in considerable depth in Part II — that the main effect of replacing an immaterial unit of account with a physical commodity like gold, with a market value of its own, is to create an artificial cost of issuing money — thereby vesting the function of doing so in a class of people who possess previously accumulated wealth.)

Joseph Schumpeter, in his *History of Economic Analysis*, takes the cartalist-metallist distinction in monetary theory back to Plato and Aristotle, with Aristotle advancing the same “dual coincidence of wants” and “medium of exchange” hypothesis outlined above by Mitchell-Innes. Since two parties will rarely both want what the other offers,

obvious convenience will then induce people to choose, tacitly or through legislative action, one commodity... as a Medium of Exchange. Aristotle briefly mentioned the fact that some commodities — such as the metals — are better fitted for this role than others, thus foreshadowing some of the tritest passages in nineteenth-century textbooks about homogeneity, divisibility, portability, relative stability of value, and so on. Moreover, the requirements of his rule of equivalence in exchange naturally led him to observe that the Medium of Exchange will also be used as a Measure of Value. And finally he recognized, implicitly at least, its use as a Store of Value.

This falls under Ludwig von Mises’ heading of “catallactic” theories of money, of which the most important criterion is that

in order to serve as a medium of exchange in the markets of commodities, money itself must be one of these commodities. That is to say, it must be a thing that is useful and has exchange value independently of its monetary function — this is all that intrinsic value means in this connection — a value that can be compared with other values.... This proposition... will identify what we shall henceforth call Metallism or the Metallist Theory of Money in contrast to the Cartal Theory of which Plato’s is an example.<sup>16</sup>

The metallist theory of money “derives directly from the logically prior theory of

<sup>14</sup>Mitchell-Innes, "The Credit Theory of Money," p. 152

<sup>15</sup>*Ibid.*, p. 155.

<sup>16</sup>Joseph A. Schumpeter, *History of Economic Analysis*. Edited from manuscript by Elizabeth Boody Schumpeter and with an Introduction by Mark Perlman (Routledge, 1954, 2006), pp. 59-60.

barter....”<sup>17</sup>

Metallism, although sometimes challenged, “held its own throughout the seventeenth and eighteenth centuries and prevailed victoriously in the ‘classical situation’ that emerged in the last quarter of the latter (“Adam Smith ratified it”).”<sup>18</sup> The “great majority” of the classical political economists, as well as Marx, “defined money... as a commodity that has been chosen for means of exchange, measure of value, et cetera.”<sup>19</sup> From there, it dominated the classical tradition and “prevailed substantially to the end of the nineteenth century and even beyond. It is the basis of the bulk of all analytic work in the field of money,”<sup>20</sup> to such an extent “that the majority of economists came to suspect not only unsoundness of reasoning but something very like obliquity of purpose behind every expression of antimetallist views.”<sup>21</sup> Schumpeter classifies all these thinkers as “theoretical metallists,” insofar as they believe that

it is logically essential for money to consist of, or to be ‘covered’ by, some commodity so that the logical source of the exchange value or purchasing power of money is the exchange value or purchasing power of that commodity, considered independently of its monetary role.

He contrasted it with “practical metallism,” the belief that “the monetary unit ‘should’ be kept firmly linked to, and freely interchangeable with, a given quantity of some commodity.”

Theoretical and Practical Cartalism may best be defined by the corresponding negatives. Thus, we shall speak of theoretical cartalism wherever we find denial of the proposition that it is logically essential for money to consist of, say, gold, or to be promptly convertible into gold; of practical cartalism wherever we find sponsorship of the principle of policy that the value of the monetary unit ‘should’ not be tied to the value of any particular commodity.<sup>22</sup>

Of the antimetallist, or cartalist, tradition — a tradition “weaker no doubt but equally ancient” which he traces back to Plato — Schumpeter cites the primary example of the tradition in modern times of a number of land bank projects.<sup>23</sup>

William Potter’s *The Key of Wealth*, published (anonymously) 1650... recommends a plan, namely the foundation of a corporation of tradesmen... which was to accept — or, what in this case amounts to the same thing — to issue ‘bills’ secured by land, buildings, and other assets and intended to

<sup>17</sup>*Ibid.*, p. 275n.

<sup>18</sup>*Ibid.*, p. 276.

<sup>19</sup>*Ibid.*, p. 668.

<sup>20</sup>*Ibid.*, p. 60.

<sup>21</sup>*Ibid.*, p. 276.

<sup>22</sup>*Ibid.*, p. 275.

<sup>23</sup>*Ibid.*, p. 279.

circulate like legal tender money. This plan for mobilizing physical property not only puts Potter in the position of a forerunner of the land-bank projectors... but also obscures the analytic work behind it, which is of considerable interest.<sup>24</sup>

The landed gentlemen in the House of Commons were no more, than were and are any other agrarians, able to see why they should not borrow as easily and cheaply as traders or financiers, and they did not take kindly to arguments about the difference between a bill and a mortgage. A land bank that, among other things, might satisfy these longings eventually became a Tory plank when the foundation of the Bank of England was in the offing. At the right time (1693) an intellectual, Hugh Chamberlen, an obstetrician by profession, presented a plan of a land bank where landowners would get loans at 4 per cent and the government would get more money than it had got from the Bank of England.<sup>25</sup>

The point is this. The practice of the epoch, especially the practice of the four great clearing and deposit banks, had familiarized economists with the idea of a money of account which was defined by quantities of metal and which existed only as a bookkeeping device for the purpose of facilitating large-scale trade and finance in a world of numberless and ever-changing currency systems. In this sense the money of account also entered monetary theory of the metallist type. Galiani called it *moneta ideale* or *moneta imaginaria*, and distinguishes it from *moneta reale*, which consists of actual *pezzi di metallo*. Steuart... makes the same distinction between ‘money of accompt’ and ‘money-coin,’ but with him this distinction acquired a different meaning. Having previously... defined money as ‘any commodity which purely in itself is of no material use to man but which acquires such an estimation from his opinion of it as to become the universal measure of what is called value...’ — a faulty way of defining a pure *numéraire* of which he thus may be called the discoverer — he then starts from a money of account, considered as an ‘arbitrary scale’ for measuring values and, unlike the money of account of practice and also of metallist theory, devoid of any commodity connotation.<sup>26</sup>

Although the land banks mentioned above might not be strictly “metallist,” they would nevertheless seem to fall under Schumpeter’s broader definition of commodity money insofar as they reflect the belief that money must be backed or “covered” by something of independent value — as opposed to being a pure unit of measure (*numéraire*).

<sup>24</sup>*Ibid.*, p. 279.

<sup>25</sup>*Ibid.*, p. 281.

<sup>26</sup>*Ibid.*, pp. 282-283.

Even cryptocurrencies like Bitcoin, despite abandoning the notion of backing by a material commodity with independent value, still retain the idea that a currency must have an independent market value. In the case of Bitcoin, this is achieved by an artificial scarcity derived from “mining” and the “proof of work” principle. But in principle, the “store of value” function no more requires currency to be a marketable commodity than measuring the length of a physical object requires feet and inches to be marketable commodities; the only thing required for the store of value function to be fulfilled is the record of a debit or credit on one’s account.

**Savings Mobilization vs. Accounting Theories of Credit.** Schumpeter remarks on the “curious narrowness and lack of realism” in the “conception of the nature of bank credit” through the early 20th century. He presented the understanding of credit on the part of a “typical economist, writing around 1900” in language familiar to readers of any right-libertarian periodical writing today.

He would have said something like this. In the (logical) beginning is money — every textbook on money, credit, and banking begins with that. For brevity’s sake, let us think of gold coin only. Now the holders of this money, so far as they neither hoard it nor spend it on consumption, ‘invest’ it or, as we may also say, they ‘lend’ their ‘savings’ or they ‘supply capital’ either to themselves or to somebody else. And this is the fundamental fact about credit. Essentially, therefore, credit is quite independent of the existence or nonexistence of banks and can be understood without any reference to them. If, as a further step in analysis, we do introduce them into the picture, the nature of the phenomenon remains unchanged. The public is still the true lender. Bankers are nothing but its agents, middlemen who do the actual lending on behalf of the public and whose existence is a mere matter of division of labor. This theory is satisfactory enough in cases of actual ‘lending on account of others’ and of savings deposits. But it was also applied to checking deposits.... These, too, were made to arise from people’s depositing with banks funds that they owned (our gold coins). The depositors become and remain lenders both in the sense that they lend (‘entrust’) their money to the banks and in the sense that they are the ultimate lenders in case the banks lend out part of this money.... As the depositors remain lenders, so bankers remain middlemen who collect ‘liquid capital’ from innumerable small pools in order to make it available to trade. They add nothing to the existing mass of liquid means, though they make it do more work. As Professor Cannan put it.... ‘If cloak-room attendants managed to lend out exactly three-quarters of the bags entrusted to them... we should certainly not accuse the cloak-room attendants of having

“created” the number of bags indicated by the excess of bags on deposit over bags in the cloak rooms.’ Such were the views of 99 out of 100 economists.

But if the owners of those bags wish to use them, they have to recover them from the borrowers who must then go without them. This is not so with our depositors and their gold coins. They lend nothing in the sense of giving up the use of their money. They continue to spend, paying by check instead of by coin. ...[A] deposit, though legally only a claim to legal-tender money, serves within very wide limits the same purposes that this money itself would serve. Banks do not, of course, ‘create’ legal-tender money and still less do they ‘create’ machines. They do, however, something — it is perhaps easier to see this in the case of the issue of banknotes — which, in its economic effects, comes pretty near to creating legal-tender money and which may *lead* to the creation of ‘real capital’ that could not have been created without this practice. But this alters the analytic situation profoundly and makes it highly inadvisable to construe bank credit on the model of existing funds’ being withdrawn from previous uses by an entirely imaginary act of saving and then lent out by their owners. It is much more realistic to say that the banks ‘create credit,’ that is, *that they create deposits in their act of lending, than to say that they lend the deposits that have been entrusted to them* [emphasis added].... The theory of ‘credit creation’ not only recognizes patent facts without obscuring them by artificial constructions; it also brings out the peculiar mechanism of saving and investment that is characteristic of fullfledged capitalist society and the true role of banks in capitalist evolution....

Nevertheless, it proved extraordinarily difficult for economists to recognize that bank loans and bank investments do create deposits. In fact, throughout the period under survey they refused with practical unanimity to do so.<sup>27</sup>

On the other hand, more heterodox figures such as the early 20th century English financial journalist Hartley Withers “espoused the notion that bankers were not middlemen but ‘manufacturers’ of money.”<sup>28</sup>

A forerunner of this approach was the 17th century economist and land-bank projector John Law.

...[S]ince silver that serves as money has no other use than to buy goods, it might just as well be replaced by a cheaper material, in the limit[ing case] by one that has no commodity value at all, such as printed paper, for ‘Money is not the Value *for* which Goods are exchanged, but the Value *by* which they are exchanged’ [J.A.S.’s italics]. This, however, cuts the cable that so far

<sup>27</sup>*Ibid.*, pp. 1079-1080.

<sup>28</sup>*Ibid.*, p. 1081.

[has tied money to a commodity having] ‘intrinsic’ value. Now he draws the conclusion that there is an advantage other than cheapness and absence of worry about how to get and keep [an adequate supply of money] — it is that the quantity of money is fully manageable.<sup>29</sup>

Fractional reserve banking breaks the link between the quantity of money deposits and the quantity of money issued by the bank.

Even the banker who lends by paying out actual money deposited with him does more than collect it from innumerable small puddles, where it stagnates, in order to hand it to people who will use it. He lends the same sums over and over again *before the first borrower has repaid*: that is to say, he does not merely find successive employments for the sum entrusted to him, but many employments which that sum then fills simultaneously. If he lends by paying out notes — or by crediting the sum lent to the borrower in a checking account — for which his cash holding acts merely as a reserve, the same fact stands out still more clearly. And so it does if he lends coins he received as a deposit, which the depositor proposes to use exactly as he would have used the coins had he kept them. There surely must be other ways of expressing these practices than by calling these bank notes embodiments of velocity of circulation — a velocity so great that it enables a thing to be in different places at the same time.... Therefore it may, perhaps, seem more natural to say that bankers increase not the velocity but the quantity of money — or of those means of payment that, within limits, serve as well as money if one wishes to reserve this term for coin or coin and government paper. This accords perfectly with practice — borrowers do feel that they get additional liquid means that are normally just as good as money. Banks are no longer said to ‘lend their deposits’ or ‘other people’s money,’ but to ‘create’ deposits or bank notes: they appear to manufacture money rather than to increase its velocity or to act — which is a completely unrealistic idea — on behalf of their depositors.<sup>30</sup>

In fact, although mainstream economists in the 20th century came to recognize that the money supply was elastic, and not limited to the value of bank reserves, those of orthodox tendency continue to frame the function of banks (witness the quotes from Myshkin above) as aggregating “savings” and mobilizing them into investment capital. Schumpeter made a similar observation about the economic orthodoxies of his own day.

Even today, textbooks on Money, Currency, and Banking are more likely than not to begin with an analysis of a state of things in which legal-tender ‘money’ is the only means of paying and lending. The huge system of

<sup>29</sup>*Ibid.*, pp. 305-306.

<sup>30</sup>*Ibid.*, pp. 303-304.

credits and debits, of claims and debts, by which capitalist society carries on its daily business of production and consumption is then built up step by step by introducing claims to money or credit instruments that act as substitutes for legal tender and are allowed indeed to affect its functioning in many ways but not to oust it from its fundamental role in the theoretical picture of the financial structure. Even when there is very little left of this fundamental role in practice, everything that happens in the sphere of currency, credit, and banking is construed from it, just as the case of money itself is construed from barter.<sup>31</sup>

The assertion that “banks create money” was not only “a highly contested notion” in Schumpeter’s day, but remains so right up to our own, according to Mariana Mazzucato.

Banks traditionally presented themselves purely as financial intermediaries, usefully channelling household depositors’ savings into business borrowers’ investment. Mainstream economists accepted this characterization, and its implication that banks play a vital economic role in ‘mobilizing’ savings.<sup>32</sup>

But if credit is something banks lend at no sacrifice to themselves, and they create money out of nothing at no cost, it follows that there is nothing for which to be compensated; the scarcity is a purely artificial one, maintained in order to justify rent extraction. As Bret Christophers explains it, with fully justified cynicism:

Keynes’s most important, even radical, insight was that there is nothing natural about the scarcity that underpins financial rents – ‘whilst there may be intrinsic reasons for the scarcity of land’, he insisted, ‘there are no intrinsic reasons for the scarcity of capital’. Rather, as Geoff Mann has recently written of the Keynesian theory, ‘scarcity is socially produced so as to generate prospective and real yield ... capital is made scarce because it must be scarce’. And the making of capital scarcity, Keynes realized, is very much a class project; he described the ability of banks ‘to exploit the scarcity-value of capital’ as a ‘cumulative oppressive power’. Given, moreover, that, in Keynes’s estimation, rent in the form of interest rewarded ‘no genuine sacrifice, any more than does the rent of land’, he believed that society’s goal should be to put in place the necessary conditions such that the generation of this financial rent would be impossible. How could this be done? By increasing the quantity of capital in circulation to such a point that

<sup>31</sup>*Ibid.*, p. 686.

<sup>32</sup>Mariana Mazzucato, *The Value of Everything: Making and Taking in the Global Economy* (Penguin, 2018), p. 112. All page references to this book will be from CloudConvert’s pdf conversion of the epub version hosted by Library Genesis at <<https://library.lol/main/7BD7A9996DE444F66BEB6B856056899E>> (downloaded Oct. 11, 2023).

it was no longer scarce.<sup>33</sup>

The banking industry maintains this artificial scarcity, Mazzucato explains, with the help of the regulatory state.

Large financial firms were... careful to secure a lightening of regulation, rather than... complete deregulation.... Their reasoning was as follows. To maintain their high profits, the big commercial and investment banks still needed regulators who would keep potential competitors out of the market. Existing big players are therefore helped if banking licences are restricted....<sup>34</sup>

Even once we accept the idea that money and credit are artificial creations which require no “backing” or “sacrifice,” we still face further questions regarding whether there is some desirable objective limit to the money supply at any given time, what effect credit expansion has on economic output when credit is decoupled from savings, and whether or not it is inflationary.

Mitchell-Innes argued that the cause of price inflation was an excess of debits over credits in an economy — that is, the excess of purchasing power over the value of the goods and services which the population has been able to produce.

Whenever we see in a country signs of a continuous fall in the value of the credit unit, we shall, if we look carefully, find that it is due to excessive indebtedness.

We have seen in the Middle Ages how prices rose owing to the failure of consecutive governments throughout Europe to observe the law of the equation of debts and credits. The value of the money unit fell owing to the constant excess of government indebtedness over the credits that could be squeezed by taxation out of a people impoverished by the ravages of war and the plagues and famines and murrains which afflicted them.<sup>35</sup>

The question of regulating the ratio of debits to credits is a practical one. One approach is suggested by Thomas Greco: Setting a limit to the deficit a member of a mutual credit-clearing system is allowed to run in their account (a subject which will be addressed in the second part).

At the level of state fiscal policy, Mitchell-Innes foreshadowed Modern Monetary Theory in treating taxation as the means by which the state offsets or destroys the money which it has created by spending. Inflation is therefore the result of an excess of purchasing power relative to the total value of goods and

<sup>33</sup>Brett Christophers, *Rentier Capitalism: Who Owns the Economy, and Who Pays For It?* (London and New York: Verso, 2020), p. 99. All page references to this book will be from CloudConvert's pdf conversion of the epub version hosted by Library Genesis at <<http://library.lol/main/C0B801D70D3E9DFF6041355CFD9B99F0>> (downloaded Sept. 30, 2023).

<sup>34</sup>Mazzucato, *The Value of Everything*, p. 112.

<sup>35</sup>Mitchell-Innes, "The Credit Theory of Money," p. 160.

services at the macroeconomic level, just as much as at the microeconomic.<sup>36</sup>

The discussions in this section raise a question central to this study: if the early modern banker or goldsmith is actually creating money, rather than lending “against” stocks of gold or any other form of wealth deposited with them, why is the gold necessary at all? Why is the function of issuing credit-money limited to the possessors of stocks of gold or other forms of wealth? And why are they put in a position of charging a monopoly price, disguised as “compensation” for something they’re not actually deprived of, for performing that function? And doubly so, why are banks put in such a position when not only do they lend money into existence at no actual sacrifice to themselves, but the amount of money they are authorized to lend into existence at no cost to themselves may jump enormously depending on how central banks may change the mandated reserve ratios?

It also raises the historical question, which will be addressed below, of how states’ adoption of specie currency as legal tender, and their banking laws, between them served to crowd out alternative forms of credit-money *not* based on the fiction of commodity-backing and restricted to the possessors of stockpiled wealth.

<sup>36</sup>*Ibid.*, pp. 160-161.



## II. Synchronization Economics vs. Advance Economics

**Concepts and Definitions.** As already observed, if credit needn't be "backed" by savings or other accumulated wealth, it follows that interest is not necessary as "compensation" for any "sacrifice" by the lender.

This is closely related to another concept: Schumpeter's distinction between "synchronization economics" and "advance economics." "Advance economics" was Schumpeter "distinctive label for all analytic patterns that... work with the notion" that "capitalists' actually advance labor's real income...."<sup>37</sup> It treats capital investment as having some real existence, in a manner analogous to the theories of money and credit examined previously, rather than being a simple accounting or coordinating mechanism. Capital investment is in some sense either a real material sacrifice or a real source of productivity, for which the capitalist is entitled to compensation. Investment in physical capital and workers' subsistence during the production process is "advanced" from the savings created by past "abstention" or "waiting" — abstention for which the capitalist is entitled to compensation.

Some variant of advance economics — the idea of both interest and profit as rewards for "sacrifice," "waiting," or "abstention" has been predominant in mainstream capitalist economic theories to the present day. Even mainstream economists who acknowledge money as something created from nothing by banks, defend the idea that profit is a "reward" either for the "services" of the capital which the capitalist "provides" or "advances" for the duration of the production process, or for the capitalist's "sacrifice" in parting with it. In this view the capitalist advances workers the subsistence income they live on, and the tools and raw materials with which they work, and is then reimbursed for both the value of the advance and the "waiting" or "sacrifice" when the capital investment is realized through sale of the finished product. Capital is "productive," so the orthodox argument goes, because workers would be unable to produce with their labor absent the means of subsistence, machinery, and materials which the capitalist "provides."

At the most vulgar level, we have the Peter Bagge cartoon at *Reason*, in which the ghost of Adam Smith — apparently hovering over a conversation between Marx and Engels in a London pub — responds to Engels' claim that "the workers will run the factories themselves" by asking "How will they repair, expand, and

<sup>37</sup>Joseph A. Schumpeter, *History of Economic Analysis*. Edited from manuscript by Elizabeth Boody Schumpeter and with an Introduction by Mark Perlman (Routledge, 1954, 2006), pp. 538-539.

improve those factories? Doesn't that take capital?"<sup>38</sup>

Schumpeter distinguished advanced economics from "synchronization economics," by which he meant

all analytic patterns that do not in a stationary process assign any fundamental role to the fact that what society lives on at any given moment is the result of past production, on the ground that, once a stationary process has been established, the flow of consumers' goods and the flow of productive services are synchronized so that the process works *as if* society did live on current production.<sup>39</sup>

Credit, according to synchronization economics, is a simple accounting mechanism via which people keep track of their ongoing obligations to one another, or for coordinating the various ongoing flows of production between groups of producers, with no previously amassed "savings" required. Nor, in the case of capital investment — whether financed by bank credit or other loans, or not — is capitalist profit necessary to reward the capitalist who "advances" tools, materials, and means of subsistence to the labor force.

Schumpeter elaborated considerably on his brief definition in *The Theory of Economic Development*. He went a great deal further in distinguishing an economy characterized by entrepreneurship, structural change, and innovation, from the sort of circular economy of which synchronization economics was an adequate description. He also stressed the importance of net new investment — "advances" — in the former.

The total of all commodities produced and marketed in a community within an economic period may be called the social product.... We can then say that each individual throws a contribution into this great social reservoir, and later receives something from it. To each contribution there corresponds somewhere in the system a claim of another individual; the share of everyone lies ready somewhere. And since all know from experience how much they must contribute in order to get what they want, having regard to the condition that each share involves a certain contribution, the circular flow of the system is closed, and all contributions and shares must cancel out, whatever the principle according to which the distribution is made.<sup>40</sup>

...If possible, imagine the following case. Someone enjoys a life-annuity. His wants remain absolutely constant in kind as well as in intensity

<sup>38</sup>Peter Bagge, "Comic: The Revised Adam Smith," *Reason*, June 5, 2023 <<https://reason.com/2023/06/05/comic-the-revised-adam-smith/>>.

<sup>39</sup>Schumpeter, *History of Economic Analysis*, pp. 538-539.

<sup>40</sup>Schumpeter, *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Translated from the German by Redvers Opie. With a new introduction by John E. Elliott (New Brunswick and London: Transaction Publishers, 1934, 1983), p.23. Pagination from pdf at Anna's Archive <<https://annas-archive.org/md5/72ce667e0b8930638ce60b07f775f0ee>>.

throughout the rest of his life. The annuity is big and secure enough to relieve him of the necessity of creating funds for special emergencies and for the possibility of loss. He knows himself secure from responsibilities arising towards others and proof against sudden desires.... Now will a man in such a position esteem future instalments of his annuity less than those nearer in time? Would he — always abstracting from the personal risk of life — give up future more easily than present instalments? Obviously not, for if he did, that is if he gave up a future instalment for smaller compensation than one nearer in time, he would discover in due course that he had obtained a smaller total satisfaction than he might have done. His conduct would therefore cause him loss; it would be uneconomic....

...I do not deny the importance of the element of time in economic life, but only look at it in a different light. The question of the *introduction* of more productive but more time-consuming processes and the question of how the time element affects it are quite distinct problems. We are not now speaking of the *introduction* of new processes, but of the circular flow which consists of given processes already in working order. And here the more fruitful method of production yields its results just as immediately as any other, no matter what the length of its period may be....

A similar argument applies to the element of abstinence, the necessity of waiting, and so forth.... Here also one must distinguish the process of creating a productive apparatus from the process of operating it when once created. Whatever the rôle of abstinence in the former may be... certainly in the latter the necessity of waiting does not recur every time a process of production is repeated. One need not “wait” for the regular returns, since one receives them as a matter of course just when they are needed.... Whatever may be the nature of waiting, it is certainly not an element of the economic process which we are here considering, because the circular flow, once established, leaves no gaps between outlay or productive effort and the satisfaction of wants. Both are, following Professor Clark’s conclusive expression, automatically synchronised.<sup>41</sup>

The latter reference is to John Bates Clark who, in *The Distribution of Wealth*, made one of the most famous arguments for synchronization economics.

In a static adjustment of society, no one is “saving money” and adding to his capital; and therefore the whole income of capitalists, as a class, comes to them in the shape of goods that are ripe for consumption.... Capitalists in all the different sub-groups get a uniform rate of income, in proportion to their several capitals, and get it in a uniformly ripened state; yet capitalists in the sub-groups, A, B, C — and, indeed, in all the sub-groups except those in the

<sup>41</sup>*Ibid.*, p. 30.

uppermost tier in the table — are producing things today that will not themselves be ready to use for some time to come....

The whole question, whether goods are advanced by one class of persons to another, in order to tide that other class over an interval of waiting, clearly has reference, not to the relation of capitalists in general to laborers in general, but to the relation of certain subgroups to other sub-groups in the producing series. It is the subgroup A''' that must advance the stock of the article A''' to all the sub-groups that are below it in the series, if any advances at all are needed; but does it actually make any advances? If this term be used in any true sense, it must mean that a stock of passive capital-goods is drawn upon at one date and replenished at a later date, and that it stands reduced in size during the interval. Nothing of this kind, however, takes place. The stocks of A''', B''' and C''' are drawn upon and replenished simultaneously, like water in a full pipe, with an inflow at one end and an outflow at the other.<sup>42</sup>

As Schumpeter summarizes it, “workers and landlords always exchange their productive services for present consumption goods only” and not for “promises of future consumption goods”; nor do they “apply for any ‘advances’ of present consumption goods.”

