

EUGEN VON BÖHM-BAWERK'S "INTEREST THEORY OF 1876"

TRANSLATED, INTRODUCED, AND ANNOTATED BY EDWARD W.
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INTRODUCTION

There are a number of mystery documents in the history of economic thought. Peter of John Olivi's ([1295] 2016) *Treatise on Contracts* and Richard Cantillon's ([1755] 2010) *Essay on Trade in General* (written around 1730) are perhaps the most notable examples. The reason for the mystery surrounding these documents can be easily explained. In the first case, Olivi was condemned with heresy and his bones were scattered. In the second, Cantillon was embroiled

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in the infamous Mississippi Bubble and probably faked his death to avoid numerous lawsuits. For scholars today, Olivi and Cantillon are towering figures in the early history of economic science (Thornton 1999; Langholm 2009). But the controversy surrounding their lives meant that their writings remained in obscurity for generations.

Eugen von Böhm-Bawerk's "Interest Theory of 1876" is a mystery document. This is puzzling, for he was not a controversial figure like Olivi or Cantillon. No one can deny that Böhm-Bawerk was one of the greatest economists of all time (Schumpeter [1954] 1994, 847; Robbins [1979–81] 1998, 287). He was an eminent professor and statesman, and the significance of his classic work *Capital and Interest* was widely recognized before he died on August 27, 1914.¹ For example, Irving Fisher (1907, 53) wrote while Böhm-Bawerk was still alive:

Capital and Interest and the *Positive Theory of Capital* [by Böhm-Bawerk] have become economic classics. There can be no question that they deserve the high esteem in which they are held, for they contain the material, both in their destructive criticism and in their constructive argument, for a correct theory of interest. For the most part, Böhm-Bawerk's work will doubtless always stand.

Similarly, Joseph Schumpeter wrote that Böhm-Bawerk's work is timeless. He insisted, "To say that his work is immortal is to express a triviality. . . . [T]he traces of his work will never perish" ([1914] 1997, 189–90). According to Schumpeter, *Capital and Interest* is required reading for all economists: "It has become a standard work which cannot be by-passed" ([1914] 1997, 155). Ludwig von Mises ([1959] 2007, 155) agreed:

There is no doubt that [*Capital and Interest*] is the most eminent contribution to modern economic theory. For every economist it is a must to study it most carefully and to scrutinize its content with the utmost care. A man not perfectly familiar with all the ideas advanced in these three volumes has no claim whatever to the appellation of an economist.

Considering his distinguished position in the history of economics, the inaccessibility of Böhm-Bawerk's "Interest Theory

¹ See Hennings (1997) for a full treatment of Böhm-Bawerk's life and contributions to economics. For shorter treatments, see Garrison (1999), Ebeling (2001), and Huerta de Soto (2008).

of 1876" is baffling. In *Capital and Interest*, he acknowledged that his seminar paper is an early outline of all his future work:

The basic features of my own theory of capital had already been established by 1876 which is the year in which I set them down in a youthful work that never achieved publication. . . . Those ideas were not to be laid before the public until I was able to present them as a complete whole, and harmoniously incorporated in a system of adequately developed fundamental principles of economics. And for that reason I chose to labor for a period of ten years laying a foundation for my theory by first working out completely the theory of goods (1881), the critique of capital (1884), and the theory of value (1886). I chose to do that rather than snatch at the lucent wraith of antecedence, as I might easily have done, by publishing a decade earlier a collection of original but still undeveloped ideas. ([1889] 1959, 439n2)

Clearly, Böhm-Bawerk thought his 1876 seminar paper had some significance. Still, he chose not to publish it during his lifetime. This is understandable given that *Capital and Interest* was available. For him, the seminar paper was probably a sentimental piece that established 1876 as a key year in his career as an economist.

But why wasn't the paper published after his death 1914? Important students of his recognized that Böhm-Bawerk's seminar paper contains his basic ideas on capital and interest. For example, Mises ([1924] 2002, 329–30) wrote in 1924,

From the beginning, Böhm-Bawerk concentrated his scientific work on a central problem of theoretical economics, namely, the problem of interest. In the spring of 1876, at the age of twenty-five, he presented in Karl Knies's seminar in Heidelberg a paper on interest that already contained the basic ideas of the soon-to-be-famous *agio* theory. Before he could present his work to the public, some difficult preliminary problems had to be solved. And he first turned his attention to them. Always with his final goal in mind, he published in 1881 the essay "Whether Legal Rights and Relationships are Economic Goods," in 1884 *The History and Critique of Interest Theories*, in 1886 "The Essential Theory of the Value of Economic Goods," which was finally followed by the publication of *The Positive Theory of Capital* in 1889.²

² Schumpeter ([1914] 1997, 147) described "the problem of interest" as "the most difficult and the most important in economics." Fisher (1930, 33) wrote, "The rate of interest is the most pervasive price in the whole price structure."