It is simply a matter of exchange, and not of credit transactions. The element of time plays no part. All products are *only* products and nothing more. For the individual firm it is a matter of complete indifference whether it produces means of production or consumption goods.... Consumption goods in particular are also only products and nothing more, products to which nothing more happens than their sale to consumers. They form in nobody’s hands a “fund” for the maintenance of laborers, and so on....<sup>43</sup>

In the case of an expanding economy with increased production or innovation, however, Schumpeter argues, contra Clark, that an advance of capital *is* required.

In the contrary case [i.e. where firms do not already have means of production for new projects at their disposal] — and this is the rule as it is the fundamentally interesting case — the possessor of wealth, even if it is the greatest combine, must resort to credit if he wishes to carry out a new combination, which cannot like an established business be financed by returns from previous production. To provide this credit is clearly the function of that category of individuals which we call “capitalists.” It is obvious that this is the characteristic method of the capitalist type of society... for forcing the economic system into new channels, for putting its

<sup>42</sup>John Bates Clark, *The Distribution of Wealth: A Theory of Wages, Interest and Profits* (Dodo Press, 2008), pp. 245-247.

<sup>43</sup>Schumpeter, *The Theory of Economic Development*, p. 32.

means at the service of new ends, in contrast to the method of a non-exchange economy of the kind which simply consists in exercising the directing organ's power to command.

It does not appear to me possible to dispute in anyway the foregoing statement. Emphasis upon the significance of credit is to be found in every textbook. That the structure of modern industry could not have been erected without it, that it makes the individual to a certain extent independent of inherited possessions, that talent in economic life “rides to success on its debts,” even the most conservative orthodoxy of the theorists cannot well deny. Nor is the connection established here between credit and the carrying out of innovations, a connection which will be worked out later, anything to take offence at. For it is as clear *a priori* as it is established historically that credit is primarily necessary to new combinations and that it is from these that it forces its way into the circular flow, on the one hand because it was originally necessary to the founding of what are now the old firms, on the other hand because its mechanism, once in existence, also seizes old combinations for obvious reasons. ...[B]orrowing is not a necessary element of production in the normal circular flow within accustomed channels, is not an element without which we could not understand the essential phenomena of the latter. On the other hand, in carrying out new combinations, “financing” as a special act is fundamentally necessary, in practice as in theory....<sup>44</sup>

Nevertheless, Schumpeter also acknowledged that the advance of bank credit entails the creation of new money out of nothing, with no “saving” or “sacrifice” being required:

Finally one more step in this direction: whence come the sums needed to purchase the means of production necessary for the new combinations if the individual concerned does not happen to have them? The conventional answer is simple: out of the annual growth of social savings plus that part of resources which may annually become free....

Even though the conventional answer to our question is not obviously absurd, yet there is another method of obtaining money for this purpose, which claims our attention, because it, unlike the one referred to, does not presuppose the existence of accumulated results of previous development, and hence may be considered as the only one which is available in strict logic. This method of obtaining money is the creation of purchasing power by banks. The form it takes is immaterial. The issue of bank-notes not fully covered by specie withdrawn from circulation is an obvious instance, but methods of deposit banking render the same service, where they increase the

<sup>44</sup>*Ibid.*, pp. 40-41.

sum total of possible expenditure. Or we may think of bank acceptances in so far as they serve as money to make payments in wholesale trade. It is always a question, not of transforming purchasing power which already exists in someone's possession, but of the creation of new purchasing power out of nothing....<sup>45</sup>

\* \* \*

...[C]redit is essentially the creation of purchasing power for the purpose of transferring it to the entrepreneur, but not simply the transfer of existing purchasing power....<sup>46</sup>

In other words, capital is simply a claim to the right to allocate *already existing* outputs to uses of the capitalist's choice:

*Capital is nothing but the lever by which the entrepreneur subjects to his control the concrete goods which he needs, nothing but a means of diverting the factors of production to new uses, or of dictating a new direction to production.* This is the only function of capital, and by it the place of capital in the economic organism is completely characterised....

What is capital then if it consists neither of a definite kind of goods nor of goods in general? By this time the answer is obvious enough: it is a fund of purchasing power.<sup>47</sup>

So for purposes of our analysis in this book, no advance takes place even in cases of "entrepreneurship, structural change, or innovation." Even for goods with a long production period, it is nevertheless true that all the subsistence goods and producer goods are actually "advanced" by other groups of workers at the time they are needed, amounting to a constant synchronization of current outputs. And in return for these advances of material goods, they all receive credits which are used to purchase present consumption goods of their own. Different groups of workers are constantly supporting one another with their current outputs. And the employer (as stand-in or intermediary for the workers, interposed between them and the workers in other enterprises) is constantly realizing previous outlays through the sale of finished goods, providing a constant revenue stream, only part of which goes to compensate the workers for the material goods their labor supplied. If there is any "advance" at all in material terms, it is a social decision to allocate labor to producer goods — certainly not an advance or sacrifice on the part of the "investor" who controls the allocation of that labor.

Economic historian Mark Blaug echoed Schumpeter in stressing the importance of advance economics, or a wages fund doctrine, in the case of an expanding or innovating economy.

<sup>45</sup>*Ibid.*, p. 41.

<sup>46</sup>*Ibid.*, pp. 50-51.

<sup>47</sup>*Ibid.*, pp. 52-53.

In a developed economy, goods that can be produced only at comparatively long intervals do not form a very large part of society's consumable output; most goods can be produced fairly continuously throughout the year. It would be unrealistic to think that 'roundabout production' depends on the prior existence of a stock of such goods. But the fact remains that such accumulated stocks of consumer goods are constituents of capital, and that the amount payable in wages during any slice of time is limited by the quantity of wage goods that can be produced during its course with the aid of equipment inherited from the past. In a stationary state, this consideration would have no significance. Although production is time consuming, a stationary economy functions as if output in every period is consumed in the same period: the stock of consumer goods available at the beginning of each year is used up through the year, but it is always exactly replaced at the end. In a stationary state, the flow of consumption and the flow of productive services are perfectly synchronized. In this kind of economy it is strictly true that wages are paid out of current product. But in a growing economy, wages are in part paid out of past product and the stock of goods-in-the-pipelines has real significance for the functioning of the system. This assertion is sometimes denied and it is useful to categorize the denial as involving 'synchronization economics'. The opposite view, which insists on the importance of the time structure of production, we will call 'advance economics'.... Suffice it to say that the Austrian theory rests upon 'advance economics' and in this way links up with the wages fund doctrine. To throw out the wages fund theory *in toto* is to cut oneself off from the key to the meaning of real capital that it furnishes. It was a bad theory of wages but it had all the ingredients of a good theory of capital.<sup>48</sup>

Blaug also went beyond Schumpeter, in questioning whether synchronization economics is adequate even as a description of a circular economy.

If we confine ourselves to stationary conditions, Clark argued, the length of time for which a stock of capital is embodied in production turns out to be economically irrelevant. In stationary equilibrium, with net investment equal to zero, the number of production periods that are coming to a close at any instant of time are exactly equal to the number of production periods just beginning. Hence, stratification of the economy into production periods of different lengths can be only an arbitrary procedure, having no economic significance. A stationary state involves automatic synchronization of inputs and outputs...; there is no waiting whatever for output because every

<sup>48</sup>Mark Blaug, *Economic Theory in Retrospect*. Fourth edition (Cambridge University Press: Cambridge, New York, Port Chester, Melbourne, Sydney, 1985), pp. 187-188.

application of inputs that bears their fruit some time hence is matched by the simultaneous emergence of output from past outlays of productive effort....

It is difficult to see the force of this argument.... It is true that to maintain an equilibrium stock of capital requires no further net investment but only reinvestment of funds regularly recovered from sales. But it is also true that when a community succeeds in maintaining a stock of machines, the members of the community have fewer goods available for consumption in the present than they would have if they failed to replace worn-out machines. By definition, in a stationary state no one can refrain from present consumption in order to augment future consumption but they can increase present income by depleting future income. Their refusal to do so expresses the social cost of 'waiting'.<sup>49</sup>

Schumpeter and Blaug are both, in my opinion, erroneous in their reasoning. Abstinence, waiting, time preference, and all the other advance theories, were formulated in a common institutional context, in order to justify net interest or profit on capital: namely, one party foregoing the use of funds in their possession for personal consumption, in order to lend it to another party, in return for which they would be entitled either to realize a greater sum of money from the sale of the finished product than they paid on wages, or to payments on debt totaling more than the principal. Even if, as Böhm-Bawerk argued, time preference would still be implicit in the consume-vs-invest calculations of a worker-owned enterprise, it is nevertheless largely superfluous. In the purely internal calculations of a worker-owned enterprise or federation of such enterprises, as to whether to consume or invest, the expectation that increased output will justify the foregone consumption is obviously the central consideration as a simple matter of common sense — as in similar such calculations made by family businesses and subsistence farmers throughout history — with no need for recourse to a more elaborate theoretical apparatus.

Likewise for Blaug's critique that, even in a steady-state economy, the ongoing decision to continue putting resources into maintaining capital equipment rather than consuming the full output constitutes an advance. In functional terms, capital investment or credit is the synchronization of current production streams, rather than an advance. That is, the capitalist as a specific actor is not advancing producer goods or subsistence goods, but rather is simply acting as a self-imposed intermediary in the advancement of those goods by other groups of workers. To the extent that there is any "waiting," or exchange of present for future goods, it is a transaction by workers themselves in the collective interest of maximizing their wellbeing. Any abstention or waiting by the capitalist, in contrast, is entirely relative. In the case of a hypothetical worker-owned and -managed economy, this

<sup>49</sup>*Ibid.*, p. 519.

takes us back to the argument above: a framing based on the assumption that investment decisions are vested in a separate entrepreneurial or rentier class is superfluous.

The relative rather than absolute nature of the waiting or abstinence involved in the “advance” of capital is heightened still further by the fact — acknowledged not only, as we saw above, by Schumpeter, but also by John Elliott in the Introduction to the Transaction edition of Schumpeter’s *Theory of Economic Development* — that the advance comes from money newly created rather than “savings”:

The commercial application of a new idea, often involving the acquisition and redirection of the employment of existing means of production, must be financed. It cannot be financed from the revenues received in the stationary circular flow, because these are just sufficient to cover existing costs and depreciation. They are not sufficient and not generally available for the daring experiments involved in shifting to new ways of doing things, especially when these new ideas involve (as they customarily do) new net investment beyond replacement requirements. Innovations, both logically and historically, must be financed by turning to a source of credit above and beyond the circular flow, namely, the commercial bank, the only private financial institution in the capitalist economy with the unique power to create new money, new purchasing power above current saving out of current income.<sup>50</sup>

In short, it makes more sense to think of capital or credit as a simple unit of account for purposes of coordination.

Although Böhm-Bawerk did not adopt Schumpeter’s terminological division between advance and synchronization theories, virtually all of the classical political economists’ defenses of a profit or natural rate of interest on capital — save the fructification theories — which he surveyed in *Capital and Interest* fall into the category, broadly understood, of advance economics.

Advance economics, both as economic theory and unstated ideological assumption, is at the heart of the capitalist credit system. I will, accordingly, be devoting a disproportionate share of space in subsequent portions of this chapter to the historical development of its variants.

Böhm-Bawerk divided theories of interest into the general categories of Fructification, Productivity, Use, and Abstention, all of which he set in opposition to “exploitation theories” like those of Rodbertus and Marx. As his classification of advance theories is the most developed, and his account of their evolution is the most detailed, this chapter will — at least roughly, and more or less — tend to

<sup>50</sup>John E. Elliott, “Introduction to the Transaction Edition,” Schumpeter, *The Theory of Economic Development*, p. 10.

follow his chronology regarding those thinkers he actually discussed.

**The Pre-Classicals.** Schumpeter went back to Aristotle and the Scholastics, in examining the history of theories of interest. He observed that the Scholastics “simply accepted a surface fact exactly as had Aristotle.”

They did sometimes relate interest on money to the returns of income-bearing goods, land, mining rights, and the like that may be bought for money. But this point — though used in some interest theories of the seventeenth and eighteenth centuries — was without analytical value because the price of income-bearing goods and therefore the net return from them already presupposes the existence of interest.<sup>51</sup>

But he immediately proceeded to make the same error himself that he pointed to in the Scholastics, in reverse, arguing that “the fundamental factor that raises interest above zero is the prevalence of business profit — all the other facts that may produce the same results are not necessarily inherent in the capitalist process.”

This proposition constitutes the main positive contribution of scholastic interest analysis. Adumbrated before, it was first clearly stated by St. Antonine, who explained that though the circulating coin might be sterile, money capital is not so because command of it is a condition for embarking upon business. Molina and his contemporaries, while rightly insisting that money was ‘in itself’ not productive and no factor of production, yet accepted a similar view: they coined the significant phrase that money was the Merchant’s Tool. Moreover, they quite understood the mechanism by which this premium, if capitalist business be sufficiently active and — relative to the rest of the environment — sufficiently important, will tend to become an all-pervading normal phenomenon.<sup>52</sup>

But the ability of money capital to bring a profit presupposes background conditions in which credit can only be issued against stocks of previously accumulated wealth. The rate of profit on capital reflects an artificial scarcity of credit, resulting from a restriction of the function of issuing it to the possessors of wealth. In other words, the association of interest with business profit presupposes a money theory of credit. Hence tying interest to “the prevalence of business profit” is without analytical value for reasons directly analogous to those Schumpeter cited against the argument from the returns on productive goods.

Böhm-Bawerk made a similar critique of Turgot, whom he considered the first major figure among the fructification theorists:

Seeing that this theory bases the entire interest of capital on the possibility always open to the owner of capital to find for it an ulterior

<sup>51</sup>Schumpeter, *History of Economic Analysis*, p. 100.

<sup>52</sup>*Ibid.*, p. 101.

fructification through the purchase of rent-bearing land, I propose to call it shortly the Fructification theory....

Since in this way the owner of a capital, by buying land, is able to obtain from it a permanent yearly income, he will not be inclined to put his capital in an industrial, agricultural, or commercial undertaking, if he cannot — leaving out of account compensation for all ordinary kinds of costs and trouble — expect just as large a profit from his capital thus employed as he could obtain through the purchase of land. On that account capital, in all these branches of employment, must yield a profit.<sup>53</sup>

It's a truism that the alternative employments of investment capital are in competition with one another, and that the returns on one form of employment are affected by those on the others. The question is what determines the various returns in the first instance. Fructification theories lean heavily on explaining returns from one kind of activity in terms of competition from other forms of investment opportunity — ignoring the role of institutional factors in the latter. In this case, the reason is that rent can be extracted from land. It's not just that the land is fruitful, but that the landlord is in the position to collect a share of that fruit.

Böhm-Bawerk, pointing out the circularity of justifying the returns on one form of investment in terms of competing opportunities in other forms of investment, sought to explain simultaneously all forms of return on capital (i.e. the rate of natural or ordinary interest common to all of them) by anticipating his own doctrine of time preference.

I think we should all agree in pointing to the following as the true reason; — in valuing a piece of land, we make a discounting calculation. Thus we value the many hundred years' use of a piece of land at only twenty times the annual use when the rate of interest is 5 per cent, and at only twenty-five times the annual use when the rate is 4 per cent, because we discount the value of the future uses; that is, we estimate them in to-day's value at a smaller amount, *pro rata temporis et usurarum*, exactly on the same principle as we estimate the present capital value of a limited or perpetual claim on rent.

If this is so, and I do not think it will be doubted, then the capital valuation of land to which Turgot appealed in explanation of the phenomenon of interest, is itself nothing more than one of the many forms in which that phenomenon meets us in economic life. For that phenomenon is protean.<sup>54</sup>

But in so doing, he himself took for granted the institutional factor common to

<sup>53</sup>Eugen von Böhm-Bawerk, *Capital and Interest: A Critical History of Economic Theory*. Translated, with Preface and analysis, by William Smart (London and New York: MacMillan, 1890), pp. 63-64.

<sup>54</sup>*Ibid.*, p. 68.

all these cases: that the lender, the investor, the landlord, etc., is able to charge a rate of return because *they are in a position to control access to the given factor input*.

Ironically, Böhm-Bawerk took care to demolish, quite ably, all the prior defenses of interest — i.e., of net profit on capital — in modern political economy, in clearing the field for his own time preference theory. In fact he stipulated to the socialist argument that, far from being a “factor of production” entitled to profit as a reward for its contributions, physical capital is nothing but the product of human labor acting on the free gifts of nature. Specifically, he acknowledged that “capital is no element in the proper sense of the word, inasmuch as it itself springs from the co-operation of nature and labour.”<sup>55</sup>

Lastly, we can now answer, easily and categorically, the much-disputed question, whether any independent productive power is inherent in capital; or, to put the question in its usual form, whether capital is a third and independent “factor in production” alongside of labour and nature? The answer must be a most distinct negative....

...Capital is an intermediate product of nature and labour, nothing more. Its own origin, its existence, its subsequent action, are nothing but stages in the continuous working of the true elements, nature and labour. They and they alone do everything from beginning to end in bringing consumption goods into existence. The only distinction is that sometimes they do it all at once, sometimes by several stages.<sup>56</sup>

...Thus all that we get in production is the result of two, and only two, elementary productive powers — Nature and Labour.... Man finds ready to hand an abundance of natural processes, and allies his own powers with them. What nature by herself does, and what man does along with her — these form the double source from which all our goods come, and the only source from which they can come. There is no place for any third primary source.<sup>57</sup>

And he explicitly repudiated attempts by the classical political economists to defend profit as the reward for “abstinence” or for the “use” of capital.

Some writers, of course, treat the matter more seriously. They do not evade the difficulty, but try to get a real solution of it. They cannot overlook the fact that capital first comes into existence through combination of simpler factors. Quite correctly, therefore, they do not attempt to claim for capital itself the character of an element; but they still require an

<sup>55</sup>Böhm-Bawerk, *The Positive Theory of Capital*. Translated with a Preface and analysis by William Smart. Photographic reprint of the edition of 1891 (New York: G.E. Stechert, 1930), p. 97.

<sup>56</sup>*Ibid.*, pp. 95-96.

<sup>57</sup>*Ibid.*, pp. 79-80.

independent support for interest. This they obtain by resolving capital into its elements, and finding that, besides nature and labour, there is still a third independent element: Senior calls it Abstinence, Hermann calls it the Use of Capital. These attempts at solution, which I went into in detail and pronounced upon in my former book, *Capital and Interest*, were certainly not very happy.<sup>58</sup>

Of course, as we shall see below, Böhm-Bawerk's pronouncement actually consisted of greatly exaggerating and then quibbling over what were largely verbal differences between Senior's abstinence and Hermann's use, and his own time preference, which were in fact closely related in substance.

**Adam Smith.** Marxist Maurice Dobb, in *Theories of Value and Distribution Since Adam Smith*, noted that "the notion," which appeared in Smith's *Wealth of Nations*,

of capital as involving an 'advance' in time... in advance... of production or at least of its completion..., implicitly contained all the essentials of capital theory as subsequently developed, so far as this has treated the crux of the problem of capital and its investment as revolving on time.<sup>59</sup>

At any rate, most variants of advance economics appeared, with some degree of development, in Smith's work.

Smith repeatedly stated, in one form or another, that capital accumulation — a stock of consumption goods, and of tools and materials for production, to support workers in their work — is necessary for production to be undertaken, and that this stock is "advanced" to workers for the period of the production process.

As soon as stock has accumulated in the hands of particular persons, some of them will naturally employ it in setting to work industrious people, whom they will supply with materials and subsistence, in order to make a profit by the sale of their work, or by what their labour adds to the value of the materials.<sup>60</sup>

This is closely associated, in Smith, with the so-called wages-fund doctrine: i.e., that the amount of labor employed is proportionate to the amount of capital accumulated to pay its wages.

The demand for those who live by wages, it is evident, cannot increase but in proportion to the increase of the funds which are destined for the payment of wages. These funds are of two kinds; first, the revenue which is

<sup>58</sup>*Ibid.*, p. 98.

<sup>59</sup>Maurice Dobb, *Theories of Value and Distribution Since Adam Smith: Ideology and Economic Theory* (Cambridge, London, New York, New Rochelle, Melbourne, Sydney: Cambridge University Press, 1973), p. 42.

<sup>60</sup>Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, vol. 1. The Glasgow Edition of the Works and Correspondence of Adam Smith. R.H. Campbell and A.S. Skinner, general eds. Textual editor W.B. Todd (Oxford University Press, 1976). 1981 Liberty Classics reprint, pp. 65-66.

over and above what is necessary for the maintenance; and, secondly, the stock which is over and above what is necessary for the employment of their masters.

When the landlord, annuitant, or monied man, has a greater revenue than what he judges sufficient to maintain his own family, he employs either the whole or a part of the surplus in maintaining one or more menial servants. Increase this surplus, and he will naturally increase the number of those servants.

When an independent workman, such as a weaver or shoe-maker, has got more stock than what is sufficient to purchase the materials of his own work, and to maintain himself till he can dispose of it, he naturally employs one or more journeymen with the surplus, in order to make a profit by their work. Increase this surplus, and he will naturally increase the number of his journeymen.<sup>61</sup>

...It is the stock that is employed for the sake of profit, which puts into motion the greater part of the useful labour of every society.<sup>62</sup>

...[W]hen the division of labour has once been thoroughly introduced, the produce of a man's own labour can supply but a very small part of his occasional wants. The far greater part of them are supplied by the produce of other mens labour, which he purchases with the produce, or, what is the same thing, with the price of the produce of his own. But this purchase cannot be made till such time as the produce of his own labour has not only been completed, but sold. A stock of goods of different kinds, therefore, must be stored up somewhere sufficient to maintain him, and to supply him with the materials and tools of his work till such time, at least, as both these events can be brought about.... This accumulation must, evidently, be previous to his applying his industry for so long a time to such a peculiar business.

As the accumulation of stock must, in the nature of things, be previous to the division of labour, so labour can be more and more subdivided in proportion only as stock is previously more and more accumulated. The quantity of materials which the same number of people can work up, increases in a great proportion as labour comes to be more and more subdivided; and as the operations of each workman are gradually reduced to a greater degree of simplicity, a variety of new machines come to be invented for facilitating and abridging those operations. As the division of labour advances, therefore, in order to give constant employment to an equal number of workmen, an equal stock of provisions, and a greater stock of

<sup>61</sup>*Ibid.*, p. 86.

<sup>62</sup>*Ibid.*, p. 266.

materials and tools than what would have been necessary in a ruder state of things, must be accumulated beforehand....

As the accumulation of stock is previously necessary for carrying on this great improvement in the productive powers of labour, so that accumulation naturally leads to this improvement. The person who employs his stock in maintaining labour, necessarily wishes to employ it in such a manner as to produce as great a quantity of work as possible. He endeavours, therefore, both to make among his workmen the most proper distribution of employment, and to furnish them with the best machines which he can either invent or afford to purchase. His abilities in both these respects are generally in proportion to the extent of his stock, or to the number of people whom it can employ....<sup>63</sup>

Smith stressed the dependence of workers on the capitalist's advance for their livelihood.

In all arts and manufactures the greater part of the workmen stand in need of a master to advance them the materials of their work, and their wages and maintenance till it be completed. He shares in the produce of their labour, or in the value which it adds to the materials upon which it is bestowed; and in this share consists his profit....<sup>64</sup>

Further, the capitalist's ability to advance this capital is the result of "parsimony" — what Senior later called "abstinence."

Capitals are increased by parsimony, and diminished by prodigality and misconduct.

Whatever a person saves from his revenue he adds to his capital, and either employs it himself in maintaining an additional number of productive hands, or enables some other person to do so, by lending it to him for an interest, that is, for a share of the profits. As the capital of an individual can be increased only by what he saves from his annual revenue or his annual gains, so the capital of a society, which is the same with that of all the individuals who compose it, can be increased only in the same manner.

Parsimony, and not industry, is the immediate cause of the increase of capital....

Parsimony, by increasing the fund which is destined for the maintenance of productive hands, tends to increase the number of those hands whose labour adds to the value of the subject upon which it is bestowed. It tends therefore to increase the exchangeable value of the annual produce of the land and labour of the country. It puts into motion an additional quantity of industry, which gives an additional value to the annual produce.

<sup>63</sup>*Ibid.*, pp. 276-277.

<sup>64</sup>*Ibid.*, p. 83.

What is annually saved is as regularly consumed as what is annually spent, and nearly in the same time too; but it is consumed by a different set of people. That portion of his revenue which a rich man annually spends, is in most cases consumed by idle guests, and menial servants, who leave nothing behind them in return for their consumption. That portion which he annually saves, as for the sake of the profit it is immediately employed as a capital, is consumed in the same manner, and nearly in the same time too, but by a different set of people, by labourers, manufacturers, and artificers, who re-produce with a profit the value of their annual consumption.<sup>65</sup>

Smith equated “parsimony” to “good behavior,” and argued that if a society’s standard of living is higher than it was at an earlier date, it can only be because its level of output has increased as the result of capital investment. It follows that its capital must have increased during the interval between those two periods, and that more must have been added to it by the good conduct of some, than had been taken from it either by the private misconduct of others, or by the publick extravagance of government.<sup>66</sup>

It follows from all this that profit is the capitalist’s reward for advancing wages and working materials, and absorbing the cost of supporting the workforce during the production process, pending realization of the capital investment by sale of the finished product.

In this state of things, the whole produce of labour does not always belong to the labourer. He must in most cases share it with the owner of the stock which employs him.<sup>67</sup>

...In exchanging the complete manufacture either for money, for labour, or for other goods, over and above what may be sufficient to pay the price of the materials, and the wages of the workmen, something must be given for the profits of the undertaker of the work who hazards his stock in this adventure. The value which the workmen add to the materials, therefore, resolves itself in this case into two parts, of which the one pays their wages, the other the profits of their employer upon the whole stock of materials and wages which he advanced. He could have no interest to employ them, unless he expected from the sale of their work something more than what was sufficient to replace his stock to him; and he could have no interest to employ a great stock rather than a small one, unless his profits were to bear some proportion to the extent of his stock.<sup>68</sup>

Böhm-Bawerk treated this “line of thought” of Smith’s — “that there must be a

<sup>65</sup>*Ibid.*, pp. 337-338.

<sup>66</sup>*Ibid.*, p. 343.

<sup>67</sup>*Ibid.*, p. 67.

<sup>68</sup>*Ibid.*, p. 66.

profit from capital, because otherwise the capitalist would have no interest in spending his capital in the productive employment of labourers” — as occupying an important place in “explaining natural interest” or net profit.<sup>69</sup>

Smith simply took for granted that “the greater part of the workmen stand in need of a master to advance them the materials of their work, and their wages and maintenance,” without inquiring as to why they so stand in need, or how the distribution of resources that puts them in such need came about. He nevertheless acknowledged that the distribution of product between wages and profit is determined by relative power, and that inequality of wealth reduces the bargaining power of labor.

What are the common wages of labour depends every where upon the contract usually made between those two parties, whose interests are by no means the same. The workmen desire to get as much, the masters to give as little as possible. The former are disposed to combine in order to raise, the latter in order to lower the wages of labour.

It is not, however, difficult to foresee which of the two parties must, upon all ordinary occasions, have the advantage in the dispute, and force the other into a compliance with their terms. . . . In all such disputes the masters can hold out much longer. A landlord, a farmer, a master manufacturer, or merchant, though they did not employ a single workman, could generally live a year or two upon the stocks which they have already acquired. Many workmen could not subsist a week, few could subsist a month, and scarce any a year without employment. In the long-run the workman may be as necessary to his master as his master is to him; but the necessity is not so immediate.<sup>70</sup>

But most important, in Böhm-Bawerk’s view, was Smith’s position as forerunner of Nassau Senior’s abstinence theory.

...if we take those expressions in connection with a later passage, where Smith sharply opposes the "future profit" that rewards the resolution of the capitalist to the "present enjoyment" of immediate consumption, we may recognise the first germs of that theory which Senior worked out later on under the name of the Abstinence theory.<sup>71</sup>

Schumpeter, likewise, addressed Smith’s abstinence theory, which was reiterated in various guises (“waiting,” “time preference,” etc., Böhm-Bawerk’s quibbles notwithstanding) over subsequent generations. He cited Smith’s tremendous emphasis on the propensity to save as the true creator of physical capital (‘Parsimony, and not industry, is the immediate cause of the

<sup>69</sup>Böhm-Bawerk, *Capital and Interest*, p. 71.

<sup>70</sup>Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, pp. 83-84.

<sup>71</sup>Böhm-Bawerk, *Capital and Interest: A Critical History of Economic Theory*, p. 71.

increase of capital’ ...; ‘every prodigal appears to be a public enemy, and every frugal man a public benefactor,’ ...), marks the victory for more than 150 years to come of a pro-saving theory. ‘What is annually saved is as regularly consumed as what is annually spent, and nearly in the same time too; but it is consumed by a different set of people’ ..., namely, productive laborers whose wages and employment are thus positively related to the rate of saving which is identified or at least equated to the rate of increase of capital, that is, investment.<sup>72</sup>

**David Ricardo.** Böhm-Bawerk regarded Ricardo as having little of value to say about the theory of net interest, as such. He credited him with a few passing remarks to the effect that there must be interest, because otherwise capitalists would have no inducement to accumulate capital. These remarks have an evident connection with the analogous expressions of Adam Smith, with which we are familiar, and come under the same criticism.<sup>73</sup>

But in fact Ricardo anticipated Senior’s waiting theory. In Chapter 1 of *On the Principles of Political Economy and Taxation*, he wrote that prices of goods employing the same quantities of capital vary with the production period, because the capitalist must be compensated for the increased length of time he waits for his profit.

...[T]he superior price of one commodity is owing to the greater length of time which must elapse before it can be brought to market... The difference in value arises in both cases from the profits being accumulated as capital, and is only a just compensation for the time that the profits were withheld.<sup>74</sup>

Böhm-Bawerk acknowledged this passage as suggesting agreement with the Abstinence theory, but denied that it constitutes “any finished theory.”<sup>75</sup>

Schumpeter quoted this passage from Chapter 31 (“On Machinery”) as demonstrating Ricardo’s understanding that the capitalist provided an advance of “food and necessaries,” or the wages to pay for them (with the caveat that the capitalist technically hires the workers rather than advancing supplies to them):

Each year the capitalist begins his operations, by having food and necessaries in his possession of the value of £13,000, all of which he sells in the course of the year to his own workmen for that sum of money, and, during the same period, he pays them the like amount of money for wages: at the end of the year they replace in his possession food and necessaries of

<sup>72</sup>Schumpeter, *History of Economic Analysis*, pp. 186-187.

<sup>73</sup>Böhm-Bawerk, *Capital and Interest*, p. 88.

<sup>74</sup>David Ricardo, *On the Principles of Political Economy and Taxation*. Third edition, 1821 (Kitchener, Batoche Books, 2001), p. 28.

<sup>75</sup>Böhm-Bawerk, *Capital and Interest*, pp. 88-89.

the value of £15,000, £2,000 of which he consumes himself, or disposes of as may best suit his pleasure and gratification.<sup>76</sup>

Of the passage, Schumpeter wrote that “this interpretation means more than recognition of the trivial facts that whatever is being consumed must have been produced before; or that society at any moment always lives on the past and works for the future....”

But if we do make [these facts] the pivots [of our analysis], then a number of consequences suggest themselves that are not avoided simply by refusing to recognize them. If ‘capitalists’ actually advance labor’s real income and if this is to mean more than a monetary arrangement, discounts and ‘abstinence’ will have to be admitted among the essentials of the economic process whether we like them or not; that is, no analysis of production and consumption will be complete that does not take account of them in one way or another.<sup>77</sup>

Regarding the last sentence, he added in a footnote that “[t]alk about exploitation may cover up this state of things but cannot alter it.”

If I were asked what I consider the easiest method for upsetting Marx’s theoretical structure, I should certainly answer: start from Marx’s admission that capitalists advance wages and develop the logical consequences of this admission. I should add, of course, that this is the answer to the question what is the easiest, not to the question what is the most profound, set of moves for the anti-Marxist to make.<sup>78</sup>

As Schumpeter elaborated on it, the notion of the advance is the basis for the classical labor-fund doctrine.

The basis of the wage-fund doctrine is the proposition that (industrial) wages are ‘advanced’ from capital. This fundamental proposition goes far back, at least to Cantillon and Quesnay. He who accepts it cannot oppose the wage-fund doctrine, root and branch, however much fault he may find with details, simplifications, or applications. For the long-run wage-fund theory it is equally important that these advances should depend upon saving as their source: this point was driven home by Turgot and A. Smith.<sup>79</sup>

Mark Blaug also treated Ricardo’s remarks on the production period as foreshadowing “abstinence”:

Hence, goods produced with equal amounts of direct labour, but with unequal amounts of machinery of unequal durability, cannot sell at the same price. It is useless to reply that machines are only embodied labour, for the

<sup>76</sup>Ricardo, *On the Principles of Political Economy and Taxation*, p. 284.

<sup>77</sup>Schumpeter, *History of Economic Analysis*, pp. 537-538.

<sup>78</sup>*Ibid.*, p. 538n.

<sup>79</sup>*Ibid.*, p. 636.

whole point is that the present value of a machine exceeds the value of all the wages expended on its production in the past by the amount of annual interest charges. It is not necessary to argue that capital goods cannot be reduced solely to labour, that[ yesterday's labour, which produced today's capital goods, was itself working with capital goods and land existing yesterday, and so on back to the Garden of Eden in an infinite regress. Even if it were true that the first machine was produced by labour alone eons ago, the fact remains that from that point onward the labour theory of value consistently neglects at least one element determining current prices. Notice that this kind of difficulty has nothing to do with the neglect of demand; it is a difficulty that remains even when the supply curve of every product in the economy is perfectly elastic, so that all prices are supply determined.

No labour theory of value is analytically satisfactory that does not address itself to this fatal objection.<sup>80</sup>

**Jean-Baptiste Say and James Maitland Lauderdale.** J.B. Say put forward both abstinence and productive services explanations for interest or net profit. Regarding the former:

Now, the only way of augmenting the productive capital of individuals, as well as the aggregate productive capital of the community, is by this process of saving; in other words, of re-employing in production more products created than have been consumed in their creation. Productive capital cannot be accumulated... otherwise, than by withdrawing them from unproductive, and devoting them to reproductive consumption. There is nothing odious in the real picture of the accumulation of capital....<sup>81</sup>

...And capital, or accumulated produce, is the mere result of human frugality and forbearance to exercise the faculty of consuming...; wherefore, no one else, but he who has practised this self-denial, can claim the result of it with any show of justice. Frugality is next of kin to the actual creation of products, which confers the most unquestionable of all titles to the property in them.<sup>82</sup>

As for his productivity theory, land rent — as opposed to the portion of the annual harvest that compensates the capital and labor applied to the land — results from “the natural productive powers of the soil... yielded by the land to the proprietor.” The productive services of the land in turn, are “transferred or lent to

<sup>80</sup>Blaug, *Economic Theory in Retrospect*, pp. 95-96.

<sup>81</sup>Jean-Baptiste Say, *A Treatise on Political Economy, or the Production, Distribution, and Consumption of Wealth*. Translated from the Fourth Edition by C. R. Prinsep (Philadelphia: Claxton, Remsen & Haffelfinger, 1880), p. 111.

<sup>82</sup>*Ibid.*, p. 293.

the cultivator” in return for the payment of rent.<sup>83</sup> The same is as true for the productive services of labor and capital as for land:

Every product, when completed, repays by its value the whole amount of productive agency employed in its completion. A great part of this agency has been paid for before the entire completion of the product, and must have been advanced by somebody: other part has been remunerated on its completion; but the whole is always paid for ultimately out of the value of the product.<sup>84</sup>

That portion of the value produced, which accrues in this manner to the landed proprietor, is called the *profit of land*; which is sometimes transferred to the farmer, in consideration of a fixed *rent*.

The portion assigned to the capitalist, or person making the advances, however minute and for however short a period of time, is called the *profit of capital*; which capital is sometimes lent, and the profit relinquished on condition of a stipulated *interest*.

The portion assigned to the mere mechanic or labourer is called the *profit of labour*; which is sometimes relinquished for certain *wages*.<sup>85</sup>

The aggregate value of a product, in the way just described, refunds to its different concurring producers the amount of their advances, with the addition in most cases, of a profit, that constitutes their revenue.<sup>86</sup>

This reference to repayment of the advance, and a separate additional profit, suggests Böhm-Bawerk’s critique that the payment for “use” constitutes a double charge. This “double-counting” critique also seems applicable to another passage, which implies that the owner of capital is compensated for its ongoing “productive services” in addition to the amortization cost of the past human labor embodied in it.

It is a maxim with Smith and those of his school, that human labour was the first price, — the original purchase-money, paid for all things. They have omitted to add, that for every object of purchase, there is, moreover, paid, the agency and co-operation of the capital employed in its production. Is not capital itself, they will say, composed of accumulated products, — of accumulated labour? Granted: but the value of capital, like that of land, is distinguishable from the value of its productive agency; the value of a field is quite different from that of its annual rent. . . . Thus, although the capital be itself a pre-existent product, the annual profit upon it is an entirely new one, and has no reference to the industry, wherein the capital originated.

<sup>83</sup>*Ibid.*, p. 294.

<sup>84</sup>*Ibid.*, p. 315.

<sup>85</sup>*Ibid.*, pp. 316-317.

<sup>86</sup>*Ibid.*, p. 321.

Wherefore when a product is ultimately completed by the aid of capital, one portion of its value must go to recompense the agency of the capital, as well as another to reward that of the industry, that have concurred in its production. And the portion so applied is wholly distinct from the value of the capital itself, which is returned to the full amount, and emerges in a perfect state from its productive employment. Nor does this profit upon capital represent any part of the industry engaged in its original formation.

From all which it is impossible to avoid drawing this conclusion, that the profit of capital, like that of land and the other natural sources, is the equivalent given for a productive service, which though distinct from that of human industry, is nevertheless its efficient ally in the production of wealth.<sup>87</sup>

And these productive services are also something for which the proprietor deserves additional compensation.

The service, rendered by capital, in productive operations, establishes a demand for capital to be so employed, and enables the proprietors of it to charge more or less for that service....

...[I]nterest is nothing more than the price, or rent, paid for the enjoyment of an object of value.<sup>88</sup>

Say differed from the English political economists, who tended to treat land rent as an unearned monopoly resulting from the artificial conventions of ownership, in contrast to the real sacrifices of labor and saving. Instead, he justified the legitimacy of compensation for the productive services of capital by comparing it to what he considers the equally legitimate rent on land. Capital is

an agent, an instrument, which may be turned to the great benefit, as well of society, as of the individual. Henceforward, it will be reckoned no more avaricious or immoral to take interest, than to receive rent for land, or wages for labour; it is an equitable compensation adjusted by mutual convenience; and the contract, fixing the terms between borrower and lender, is of precisely the same nature, as any other contract whatsoever.<sup>89</sup>

In so doing, he opened himself up to the reverse critique: that profit on capital over and above compensation for the previous labor embodied in it is an unearned rent comparable to land rent.

Further, he made the strategic error of admitting that the ability to charge for the “productive services” of land results entirely from the ability to control access to it.

Land..., is not the only natural agent possessing productive properties; but it is the only one, or almost the only one, which man has been able to

<sup>87</sup>*Ibid.*, pp. 356-357.

<sup>88</sup>*Ibid.*, p. 343.

<sup>89</sup>*Ibid.*, p. 344.

appropriate, and turn to his own peculiar and exclusive benefit.... The sea and the wind can at the same time convey my neighbour's vessel and my own. With land it is otherwise. Capital and industry will be expended upon it in vain, if all are equally privileged to make use of it; and no one will be fool enough to make the outlay, unless assured of reaping the benefit.<sup>90</sup>

It's unclear whether "outlay" refers to purchase price, improvements, or both, but Say made no distinction between compensation for the owner's actual improvements of the land, and compensation for access to natural "productive services" which were freely created by nature and for which the owner is only in a position to charge owing to control over access. Likewise, his praise for the productive incentives of private property did not distinguish between property in one's own improvements and other labor product, and property in right of access derived from enclosure of that which one did not create.

Land is an agent gratuitously furnished to mankind at large, by whom it is afterwards exclusively appropriated; but its appropriation does not begin to be profitable to the individual, in whose favour it is made, until its products are an object of demand, and until their supply ceases to be co-extensive with the desire for them....<sup>91</sup>

Note he did not say until the proprietor improves it, but rather until the demand rises sufficiently that the proprietor can extract a rent from it.

Say also tied this "productive services" defense to a "use" theory of interest, as "the rent for the use of capital lent."<sup>92</sup>

Böhm-Bawerk put both Say and Lauderdale into his category of "productivity" theorists, who "began to explain interest by the Productive Power of capital." He also found their theories wanting.

The new explanation found acceptance. It was taken up by gradually widening circles of economists, and worked out by them with greater care; in course of which it became divided into several branches marked by considerable divergence. Although attacked in many ways, chiefly from the socialist side, the Productivity theory has managed to hold its own. Indeed, at the present time the majority of such writers as are not entirely opposed to interest, acquiesce in one or other modification of this theory.

The idea that capital produces its own interest, whether true or false, seems at least to be clear and simple. It might be expected, therefore, that the theories built on this fundamental idea would be marked by a peculiar definiteness and transparency in their arguments. In this expectation, however, we should be completely disappointed. Unhappily the most

<sup>90</sup>*Ibid.*, pp. 359-360.

<sup>91</sup>*Ibid.*, p. 362.

<sup>92</sup>*Ibid.*, p. 345.

important conceptions connected with the Productivity theories suffer in an unusual degree from indistinctness and ambiguity; and this has been the abundant source of obscurity, mistakes, confusion, and fallacious conclusions of every kind.<sup>93</sup>

Expressly or tacitly [adherents of the productivity theory] understand [productivity] as meaning that, by the aid of capital, more is produced; that capital is the cause of a particular productive surplus result.

But this meaning also is subdivided. The words “to produce more” or “a productive surplus result” may mean one of two things. They may either mean that capital produces more *goods* or more *value*, and these are in no way identical. To keep the two as distinct in name as they are in fact, I shall designate the capacity of capital to produce more goods as its “Physical Productivity”; its capacity to produce more value as its “Value Productivity.”<sup>94</sup>

Say, in particular, “ascribes to capital the rendering of productive services, or, as he often expresses it, the rendering of ‘labour,’ and this labour is, according to him, the foundation of interest.”

The expressions Services and Labour may perhaps be objected to as more applicable to the actions of persons than of impersonal goods. But there is no doubt that Say is substantially right; capital does perform “labour.” It appears to me, however, just as much beyond doubt that the labour which capital actually performs consists in what I have called the Material Services of goods, and these form the foundation of gross interest, or, as the case may be, of the capital value of goods.<sup>95</sup>

The material services are subsumed completely under the price of the capital good itself; or rather, the material services *are* the value of the capital good.

A major part of *Capital and Interest* is devoted to examining and ultimately rejecting the productivity theories. Böhm-Bawerk wound up distilling productivity theories down into two main alternatives: a physical productivity theory that capital “has the power of serving towards the production of more goods than could be produced without it,” and a value productivity theory that capital “has the power of producing more value than it has in itself” or “to produce a surplus of value over its own value.”<sup>96</sup>

He further warned against conflating the two, or begging the question by arguing based on physical productivity that value productivity is also true.<sup>97</sup>

<sup>93</sup>Böhm-Bawerk, *Capital and Interest*, p. 111.

<sup>94</sup>*Ibid.*, p. 112.

<sup>95</sup>*Ibid.*, p. 232.

<sup>96</sup>*Ibid.*, p. 114.

<sup>97</sup>*Ibid.*, p. 115.

The facts of natural interest, as stated by Böhm-Bawerk, which call for an explanation, are that when capital is used in production “the return... which the capital creates for its owner has a greater value than the sum of the objects of capital consumed in obtaining it.” That is, the gross return to capital “is, as a rule, of more value than the capital expended in its attainment.” This “excess of value,” or “surplus value,” accruing to the owner is what the productivity theorists must explain in explaining interest.

The problem, more exactly stated, will therefore run thus: Why is the gross return to capital invariably of more value than the portions of capital consumed in its attainment? Or, in other words, Why is there a constant difference in value between the capital expended and its return?...

By the word “explain” I mean that they must show the productive power of capital to be the entirely sufficient cause of surplus value, and not merely name it as one condition among other unexplained conditions. To show that, without the productive power of capital, there could be no surplus value, does not explain surplus value any more than it would explain land-rent if we showed that, without the fruitfulness of the soil, there could be no land-rent....

If surplus value is to be explained by the productive power of capital, it is necessary to prove or show in capital a productive power of such a kind that it is capable, either by itself or in conjunction with other factors (in which latter case the other factors must equally be included in the explanation), of being the entirely sufficient cause of the existence of surplus value.

It is conceivable that this condition might be fulfilled in any of three ways.

1. If it were proved or made evident that capital possesses in itself a power which directly makes for the creating of value, — a power through which capital is able, as it were, to breathe value like an economic soul into those goods which it assists, physically speaking, to make. This is value productivity in the most literal and emphatic sense that could possibly be given it.

2. If it were proved or made evident that capital by its services helps towards the obtaining of more goods, or more useful goods; and if, at the same time, it was immediately evident that the more goods, or the better goods, must also be of more value than the capital consumed in their production. This is physical productivity with surplus value as a self-explanatory result.

3. If it were proved or shown that capital by its services helps towards the obtaining of more goods, or more useful goods; and if, at the same time, it were expressly proved that the more goods, or the better goods, must also be

of more value than the capital consumed in their production, and why they should be of more value. This is physical productivity with surplus value expressly accounted for.<sup>98</sup>

But in the passages quoted above, Say himself admitted that the “productivity” justification of profit or net interest did not depend solely on the productivity of the capital, but also required that productive services be excludable and finite in relation to demand — regardless of whether the person with title to exclude actually created those services.

Böhm-Bawerk shortly afterward repeated his division of productivity theories into two classes, this time using slightly different terminology. He described the first class as “Naive Productivity theories.” The second class, which start from the physical productivity of capital in the sense of increasing the output of products, but see the derivation of surplus value from this physical surplus as a separate phenomenon requiring further demonstration in its own right, he called “Indirect Productivity theories.” From the indirect productivity theories, in turn,

branches off a group of theories which, like the others, connect themselves with physical productivity, but lay the emphasis of their explanation on the independent existence, efficiency, and sacrifice of the uses of capital. These I shall call the Use theories. In the productive power of capital they do certainly see a condition of surplus value, but not the principal cause of its existence.

These use theories he treated as a category separate from the productivity theories, although they assume the productivity of capital.<sup>99</sup>

Böhm-Bawerk considered Say the “founder of the Naive Productivity theories,” but chided him for his unclarity of writing and argued that he “hesitates between two theories” — one of which is the naive productivity theory and the other an early and undeveloped version of the use theory.<sup>100</sup> As Böhm-Bawerk summarized Say’s argument, each of the cooperating factors, or funds — land, labor, and capital —

produces, first of all, productive services, and from these services come the actual products.

The productive services consist in an activity (action) or labour (travail) of the fund. The industrial fund renders its services through the labour of the producing man; nature renders hers through the activity of natural powers, the work of the soil, the air, the water, the sun, etc. But when we come to the productive services of capital, and ask how they are to be represented, the answer is less distinctly given. On one occasion in the *Traite* he says

<sup>98</sup>*Ibid.*, pp. 116-118.

<sup>99</sup>*Ibid.*, p. 119.

<sup>100</sup>*Ibid.*, p. 120.

vaguely enough: "It (capital) must, so to speak, work along with human activity, and it is this co-operation that I call the productive service of capital." He promises, at the same time, to give a more exact exposition later on of the productive working of capital, but in fulfilling this promise he limits himself to describing the transformations which capital undergoes in production. Nor does the *Cours Complet [d'Economie Politique Pratique]* give any satisfactory idea of the labour of capital. It simply says, capital is set to work when one employs it in productive operations.... We learn only indirectly, from the comparisons he is continually drawing, that Say thinks of the labour of capital as being entirely of the same nature as the labour of man and of natural powers.<sup>101</sup>

There are certain natural agents that do not become private property, and these render their productive services gratuitously — the sea, wind, physical and chemical changes of matter, etc. The services of the other factors — human labour-power, capital, and appropriated natural agents (especially land) — must be purchased from the persons who own them. The payment comes out of the value of the goods produced by these services, and this value is divided out among all those who have co-operated in its production by contributing the productive services of their respective funds. The proportion in which this value is divided out is determined entirely by the relation of the supply of and demand for the several kinds of services. The function of distributing is performed by the undertaker, who buys the services necessary to the production, and pays for them according to the state of the market.<sup>102</sup>

When we go deeper, however, the difficulties begin, and also the contradictions.

If the productive services of capital are to be paid by an amount of value taken out of the value of the product, it is above all necessary that there be an amount of value in the product available for that purpose. The question immediately forces itself on us — and it is a question to which in any case the interest theory is bound to give a decisive answer — Why is there always that amount of value? To put it concretely, where capital has co-operated in the making of a product, why does that product normally possess so much value that, after the other co-operating productive services, labour and use of land, are paid for at the market price, there remains over enough value to pay for the services of capital — enough, indeed, to pay these services in direct proportion to the amount and the duration of the employment of capital?<sup>103</sup>

<sup>101</sup>*Ibid.*, p. 121.

<sup>102</sup>*Ibid.*, pp. 121-122.

<sup>103</sup>*Ibid.*, pp. 122-123.

The question is, why, if the value of the capital advanced is a certain amount, the value of the product a greater amount? What accounts for this surplus value?<sup>104</sup>

Böhm-Bawerk pointed out that Say made two directly contradictory arguments for surplus value: one, that natural productive services directly create value; and the other, that the ability to collect payment is the primary cause.

In one group Say ascribes to capital a direct power of creating value; value exists because capital has created it, and the productive services of capital are remunerated *because* the surplus value necessary for this purpose is created. Here, then, the payment for the productive services of capital is the result of the existence of surplus value.

In the second group Say exactly transposes the causal relation, by representing the payment of the services of capital as the *cause*, as the reason for the existence of surplus value. Products have value because, and only because, the owners of the productive services from which they come obtain payment; and products have a value high enough to leave over a profit for capital, because the co-operation of capital is not to be had for nothing.

Say's first argument, as Böhm-Bawerk summarized it, was utterly incoherent. Say, specifically, attempted to refute Smith's argument reducing the value created by capital to "the labour by which capital itself was originally produced."

"Smith is mistaken," he says. "The product of this preceding labour is, if you will, the value of the mill itself; but the value that is daily produced by the mill is another and a quite new value; just in the same way as the rented use of a piece of ground is a separate value from that of the piece of ground itself, and is a value which may be consumed without diminishing the value of the ground." And then he goes on: "If capital had not in itself a productive power, independent of the labour that has created it, how could it be that a capital, to all eternity, produces an income independent of the profit of the industrial activity which employs it?" Capital, therefore, creates value, and its capability of doing so is the cause of profit. Similarly in another place: "The capital employed pays the services rendered, and the services rendered produce the value which replaces the capital employed."<sup>105</sup>

The argument is essentially circular: capital must have productive power in its own right, and create new value through its daily operation; else how could its owner derive an income from it?

In the second group I place first an expression which does not indeed directly refer to profit, but must by analogy be applied to it. "Those natural powers," says Say, "which are susceptible of appropriation become

<sup>104</sup>*Ibid.*, p. 123.

<sup>105</sup>*Ibid.*, p. 124.

productive funds of value because they do not give their co-operation without payment." Further, he constantly makes the price of products depend on the height of the remuneration paid to the productive services which have co-operated in their making. "A product will therefore be dearer just in proportion as its production requires, not only more productive services, but productive services that are more highly compensated.... The more lively the need that the consumers feel for the enjoyment of the product, the more abundant the means of payment they possess; and the higher the compensation that the sellers are able to demand for the productive services, the higher will go the price."<sup>106</sup>

Between the two views there is a strong and real antagonism, — stronger than one would perhaps think at first sight. The one treats the phenomenon of interest as above all a problem of production; the other treats it as a problem of distribution. The one finishes its explanation by referring simply to a fact of production: capital produces surplus value, therefore there is surplus value, and there is no occasion for further question. The other theory only rests by the way on the co-operation of capital in production, which it of course presupposes. It finds its centre of gravity, however, in the social formations of value and price.<sup>107</sup>

Böhm-Bawerk criticized naive productivity theories for providing “a great many proofs of a physical productivity, but almost nothing that could be interpreted as an attempt to prove that there is a direct value-creating power in capital.”

They assert it, but they take no trouble to prove it; unless the fact that the productive employment of capital is regularly followed by a surplus of value be advanced as a kind of empirical proof of the power of capital to produce value. Even this, however, is only mentioned very cursorily. It is perhaps put most plainly by Say, when... he asks how capital could to all eternity produce an independent income, if it did not possess an independent productive power....

Now what is the worth of this empirical proof? Does the fact that capital when employed is regularly followed by the appearance of a surplus in value, actually contain a sufficient proof that capital possesses a power to create value?...

The scientific blunder here made is obvious. A mere hypothesis is taken for a proved fact.<sup>108</sup>

In other words, Say begged the question; he took the question to be proved as a

<sup>106</sup>*Ibid.*, pp. 124-125.

<sup>107</sup>*Ibid.*, p. 126.

<sup>108</sup>*Ibid.*, p. 133.

premise and then argued from it. The thing to be proved — that the profit collected by the capitalist is payment for productive services — Say attempted to demonstrate by saying that capital must have productive services or could not collect a profit.

Literally to ascribe to capital a power of producing value is thoroughly to misunderstand the essential nature of value, and thoroughly to misunderstand the essential nature of production. Value is not produced, and cannot be produced. What is produced is never anything but forms, shapes of material, combinations of material; therefore things, goods. These goods can of course be goods of value, but they do not bring value with them ready made, as something inherent that accompanies production. They always receive it first from outside — from the wants and satisfactions of the economic world. Value grows, not out of the past of goods, but out of their future. It comes, not out of the workshop where goods come into existence, but out of the wants which those goods will satisfy. Value cannot be forged like a hammer, nor woven like a sheet. If it could, our industries would be spared those frightful convulsions we call crises, which have no other cause than that quantities of products, in the manufacture of which no rule of art was omitted, cannot find the value expected. What production can do is never anything more than to create goods, in the hope that, according to the anticipated relations of demand and supply, they will obtain value.<sup>109</sup>

Böhm-Bawerk took Say to task for failing to demonstrate that any additional value was contributed to the product beyond that Smith argued for: the value created in the process of creating the capital in the first place.

To turn now to the second interpretation that may be given to the Naive Productivity theory. Here the productive power ascribed to capital is, in the first instance, to be understood as Physical Productivity only; that is a capacity of capital to assist in the production of more goods or better goods than could be obtained without its help. But it is assumed as self-evident that the increased product, besides replacing the costs of capital expended, must include a surplus of value. What is the force of this interpretation?

I grant at once that capital actually possesses the physical productivity ascribed to it — that is to say, by its assistance more goods can actually be produced than without it. I will also grant — although here the connection is not quite so binding — that the greater amount of goods produced by the help of capital has more value than the smaller amount of goods produced without its help. But there is not one single feature in the whole circumstances to indicate that this greater amount of goods must be worth more than the capital consumed in its production — and it is this

109 *Ibid.*, pp. 134-135.

phenomenon of surplus value we have to explain.<sup>110</sup>

Lauderdale started out by denying Smith's claim that both the wages of labor and profit on capital are derived from the value which laborers add to the materials supplied by the capitalist. If this were true, he wrote, it would imply that profits on capital were entirely derivative of labor, and that capital was not an independent source of wealth alongside labor and land.<sup>111</sup>

In every case, the capital already exists in the possession of the capitalist, and is subsequently lent out. "Thus the profit which capital lent out acquires, is a transfer from one to another of what already exists, and can not, therefore, be said to be produced."<sup>112</sup>

The profit of capital "uniformly arises, either — from its supplanting a portion of labour, which would otherwise be performed by the hand of man; or — from its performing a portion of labour, which is beyond the reach of the personal exertion of man to accomplish."<sup>113</sup> The most obvious example is the use of capital in the form of machinery to supplant labour. If it was not for this singular faculty, his efforts to provide for his wants, like those of the other animals, would be bounded by what his hands, his teeth, and his feet, could enable him to accomplish.

Thus the spade enables one man to prepare as much ground for seed as fifty men could with their bare hands, thereby supplanting the labor of forty-nine; the plow, likewise, does the work of five diggers with spades and supplants the labor of four.<sup>114</sup> So, to summarize, "the profit of stock employed in machinery is paid out of a fund that would otherwise be destined to pay the wages of the labour it supplants."<sup>115</sup>

He stressed that capital *produces* profit, profit to which the capitalist is entitled by virtue of its productivity.

That we may possess a clear view of the manner in which this part of the national capital becomes entitled to its profit, let us suppose that all at once it was abstracted from any society, and that each consumer was obliged to perform himself the services he now derives from the capital which is employed in procuring and conveying to the manufacture the raw materials in advance of wages, or in conveying the manufactured commodity to the

<sup>110</sup>*Ibid.*, pp. 137-138.

<sup>111</sup>James Maitland Lauderdale, *An Inquiry into the Nature and Origin of Public Wealth, and into the Means and Causes of its Increase* (Edinburgh: Arch. Constable & Co.; London: T. N. Longman & O. Lees, 1804), pp. 155-158.

<sup>112</sup>*Ibid.*, p. 160.

<sup>113</sup>*Ibid.*, p. 161.

<sup>114</sup>*Ibid.*, pp. 162-163.

<sup>115</sup>*Ibid.*, p. 167.

market, and furnishing it to the consumer.<sup>116</sup>

But elsewhere Lauderdale unwittingly undermined this argument. He stated first that the rate of profit is determined by the balance between the supply of machines and the demand for them, with the upward bound of profit being set by the wages of the labor they supplant. But he went on to admit that that a machine under patent could collect a rate of profit much closer to this upper limit, and that when the patent expired the rate of profit would instead, like the price of other goods, be set by market competition and gravitate toward a lower bound set by the difficulty of procuring additional machines.<sup>117</sup> The clear implication is that the rate of net profit, over and above cost amortization, is determined primarily by control over access to capital goods.

Lauderdale himself seemed to give away as much, in noting that “though the proprietor of the capital so employed, saves, by the use of it, the labour of the consumer, he by no means substitutes in its place an equal portion of his own; which proves that it is his capital, and not himself, that performs it.”<sup>118</sup>

Böhm-Bawerk identified Lauderdale, specifically, as the founder of indirect productivity theories.

He challenged his argument that profit consisted of the wages of the labor supplanted by capital. It’s true, he said, that a machine may enable one laborer to do the work previously done by many more, and true as well that some share of the saving in wages goes to the capitalist. “But this share, thus proved to go to capital, is not the thing that was to be explained, the Net Interest or profit; but only the gross return to the use of capital.”

Lauderdale assumed that, even with all the capitalist’s costs accounted for, including depreciation of the machines, there would be some surplus value left over. But, as Böhm-Bawerk pointed out, the existence of this surplus value as a normal state of affairs after the amortization of all costs is taken into account was the point to be proved.<sup>119</sup> (And, as we saw above, Lauderdale himself inadvertently conceded that the size of the net profit over and above amortization of capital outlays is determined by relative power rather than by any objective measure of productivity.)

Despite his often brilliant insights on the history of economic theory, Schumpeter ironically was less critical of productive services theories than was Böhm-Bawerk. Like the theorists whose systems he chronicled, he displayed a general tendency to accept at face value the socially constructed claims of compensation to the owners of production inputs for the “productive services”

<sup>116</sup>*Ibid.*, pp. 172-173.

<sup>117</sup>*Ibid.*, pp. 167-169.

<sup>118</sup>*Ibid.*, p. 179.

<sup>119</sup>Böhm-Bawerk, *Capital and Interest*, pp. 145-146.

which they “contributed” only in the sense of not obstructing the use of things which they did not themselves in any way produce, but only controlled access to. Landlords, for example:

Everybody not completely blinded by indoctrination will... realize immediately that... the capitalist hires services of land exactly in the same sense in which he hires services of labor. In fact, all we need to do in order to arrive at this result is to ask the question why landlords are in a position to prey upon the ‘capitalist’s’ loot. The only answer is that the services of land, also, are requisites of production. As soon as we realize this not very recondite truth, we arrive at what, to any unbiased mind, must seem to be the most natural view to take: the landowners should enter the model of the stationary process, along with labor, as another class of owners of productive services, which, at the beginning of (or during) each period, they stand ready to exchange for the income goods that the ‘capitalists’ were supposed to possess. This should be extended, of course, to the ‘capitalists’ (or whoever the people are) who own the nonwage capital.<sup>120</sup>

...Production in the economic sense of the term is nothing but a combination, by purchase, of requisite and scarce services. In this process, each of the requisite and scarce services secures a price, and the determination of these prices is all that distribution or income formation fundamentally consists in.... And all types of incomes are by this schema explained on one and the same principle, the principle of pricing the services of co-operating factors. The analytic task of showing how this principle, so obvious in the case of consumers’ goods or their services, may be made to apply also to the case of producers’ goods or their services, was not clearly discerned, let alone accomplished before the rise of the theory of imputation in the next period....<sup>121</sup>

**Nassau Senior.** As one of his four elementary economic propositions, Senior stated “That the powers of Labour, and of the other instruments which produce wealth, may be indefinitely increased by using their Products as the means of further Production.”<sup>122</sup> He tied this directly to “abstinence,” which he listed as his third category of Instruments of Production alongside “labour” and “natural agents.” “All our subsequent remarks on abstinence are a development and illustration” of the proposition that productivity is increased by labor using its products as means of further production.<sup>123</sup>

<sup>120</sup>Schumpeter, *History of Economic Analysis*, pp. 540-541.

<sup>121</sup>*Ibid.*, pp. 541-542.

<sup>122</sup>Nassau W. Senior, *An Outline of the Science of Political Economy* (London: Clowes and Sons, Stamford Street, 1836). Facsimile edition (New York: Augustus M. Kelley, 1965), p. 26.

<sup>123</sup>*Ibid.*, p. 58.

But although Human Labour, and the Agency of Nature, independently of that of man, are the primary Productive Powers, they require the concurrence of a Third Productive Principle to give to them complete efficiency. The most laborious population, inhabiting the most fertile territory, if they devoted all their labour to the production of immediate results, and consumed its produce as it arose, would soon find their utmost exertions insufficient to produce even the mere necessaries of existence.

To the Third Principle, or Instrument of Production, without which the two others are inefficient, we shall give the name of Abstinence: a term by which we express the conduct of a person who either abstains from the unproductive use of what he can command, or designedly prefers the production of remote to that of immediate results.<sup>124</sup>

Although Senior viewed his categories as more or less coextensive with the traditional labor, land, and capital, he preferred to substitute “abstinence” for the last because of its ambiguity or ambivalence. In popular usage and that of economists, capital “signifies an article of wealth, the result of human exertion, employed in the 'production or distribution of wealth.’”

*By the word Abstinence, we wish to express that agent, distinct from labour and the agency of nature, the concurrence of which is necessary to the existence of Capital, and which stands in the same relation to Profit as Labour does to Wages.... Attention is usually drawn to abstinence only when it is not united with labour. It is recognised instantly in the conduct of a man who allows a tree or a domestic animal to attain its full growth; but it is less obvious when he plants the sapling or sows the seed corn. The observer's attention is occupied by the labour, and he omits to consider the additional sacrifice made when labour is undergone for a distant object. This additional sacrifice we comprehend under the term Abstinence....*<sup>125</sup>

For Senior, abstinence — as with time preference for some Austrians — took on a moral character, its lack being associated with improvidence and ignorance.

It may be said that pure Abstinence, being a mere negation, cannot produce positive effects.... [But t]o abstain from the enjoyment which is in our power, or to seek distant rather than immediate results, are among the most painful exertions of the human will. ...[A]bstinence, as it is perhaps the most effective [means by which man can be raised in the scale of being], is the slowest in its increase, and the least generally diffused. Among nations, those that are the least civilized, and among the different classes of the same nation those which are the worst educated, are always the most improvident,

<sup>124</sup>*Ibid.*, p. 58.

<sup>125</sup>*Ibid.*, p. 59.

and consequently the least abstinent.<sup>126</sup>

Abstinence and capital accumulation are also tied in with something like the wages-fund doctrine. "Capital," in Senior's usage, included not only fixed industrial capital and raw materials but "the necessaries of life, consumed by the labourer and the capitalist for their own support...."<sup>127</sup>

Abstinence, and the associated accumulation of capital, is what enables the use of machinery and division of labor.

The principal advantages derived from Abstinence, or, to express the same idea in more familiar language, from the Use of Capital, are two: first the Use of Implements [i.e. "tools, or machines"]; and second the Division of Labour.<sup>128</sup>

The superior productiveness of modern compared with ancient labour depends, perhaps, principally on the use of these instruments.<sup>129</sup>

Abstinence, in concrete terms, is the foregone consumption necessary to create productive tools that would increase future productivity: "But what a sacrifice of present enjoyment must have been undergone by the capitalist who first opened the mine of which the carpenter's nails and hammer are the product!"<sup>130</sup>

Regarding the necessity of abstinence and accumulation for the division of labor, Senior quoted Adam Smith. In commenting on Smith's passage, he came close to stating a synchronization theory of capital in language resembling that of Thomas Hodgskin.

"In that rude state of society," says Adam Smith, "in which there is no division of labour, in which exchanges are seldom made, and in which every man provides every thing for himself, it is not necessary that any stock should be accumulated or stored up beforehand in order to carry on the business of the society. Every man endeavours to supply, by his own industry, his own occasional wants as they occur...."

"But when the division of labour has once been thoroughly introduced, the produce of a man's own labour can supply but a very small part of his occasional wants. The far greater part of them are supplied by the produce of other men's labour, which he purchases with the produce, or, what is the same thing, with the price of the produce of his own. But his purchase cannot be made until such time as the produce of his own labour has not only been completed, but sold. A stock of goods of different kinds, therefore, must be stored up somewhere, sufficient to maintain him, and to

<sup>126</sup>*Ibid.*, p. 60.

<sup>127</sup>*Ibid.*, p. 64.

<sup>128</sup>*Ibid.*, p. 67.

<sup>129</sup>*Ibid.*, p. 70.

<sup>130</sup>*Ibid.*, p. 68..

supply him with the materials and tools of his work, till such time, at least, as both these events can be brought about....”

Perhaps this is inaccurately expressed; there are numerous cases in which production and sale are contemporaneous. The most important divisions of labour are those which allot to a few members of the community the task of protecting and instructing the remainder. But their services are sold as they are performed. And the same remark applies to almost all those products to which we give the name of services. Nor is it absolutely necessary in any case, though, if Adam Smith's words were taken literally, such a necessity might be inferred, that, before a man dedicates himself to a peculiar branch of production, a stock of goods should be stored up to supply him with subsistence, materials, and tools, till his own product has been completed and sold. That he must be kept supplied with those articles is true; but they need not have been stored up before he first sets to work, they may have been produced while his work was in progress. Years must often elapse between the commencement and sale of a picture. But the painter's subsistence, tools, and materials for those years are not stored up before he sets to work: they are produced from time to time during the course of his labour. It is probable, however, that Adam Smith's real meaning was, not that the identical supplies which will be wanted in a course of progressive industry must be already collected when the process which they are to assist or remunerate is about to be begun, but that a fund or source must then exist from which they may be drawn as they are required. That fund must comprise in specie some of the things wanted....<sup>131</sup>

Nevertheless, he immediately went on afterward to back Smith's analysis for all intents and purposes.

But if the employment of capital is required for the purpose of allowing a single workman to dedicate himself to one pursuit, it is still more obviously necessary in order to enable aggregations, or classes of producers, to concur, each by his separate exertions, in one production. In such cases even the mere matter of distribution, the mere apportionment of the price of the finished commodity among the different producers requires the employment of a considerable capital, and for a considerable time, or, in other words, a considerable exertion of abstinence. The produce of independent labour belongs by nature to its producer. But where there has been a considerable division of labour, the product has no one natural owner....

This difficulty is got over by distinguishing those who assist in production by advancing capital, from those who contribute only

<sup>131</sup>*Ibid.*, pp. 78-79.

labour....<sup>132</sup>

The productivity of capital is a matter of degree: the more capital-intensive — or what Böhm-Bawerk called “roundabout” — the production method, the more productive labor becomes.

The productiveness of labour partly depends *on the degree in which it is assisted by abstinence*, or, to use a more familiar expression, *by the use of capital*.<sup>133</sup>

The profit incorporated into the price of finished goods must be “proportioned to the time... elapsed” between payment of wages and sale of the finished product, in order to “remunerate [the capitalist] for his abstinence in having so long deprived himself of the use of his money” or of the pleasure of devoting the same productive resources to his own consumption.<sup>134</sup>

Böhm-Bawerk credited Senior as the founder of the Abstinence theory.<sup>135</sup> The concept — that interest is a reward for the capitalist’s abstinence, i.e., investing resources in producing goods and awaiting payoff from the proceed of sales rather than consuming them — was “foreshadowed” by Smith’s and Ricardo’s observation that “the capitalist must receive interest, because otherwise he would have no motive for the accumulation and preservation of capital,” and in another “nice opposition” by Smith “of ‘future profit’ to ‘present enjoyment’....”<sup>136</sup> But Senior took it further, making it “the centre of a well-constructed theory of interest.”<sup>137</sup>

Now the "sacrifice," which lies in the renunciation or postponement of enjoyment, demands indemnification. This indemnification consists in the profit of capital.<sup>138</sup>

Böhm-Bawerk acknowledged at least a “core of truth” in Senior’s abstinence doctrine.

It cannot be denied that the making, as well as the preservation of every capital, does demand an abstinence from or postponement of the gratification of the moment; and it appears to me to admit of as little doubt that this postponement is considered in, and enhances the value of those products that, under capitalist production, cannot be obtained without more or less of such postponement....

Now I have no doubt that the reason of this enhancement is nothing else than that there must be in this case a postponement of the gratification

<sup>132</sup>*Ibid.*, pp. 78-79.

<sup>133</sup>*Ibid.*, p. 176.

<sup>134</sup>*Ibid.*, pp. 80.

<sup>135</sup>Böhm-Bawerk, *Capital and Interest*, p. 269.

<sup>136</sup>*Ibid.*, pp. 270-271.

<sup>137</sup>*Ibid.*, pp. 271-272.

<sup>138</sup>*Ibid.*, p. 273.

obtainable from the labour performed. For if the commodity immediately ready for use and that ready later on were to stand equally high in value, everybody would prefer to employ his 100 days in that labour which pays its wages immediately. This tendency is bound to call forth an increased supply of the goods immediately ready for use, and this again must bring down their price as compared with that of the goods ready later on. And as the wages of labour have a tendency to equalise themselves over all branches of production, in the end there is assured to the producers of these later goods a plus over the normal payment of labour; in other words, an interest on capital.

Even so, he viewed Senior's theory as defective in that "First, Senior has made too sweeping a generalisation on an idea quite right in itself, and has used it too much as a type.

There is no doubt in my mind that the element, postponement of gratification, which Senior puts in the foreground, does as a fact exert a certain influence on the origination of interest. But that influence is neither so simple, nor so direct, nor so exclusive as to permit of interest being explained as merely a "wage of abstinence."...

Second, Senior has expressed that part of his theory which is substantially correct in a fashion at all events open to attack. I consider it a logical blunder to represent the renunciation or postponement of gratification, or abstinence, as a second independent sacrifice in addition to the labour sacrificed in production.<sup>139</sup>

By way of explanation, Böhm-Bawerk asked the reader to imagine a man who chooses between using his time to fish, hunt, or gather fruit. If he decides to fish and manages to catch some for supper, what is the man's sacrifice? Other than the actual day's labor he spends fishing, the only other sacrifice is the opportunity cost of the other possible ways of spending his time. But Böhm-Bawerk argued that it is permissible to count *either* the sacrifice of the day's labor, *or* the opportunity cost of the alternative employments — but not *both*. Senior, by attempting to elevate the indirect sacrifice of alternative employments alongside the direct sacrifice of labor as a second form of sacrifice, was guilty of "double reckoning."<sup>140</sup>

Böhm-Bawerk put forth another alternative scenario that brings the time or waiting element more fully into play, with the hypothetical man deciding between employing his labor in fishing versus planting fruit trees, and claiming the right to a higher reward for time spent waiting for the fruit trees to bear fruit compared to the immediate consumption of the fish on the same day.<sup>141</sup>

<sup>139</sup>*Ibid.*, pp. 277-278.

<sup>140</sup>*Ibid.*, pp. 278-280.

<sup>141</sup>*Ibid.*, p. 281.

The source of [the error of positing two sacrifices] is simply this, that the element of Time is not really indifferent; only it exerts its influence in a somewhat different way from that imagined by Senior and by people generally. Instead of affording material for a second and independent sacrifice, its importance rather lies in determining the amount of the one sacrifice actually made.<sup>142</sup>

He went on, finally, to state his own principle of time preference as a superior way of understanding the time element:

Here we have at last reached the point where we see the real influence of the element Time on the amount of the sacrifice. It is a fact — the grounds on which it rests do not concern us here — that in circumstances otherwise equal we prefer a present enjoyment to a future. Consequently, if we have to choose between applying a means of satisfaction, say labour, to the satisfaction of a present want, and applying it towards the satisfaction of a future want, the attraction of the immediate gratification will make it difficult to decide in favour of the future use. If, however, we do decide for the future use, in measuring the amount of sacrifice made for it by the greatness of the use foregone, the attraction of the moment which adheres to the use foregone will weigh down the scale, and make our sacrifice appear harder than it would otherwise have appeared.<sup>143</sup>

Even so, in his treatment of the “core of truth” in Senior’s Abstinence theory, he — perhaps unwittingly — showed it and time preference to be closely related forms of advance theory.

He treated Bastiat’s theory of interest as “a copy of Senior's Abstinence theory forced into the forms of Bastiat's Value theory, and thereby much deteriorated.”

The fundamental thought in each is identical. The postponement of gratification, which Senior calls Abstinence, and Bastiat calls sometimes Delay, sometimes Privation, is a sacrifice demanding compensation. But beyond this they diverge from each other in some respects.

Senior, who deduces the value of goods from their cost of production, simply says that this sacrifice is a constituent element of the costs, and is done with it. Bastiat, who bases the value of goods on "exchanged services," elevates the postponement also to the rank of a service. "Postponement in itself is a special service, since on him who postpones it imposes a sacrifice, and on him who desires it confers an advantage." This service, according to the great law of society, which runs "service for service," must be specially paid. The payment takes place where the capitalist has borrowed his capital

<sup>142</sup>*Ibid.*, p. 282.

<sup>143</sup>*Ibid.*, pp. 284-285.

from another person by means of loan interest.<sup>144</sup>

**John Stuart Mill.** A “fundamental theorem” concerning capital, according to Mill, is that “...all capital is the product of saving, that is, of abstinence from present consumption for the sake of a future good...”<sup>145</sup> And profit is its reward.

As the wages of the labourer are the remuneration of labour, so the profits of the capitalist are properly, according to Mr. Senior's well-chosen expression, the remuneration of abstinence. They are what he gains by forbearing to consume his capital for his own uses, and allowing it to be consumed by productive labourers for their uses. For this forbearance he requires a recompense.<sup>146</sup>

He tied abstinence to something like Smith's wages fund doctrine. “The claim to remuneration” for maintaining laborers with food is “for abstinence.”

If a person has a store of food, he has it in his power to consume it himself in idleness, or in feeding others to attend on him, or to fight for him, or to sing or dance for him. If, instead of these things, he gives it to productive labourers to support them during their work, he can, and naturally will, claim a remuneration from the produce. He will not be content with simple repayment; if he receives merely that, he is only in the same situation as at first, and has derived no advantage from delaying to apply his savings to his own benefit or pleasure, he will look for some equivalent for this forbearance: he will expect his advance of food to come back to him with an increase, called in the language of business, a profit; and the hope of this profit will generally have been a part of the inducement which made him accumulate a stock, by economizing in his own consumption; or, at any rate, which made him forego the application of it, when accumulated, to his personal ease or satisfaction.<sup>147</sup>

Böhm-Bawerk had little to say about Mill's theory of net interest, beyond including him with the eclectics who appended Senior's abstinence theory to his own body of theory.<sup>148</sup>

Schumpeter appeared to endorse the abstinence theory when he wrote that its “sound logic” and “common-sense appeal” recommended it to “a long line of authorities, mainly English, headed by J.S.Mill,” who “handed to Marshall ready-made the doctrine of the two factors of ‘real cost’ — the disutility (irksomeness)

<sup>144</sup>*Ibid.*, p. 288.

<sup>145</sup>John Stuart Mill, *Principles of Political Economy with Some of Their Applications to Social Philosophy*. Edited, with an introduction by Sir W. J. Ashley (London, New York, Toronto: Longmans, Green & Co., 1909) <[https://oll-resources.s3.us-east-2.amazonaws.com/oll3/store/titles/101/0199\\_Bk.pdf](https://oll-resources.s3.us-east-2.amazonaws.com/oll3/store/titles/101/0199_Bk.pdf)>, p. 163.

<sup>146</sup>*Ibid.*, p. 405.

<sup>147</sup>*Ibid.*, p. 32.

<sup>148</sup>Böhm-Bawerk, *Capital and Interest*, p. 286.

experienced by the laborer and abstinence experienced by the saver.”<sup>149</sup>

**The Marginalists.** The benefit of capital, William Stanley Jevons wrote, “is to enable the labourer to await, the result of any long-lasting work, —to put an interval between the beginning and the end of an enterprise.”

Not only can we, by the aid of capital, erect large works which would otherwise have been impossible, but the production of articles which would have been very costly in labour may be rendered far more easy. Capital enables us to make a great outlay in providing tools, machines, or other preliminary works, which have for their sole object the production of some important commodity, and which will greatly facilitate production when we enter upon it.<sup>150</sup>

In a section of the chapter on capital titled “Capital is concerned with Time,” he observed: “Several economists have clearly perceived that the time elapsing between the beginning and end of a work is the difficulty which capital assists us to surmount.”<sup>151</sup>

However, he continued, James Mill and others “have not with sufficient boldness followed out the consequences of their notion.”

If we take a comprehensive view of the subject, it will be seen that not only the chief but the sole purpose of capital is as above described. Capital simply allows us *to expend labour in advance*. (i.e., to “spend the first part of our labour” constructing tools, rather than “proceed straight to the work” using only our own bodies).<sup>152</sup>

In the production of goods by modern industry, “the complete process of producing those goods is divided into many parts; and it is necessary to begin the spending of labour a long time before any goods can be finished.”<sup>153</sup>

Jevons posited something like Böhm-Bawerk’s roundaboutness, associating improvements in productivity with lengthening “*the average interval between the moment when labour is exerted and its ultimate result or purpose accomplished,*” and then noting that “*such improvements depend upon the use of capital.*”<sup>154</sup>

He also equated investment to Senior’s concept of abstinence, or “that temporary sacrifice of enjoyment which is essential to the existence of capital.”<sup>155</sup>

A careful consideration of Senior’s remarks shows that in reality abstinence

<sup>149</sup>Schumpeter, *History of Economic Analysis*, p. 629.

<sup>150</sup>William Stanley Jevons, *The Theory of Political Economy*. Third edition (London and New York: MacMillan & Co., 1888), pp. 222-223.

<sup>151</sup>*Ibid.*, p. 223.

<sup>152</sup>*Ibid.*, p. 225.

<sup>153</sup>*Ibid.*, p. 226.

<sup>154</sup>*Ibid.*, pp. 227-228.

<sup>155</sup>*Ibid.*, p. 232.

is the endurance of want, the abstaining from the enjoyment of utility which might be enjoyed. Now the degree or intensity of want is measured by the degree of utility of commodity if it were consumed.<sup>156</sup>

He went on to cite Senior's position "that abstinence is to profit as labour is to wages."<sup>157</sup>

Despite all this, Jevons shortly thereafter stated a productivity theory of interest, treating it as payment for the increased productivity which capital enables: "interest is determined by the increment of produce which it enables a labourer to obtain,"<sup>158</sup> or "the advantage which it confers on industry" — but "the advantage of the last increment of capital," not "the whole advantage."<sup>159</sup>

Böhm-Bawerk treated Say as an exemplar not only of the productive services theory of interest which we examined earlier, but of yet another one — the "use theory" — which began as an offshoot of Say's productivity theory, was further developed by Friedrich Benedikt Wilhelm von Hermann, and reached its fullest development in the Austrian marginalist Carl Menger.

If, on the one hand, it is true that the value of every product is identical with the value of the means of production sacrificed in making it, and if, on the other hand, it is observed that, notwithstanding this, the product of capital is regularly greater than the value of the real capital thus sacrificed, the conviction almost forces itself on us that this real capital may not represent all the sacrifice that is made to obtain a product. Perhaps, besides this real capital, there is something else that must be expended at the same time; a something which claims a part of the value of the product, — the surplus value we are inquiring about.

This Something was sought and found. Indeed, we might say that more than one was found. Three distinct opinions were put forward as to its nature; and out of the one fundamental idea there grew three distinct theories — the Use theory, the Abstinence theory, and the Labour theory. Of these the one that kept most closely by the Productivity theories, and indeed made its first appearance simply as an extension of them, is the Use theory.

The fundamental idea of the Use theory is the following. Besides the *substance* of capital, the *use...* of capital is an object of independent nature and of independent value. To obtain a return for capital it is not enough to sacrifice substance of capital alone; the use of the capital employed must be sacrificed also during the period of the production. Now since, as a matter of

<sup>156</sup>*Ibid.*, p. 233.

<sup>157</sup>*Ibid.*, p. 233.

<sup>158</sup>*Ibid.*, p. 253.

<sup>159</sup>*Ibid.*, pp. 254-255.

theory, the value of the product is equal to the sum of the values of the means of production spent in making it, and since, in conformity with this principle, the substance of capital and the use of capital, taken together, are equal to the value of the product, this product naturally must be greater than the value of the substance of capital by itself. In this way the phenomenon of surplus value is explained as being the share that falls to the part sacrifice, the "use of capital."<sup>160</sup>

The use theory, Böhm-Bawerk wrote, was "first suggested" by J. B. Say; Hermann "worked out the nature and essence of the Uses, and so put the theory on a firm foundation"; and Menger "gave it the most complete form of which, in my opinion, it is capable."<sup>161</sup>

In [Say's] writings Productivity theory and Use theory grow up side by side; so much so that neither seems to come before or be subordinate to the other; and the historian of theory has no alternative but to consider Say as the representative of both theories.<sup>162</sup>

The fund of productive capital provides productive services. These services possess economical independence, and are the objects of independent valuation and sale. Now as these services are indispensable for production, and at the same time are not to be obtained from their owners without compensation, the prices of all products of capital, under the play of supply and demand, must adjust themselves in such a way that, over and above the compensation to the other factors in production, they contain the ordinary compensation for these productive services. Thus the "surplus value" of the products of capital, and with it interest, originates in the necessity of paying independently for this independent sacrifice in production, the "services of capital."

The most signal weakness of this doctrine... lies, perhaps, in the confusion in which Say leaves the conception of productive services. A writer who makes the independent existence and remuneration of such services the axis on which his interest theory turns is, at least, bound to express himself clearly as to what should be understood by these terms. Not only has Say omitted to do this..., but the few indications that he does give point in an entirely wrong direction.

From the analogy that Say repeatedly draws between the services of capital on the one hand, and human labour, as also the activity of the "natural fund," on the other, we might conclude that, by the services of capital, Say would wish us to understand the putting in motion of the natural

<sup>160</sup>Böhm-Bawerk, *Capital and Interest*, pp. 185-186.

<sup>161</sup>*Ibid.*, p. 188.

<sup>162</sup>*Ibid.*, p. 188.

powers that reside in real capital; e.g. the physical actions of beasts of burden, of machines, the setting free of the heating power in coal, etc. But if this is what he means, then the whole argument is on the wrong track. For this putting in motion of natural powers is nothing else than... the “Material Services”... of goods. It is what our current science, with its unsuggestive and lamentably obscure vocabulary, has termed... the gross use of capital.... In a word, it is the substance of gross interest, not of net interest, and it is net interest with which we are here concerned. If this is what Say actually meant by his *services productifs*, then his whole theory has missed the mark; for it is only gross interest that emerges from the necessity of paying for productive services, not net interest; and it is net interest that is the object of explanation. But if by the *services productifs* he meant anything else, he has left us absolutely in the dark regarding the nature of it, and the theory built on its existence is, to say the least of it, incomplete.

In any case, then, Say's theory is not satisfactory. Yet it pointed out a new way which, when properly followed, led much nearer the heart of the interest problem than the barren Productivity theories had.<sup>163</sup>

Hermann's 1832 work *Staatswirtschaftliche Untersuchungen*, in turn, was “a very great stride... towards the perfecting of the Use theory.”

This work forms the second milestone in the development of the Use theory. Out of Say's scanty and contradictory suggestions — which he accepts with flattering recognition — Hermann has built up a stately theory; the same care expended on its foundations as on its details....

The various inputs to production, whether consumables or durable goods, have a “use” which “can be conceived of as a good in itself, and may obtain for itself an exchange value which we call interest.”

Hermann then makes use of this analysis to introduce his conception of capital, which is based altogether on that of its use.

"Lasting or durable goods, and perishable goods which retain their value while changing their shape, may thus be brought under one and the same conception; they are the durable basis of a use which has exchange value. Such goods we call capital."<sup>164</sup>

The exchange value of the use of capital results from “calculation” of “the period of time during which each element of exchange value is embodied in the product.”

For from that moment when a labour or a use is employed in the making of a product, the disposal of it in any other way is made impossible. Instead of being made use of in itself, it is simply made to co-operate in the making

<sup>163</sup>*Ibid.*, pp. 188-190.

<sup>164</sup>*Ibid.*, pp. 193-197.

and delivery of the product to the consumers.... But it is just this amount of value that a man abstains from using in any other way till the product is paid for by the buyer.”<sup>165</sup>

...In the fact that capital is made use of in production, both [Say and Hermann] see a sacrifice independent of and separate from the expenditure of the substance of capital.... Still, Hermann's doctrine shows a substantial advance on Say's. Say had, in fact, given the mere outlines of a theory, inside which the most important features were left blank. His *services productifs* are nothing but an ambiguous name, and the very important consideration of how the sacrifice of these services constitutes an independent sacrifice in production — independent, that is, of the substance of capital sacrificed — is very much left to the reader's fancy. In trying, with true German thoroughness, to work out and make clear these two cardinal points, Hermann has definitely filled in the outlines he took from Say, and in doing so has given to the whole the rank of a solid theory.<sup>166</sup>

Regardless of the production period specific to a given industry, Menger wrote, all forms of industry that involve the transformation of higher-order producer goods into lower-order consumer goods entail a time element between the beginning of the production process and consumption of the finished good, which cannot be entirely eliminated. But it necessarily implies a waiting period, of greater or lesser extent.<sup>167</sup> The productivity benefits of extended periods of production can only be obtained “by employing goods, which are available... for the *present* or for the *near future*, for the satisfaction of the needs of a *more distant time period*.”<sup>168</sup>

It follows from this that one can take advantage of the increased productivity of longer production periods if one “possesses *capital*.” And as the use of extended production processes using higher-order goods — capital goods — proliferates in more and more areas, “the available quantities of capital services are smaller than the requirements for them,” so that they become economic goods which possess exchange value and must be economized on.<sup>169</sup> The “*command* of quantities of economic goods *for periods of time*” (emphasis added) acquires an economic value. Hence the full price of higher-order goods must include “the value of the services of capital during the production period.”<sup>170</sup> Interest, therefore, is payment

<sup>165</sup>*Ibid.*, pp. 197-198.

<sup>166</sup>*Ibid.*, pp. 198-199.

<sup>167</sup>Carl Menger, *Principles of Economics*. Translated by James Dingwall and Bert F. Hoselitz. Introduction by F.A. Hayek (Libertarian Press, 1994), pp. 67-68.

<sup>168</sup>*Ibid.*, p. 155.

<sup>169</sup>*Ibid.*, pp. 155-156.

<sup>170</sup>*Ibid.*, pp. 157-158.

for “the use of capital.”<sup>171</sup>

In so stating it, Böhm-Bawerk wrote, Menger “put the Use theory into the most perfect form in which it could well be put.”<sup>172</sup> As he summarized the argument:

The transformation of means of production into products (or, shortly, Production) always demands a certain period of time, sometimes long, sometimes short. For the purposes of production it is necessary that a person should not only have the productive goods at his disposal for a single moment inside that period of time, but should retain them at his disposal and bind them together in the process of production over the whole period of time. One of the conditions of production, therefore, is this: the disposal over quantities of real capital during definite periods of time. It is in this Disposal that Menger places the essential nature of the use of capital.

The use of capital, or the disposal over capital, thus described, in so far as it is in demand and is not to be had in sufficient quantity, may now obtain a value, or, in other words, may become an economical good. When this happens... then, over and above the other means of production employed in the making of a concrete product..., there enters into the sum of value contained in the anticipated product, the disposal over those goods that are required for the production, or the use of capital. And since, on that account, in this sum of value there must remain something for the economical good we have called "use of capital," the other means of production cannot account for the full amount of the value of the anticipated product.<sup>173</sup>

Up to this point, Böhm-Bawerk continued, he had evaluated previous iterations of the use theory not in terms of their validity as such, but in terms of whether they measured up to an ideal use theory. Menger having put forward the ideal form of the theory in its fullness, Böhm-Bawerk instead shifted to evaluating Menger’s fully developed form of the theory for its general validity.<sup>174</sup> He found it wanting.

All the Use theories rest on the following assumption. Not only does real capital itself possess value, but there is a Use... of capital which exists as an independent economical good, possessing independent value; and this latter value, together with the value of the capital, makes up the value of the product of capital. Now in opposition to this I maintain : —

1. There is no independent “use of capital,” such as is postulated by the Use theorists; there can, therefore, be no independent value of the kind asserted, and the phenomenon of "surplus value" cannot thus be accounted for. The assumption is nothing but the product of a fiction which is in

<sup>171</sup>*Ibid.*, p. 156.

<sup>172</sup>Böhm-Bawerk, *Capital and Interest*, p. 209.

<sup>173</sup>*Ibid.*, pp. 211-212.

<sup>174</sup>*Ibid.*, p. 213.

contradiction of actual fact.

2. Even if there were a "use of capital" of such a nature as is assumed by the Use theorists, the actual phenomena of interest would not be satisfactorily explained thereby. The Use theories, therefore, rest on a hypothesis which contradicts actual facts, and is, besides, insufficient to explain the phenomena in question.<sup>175</sup>

And first we ask, May it not be the case that the Uses... of the Say-Hermann school are identical with our Material Services...? There can be no doubt that they are not identical. That something which the school in question calls "use" is intended to be the basis and the equivalent of net interest. The material services, on the contrary, are sometimes (in the case of durable goods) the basis of gross interest, embracing the net interest and a part of the capital value itself; sometimes (in the case of perishable goods) the basis of the entire capital value. If I buy the material services of a dwelling-house, I pay a year's rent for the services of one year; this is a gross interest. If I buy the material services of a cwt. of coal, I pay, for the services of the single hour in which the coal burns to ashes, the whole capital value of the coal. On the other hand, what the Use theorists call "use" is paid for quite differently. The "use" that a cwt. of coal gives off during a whole year attains no higher price than, say, a twentieth part of the capital value of the coal. Use and Material Service must, therefore, be two quite distinct amounts. From this, among other things, it is clear that those writers who defined and pointed out the existence of what we have called material services, under the idea that they were defining the basis of net interest, and pointing to it, were under a serious delusion....

And now we come to the decisive question. If what the Use theorists called "uses"... are anything else than the "material services" of goods, does their conception represent anything real? Is it conceivable that between, beside, or among these material services we get some other useful thing from goods?

I can give no other answer to this question than the most emphatic No.<sup>176</sup> As with previous iterations of the use theory, Böhm-Bawerk viewed this as a case of double counting.

...[T]he value of the permanent disposal that inheres in the thing, and is presented along with it? — Is evidently contained in the capital value of the thing itself. From which I draw the conclusion... that if the plus, viz. the value of the permanently inhering disposal, is contained in the capital value of the good itself, the minus contained in it, the temporary disposal over a

<sup>175</sup>*Ibid.*, p. 214.

<sup>176</sup>*Ibid.*, pp. 228-229.

good, must be contained in the value of the good itself. The temporary disposal, therefore, cannot be, as Menger assumes, an independent bearer of value alongside the value of the good in itself.<sup>177</sup>

To reiterate a previous argument, however, Menger's "use" — insofar as it is compensation for the fact that, as Menger said, the lender abstains from using the capital in any other way — can plausibly be interpreted as a forerunner of time preference. Compensation for use amounts, in other words, to compensating the lender for doing without the capital at its present value out of the proceeds from selling the product at its discounted future value.

**Exploitation Theories.** As Böhm-Bawerk summarized them, exploitation theories are characterized by this general approach:

All goods that have value are the product of human labour, and indeed, economically considered, are exclusively the product of human labour. The labourers, however, do not retain the whole product which they alone have produced; for the capitalists take advantage of their command over the indispensable means of production, as secured to them by the institution of private property, to secure to themselves a part of the labourers' product.<sup>178</sup>

Rent is defined by Rodbertus as "all income obtained without personal exertion solely in virtue of possession." It includes two kinds of rent—land-rent and profit on capital.<sup>179</sup>

Rent owes its existence to the coincidence of two facts, one economical and one legal. The economic ground of rent lies in the fact that, since the introduction of the division of labour, the labourers produce more than they require to support themselves in life and to allow them to continue their labour, and thus others also are able to live upon the product. The legal ground lies in the existence of private property in land and capital. As, therefore, through the existence of private property the labourers have lost all control over the conditions that are indispensable to production, they cannot, as a rule, do otherwise than produce in the service of the proprietors, and that according to an agreement previously made. These proprietors impose upon the labourers the obligation of surrendering a part of the product of their labour as rent, in return for the opportunity of using the conditions of production just mentioned.<sup>180</sup>

He quoted Rodbertus directly to the effect that various forms of surplus extraction were rents derived from historical and institutional laws of distribution,

<sup>177</sup>*Ibid.*, pp. 262-263.

<sup>178</sup>Böhm-Bawerk, *Capital and Interest*, p. 315.

<sup>179</sup>*Ibid.*, p. 330.

<sup>180</sup>*Ibid.*, pp. 330-331.

rather than technically-based laws of production:

“That this surplus is entirely or in part withdrawn from the labourers and given to others rests on grounds of positive law; and as law has always united itself with force it only effects this withdrawal by continual compulsion.

"The form which this compulsion originally took was slavery, the origin of which is contemporaneous with that of agriculture and landed property. The labourers who produced such a surplus in their labour-product were slaves, and the master to whom the labourers belonged, and to whom consequently the product itself also belonged, gave the slaves only so much as was necessary for the continuance of their labour, and kept the remainder or surplus to himself. If all the land, and at the same time all the capital of a country, have passed into private property, then landed property and property in capital exert a similar compulsion even over freed or free labourers. For, first, the result will be the same as in slavery, that the product will not belong to the labourers, but to the masters of land and capital; and secondly, the labourers who possess nothing, in face of the masters possessing land and capital, will be glad to receive a part only of the product of their own labour with which to support themselves in life; that is to say, again, to enable them to continue their labour. Thus, although the contract of labourer and employer has taken the place of slavery, the contract is only formally and not actually free, and Hunger makes a good substitute for the whip. What was formerly called food is now called wage."<sup>181</sup>

Böhm-Bawerk began by denying Rodbertus's contention that "all goods, economically considered, are products of labour and of labour alone."

First of all, what do the words "economically considered" mean?

Rodbertus explains them by a contrast. He puts the economical standpoint in opposition to the physical standpoint. That goods, physically speaking, are the products not only of labour but of natural powers, he explicitly allows. If then it is said that, from the economic standpoint, goods are the product of labour only, the statement can surely have but one meaning, viz. that the co-operation of natural powers in production is a matter of utter indifference so far as human economy is concerned. On one occasion Rodbertus gives forcible expression to this conception when he says: "All other goods except those that have cost labour, however useful or necessary they may be to mankind, are natural goods, and have no place in economic consideration." "Man may be thankful for what nature has done beforehand in the case of economic goods, as it has spared him so much extra labour, but economy takes notice of them only in so far as labour has completed the work of

<sup>181</sup>*Ibid.*, pp. 331-332.

nature."

Now this is simply false. Even purely natural goods have a place in economic consideration, provided only they are scarce as compared with the need for them. If a lump of solid gold in the shape of a meteoric stone falls on a man's field, is it not to be economically considered?<sup>182</sup>

Rodbertus's point, however, was that the gifts of nature are freely provided with no effort; while they may be naturally scarce, any individual appropriation of their scarcity value is illegitimate and the result of artificial property rights. Land and resources should be owned as a commons, with individual ownership only of the fruits or improvements.

And while Rodbertus was incorrect to dismiss natural goods as "not economic," despite their scarcity value, Böhm-Bawerk nevertheless neglected to question why the scarcity value of land and other natural resources should be appropriated by a landlord who enclosed but did not create them, instead of shared by society. Whatever scarcity value the land as such has, it is nevertheless not replicable by human effort. Therefore the only value creation for which human beings deserve compensation is the actual labor put into developing the land and making it bear fruit, or converting natural resources into goods; the landlord creates no value by enclosing the land and resources, and deserves no compensation for "contributing to productivity" thereby, which consists entirely of the "productive contribution" of allowing access to something under one's control.

This aside, Böhm-Bawerk agreed with Rodbertus that "if we consider the result of all the stages of production as a whole,"

capital cannot maintain an independent place among the costs of production. It is not exclusively "previous labour," as Rodbertus thinks, but it is partly, and indeed, as a rule, it is principally "previous labour"; for the rest, it is valuable natural power stored up for human purposes. Where natural power is conspicuous — as in a production which, in all its stages, only makes use of free gifts of nature and of labour, or which makes use of such products as have themselves originated exclusively in free gifts of nature and in labour — in such cases we could, indeed, say with Rodbertus that the goods, economically considered, are products of labour only. Since then Rodbertus's fundamental error does not refer to the role of capital, but only to that of nature, the inferences regarding the nature of profit on capital which he deduces are not necessarily false. It is only if essential errors appear as well in the development of his theory that we may reject these inferences as false. Now such errors there undoubtedly are....

The next proposition of Rodbertus runs thus: that, according to nature and the "pure idea of justice," the whole product, or the whole value of the

<sup>182</sup>*Ibid.*, pp. 337-338.

product, ought to belong without deduction to the labourer who produced it. In this proposition also I fully concur. In my opinion no objection could be taken to its correctness and justice under the presupposition we have made. But I believe that Rodbertus, and all socialists with him, have a false idea of the actual results that flow from this true and just proposition, and are led by this mistake into desiring to establish a condition which does not really correspond with the principle, but contradicts it. It is remarkable that, in the many attempts at confutation that have been directed up till now against the Exploitation theory, this decisive point has been touched on only in the most superficial way, and never yet been placed in the proper light.<sup>183</sup>

Böhm-Bawerk went on to criticize Rodbertus with reference to his own time preference theory. Since “it very often happens that the labourer cannot or will not wait till his product be fully completed,”<sup>184</sup> the undertaker must pay workers a wage today as an advance on their future product.

That present goods, in the estimation of the present time, in which our economical transactions take place, have a higher value than future goods of the same kind and quality, is one of the most widely known and most important economic facts.<sup>185</sup>

But what do Rodbertus and the socialists suppose to be the application of the principle that the labourer should receive the whole value of his product? They would have the whole value that the completed engine will have at the end of the process of production applied to the payment of wages, but they would have this payment not made at the conclusion of the whole production, but spread proportionally over the whole course of the labour.<sup>186</sup>

His arguments against Marx’s labor theory of exploitation are essentially the same as those against Rodbertus:

Sharing in Rodbertus's mistaken idea that the value of all goods rests on labour, he falls later on into almost all the mistakes of which I have accused Rodbertus. Shut up in his labour theory Marx, too, fails to grasp the idea that Time also has an influence on value. On one occasion he says expressly that, as regards the value of a commodity, it is all the same whether a part of the labour of making it be expended at a much earlier point of time or not. Consequently he does not observe that there is all the difference in the world whether the labourer receives the final value of the product at the end of the whole process of production, or receives it a couple of months or years earlier; and he repeats Rodbertus's mistake of claiming *now*, in the name of

<sup>183</sup>*Ibid.*, pp. 340-342.

<sup>184</sup>*Ibid.*, p. 342.

<sup>185</sup>*Ibid.*, p. 343.

<sup>186</sup>*Ibid.*, p. 345.

justice, the value of the finished product as it will be *then*.<sup>187</sup>

**Böhm-Bawerk and Time Preference.** Böhm-Bawerk developed his own time preference theory in *Capital and Interest* and *The Positive Theory of Capital*.

*The loan is a real exchange of present goods against future goods.* For reasons that I shall give in detail in my second volume, present goods invariably possess a greater value than future goods of the same number and kind, and therefore a definite sum of present goods can, as a rule, only be purchased by a larger sum of future goods. Present goods possess an agio in future goods. *This agio is interest.*<sup>188</sup>

As we saw, he fleshed it out in particular in the course of his critique in *Capital and Interest* of the exploitation theories of interest — most notably that of Rodbertus.

We now turn to considering Böhm-Bawerk's version of the advance theory, time preference, in its own right. To repeat, he argued that the worker's wage is the true present value of their future, currently unfinished, product. This reflects the fact that

present goods have a higher subjective value than future goods of like kind and number. And since the resultant of subjective valuations determines objective exchange value, present goods, as a rule, have a higher exchange value and price than future goods of like kind and number.<sup>189</sup>

...The borrower, therefore, will, as a rule, purchase the money which he receives now by a larger sum of money which he gives later. He must thus pay an "agio" or premium (*Aufgeld*), and this agio is interest. Interest, then, comes, in the most direct way, from the difference in value between present and future goods.<sup>190</sup>

The reason for the prolonged period of production, during which the worker requires payment in order to survive, is the productivity advantages of what Böhm-Bawerk called "roundabout" — i.e. capital-intensive — production methods.

...In the overwhelming majority of cases we must treat the roundabout ways of capitalist production under technical conditions of such a nature that we have to wait, and often for a very long time, before we get the ripe final product. ...[I]n the loss of time which is, as a rule, bound up with the capitalist process, lies the sole ground of that much-talked-of and much-deplored dependence of labourer on capitalist. If capitalist production led as quickly from the hand to the mouth as unskilled direct production does, there

<sup>187</sup>*Ibid.*, p. 389.

<sup>188</sup>*Ibid.*, p. 259.

<sup>189</sup>Böhm-Bawerk, *The Positive Theory of Capital*. Translated with a Preface and analysis by William Smart. Photographic reprint of the edition of 1891 (New York: G.E. Stechert, 1930), pp. 247-248.

<sup>190</sup>*Ibid.*, p. 286.

would be nothing to hinder the workers carrying on such roundabout methods from beginning to end on their own account. They would still be dependent on the landowners, who could prevent them from access to the land which at the outset they require, but they would not be dependent on the capitalists. It is only because the labourers cannot wait till the roundabout process — which begins with the obtaining of raw materials and making of tools — delivers up its products ready for consumption, that they become economically dependent on the capitalists who already hold in their possession what we have called “intermediate products.”<sup>191</sup>

In the circumstances of modern industry, the wage workers scarcely ever possess sufficient means to utilise their own labour in methods of production extending over years. They have, therefore, to face the alternative of selling their labour, or of employing it on their own account in such short and unproductive processes as the scanty means at their disposal permit.<sup>192</sup>

In short, the basis of capitalist profit is that workers are paid in more valuable money for productive labor whose product will be sold for a less valuable amount after its future completion.<sup>193</sup>

Why are workers unable to wait? Böhm-Bawerk is remarkably incurious regarding the historical and institutional question of how capitalists just happen to “hold in their possession” the intermediate products, and why laborers “cannot wait till the roundabout process... delivers up its products.” He ignored, likewise, how the capitalist wound up as intermediary between workers in their employ and the various groups of workers providing subsistence goods and raw materials. These are questions every bit deserving of scrutiny as the landlord’s control of access to land. But for Böhm-Bawerk, it is sufficient answer that they *just happen* to lack sufficient means, or to be incapable of mobilizing them.

Further, he engaged in an ahistorical Robinsonade, insofar as he assumed a production process starting from scratch in which the stages are performed sequentially and one group of workers must stand idle while waiting for another group of workers to complete the previous stage of production — as opposed to the operation as a going concern in which all groups are simultaneously engaged in continuous production, with the various groups feeding unfinished goods to one another. In short, he ignored the simultaneity of production in the real world.

Böhm-Bawerk continued by observing that, as an exception to Ricardo’s labor theory ignored by Rodbertus, goods whose production requires greater advances of previous labor or longer time periods also possess higher exchange value. This time factor, he continued, was closely involved with

191 *Ibid.*, pp. 82-83.

192 *Ibid.*, p. 314.

193 *Ibid.*, pp. 300-301.

the principal feature of interest on capital. For when, on the division of the value, those goods that require for their production an advance of foregoing labour show a surplus of exchange value, it is just this surplus that remains in the hands of the capitalist-undertaker as profit.<sup>194</sup>

Higher wage payments than those reflecting the present value of the future product could only be possible through either the capitalist's indifference to the waiting period, or their generosity. But there was no justification for reproaching the capitalist's failure to forego this time agio as "injustice, exploitation, or robbery."

There is only one personage from whom the labourers could expect such a treatment — the State. For on the one hand, the state, as a permanently existing entity, is not bound to pay as much regard to the difference of time in the outgoing and replacing of goods as the short-lived individual. And on the other hand, the state, whose end is the welfare of the whole, can, if it is a question of the welfare of a great number of the members, quit the strict standpoint of service and counterservice, and, instead of bargaining, may give. So then it certainly is conceivable that the state — but certainly only the state — assuming the function of a gigantic undertaker of production, might offer to the labourers as wage the full future value of their future product at once, that is, immediately after the accomplishment of their labour.<sup>195</sup>

(The function could, in fact, be performed in any society, with or without a state, in which the means of production were owned and the production process controlled by the "associated producers," whether collectively or severally within individual enterprises. More specifically, it could be performed by the mutual credit arm of a federation of cooperative shops, using credit and units of account as a simple coordinating mechanism for directing various streams of output between various groups of producers. It could do so, that is, if not for 1) the fiction that capital must be "lent" or "advanced" against stockpiles of previously accumulated money, and 2) a state of affairs in which such wealth is, for grossly unjust historical reasons, concentrated in the hands of a few absentee investors. In any case Böhm-Bawerk, in bringing in the state, implicitly conceded that time preference is a subjective valuation that varies with material circumstances.)

Böhm-Bawerk, in positing an agio on the difference in value between present and future goods as a necessary incentive for motivating people to "save and produce intermediate products,"<sup>196</sup> ignored the fact that "motivation" differs greatly between situations in which one person saves by foregoing their own consumption,

<sup>194</sup>Böhm-Bawerk, *Capital and Interest*, pp. 353-354.

<sup>195</sup>*Ibid.*, p. 351.

<sup>196</sup>Böhm-Bawerk, *The Positive Theory of Capital*, p. 124.

and in which forced saving is imposed by someone else as a result of superior institutional power. In the latter case, the “saving” of the extractor is entirely relative to their power to withhold the capital in question.

Böhm-Bawerk’s protestations aside, there are at the very least large areas of commonality in kind between his time preference theory, and the abstinence and use theories of his predecessors.

First, his treatment of the role of “saving” in the accumulation of capital, through its logical connection to both Senior’s abstinence and Böhm-Bawerk’s time preference, had the effect of tying the two together.

In our science there are three views in circulation as to the formation of capital. One finds its origin in Saving, a second in Production, and a third in both together. Of these the third enjoys the widest acceptance, and it is also the correct one. But the formula will have to be amplified to some extent, and presented in a way that is, at once, clearer and more true to life than has usually been the case.

To put the matter, first of all, in its simplest conceivable terms. Suppose a recluse working absolutely without capital — say some Robinson Crusoe thrown on a lonely shore without either tools or weapons. Being without capital he must at first support life in the most primitive fashion, as, for instance, by gathering berries which grow wild. Now what must happen before he can get possession of his first capital, say a bow and arrow ?

Let us put the first theory to the test. Is saving by itself sufficient to call capital into existence? Certainly not. "With the one possession that he has — his wild fruits — our Crusoe may save and stint as much as he please; he will accumulate a store of berries — goods for consumption — but that will never give him a single bow or arrow. As we can easily see, these must be positively produced.

Is it sufficient, then, for the origination of capital that it be produced? Again, certainly not. Of course, once Crusoe has got the length of commencing to produce capital, the formation of capital is as good as accomplished. But before he gets that length, there is something else to be done, and that something is by no means self-evident. Productive powers are to be set free for the proposed formation of capital, and this can only be done... through saving.

The purpose of the saving is to accumulate means of supporting oneself while engaged in the process of producing capital goods.<sup>197</sup>

Further, Böhm-Bawerk explicitly tied saving to the “parsimony” or “abstinence” of the classical political economists — namely quoting Smith’s statement that “Parsimony and not industry is the immediate cause of the increase

<sup>197</sup>*Ibid.*, p. 100.

of capital."<sup>198</sup>

And as we have previously seen, earlier theories of abstinence and “use” have much more commonality with time preference than Böhm-Bawerk would acknowledge. The point of interest or profit as payment for “use” is not so much the use the borrower obtains, as the use the lender or investor foregoes while the capital is tied up in the production process. And Böhm-Bawerk’s “agio” results not simply from the borrower compensating for the greater value of the present sum to themselves; they are compensating the lender for foregoing use of the sum at its greater present value. The difference between profit as a future reward for “abstinence” or “waiting” now, and an agio on the difference between present and future goods, is thin enough to read a newspaper through it.

The same is true of productivity theories. Despite his quibbling, Böhm-Bawerk did not so much replace the productivity theory with time preference, as refine it and provide a mechanism. It could be restated: “Physical capital increases physical productivity, and the acquisition of physical capital requires an advance of money capital; the capitalist’s profit is surplus value resulting from the difference in time preference.” Hence, the advance of capital does perform a service in increasing physical productivity — a service for which it is paid with surplus value.

But the dependence on the capitalist’s advance of money capital depends, further, on institutional factors, namely: 1) the historically contingent concentration of wealth and resulting inequality, and 2) a set of rules limiting the issue of credit to possessors of previously accumulated claims on the right to allocate physical capital.

Böhm-Bawerk’s critique of the use theory of Say and Menger, like his critique of the abstinence theories, ignored their areas of commonality with time preference. In addition to the material services of capital goods, Say also hinted in the material Böhm-Bawerk quoted about the *use* of the capital expenditure to acquire capital goods, and not just the use of the goods themselves — which means once they are committed to a particular form of production the capitalist who advances the capital expenditure is deprived of the *use* of the sum advanced — required to do without any alternative use — until it is realized at the end of the productive process. Use, in this sense, as a source of net interest, is analogous to the “waiting,” “abstention,” or “sacrifice” involved in other advance theories — including Böhm-Bawerk’s own theory of time preference.

The important part of the use theory is not the specific value the borrower or investee gets from the use, but the fact that it *precludes* use by the lender or capitalist; and more specifically, it precludes use *during the period of production*, when the capitalist is waiting to realize their investment. The point is that the source of interest lies not in the receiver’s disposal, but in the investor’s *lack* of it

198 *Ibid.*, p. 100n.

for a period of time. In short, the important aspect of the use theory, which Böhm-Bawerk neglects, is the extent to which it anticipates the abstinence theory — which itself anticipates time preference.

Before we move on, we should note the problems Böhm-Bawerk's treatment of savings shares in common with the classical political economists' earlier theories of abstinence. As he himself acknowledged,<sup>199</sup> all these illustrations of the savings process start with a Robinsonade, in which all decisions concerning how much to labor, and how to allocate the product between present consumption and saving, are made by the same person. Böhm-Bawerk went on, accordingly, to deal with the accumulation of capital in a modern national economy.

Let us take the case of a community embracing ten millions of able-bodied persons. ...[T]he annual endowment of such a nation — its original productive powers — thus amounts to ten million years of labour. Its accumulated stock of capital, we shall suppose, represents the fruit of thirty million labour-years... invested during previous economic years in intermediate products. Now look at the constitution of this stock of capital more closely.

Every capital is, by its nature, composed of a mass of intermediate products, and the common goal of all these products is to ripen into consumption goods or means of enjoyment. They reach this goal through the continuation of that production process in the course of which they themselves have come into existence. They are all, as it were, on the way towards the goal of human consumption. But the length of the road which they have had to travel is different. This is partly because the various branches of production adopt roundabout ways of various length: mining, for instance, or railway building, takes a much more roundabout and lengthy method than wood-cutting. But it is partly, also, because those goods which constitute the community's capital at the moment are at various points on their respective roads.<sup>200</sup>

But his analysis of saving by the sole individual on an island failed to scale to a modern industrial society precisely because the process of “saving” in his national economy was fundamentally different from that in his Robinsonade, to the extent that it introduced institutional power relations that are lacking in the case of an autarkic individual. By the very nature of the case, any savings upon which Crusoe subsists while producing tools and other capital goods will have been saved by Crusoe himself. When power relations are introduced — effectively replacing Crusoe with, say, a million Crusoes and nine million Fridays — there is introduced along with them the possibility that “savings” can be imposed on one party by

<sup>199</sup>*Ibid.*, pp. 105-106.

<sup>200</sup>*Ibid.*, p. 107.

another. And Böhm-Bawerk's capitalist or undertaker, unlike Crusoe, is "saving" only in the relative sense of having control over whether or not to consume a given amount of money capital rather than directing it into production — not, at least necessarily, from having abstained from consuming the product of their own past labor.

Talk of "original accumulation" of capital through thrift by Smith and others was rightfully mocked and turned on its head by Marx, who opposed to it an account of the actual history of primitive accumulation "written in letters of fire and blood." It's no coincidence that Preobrazhensky appealed to the history of capital accumulation through forcible enclosure in the early industrial revolution, as a model for "socialist primitive accumulation" through forced collectivization under Stalin.

Aside from its unacknowledged similarities to previous advance theories, there are several other problems with the time preference theory. First of all, it presupposes that the capitalist's money is necessary, and that the necessity for it is not artificially created. Second, it casts the alternatives of present or deferred consumption from the vantage point of a capitalist who is simply assumed to be in possession of the money, and in a legitimate position of deciding what to do with it. Third, the steepness of time preference — as Böhm-Bawerk himself at times seemed close to acknowledging — correlates inversely to wealth.

In that last regard, Böhm-Bawerk admitted, as one possibility among others explaining an individual's strong preference for present over future goods, the existence of cases in which "the individual may be badly off in the present."

The needy man prefers present goods because he must consume them in the present. The opportunities of employing the goods for productive purposes in the future remain in this case — since the poverty-stricken present, naturally, cannot afford any goods for purposes beyond itself — out of court as economically impossible, and, of course, without any influence on the value, or preferable value, of present goods.<sup>201</sup>

And again, later, he called it "undeniable that, in this exchange of present commodities against future, the circumstances are of such a nature as to threaten the poor with exploitation of monopolists."

Present goods are absolutely needed by everybody if people are to live. He who has not got them must try to obtain them at any price. To produce them on his own account is proscribed the poor man by circumstances; the only kind of production he could take up would be one yielding an immediate return, and this is not only unremunerative but almost impracticable under modern economic conditions. He must, then, buy his

201 *Ibid.*, p. 275.

present goods from those who have them, either in the form of a loan, or, more usually, by selling his labour. But in this bargain he is doubly handicapped; first, by the position of compulsion under which he finds himself, and, second, by the numerical relation existing between buyers and sellers of present goods. The capitalists who have present goods for sale are relatively few; the proletarians who must buy them are innumerable. In the market for present goods, then, a majority of buyers, who find themselves compelled to buy, stands opposite a minority of sellers, and this is a relation which obviously is profoundly favourable to the sellers and unfavourable to the buyers.<sup>202</sup>

“Nevertheless,” he continued, “with all emphasis, ... what we might stigmatise as "usury" does not consist in the obtaining of a gain out of the loan, or out of the buying of labour, but in the immoderate extent of that gain.” The agio resulting from the exchange of present against future goods, the profit as such, is entirely legitimate:

the existence of some gain is an entirely normal phenomenon; is, indeed, an economic necessity. Some gain or profit on capital there would be if there were no compulsion on the poor, and no monopolising of property; and some gain there must be. It is only the height of this gain where, in particular cases, it reaches an excess, that is open to criticism, and, of course, the very unequal conditions of wealth in our modern communities bring us unpleasantly near the danger of exploitation and of usurious rates of interest.<sup>203</sup>

The problem is that he framed this vulnerability to exploitation, not as a general rule quantitatively relating poverty and precarity to the steepness of time preference, but as an exceptional circumstance that only kicks in when the poverty and precarity reach some threshold owing to an artificially low number of competing employers. Further, given his institutional blinders, he saw the only remedy as increasing the number of competing “sellers of present goods”<sup>204</sup> — i.e. employers — without looking into the effect larger possessions of present goods would have on the time preference of the workers themselves.

But Böhm-Bawerk himself, in his earlier formulation of the time preference theory, listed the “relation between want and provision for want in present and future” among the bases of time preference itself<sup>205</sup> — not as a special case that comes into play only at some threshold, but as a general quantitative relationship admitting of degree. Given gross inequality of wealth and bargaining power, it

<sup>202</sup>*Ibid.*, pp. 360-361.

<sup>203</sup>*Ibid.*, p. 361.

<sup>204</sup>*Ibid.*, p. 361.

<sup>205</sup>*Ibid.*, p. 281.

seems likely that this “possibility” explains a disproportionate share of strong time preference.

Blaug, in his history of economic thought, flat-out asserted the primary relationship between time preference and economic dependency or lack of bargaining power:

whatever the reason, this discounting of the future value of goods is possible only because workers’ lack of financial reserves forces them to pay a premium on present goods. Insofar as interest is a distributive share, therefore, Marx’s and Böhm-Bawerk’s explanations do not differ significantly.<sup>206</sup>

Nevertheless, he framed Böhm-Bawerk’s argument, which we will see below, regarding interest as a mechanism for inter-temporal assignment of goods — which Blaug considered valid — as a separate issue.

But interest is also a price that governs the distribution of the income stream of a community over time. It acts to allocate resources between current and future consumption. And it is one of Böhm-Bawerk’s contentions that interest is a general economic category not peculiar to capitalism but obtaining whenever present and future goods are exchanged. By way of contrast, Marx completely neglects the problem of resource allocation over time under socialism.<sup>207</sup>

More generally, Böhm-Bawerk was inclined to take prevailing institutional arrangements as given. In particular, he took for granted a situation in which some people just happened to have large amounts of accumulated money-capital on which they sought a return, and others had nothing but their labor to sell.

Those who took the trouble to go more deeply into the technicalities of business life must have seen that practice not only would not, but could not dispense with interest; that interest being the soul of credit, where credit exists to any considerable extent interest cannot be prevented; and that to suppress it would be to suppress nine-tenths of credit transactions. They must have seen, in a word, that, even in a half-developed system of economy, interest is an organic necessity. It was inevitable that the recognition of such facts that had for long been commonplaces among practical men, should in the end force its way into literary circles.<sup>208</sup>

He was likewise inclined to balk when an argument hinted at institutional power issues. For example, he was not impressed with Locke’s defense of interest by comparing it with land-rent — a defense which, Locke’s obliviousness notwithstanding, might just as easily be inverted into a condemnation of both

<sup>206</sup>Blaug, *Economic Theory in Retrospect*, p. 242.

<sup>207</sup>*Ibid.*, p. 242.

<sup>208</sup>Böhm-Bawerk, *Capital and Interest*, p. 27.

interest and rent.

It will scarcely be maintained that this theory is particularly happy. There is too marked a contrast between its starting-point and its conclusion. If it be true that loan interest transfers the hard-earned wage of the man who works into the pocket of another man who does nothing, and whose money besides is a "barren thing," it is absolutely inconsistent to say that loan interest is nevertheless "equitable and lawful." That there is undoubtedly an analogy between interest and the profit from land rent, was very likely to lead logically to a conclusion involving land rent in the same condemnation as interest. To this Locke's theory would have presented sufficient support, since he expressly declares rent also to be the fruit of another man's industry. But with Locke the legitimacy of rent appears to have been beyond question.<sup>209</sup>

He acknowledged the socialists, with their historical or institutional approach to capital, for being the "first to face in earnest the confusion of conceptions [between national, or productive, capital and individual, or interest-bearing capital] by distinguishing capital into 'pure economic capital,' and capital as a 'historico-legal category.'<sup>210</sup>

Nevertheless, after faulting the historical approach for lacking "even an attempt to solve the great problem of interest by the tools of the historical method" until Rodbertus, he likewise faulted Rodbertus's "famous statement of the different forms under which, in various ages, the ruling economic classes have always drawn the better part of the product of the nation's labour to themselves" on the grounds that it was a Trojan horse, "aimed only at winning assent to his exploitation theory" which was based on Ricardo's labor theory of value.<sup>211</sup>

Subsequently he appeared to acknowledge the achievement of the socialists' historical approach, in treating capital as a legal category.

[Adolf] Wagner, like Rodbertus before him, makes a distinction between capital as a "purely economic category," and capital "in the historico-legal sense" or property in capital. "Capital as a purely economic category, considered apart from the legal relations which obtain as regards property in capital, is a store of those economic goods, — natural goods, — which serve as technical instruments to produce new goods to a community; it is a store of productive instruments; it is National capital (or a portion of such). Capital in the historico-legal sense, or property in capital, is that portion of a person's wealth which may serve him as a means of obtaining an income (Rent, Interest), and which, therefore, is owned by him to this end; it is a

209 *Ibid.*, pp. 45-46.

210 Böhm-Bawerk, *The Positive Theory of Capital*, p. 29. Cites Rodbertus, *Das Capital*.

211 *Ibid.*, xxv.

Rent Fund, or Private Capital." In this the distinction between National capital and Private capital is narrowed down to the distinction between a natural store of goods on the one hand, and the legal rights which private individuals have over that natural store on the other.

I am far from denying the very great importance and usefulness of this new distinction....<sup>212</sup>

But he immediately went on to assert that Rodbertus's "one-sided conception led him directly into a false theory of interest."

In his view the essence of private capital consisted in the historico-legal circumstances of force that were connected with it; and he was thus logically committed to explain the interest on private capital simply and solely from the existence of those circumstances. Interest to him was robbery; a profit which the owners of capital squeezed out of the labourers in virtue of the brute strength which their exclusive property in the means of production gave them.

Had Rodbertus gone further in his analysis, he continued, "he would have found that interest is not purely a growth of history and law, but an original economic growth, the emergence of which is, to a certain extent, independent of the form which history and law have given it."<sup>213</sup>

Böhm-Bawerk developed this claim regarding the universality of the time preference principle, across social systems, with regard specifically to what he calls the "socialist state." Even in a socialist society — which he defined as an economy functioning as a single unit under state direction — saving would be a prerequisite of capital accumulation (or maintenance) in the sense that some portion of the labor of that society would have to be directed away from producing for immediate consumption to producing intermediate goods, and some members of society will have to produce the consumption goods they consume while so engaged.<sup>214</sup>

Further, "even for the Socialist state, it is absolutely inconceivable" that economic decisionmakers "should, in their economic judgment and their economic practice, treat present and future goods as on the same footing."<sup>215</sup> The existence of an "agio" on the difference between present and future goods, he argued, is necessary as a way of balancing present consumption and future productivity by preventing the production period from being extended to an unsupportable length.

Interest and Agio *must* appear. Assume for a moment that they do not. Present goods and future goods are exchanged on the great subsistence

<sup>212</sup>*Ibid.*, pp. 62-63.

<sup>213</sup>*Ibid.*, pp. 64-65.

<sup>214</sup>*Ibid.*, pp. 113-116.

<sup>215</sup>*Ibid.*, pp. 365-366.

market at par, and the labourers, for the week's work, get the whole value of their future product paid down to them in present goods. Say that the average production period, assuming the nation to be enormously wealthy, is ten years: that the week's work consequently yields 40s. and that the labourer receives the whole of this as wage. What will happen? The undertaker who employs people to work with him in a ten years' process makes no profit outside of his own personal labour. For the 40s., which the labour of his people yields him at the end of the production period, has already been wholly expended as wage. But how if he extends the production period still further? If the week's labour has returned 40s. in the ten years' process, experience tells us it will return more in a twelve years' process, say 44s. In still longer processes, say, fifteen years, it may return perhaps 48s. Now as the undertaker, by hypothesis, can buy present goods at par on the subsistence market, it would be foolish of him not to extend the production period for himself and his employes to fifteen years. If he does so, he pays his workers out of the borrowed advances 40s., the price on the labour market: in fifteen years he recovers 48s. from the product: from that sum he pays back the advanced 40s. at par, and has remaining the respectable profit of 8s. out of each week of labour. And with this we have the "surplus value," the profit on capital.

To prevent its appearance the labourer's wage would have to be raised from 40s. to 48s. But this is not possible. For the well-known levelling tendencies of competition do not allow wages to rise permanently in any isolated branch — so long as it does not presuppose peculiar personal qualities — inasmuch as there will at once be a rush from less paying branches into any particularly paying branch. But neither is a general rise of wages to 48s. possible, because the existent stock of wealth is only sufficient for an average ten years' period. The extension of the process to fifteen years, consequently, can occur only in isolated cases; the bulk of productive employments must continue the ten years' process which yields only 40s. per week, and cannot, therefore, permit of any higher wage than 40s.

On the other hand, it is obvious that something else will make its appearance. However sharp undertaker A may be in borrowing money free of interest, and securing a nice surplus value of 8s. per week of labour, undertakers B, C, D and E will not be far behind. The desire to prolong the production period, and, with that, the demand for increased advances of subsistence, will become general: it will not be possible to supply this increased demand from the limited funds of subsistence: and, finally, the weeding out of competition will begin among the classes who constitute the demand. Here, then, we have the agio again appearing in the universal

market price of present goods, from which, by hypothesis, we had for the moment banished it.

And this result, as regards the normal and really economic provision of society, is no less healthy than it is necessary. The possibility of obtaining means of subsistence free of agio would be certain to tempt undertakers into immoderate extension of the production period. If this were to occur only partially and in a few branches of production, naturally the limited stocks of subsistence would leave so much less for the other branches of production; these latter would have to curtail their processes unnaturally; and there would ensue a deficiency in the social provision which would outweigh the increased return got from the favoured branches through the immoderate extension of their processes. But if the excessive extension were to be introduced all over, the community's stock of subsistence would come to an end sooner than the fruits of processes thus unduly extended could mature; there would be deficiency in provision, want, and distress; famine prices would recall the misdirected natural powers, and put them, with difficulty, to supply provision for the moment. All this could not happen without serious disturbance, expense, and loss.

Now the constant presence of the agio on present goods is like a self-acting drag on the tendency to extend the production period...<sup>216</sup>

The problem is that he started by assuming the process to be one in which the undertaker is a provider of present goods, and in which money capital is accumulated in one set of hands and labor is performed by a different set, and “investment” takes the form of capital being advanced by the propertied or by lending institutions. He ignored the possibility of an institutional structure in which no one — whether private undertaker or the state — is seen as “lending” present goods against accumulated past savings, but rather in which everyone in their various productive groupings is constantly engaged in an ongoing process of advancing the necessities of production and consumption to one another, while coordinating the flows of goods directly between themselves.

In this state of affairs, 1) those engaged in producing intermediate goods are creating the prerequisites for future consumption by all members of society, so that all can be seen in some sense as saving for the common benefit; 2) members of society are engaged in simultaneous production, so that new intermediate goods are always coming online along with food and other subsistence goods; and 3) in an economy where all make a living wage and have secure access to the necessities of life, everyone would in any case have a weak time preference even by Böhm-Bawerk's standard.

And to the extent that an agio *does* necessarily exist across all societies, it will

216 *Ibid.*, pp. 333-335.

be expressed in a society in which enterprise governance and decisions regarding production and credit are made by workers simply as the ongoing decisions by workers themselves — the people who, occupying the roles both of Böhm-Bawerk's undertakers and workers, will fully internalize all the positive and negative effects of their decision — as to how best allocate resources between present consumption and future productivity. It will not take the form of one class with accumulated money capital to invest in production paying the wages of another class of laborers, and in consequence collecting surplus value from the sale of the finished goods in the form of an agio.

**After Böhm-Bawerk.** Alfred Marshall, whose *Principles of Economics* became the introductory textbook for a generation, adopted the “abstinence” principle of Senior and Mill (which he called “waiting”).

And human nature being what it is, we are justified in speaking of the interest on capital as the reward of the sacrifice involved in the waiting for the enjoyment of material resources, because few people would save much without reward; just as we speak of wages as the reward of labour, because few people would work hard without reward.

The sacrifice of present pleasure for the sake of future, has been called *abstinence* by economists. But this term has been misunderstood: for the greatest accumulators of wealth are very rich persons, some of whom live in luxury, and certainly do not practise abstinence in that sense of the term in which it is convertible with abstemiousness. What economists meant was that, when a person abstained from consuming anything which he had the power of consuming, with the purpose of increasing his resources in the future, his abstinence from that particular act of consumption increased the accumulation of wealth. Since, however, the term is liable to be misunderstood, we may with advantage avoid its use, and say that the accumulation of wealth is generally the result of a postponement of enjoyment, or of a *waiting* for it.

The "demand price" of accumulation, that is, the future pleasure which his surroundings enable a person to obtain by working and waiting for the future, takes many forms: but the substance is always the same. The extra pleasure which a peasant who has built a weatherproof hut derives from its use, while the snow is drifting into those of his neighbours who have spent less labour on building theirs, is the price earned by his working and waiting. It represents the extra *productiveness* of efforts wisely spent in providing against distant evils, or for the satisfaction of future wants, as compared with that which would have been derived from an impulsive grasping at immediate satisfactions. Thus it is similar in all fundamental

respects to the interest which the retired physician derives from the capital he has lent to a factory or a mine to enable it to improve its machinery; and on account of the numerical definiteness of the form in which it is expressed, we may take that interest to be the type of and to represent the usance of wealth in other forms.

*It matters not for our immediate purpose whether the power over the enjoyment for which the person waits, was earned by him directly by labour, which is the original source of nearly all enjoyment; or was acquired by him from others, by exchange or by inheritance, by legitimate trade or by unscrupulous forms of speculation, by spoliation or by fraud: the only points with which we are just now concerned are that the growth of wealth involves in general a deliberate waiting for a pleasure which a person has (rightly or wrongly) the power of commanding in the immediate present, and that his willingness so to wait depends on his habit of vividly realizing the future and providing for it [emphasis added].*<sup>217</sup>

It follows from the nature of “waiting” as a sacrifice, in Marshall’s framing, that it is experienced by the investor as a disutility in the same sense that the worker experiences labor as a disutility.

But this assumption that the whole of this Surplus is the produce of labour... is not true. It is not true that the spinning of yarn in a factory, after allowance has been made for the wear-and-tear of the machinery, is the product of the labour of the operatives. It is the product of their labour, together with that of the employer and subordinate managers, and of the capital employed; and that capital itself is the product of labour and waiting : and therefore the spinning is the product of labour of many kinds, and of waiting....

To put the same thing in other words; if it be true that the postponement of gratifications involves in general a sacrifice on the part of him who postpones, just as additional effort does on the part of him who labours; and if it be true that this postponement enables man to use methods of production of which the first cost is great; but by which the aggregate of enjoyment is increased, as certainly as it would be by an increase of labour; then it cannot be true that the value of a thing depends simply on the amount of labour spent on it. Every attempt to establish this premiss has necessarily assumed implicitly that the service performed by capital is a “free” good, rendered without sacrifice, and therefore needing no interest as a reward to induce its continuance; and this is the very conclusion which the premiss is wanted to prove.<sup>218</sup>

<sup>217</sup> Alfred Marshall, *Principles of Economics*. Eighth edition (1920). Facsimile reproduced by Palgrave Classics in Economics (Palgrave MacMillan, 2013), pp. 193-194.

<sup>218</sup> *Ibid.*, pp. 487-488.

Marshall coupled his waiting theory with an argument from Smith, that net interest existed because people would not part with capital without payment.

Everyone knows that people will not lend gratis as a rule ; because, even if they have not themselves some good to which to turn the capital or its equivalent, they are sure to be able to find others to whom its use would be of benefit, and who would pay for the loan of it : and they stand out for the best market.<sup>219</sup>

He also described waiting in language that hinted at its overlap with Bohm-Bawerk's time preference, i.e. that a borrower paying interest on a loan is "pay[ing] others to sacrifice the present to the future..."<sup>220</sup>

But labor and "waiting" are, in fact, fundamentally different forms of sacrifice or disutility. Capital investment is, as Marshall acknowledged without recognizing the significance of that acknowledgement, a "sacrifice" only in the relative sense of doing without that over which one has command, without regard to how one happens to have command over it or the level of effort involved in acquiring that command over it. Labor, on the other hand, carries disutility in an absolute or positive sense, insofar as involves the direct expenditure of effort by someone who experiences it negatively.

John Bates Clark largely rejected theories of capital investment based on "waiting," "abstinence," "sacrifice," etc., in favor of a marginal productivity theory of profit. He saw the determination of wages and profit by the marginal productivities of labor and capital, respectively, as a "natural law," independent of the respective power of labor and capital; but like earlier productivity theories already considered, it still amounted to an advance of sorts.

Wages are usually paid by one person to another. The amount thus paid is adjusted by bargain, and may seem to depend on the comparative power and the adroitness of the parties to the contract; for commercial strategy is an important art, practised by both employers and workmen according to their several abilities. There is, however, a market rate of wages; and this is, in the main, controlled by ulterior and positive forces. The so-called "higgling of the market," in fact, affects the rate of pay for labor where natural laws have their way, the share of income that attests to any productive function is gauged by the actual product of it. In other words, free competition tends to give to labor what labor creates, to capitalists what capital creates, and to entrepreneurs what the coordinating function creates. in a local way and within narrow limits. The amount that workmen can generally, by any shrewdness or firmness, exact from employers is limited, as we shall show,

219 *Ibid.*, p. 483.

220 *Ibid.*, p. 482.

by the productive power that resides in labor; and the][ forces that control the prevailing terms of wage contracts are those which determine the amount of that productive power. There is, in short, a deep acting natural law at work amid the confusing struggles of the labor market.

...[W]here natural laws have their way, the share of income that attests to any productive function is gauged by the actual product of it. In other words, free competition tends to give to laborer what labor creates, to capitalists what capital creates, and to entrepreneurs what the coordinating function creates.<sup>221</sup>

... So far as natural laws are unperverted, labor tends to get, as its share, what it separately produces; and capital does the same. The laborer who has helped a farmer to raise wheat naturally gets the value of that part of the wheat crop which is separately due to his labor.<sup>222</sup>

From the vantage point of society as a whole, Clark argued, the law of final or marginal productivity — the productivity of the last unit of labor or capital allocated to one form of production, as opposed to another — operates exactly the same as for a Robinson Crusoe choosing between allocations of a unit of his own labor.

Market value, then, is a social phenomenon; but the principle of final utility, by which values are fixed, is universal in its scope. So, too, the division of the income of an industrial group into wages and interest is a social phenomenon; but the principle that governs that division — the principle, namely, of specific productivity — is as dominant in primitive life as it is anywhere.

*The specific productivity of labor fixes wages* — this is the thesis that is to be supported in this volume. Ascertain how large a product is to be attributed to a single unit of labor that is employed in raising wheat, making shoes, smelting iron, spinning cotton, etc., and you have the standard to which the pay of all labor tends to conform. In like manner does the specific productivity of capital fix the rate of interest. Ascertain how large a product is due to the presence of the single unit of capital in each industry, and you have the standard to which all interest tends to adjust itself.<sup>223</sup>

However, an organized society with division of labor has one fundamentally different aspect affecting the valuation of factors that is missing in an autarkic economy of an isolated individual: the existence of power structures and interpersonal power differentials. Clark ignored the role of power in setting the

<sup>221</sup>John Bates Clark, *The Distribution of Wealth: A Theory of Wages, Interest and Profits* (Dodo Press, 2008), pp. 1-2.

<sup>222</sup>*Ibid.*, p. 16.

<sup>223</sup>*Ibid.*, p. 37.

exchange value of inputs, and the way they affect final product exchange values, in a way that is not true of a sole individual choosing between alternative allocations of effort based on use value. He did not even consider the potential alternative sets of institutions by which labor and capital might be coordinated, once division of labor is introduced, and which have in fact existed alongside or instead of markets at various periods of history: chattel slavery, feudalism, etc. Nor did he consider the vastly different respective shares of the product going to laborers and property owners, under those various forms of social organization.

Clark might respond that his rules of final productivity apply only to a fully competitive market economy based on voluntary exchange; but in fact there is no particular set of property rules or institutions implied by the term “market.” And the varying distributions of bargaining power between laborers and owners of land and capital, resulting from the possible alternative institutional and property frameworks, will result in vastly different measures of “final productivity” for the owners of various factors. In fact, once power and institutional considerations are introduced into a society of more than one person, the concept of “final productivity” is arguably circular and a simple restatement of bargaining power.

What we have claimed is that... the identity of wages with the product of labor is, in a general and approximate way, maintained, and that this product furnishes the standard about which wages for short periods fluctuate. It is clear, indeed, that the whole product of industry does not go to the worker. If the entire joint product of labor and capital be what we have in mind, the men who furnish land, tools, buildings, materials, etc., get a share of it. If what we mean is the part of this total that is attributable to labor itself, it is not merely possible that the worker should get it all, but it is certain that he would get it all, if competition could do its work perfectly — that is, if the static standards of wages were realized.<sup>224</sup>

Any one such body of men is always worth to its employers what the final division would produce, if we were to set them working in such an order of succession as, for illustration, we have described. That the men will get this amount, is insured by employers’ competition. The final division of a thousand men has in its hands a certain potential product, when it offers its service to employers. If one set of entrepreneurs will not give them the value of it, another will, provided that competition is perfect. With an ideally complete and free competitive system, each unit of labor can get exactly what a final unit produces.<sup>225</sup>

A fact of great importance now appears. We may reverse the application of this law, and by so doing get a law of interest. Let the labor be the

<sup>224</sup>*Ibid.*, p. 53.

<sup>225</sup>*Ibid.*, p. 142.

element that is unchanged in amount, and let capital be the one that is supplied in a succession of increments.<sup>226</sup>

The marginal product of labor, capital, etc., is determined by adding or subtracting a marginal unit of the input and observing how much the value of the final product decreases.

### **III. Analysis**

The numerous examples of advance theory we've encountered, in our historical survey — wages fund, parsimony, abstinence, waiting, sacrifice, time preference — all share one thing in common. In all of them, the capitalist is in the position of “advancing” or “supplying” something actually created by someone else's labor, and is “advancing” it only in the relative sense of being in a socially constructed position of control over it.

The approach we have already seen foreshadowed by Rodbertus's critique of land and capital as historico-legal categories, as further developed by classical institutionalists like Thorstein Veblen and John R. Commons and like-minded Marxists such as Maurice Dobb, is key to deconstructing the various versions of advance economics and revealing the ways in which they not only take

<sup>226</sup>*Ibid.*, p. 145.

institutional and power structures for granted, but serve as disguises for them.

Ironically, the best concise characterization of critiques like that of Veblen comes from Thomas Sowell, albeit from his early Marxist years: “Veblen attacked the *questions* of traditional economics rather than the answers.”<sup>227</sup> Or in Dobb’s framing, once a theory is acknowledged to be logically consistent, “the acceptance or rejection of a theory depends on one’s view of the appropriateness of the particular abstraction on which the theory is based.”<sup>228</sup> Sowell continues:

Veblen's teleology-apologetics charge was an echo of Marx's claim that 'bourgeois' economists were incapable of distinguishing a general economic function from its particular manifestation under capitalism. Marx objected to thus spuriously legitimizing and eternalizing capitalist institutions through innocence-by-association with enduring economic necessities. For example, capital in the sense of an instrument of production is an economic necessity, but capital in the sense of a legal entity causing income to flow to its owners was an artifact of existing arrangements.<sup>229</sup>

Dobb contrasted two fundamentally different approaches: the “type of theory... which casts the economic problem in terms of ‘natural’ or universal factors,” versus those theories “which by stressing social relations of production and/or income-distribution have given prominence to ‘institutional’ factors and displayed economic problems in a mainly ‘institutional’ shape.” The two approaches were essentially those at war in the *Methodenstreit* between Menger and the German historical school.

We shall see that even earlier John Stuart Mill was sufficiently alive to the significance of this kind of contrast as to make plain, as against his predecessors, that in his view, while "laws of Production" were natural and universal, those of Distribution *per contra* were "partly of human institution, since the manner in which wealth is distributed in any given society, depends on the statutes or usages therein prevalent": in this sense they were historically relative and rooted in specific property-institutions. With the generation that followed Mill, and its focus upon a demand-theory of exchange-relationships and a derivation of income-distribution (via factor-prices) from these exchange-relationships, the emphasis was surely tilted back again — back to a portrayal of the economic problem in its essentials as shaped and moulded by universal and supra-historical conditions of any

<sup>227</sup>Thomas Sowell, “The ‘Evolutionary’ Economics of Thorstein Veblen,” Oxford Economic Papers, New Series, Vol. 19, No. 2 (Jul., 1967), p. 181.

<sup>228</sup>Maurice Dobb, “The Trend of Modern Economics,” in *Political Economy and Capitalism: Some Essays in Economic Tradition* (London: Routledge & Kegan Paul, Ltd, 1937, 1940), p. 127.

<sup>229</sup>Sowell, “The ‘Evolutionary’ Economics of Thorstein Veblen,” p. 182; Karl Marx, *A Contribution to the Critique of Political Economy* (Chicago, 1904), pp. 269- 70. Cf. *The Place of Science in Modern Civilization*, p. 141. [fn p. 182]

exchange society, whatever its particular social relations, class structure and property-institutions might be. Thus one's view of the nature of historical change — its structure, sequence and causal mechanism — will colour one's view of the permitted limits and permissible forms of generalisation, if the resulting abstract projections and theorems are to have relevance to actual problems and to feasible policy.<sup>230</sup>

Dobb himself, much like Böhm-Bawerk, grouped 19th century justifications for profit — most of which were advance theories of some type — into two main categories: productivity and cost.

These attempts fall broadly into two main types: on the one hand were those who sought to explain profit in terms of some creative property inherent in capital, namely, in terms of its productivity; on the other hand were those who sought to explain profit in terms of some species of “real cost”, analogous to labour, which the capitalist contributed and for which profit was not a surplus-value but an equivalent....

...The fundamental objection to... any form of productivity theory, was that, as Marx pointed out, it included the illicit link of imputing to the owner the “productivity” of the things he owned.... On this level there could be no distinction between the “productivity” of a capitalist and of a landlord....<sup>231</sup>

When the institutional and power considerations to which Dobb referred are brought into the picture, both the productivity and cost theories of advance economics take on a far different light.

To start with Smith: his “parsimony” is saving or abstinence only in the relative sense of refraining from consuming what one has the power to consume; the origin of that power is ignored. And the producer and subsistence goods which were purchased in order to set productive forces to work are actually supplied by other laborers.

His reference to capitalists engaging in “good behavior” (parsimony and investment) rather than “bad” (opulence), means, in functional terms, that various groups of workers put more labor into supplying other groups of workers with production tools and materials, rather than into more consumption goods for the propertied classes, because of the propertied classes’ choice to allocate more of the resources over which they have socially constructed rights to the one purpose than to the other.

Smith simply presupposed the capitalist’s control over investment resources, and their being in a position to evaluate the comparative returns of different investments and set conditions on their willingness to provide capital, as given. But

<sup>230</sup>Dobb, *Theories of Value and Distribution Since Adam Smith: Ideology and Economic Theory* (Cambridge: Cambridge University Press, 1973), pp. 26-27.

<sup>231</sup>Dobb, “The Trend of Modern Economics,” pp. 137-139.

we can posit a contrary state of affairs in which the various groups of workers, who provide the various physical inputs, are themselves in the position of controlling disposal of those inputs, and provide them to one another in order to increase their collective productivity — and hence their standard of living — in material terms.

Explanations of factor input pricing based on the ability to withhold, and hence to charge for them, fall short if they fail to acknowledge underlying institutional factors.

The same criticism holds true of the wages fund doctrine. The classical political economists' doctrine that subsistence goods for labor's consumption must be the result of "past production" is the best kind of true — *technically* true. The food on my plate at this moment, necessarily, had to be prepared before I could consume it — even if that "past production" entailed removing it from the grill only seconds before it was placed in front of me.

Nevertheless, as the English socialist Thomas Hodgskin (one of the best examples of a synchronization theorist) pointed out, existing stocks of food are sufficient for only a few days' consumption, and even more durable goods like clothing exist only in comparatively small stocks in process from the producer to current consumers. The actual "advance" comes from the current output of "co-existing labour" by *other workers*. The capitalist

possesses money, he possesses credit with other capitalists...., but he does not possess food or clothing. He pays the labourer his money wages, and the expectation which other labourers have of receiving part of these wages or other wages, induces them in the meantime to prepare the clothing and food the labourer constantly requires....

To enable either the master manufacturer or the labourer to devote himself to any particular occupation, it is only necessary that he should possess — not, as political economists say, a stock of commodities, or circulating capital, but a conviction that while he is labouring at his particular occupation the things which he does not produce himself will be provided for him, and that he will be able to procure them and pay for them by the produce of his own labour.... It is labour which produces all things as they are wanted, and the only thing which can be said to be stored up or previously prepared is the skill of the labourer.<sup>232</sup>

Likewise, plant and equipment and raw materials are the output of other groups of workers that come in as they are needed, regardless of when their production process began.

Against this context, it is far more accurate to describe the economy as a

<sup>232</sup>Thomas Hodgskin, *Labour Defended against the Claims of Capital. Or the Unproductiveness of Capital proved with Reference to the Present Combinations amongst Journeymen* (1825). Hosted at Marxists.org <<https://www.marxists.org/reference/subject/economics/hodgskin/labour-defended.htm>>.

process of synchronizing ongoing flows between various groups of producers, or from producers to consumers, than one of a capitalist “advancing” subsistence goods to workers. In purely functional terms, what happens is that different groups of producers constantly advance streams of output to one another. The capitalist’s “advance” function consists entirely of a paper claim on the right to direct the flow of goods between those groups of workers. But in material terms, the capitalist does not actually “provide” anything. The capitalist does not actually build the machinery or grow the food the workers consume, and the machinery is not constructed out of piles of money. In material terms, there is nothing but workers acting on physical resources provided by nature, or upon unfinished goods provided by one another, and supplying one another with subsistence goods during the production process. The capitalist’s claimed right to stand between the various groups of workers, and coordinate the streams of production between them, by virtue of paper title to their various products, is socially constructed and — when examined closely — is mostly either the legacy effect of outright robbery (like the enclosures), or the compounded returns on rents from artificial scarcities and artificial property rights and from the “ownership” of “capital” itself. It’s labor operating on the free gifts of nature all the way down, and any claim by capitalists or landlords to have previously acquired a right of allocating the fruits of such productive activity will turn out, upon examination, to be the result of some illegitimate power relationship.

As Hodgskin wrote, the capitalist essentially preempts the synchronization function and charges a monopoly price for it:

Betwixt him who produces food and him who produces clothing, betwixt him who makes instruments and him who uses them, in steps the capitalist, who neither makes nor uses them, and appropriates to himself the produce of both. With as niggard a hand as possible he transfers to each a part of the produce of the other, keeping to himself the large share. Gradually and successively has he insinuated himself betwixt them, expanding in bulk as he has been nourished by their increasingly productive labours, and separating them so widely from each other that neither can see whence that supply is drawn which each receives through the capitalist. While he despoils both, so completely does he exclude one from the view of the other that both believe they are indebted him for subsistence. . . .<sup>233</sup>

In short, money capital is simply a legal claim to the products of labor used in the production process at any given time. The capitalist does not “provide” either machinery or the workers’ subsistence, but rather *directs* them.

The productivity doctrines of both Say and Lauderdale confuse the physical productivity of capital in producing use value with the role of the capitalist’s

ownership in creating exchange value. Say theorized that the payment to the capitalist for the productive services of capital comes out of the value of the goods produced by those services, when in fact it is just the reverse: whatever payment the owners of the factors' physical productive services can demand, given the nature of their property rights and the resulting "relation of the supply and demand," determines the "value" they add to the finished product. And contrary to Lauderdale's productivity theory, the capital which replaces part of labor, while genuinely increasing the physical productivity of labor, is entirely the product of past labor acting on nature. The capitalist does not provide it, but only directs it from the workers who produce it to those who put it to use.

Böhm-Bawerk caught Say out for his confusion, juxtaposing his two mutually contradictory arguments: first, that the productive services themselves create the payment for capital, and second, that the payment results from the appropriation of the factors and ability to charge for productive services which would otherwise be gratis. In the latter, it is the ability to command and to limit access to capital that determines the "value" created by its "productive services." Say's second argument unwittingly grounded profit in issues of institutional structure, power, and property rules.

Moving from productivity to cost theories, the wording of Senior's definition of abstinence — forbearing to consume "what he can command" — is key. Whether it be called "abstinence," "waiting," "time preference," or "opportunity cost," it is entirely relative to the alternatives available to the capitalist in question — alternatives which are socially constructed and result from a given set of power relations. It is a question, *i.e.*, of who is in a position to make the decision of whether to abstain, or of whether to spend money capital on short- or long-term projects — in other words, who is in possession of money capital, which is simply a paper claim on the right to allocate the production streams of capital goods produced by workers acting on nature.

The "abstinence" principle is frequently simplified via a Robinsonade involving a single man starting from scratch in a state of nature and foregoing consumption of the fruits of his own labor, in order to produce tools instead. It is a scenario that has nothing to do with the actual modern state of affairs, in which various organized groups of workers function as going concerns, constantly advancing various streams of goods and services to one another. In the modern capitalist economy, capitalists do not sacrifice consuming the products of their own labor, but rather invest the products of other people's labor in preference to consuming it themselves. While the workers who engage in labor abstain or sacrifice in an absolute sense, the capitalist only does so in the sense of abstaining from alternative uses of "what he can command."

At one point, Senior gives the whole thing away in attempting to contrast the

real abstinence of the capitalist with the fake abstinence of the landlord, and then conceding the lack of real difference. An “appropriated natural agent” may increase the productivity of labor. But in that case the surplus

is taken by the proprietor of the natural agent, and is his reward, not for having laboured or abstained, but simply for not having withheld what he was able to withhold; for having permitted the gifts of nature to be accepted.<sup>234</sup>

... The revenue arising from a dock, or a wharf, or a canal, is profit in the hands of the *original constructor*. It is the reward of *his* abstinence in having employed capital for the purposes of production instead of for those of enjoyment. But in the hands of his heir it has all the attributes of rent. It is to him the gift of fortune, not the result of a sacrifice. It may be said, indeed, that such a revenue is the reward for the owner's abstinence in not selling the dock or the canal and spending its price in enjoyment. But the same remark applies to every species of transferable property. Every estate may be sold, and the purchase money wasted. If the last basis of classification were adopted, the greater part of what every Political Economist has termed rent must be called profit.<sup>235</sup>

Or *vice-versa*, of course. Since “abstinence” is the failure to consume *what one can command*, the distinction between profit and rent on land is largely one without a difference. The capitalist’s profit is simply the reward for allocating to production rather than consumption a given fund over which they have control (with no more regard to the source of that control, than is paid to the source of the landlord’s title to the land); the landlord’s rent is the reward for allowing access to land which it is in their power to forbid.

Dobb treated “Senior’s notorious ‘abstinence’ theory” as the paradigmatic case of cost theories. Unfortunately, the track he took in his criticism — emphasizing Senior’s focus on subjective cost, and attacking his lumping labor together with saving as primarily a subjective cost rather than objective expenditure of energy<sup>236</sup> — actually abandoned the most effective approach to attacking the artificiality of Senior’s conception of cost. The primary difference between labor, as a factor of production, and land and capital, is that the laborer is the only “factor owner” in an innate position of control over the “contribution” of their “productive services,” and the only factor owner for whom the expenditure is experienced as a cost in any direct and absolute sense. The exchange value of the worker’s labor results from the fact that the worker’s control over their labor is innate and absolute, and that

<sup>234</sup>Nassau W. Senior, *An Outline of the Science of Political Economy* (London: Clowes and Sons, Stamford Street, 1836). Facsimile edition (New York: Augustus M. Kelley, 1965), pp. 90.

<sup>235</sup>*Ibid.*, pp. 129.

<sup>236</sup>Dobb, “The Trend of Modern Economics,” pp. 140-141.

they must be persuaded to drag themselves out of bed and “contribute” eight or twelve hours of their consciousness and effort — not by simply allowing access to it or parting with it while they do other things, but by immersing their very being in an experience that rules out any other activity. The capitalist’s “contribution” of capital, and the landlord’s of land, on the other hand, is entirely relative to their institutionalized control over them and ability to withhold them.

Dobb correctly mocked the notion of “abstinence” as a subjective cost or sacrifice entailed in the investment of capital: “Where was one to set the limit to such ‘abstinence’, short of including in it the sale or hire of every sort of property, and so imputing a ‘real cost’ to any means by which an income could be acquired in an exchange society?”<sup>237</sup> The ultimate *reductio* of the approach, which he ascribed to Marshall, was

the empirical solution of taking all cases of postponement for which a recompense was in fact demanded by individuals as identical with cases where a “sacrifice” was involved in the act — taking individual attitudes towards saving at their face-value, and assuming the empirical fact of resistance to the act of postponement as evidence that a real “sacrifice” attaching to the act existed and was a fundamental cause.

This reduced sacrifice or abstinence, in essence, to opportunity cost.<sup>238</sup>

But failing to contrast it to the *real* subjective sacrifice of labor, to the worker’s contribution of effort in an absolute and not relative way, greatly weakened Dobb’s argument. A landlord’s or capitalist’s “abstinence” is entirely relative, consisting only in not consuming what they have the power of consuming, or of allowing access to that from which they have the power to withhold access — even if their control over that thing is entirely gratis, and cost nothing to acquire. A laborer’s sacrifice, on the other hand, is unavoidably one of actual effort and sweat.

Taken to its logical conclusion, the ability to demand payment for anything becomes the sole defining criterion. “Whether a person *does* demand payment for a certain act (*i.e.* whether it has a ‘supply-price’) depends on whether he *can* demand payment; and this depends on the total situation of which he is a part.”<sup>239</sup> This amounts to “circular reasoning,” in which “the income of the capitalist” (or the legal definition of property rights by which the capitalist controls the allocation of investment resources) is treated as “in some sense ‘natural’ or ‘inevitable’....”<sup>240</sup> And the “marginal productivity” of the “contribution,” *i.e.* the amount it adds to final price, is the direct effect of the amount one is able to charge for it.

This line of argument by Dobb, especially in the case of marginal productivity

<sup>237</sup>*Ibid.*, pp. 141-142.

<sup>238</sup>*Ibid.*, p. 147.

<sup>239</sup>*Ibid.*, p. 148.

<sup>240</sup>*Ibid.*, p. 150.

theory, overlaps heavily with Veblen's concept of "capitalized disserviceability" (about both of which more below).

J.S. Mill, although his core doctrine was that profit is a reward for saving, also admitted elsewhere that saving was only relative to institutional considerations. He went so far as to note at one point that saving, at least in some previous forms of class society, can actually consist of forced savings, or privation, imposed on others. In such circumstances the "saving" by the dominant party is not absolute, but only relative to their ability to withhold it.

In a rude and violent state of society, it continually happens that the person who has capital is not the very person who has saved it, but some one who, being stronger, or belonging to a more powerful community, has possessed himself of it by plunder. And even in a state of things in which property was protected, the increase of capital has usually been, for a long time, mainly derived from privations which, though essentially the same with saving, are not generally called by that name, because not voluntary. The actual producers have been slaves, compelled to produce as much as force could extort from them, and to consume as little as the self-interest or the usually very slender humanity of their taskmasters would permit. This kind of compulsory saving, however, would not have caused any increase of capital, unless a part of the amount had been saved over again, voluntarily, by the master.<sup>241</sup>

And even under capitalism, capital results simply from the fact that "possessors of surplus income" — regardless of the source of that income — are disposed to "save a portion of it."<sup>242</sup>

In fact he went still further, acknowledging that the actual distribution of property in his own day was "the result, not of just partition, or acquisition by industry, but of conquest and violence: and notwithstanding what industry has been doing for many centuries to modify the work of force, the system still retains many and large traces of its origin."

The laws of property have never yet conformed to the principles on which the justification of private property rests. They have made property of things which never ought to be property, and absolute property where only a qualified property ought to exist. They have not held the balance fairly between human beings, but have heaped impediments upon some, to give advantage to others; they have purposely fostered inequalities, and prevented all from starting fair in the race....

Private property, in every defence made of it, is supposed to mean the guarantee to individuals of the fruits of their own labour and abstinence. The

<sup>241</sup>Mill, *Principles of Political Economy*, p. 69.

<sup>242</sup>*Ibid.*, p. 189.

guarantee to them of the fruits of the labour and abstinence of others, transmitted to them without any merit or exertion of their own, is not of the essence of the institution, but a mere incidental consequence which, when it reaches a certain height, does not promote, but conflicts with, the ends which render private property legitimate.<sup>243</sup>

Despite all these damning concessions, Mill went on to retreat from their implications, and to accept the legitimacy of the capitalist's control over investment capital at face value.

The institution of property, when limited to its essential elements, consists in the recognition, in each person, of a right to the exclusive disposal of what he or she have produced by their own exertions, or received either by gift or by fair agreement, without force or fraud, from those who produced it. . . . It may be objected, therefore, to the institution as it now exists, that it recognises rights of property in individuals over things which they have not produced. For example (it may be said) the operatives in a manufactory create, by their labour and skill, the whole produce; yet, instead of its belonging to them, the law gives them only their stipulated hire, and transfers the produce to some one who has merely supplied the funds, without perhaps contributing anything to the work itself, even in the form of superintendence. The answer to this is, that the labour of manufacture is only one of the conditions which must combine for the production of the commodity. The labour cannot be carried on without materials and machinery, nor without a stock of necessaries provided in advance to maintain the labourers during the production. All these things are the fruits of previous labour. If the labourers were possessed of them, they would not need to divide the produce with any one; but while they have them not, an equivalent must be given to those who have, both for the antecedent labour, and for the abstinence by which the produce of that labour, instead of being expended on indulgences, has been reserved for this use. The capital may not have been, and in most cases was not, created by the labour and abstinence of the present possessor; but it was created by the labour and abstinence of some former person, who may indeed have been wrongfully dispossessed of it, but who, in the present age of the world, much more probably transferred his claims to the present capitalist by gift or voluntary contract: and the abstinence at least must have been continued by each successive owner, down to the present.<sup>244</sup>

(“Voluntary contract” in the context of a power differential resulting from the unjust distribution of wealth which Mill previously acknowledged.)

<sup>243</sup>*Ibid.*, pp. 208-209.

<sup>244</sup>*Ibid.*, pp. 218-219.

Still, despite all this back-tracking, Mill recognized an important distinction at least in principle: that between the laws of production, which, being based on purely technical considerations, were objective and universal, and the distribution of wealth, which

is a matter of human institution solely. The things once there, mankind, individually or collectively, can do with them as they like. They can place them at the disposal of whomsoever they please, and on whatever terms. Further, in the social state, in every state except total solitude, any disposal whatever of them can only take place by the consent of society, or rather of those who dispose of its active force.... The distribution of wealth, therefore, depends on the laws and customs of society. The rules by which it is determined are what the opinions and feelings of the ruling portion of the community make them, and are very different in different ages and countries; and might be still more different, if mankind so chose.<sup>245</sup>

The criticisms of advance economics in general by the institutionalists and Dobb applied even more strongly to marginalism in particular. Dobb viewed marginalism in general as a retreat into “pure formalism, ...emptied of real content,” which

had reached a level of abstraction at which it was impotent to deliver any important judgment on practical affairs, at any rate on the problems peculiar to a particular form of economic society. If all that is postulated is simply that men choose, without anything being stated even as to how they choose or what governs their choice, it would seem impossible for economics to provide us with any more than a sort of algebra of human choice, indicating certain rather obvious forms of inter-relationship between choices, but telling us little as to the way in which any actual situation will behave.<sup>246</sup>

In classical political economy, “income-distribution is treated as being the result of social institutions,” according to Dobb, whereas for marginalists “it is determined by the conditions of exchange. In the one case it is determined from outside and in the other case from inside the process of market forces.”<sup>247</sup> Marginalism sweeps the question of justice in distribution under the rug, subsuming it within price-theory — as opposed to Ricardian political economy, which treated distribution as prior to exchange (in the sense that “price-relations or exchange-values could only be arrived at after the principle affecting distribution of the total product had been postulated.”)<sup>248</sup>

The change [in orientation from Ricardianism to marginalism] was

245 *Ibid.*, p. 200.

246 Dobb, “The Trend of Modern Economics,” p. 171.

247 Dobb, *Theories of Value and Distribution Since Adam Smith*, p. 34.

248 *Ibid.*, pp. 33-34.

associated... with the drawing of different boundary-lines to the "economic system", as an "isolated system"; so that questions of property-ownership or class relations and conflicts were regarded as falling outside the economist's domain, not directly affecting, in major respects at least, the phenomena and relations with which economic analysis was properly concerned, and belonging instead to the province of the economic historian or the sociologist.<sup>249</sup>

...[T]he reduction of distribution to the pricing of productive services or factors had the result of excluding the social circumstances of the individuals (or social groups) associated with the supply of these "services" — even to the extent of dropping from sight the very existence of these individuals.... The extreme case was where given factor-supplies were postulated, and distribution consisted simply of the pricing of  $n$  factor inputs.<sup>250</sup>

This approach — incorporating the theory of distribution into the theory of the pricing-process — constituted “question-begging in an important respect.”

A structure of market demands can only be derived from consumers' desires, preferences or behaviour-reactions on the assumption of consumers being equipped with a given money-income. Hence an initial distribution of income between individuals is implicit in the general pricing-process, in the sense that it must be included as one of the determinants of the structure of demand from which all prices (including prices of productive factors) are derived; the whole pricing process being relative to this postulated distribution. A theory of distribution, in other words, if it is conceived as a theory of derived prices of productive services or factors, cannot be independent of initial income-distribution as essential premise....

The important, but much-too-seldom noticed, consequence of this contrast between the classical approach and the modern follows directly from what has been said: namely, that in the former income-distribution is treated as being the result of social institutions (*e.g.* property-ownership) and social relations, whereas in the latter it is determined by the conditions of exchange. In the one case it is determined from outside and in the other case from inside the process of market prices....<sup>251</sup>

To take a quite simple example: suppose a two-commodity economy, with  $x$  a relatively cheap (compared to its utility) necessity and  $y$  a relatively dear luxury consumed only by those with high incomes. The fact that the demand for  $x$  comes from low-income groups (and conversely the demand for  $y$  from those with high incomes) will tend, *ceteris paribus*, to keep the

249 *Ibid.*, pp. 172-173.

250 *Ibid.*, p. 175.

251 *Ibid.*, pp. 33-34.

price of *x* low (and of *y* high) and likewise the price of whichever factor (*e.g.* labour) is most intensively used in its production.<sup>252</sup>

(Consider, in this light, Böhm-Bawerk's thesis that the distribution of income between labor and capital is determined by time preference — ignoring the fact that time preference is determined by the distribution of income).

Dobb noted that social relations and institutions “such as the pattern of ownership, do not appear at all” in marginal productivity theories of distribution, and were “treated, indeed, as having no determining role and as irrelevant to the result.” Such concepts as exploitation or surplus-value were ruled out by the very framing of the problem,

since the validity of such a concept rests on something about price-relations hingeing on some characteristic of the institutional structure (and if *nothing* about normal price-relations is dependent upon the social or institutional background, these price-relations can *only* reflect the requirements of the economic problem *per se*..., which would remain the same whatever the institutional system happened to be, given only the existence of free exchange).<sup>253</sup>

...Institutional differences or change could admittedly modify the pattern of income-distribution between *persons* (*e.g.* by affecting the amount of property owned by various individuals); but the broad pattern of distribution between *factors* (which meant substantially between capital and labour) was not capable of any such influence, given the relation between the relative supplies of factors and their productive uses, or their role in production and hence the demand for them. Hence economic theory could give no place to any institutional-relative characterisation of, say, property-income, or of the profit-wage ratio: these were purely economic categories in the sense of being dependent on the nature of the prevailing economic situation and the economic problem *per se*.<sup>254</sup>

Veblen, similarly, criticized the institution-blindness of marginalism. In marginalist economics, he wrote, institutional considerations

are not subject to inquiry but are taken for granted as pre-existing in a finished, typical form and as making up a normal and definitive economic situation, under which and in terms of which human intercourse is necessarily carried on.

The cultural elements so tacitly postulated as immutable conditions precedent to economic life are ownership and free contract, together with such other features of the scheme of natural rights as are implied in the

<sup>252</sup>*Ibid.*, p. 34n.

<sup>253</sup>*Ibid.*, pp. 114-115.

<sup>254</sup>*Ibid.*, p. 172.

exercise of these. These cultural products are, for the purposes of the theory, conceived to be given a priori in unmitigated force. They are part of the nature of things; so that there is no need of accounting for them or inquiring into them, as to how they have come to be such as they are, or how and why they have changed and are changing, or what effect all this may have on the relations of men who live by or under this cultural situation.<sup>255</sup>

... The acceptance by the economists of these or other institutional elements as given and immutable limits their inquiry in a particular and decisive way. It shuts off the inquiry at the point where the modern scientific interest sets in. The institutions in question are no doubt good for their purpose as institutions, but they are not good as premises for a scientific inquiry into the nature, origin, growth, and effects of these institutions and of the mutations which they undergo and which they bring to pass in the community's scheme of life.

To any modern scientist interested in economic phenomena, the chain of cause and effect in which any given phase of human culture is involved, as well as the cumulative changes wrought in the fabric of human conduct itself by the habitual activity of mankind, are matters of more engrossing and more abiding interest than the method of inference by which an individual is presumed invariably to balance pleasure and pain under given conditions that are presumed to be normal and invariable.<sup>256</sup>

... So the institution of ownership is taken into the inquiry not as a factor of growth or an element subject to change, but as one of the primordial and immutable facts of the order of nature, underlying the hedonistic calculus.... There is no thought either of a conceivable growth of this definitive nineteenth-century institution out of a cruder past or of any conceivable cumulative change in the scope and force of ownership in the present or future.<sup>257</sup>

Böhm-Bawerk's time preference doctrine was in a sense the culmination of an evolutionary process of advance theories through the nineteenth century. After knocking all the productivity and cost theories of his predecessors into a cocked hat, he proceeded to put forth time preference as the solution to the problem of surplus value which they had all failed to provide. But as noted previously, it differed far less from the previous cost or abstinence doctrines of Senior, Mill *et al* than he imagined. And it shared the relativity and institution-blindness of the other

<sup>255</sup>Thorstein Veblen, "The Limitations of Marginal Utility," *Journal of Political Economy* 17:9 (November 1909), pp. 623-624.

<sup>256</sup>*Ibid.*, pp. 627.

<sup>257</sup>*Ibid.*, p. 630.

doctrines.

Despite Böhm-Bawerk's criticism of Senior, his time preference and Senior's abstinence are so closely related as to be, in practical terms, two variants on the same general theory. The abstinence doctrine makes more sense — and bears a closer resemblance to time preference — if framed in terms of “waiting.” And Böhm-Bawerk's time preference, in turn, simply amounts to waiting; exchanging consumption now for a greater amount of consumption in the future is nothing but another way of saying postponing consumption — waiting for it — in return for an additional premium on the time one waits. To the extent that the capitalist's profit is justified as the reward for “abstention” from otherwise consuming capital which “he can command,” the argument comes very close to Böhm-Bawerk's time preference. The actual sacrifice is doing without other uses of the capital while it is tied up in the productive process, and having to wait until it is realized through sale of the finished product to get it back.

Böhm-Bawerk greatly exaggerated the difference between abstinence and time preference. The entire doctrine of time preference hinges on two points:

- 1) One party has the money and the other doesn't
- 2) The credit system is organized, by law, to limit the credit or coordinating function to those who have money.

Those are the same two points behind Senior's theory, points which are mostly unexamined by both thinkers.

Dobb criticized Böhm-Bawerk's concept of time preference as socially conditioned, with the degree of time preference amounting in substance to little more than a stand-in for one's power position.

...[T]he degree of this subjective under-estimation is itself dependent on the distribution of income, and hence on the class relations in society. Interest is, therefore, dependent on the latter in a double sense: in that the size of incomes among the capitalist class, relative to their accustomed standards of consumption, determines their attitude to saving and investment, while the poverty of the masses determines the price at which they are willing to sell their labour-power in return for immediate income. Hence, interest depends for its determination precisely on the type of social relations and institutions, historically determined and not universal, with which Marx was concerned.<sup>258</sup>

The “circular result” of this theory is that “the nature of the fundamental costs which affect both the values of commodities and the rewards of the factors of production will be determined in turn by the distribution of income.”

A man who is landless will estimate the “sacrifice” or “disutility” involved in hiring himself to a master at much less than will a peasant farmer

possessed of land and instruments of his own, since the destitute position of the former causes him to place a lower subjective valuation on his own labours in terms of the necessaries of life. The same will be true of workers backed by a trade union, as contrasted with unorganized workers with a traditionally low standard of life. Hence to postulate any normal values requires the prior postulation of a certain income-distribution and hence a certain class structure. To give a precise form to the exchange-relationships of a given society requires as data not merely the mental disposition of an abstract individual, but also the complex of institutions and social relations of which the concrete individual is a part.<sup>259</sup>

Everything the institutionalists and Dobb said of marginalism was true in particular of John Bates Clark. Although he was a major proponent of synchronization economics, and his marginal productivity theory was directly at odds with cost theories like time preference, he nevertheless falls into the broad category of advance theories in that he sees the capitalist's investment of capital as a real contribution on the capitalist's part which possesses "productivity" independent of ownership or institutional considerations.

As Veblen observed, any production input that can collect an income is a "factor of production":

It has been usual, and indeed it still is not unusual, to speak of three coordinate "factors of production": land, labor, and capital. The reason for this threefold scheme of factors in production is that there have been three recognized sources of income: rent, wages, and profits; and it has been assumed that whatever yields an income is a productive factor.<sup>260</sup>

His general term for the ability to extract rents from artificial property rights and artificial scarcity was "capitalized disserviceability.": "Disserviceability may be capitalized as readily as serviceability...."<sup>261</sup> Essentially, the ability to obstruct production, or to withhold resources from production, is defined as "productivity."

Dobb, following essentially the same line of argument as Veblen's, used the hypothetical example of toll-gates:

Suppose that toll-gates were a general institution, rooted in custom or ancient legal right.... Would not the opening and shutting of toll-gates become an essential factor of production, according to most current definitions of a factor of production, with as much reason at any rate as many of the functions of the capitalist entrepreneur are so classed to-day?

<sup>259</sup>*Ibid.*, p. 162.

<sup>260</sup>Veblen, *The Engineers and the Price System* (New York: B.W. Huebsch, Inc., 1921), p. 27.

<sup>261</sup>Veblen, "On the Nature of Capital: Investment, Intangible Assets, and the Pecuniary Magnate," *Quarterly Journal of Economics* volume 23, issue 1 (November 1908), p. 108.

This factor, like others, could then be said to have a "marginal productivity" and its price be regarded as the measure and equivalent of the service it rendered. At any rate, where is a logical line to be drawn between toll-gates and property-rights over scarce resources in general?<sup>262</sup>

Or as Marx put it in volume 3 of *Capital*, the landlord's ability to collect rent for not obstructing access to land is reified as the land "factor of production"; the capitalist's preemption of the function of mobilizing credit, and extraction of a monopoly price for that "service," is reified as "capital"; and so on.

...[L]and becomes personified in the landlord and... gets on its hind legs to demand, as an independent force, its share of the product created with its help. Thus, not the land receives its due portion of the product for the restoration and improvement of its productivity, but instead the landlord takes a share of this product to chaffer away or squander.<sup>263</sup>

The "trinitarian formula" of wages, profit, and rent is "an enchanted, perverted, topsy-turvy world, in which Monsieur le Capital and Madame la Terre do their ghost-walking as social characters and at the same time directly as mere things."<sup>264</sup> Theories of the "productivity" of land and capital are based on the social convention of imputing their productive qualities to an owner who controls access to them.

Dobb's example of the toll-gate is illustrative of what John R. Commons called property as the "power to withhold," which occurs "when both the natural opportunities are occupied and the individual services of hundreds and thousands of investors are brought together in the collective power of corporations holding access to market opportunities."<sup>265</sup>

And, as Veblen noted, the incomes derived from the ability to withhold or obstruct access to such natural opportunities were a form of rent extraction.

The absentee owner of natural resources is enabled to make them a source of free income, that is to say make them assets, by the power legally conferred on him to withhold them from use until his charge for their use is allowed him. What this charge will be is always question of what the traffic will bear; which is the same as what will yield him the largest net return.<sup>266</sup>

The very concept of marginal productivity, according to Veblen, is circular or "tautological":

According to Hudibras, "The value of a thing is just as much as it will

<sup>262</sup>Dobb, *Political Economy and Capitalism*, p. 66.

<sup>263</sup>Karl Marx and Friedrich Engels, *Capital* vol, 3. Vol. 37 of *Marx and Engels Collected Works* (New York: International Publishers, 1998), p. 811.

<sup>264</sup>*Ibid.*, p. 817.

<sup>265</sup>John R. Commons, *Legal Foundations of Capitalism* (New York: MacMillan, 1924), pp. 53-54.

<sup>266</sup>Veblen, *Absentee Ownership and Business Enterprise in Recent Times: The Case of America* (New York: Augustus M. Kelley, 1964 [1923]), pp. 125-126.

bring,” and the later refinements on the theory of value have not set aside this dictum of the ancient authority. It answers no pertinent question of equity to say that the wages paid for labor are as much as it will bring. And Mr. Clark’s chapter... on “The Unit for Measuring Industrial Agents and their Products” is designed to show how this tautological statement in terms of market value converts itself, under competitive conditions, into a competent formula of distributive justice. It does not conduce to intelligibility to say that the wages of labor are just and fair because they are all that is paid to labor as wages. What further value Mr. Clark’s extended discussion of this matter may have will lie in his exposition of how competition converts the proposition that “the value of a thing is just as much as it will bring” into the proposition that “the market rate of wages (or interest) gives to labor (or capital) the full product of labor (or capital).”<sup>267</sup>

In the end, the concept of the “productivity” of a factor of production is circular because its “marginal productivity” is whatever a marginal unit adds to the price of a finished product — which means whatever the “owner” is able to charge for it. And that, in turns, depends on the social or institutional arrangements governing who is able to control access to “factors of production” and charge for their “productive services.”

Clark’s doctrine, Veblen continued, “amounts to saying that the laborer gets what he is willing to accept and the consumers give what they are willing to pay. And this is true, of course, whether competition prevails or not.” But the existence of competition, as an added factor, is made out to be the source of justice. In the absence of force or fraud, and in the presence of competition — the institutional definition of property, and its distribution, being taken for granted — any arrangements “voluntarily” arrived at between the factors of production are *ipso facto* just.

What makes this arrangement just and right under competitive conditions, in Mr. Clark’s view, lies in his further doctrine that under such conditions of unobstructed competition the prices of goods, and therefore the wages of labor, are determined, within the scope of the given market, by a quasi-consensus of all the parties in interest. There is of course no formal consensus, but what there is of the kind is implied in the fact that bargains are made, and this is taken as an appraisalment by “society” at large....

The equity and binding force of this finding is evidently bound up with that common-sense presumption on which it rests; namely, that it is right and good that all men should get what they can without force or fraud and without disturbing existing property relations.... It does not touch questions

<sup>267</sup>Thorstein Veblen, “Professor Clark’s Economics,” in *Science and Modern Civilization and Other Essays* (New York: Russell & Russell, 1961 [1919]), pp. 202-203.

of equity beyond this, nor does it touch questions of the expediency or probable advent of any contemplated change in the existing conventions as to rights of ownership and initiative....

In effect, this law of “natural” distribution says that whatever men acquire without force or fraud under competitive conditions is their equitable due, no more and no less, assuming that the competitive system, with its underlying institution of ownership, is equitable and “natural.”<sup>268</sup>

Clark did not mention that the employer is a stand-in and intermediary on behalf of “society,” or that what one party is willing to give and the other party is able to get might reflect the power relations between them. And the property conventions of the society the employer and worker both live in are presumed, as such, not to constitute such a power relation or embody background force, nor do they constitute a restraint on competition; the particular form of property rules in their society is not contingent, but natural. Clark would, presumably, have condemned slavery as a form of violence and a restraint on competition for labor; but the role of violence in establishing the modern institution of capitalist property in land, or the effect of enclosures on the balance of power and distribution of wealth in the industrial revolution, did not bear similar looking into.

For Clark, the current distribution of property and income is presumed to be legitimate because it has flowed, via “voluntary” interactions, from the previous distribution of property and income, which is in turn presumed to be legitimate, and so on back to the beginning of time. Of course, for anyone familiar with the actual history of capitalism, this is pure nonsense.

Like previous adherents of advance doctrines, Marshall abstracted all the institutional and structural considerations to which his “waiting” or “abstention” is relative. First, he treated interest as necessary as a “reward” for “waiting for the enjoyment of material resources,” when in fact the need for the investor’s capital is artificial; money capital is nothing but a socially constructed paper claim on capital goods which are produced contemporaneously for one group of workers by other groups of workers. And further, such socially constructed claims to capital goods are concentrated in a few hands, rather than widely distributed in the hands of the producing classes, because of a history of violent dispossession and rent extraction. Second, it follows that the capitalist’s “waiting” is entirely relative to the ability to control access to such paper claims, rather than being a sacrifice in absolute terms comparable to that entailed in labor. Marshall himself substituted “waiting” in preference to “abstinence” because, as he admitted, the abstinence was only in the sense that the capitalist “abstained from consuming anything which he had the power of consuming.”

<sup>268</sup>*Ibid.*, pp. 205-207.

Dobb pointed to the largely unexamined assumptions behind the the argument, advanced by marginalists, that time preference and marginal productivity rules would function, for entirely natural reasons, regardless of a given society's institutional arrangements. "In abstracting phenomena of exchange from the productive relations and the property and class institutions of which they are the expression, an attempt has been made to arrive at generalizations which will hold for *any* type of exchange economy."<sup>269</sup>

Such arguments operate from static models, in which the quantities of goods available and the quantities supplied are simply given at a particular moment in time. Productive inputs are "natural objects available at any given date in given nature-determined amounts." In such a model, the only relevant questions are allocation of these fixed supplies of inputs based on "the pattern of demand for end-products produced from different input-combinations." In the Austrian approach, in particular, "the set of *n* means or inputs is already given as *datum*.... It excludes from consideration all situations in which these supplies are likely to change (*i.e.* to change as a 'feedback' effect of their prices)...." But once "human activity is assigned a major role in the productive process and reproducible inputs... replace scarce natural objects, the essentials of the economic problem become different...."<sup>270</sup> If quantities are not dependent upon natural limitations, but nonetheless determined in their supplies "in some other ways," then the institutional sources of artificial scarcity call for examination in their own right, as opposed to being simply accepted as a given.

*Any* particular set of property rules, or allocation of property, will result in greater or lesser *practical* scarcity for the different factor inputs, compared to alternative rulesets; as a result the "marginal productivity" of those inputs relative to each other will vary from one system to the next despite the same quantity of actual physical stocks. The choice of *any* particular set of property rules, or *any* particular allocation of property, will change the comparative marginal returns on all forms of property relative to what would prevail under alternative rulesets and distributions.

Further, in the case of a worker-controlled economy, in which credit is a simple accounting mechanism and the functions of accumulation and investment are not artificially vested in a separate class, it is hard to find a party who subjectively experiences capital investment as abstinence or sacrifice. In the case of retained earnings, in an economy where "investment" is simply a matter of workers supplying consumption goods and production goods to other workers, with all workers regardless of industry purchasing consumption goods from the proceeds of

<sup>269</sup>Dobb, "The Trend of Modern Economics," p. 131.

<sup>270</sup>Dobb, *Theories of Value and Distribution Since Adam Smith*, pp. 180-182.

their labor, who will experience their own conduct as “abstinence” or “saving” on someone else’s behalf? On the level of society as a whole, it may be true that resources are allocated toward the production of additional means of production rather than of an increased supply of current consumption goods. But just as under existing capitalism, the typical worker in a multi-worker productive enterprise — whether engaged in the production of consumer or producer goods — does not under any circumstances engage in the production of goods for their own direct consumption; they are, rather, paid in money for contributing to the production of goods for sale to others, rather than producing. And there is no individual or class of persons who are, at least subjectively or experientially, in the position of the capitalist investor who “saves” in order to “lend” or “invest.”

Or as we saw Schumpeter describe the situation earlier, all participants in the economic system “always exchange their productive services for present consumption goods only” and not for “promises of future consumption goods”; nor do they “apply for any ‘advances’ of present consumption goods.”

It is simply a matter of exchange, and not of credit transactions. The element of time plays no part. All products are *only* products and nothing more. For the individual firm it is a matter of complete indifference whether it produces means of production or consumption goods.... Consumption goods in particular are also only products and nothing more, products to which nothing more happens than their sale to consumers. They form in nobody’s hands a “fund” for the maintenance of laborers, and so on....<sup>271</sup>

The workers in an enterprise collectively may decide to reinvest a given share of revenue in expanding future production or upgrading machinery rather than wages. But for such workers, the increased future productivity and revenue are themselves the incentive for reinvestment. Society as a whole may be devoting a certain amount of labor to producing more producer goods rather than consumption goods, but from the individual perspective no one is subjectively experiencing a “sacrifice” in so doing that would entitle them to a reward for “abstinence.” And the provision of producer goods by one enterprise to another in the same credit-clearing network is simply a sales credit on the balance of the first firm, and a debit on the balance of the second that will be offset by other sales. The transactions are, rather, just a few among many in a constantly fluctuating balance. There is no bilateral relationship between a “saver” who “lends” money to another party as an “investment” — only multiple relationships through the medium of a common credit system. In cases where the scale of expenditure on new capital outlays

<sup>271</sup>Joseph A. Schumpeter, *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Translated from the German by Redvers Opie. With a new introduction by John E. Elliott (New Brunswick and London: Transaction Publishers, 1934, 1983), p. 32. Pagination from pdf at Anna’s Archive <<https://annas-archive.org/md5/72ce667e0b8930638ce60b07f775f0ee>>.

exceeds a firm's normal credit and debit activity on their account by an amount larger than the permitted negative balance of even a large regional credit-clearing network encompassing multiple firms, it may require approval by the credit-clearing network. The same is true, likewise, in other cases that require large initial expenditures like a startup. But in such cases, it will be a decision by the network based on the member enterprises' and individuals' assessment of the area's need for the additional productive activity and the likelihood that it will be viable — not based on the potential return on investment.