This is where the mystery begins. Friedrich Hayek located the seminar paper in the winter of 1922–3. Then he showed it to Friedrich von Wieser, Böhm-Bawerk's brother-in-law and alter ego. Hayek reported:

A footnote in Böhm-Bawerk's *Positive Theory* [cited above] in which he maintained that he had written down the substance of his capital theory in an unpublished étude already in the year of 1876, motivated me to search for this étude in the papers remain[ing] in his widow's hands some years ago. I found a notebook with no date which apparently contained an étude on that theme. When I reported [to] Wieser about my finding, he told me, as he later mentioned in the preface of [the] 4th edition of Böhm-Bawerk's work, that this was related to the report at Knies's seminar then and that he himself had spoken at the same time over the above theme [relations of cost and value]. He recognized that notebook as the very étude of Böhm-Bawerk and lent me also the manuscript of his own seminar report. Copies of both are now in my possession. (quoted in Yagi 1983, 3)³

Hayek sent the paper to Franz Xavier Weiss, the editor of Böhm-Bawerk's *Gesammelte Schriften* (Collected writings) (Böhm-Bawerk 1924–26).⁴ But Weiss chose not to include it in the *Gesammelte Schriften*. He kept the paper for several years before returning it to Hayek in 1929. Hayek continued pushing for publication. In the late 1920s, he was the editor of Wieser's (1929) *Gesammelte Abhandlungen* (Collected papers). As Hayek noted in the above quote, Wieser and Böhm-Bawerk both presented papers to the Karl Knies seminar in early 1876. Hayek's idea was to publish both seminar papers together in an appendix to Wieser's *Gesammelte Abhandlungen*; hence Böhm-Bawerk's 1876 paper was set to be published in the late 1920s. Then Weiss intervened and blocked publication for a second time. Hayek grumbled, "Weiss regarded this manuscript too apologetic and for this reason decided not to publish it, but I have never shared or approved of such a decision!" (quoted in Yagi 1983, 5).

Hayek's phrase "too apologetic" is crucial. To whom was the paper too apologetic? The answer is the French economist A.

³ See Groenewegen (1983, 607n104) for additional comments on Hayek's recovery of the document.

⁴ See Schulak and Unterköfler (2011, 130–31) for a short biography of the mysterious Weiss.

R. J. Turgot. Böhm-Bawerk's 1876 seminar paper is "largely a commentary on Turgot's interest theory" (Groenewegen 1983, 607). But in *Capital and Interest*, Böhm-Bawerk admitted that the seminar paper contained the basic features of his theory.⁵ Thus, the 1876 paper shows that Turgot had an enormous influence on the young Böhm-Bawerk and the course of all his future work.

Böhm-Bawerk was aware of Turgot from the very beginning of his economic studies. He read Carl Menger's ([1871] 2007) *Principles of Economics* shortly after it was published (Ebeling 2001, 38); Menger quoted Turgot seven times and described Turgot's *Reflections* as a "famous essay" (273).⁶ After Böhm-Bawerk obtained his doctoral degree in law in March 1875, Menger secured him a scholarship to do research at Heidelberg University under the supervision of Karl Knies.⁷ Böhm-Bawerk attended Knies's lectures and seminars in 1875–6, and the Turgot-Pothier usury controversy was a topic of discussion (Tomo 1997, 2).⁸ These discussions inspired Böhm-Bawerk to write his 1876 seminar paper on interest.

Why did Franz Weiss suppress the 1876 seminar paper? Obviously, he thought it was a threat to Böhm-Bawerk's reputation. Alfred Marshall and Gustav Cassel criticized Böhm-Bawerk's interpretation of Turgot in *Capital and Interest* (Groenewegen 2009). It seems Weiss feared that the "apologetic" seminar paper of 1876 might vindicate

⁵ In his overview of the seminar paper, Hennings (1997, 59) concluded that it "does bring together most of his fundamental ideas and concepts. There is hardly a notion on which he did not improve in later publications; but they are all there." Also see Hennings (1997, 10, 65).

⁶ See Turgot ([1766] 2011) for this famous essay. As Peter Groenewegen noted, Turgot's *Reflections* has "frequently been described as the most important treatise on economics prior to Adam Smith's *Wealth of Nations*" (1977, xviii). According to Schumpeter, "Turgot's theoretical skeleton is, even irrespective of its priority, distinctly superior to the theoretical skeleton of the *Wealth of Nations*. . . . [Turgot's *Reflections*] presents a complete system of economic theory" ([1954] 1994, 248).

⁷ Karl Knies (1821–98) was a leader of the German historical school. He taught at Heidelberg University from 1865 to 1896. His seminar was perhaps the most important economics circle in Germany when Böhm-Bawerk presented his seminar paper (Hülsmann 2007, 142). Knies has been described as "the most important teacher of Böhm-Bawerk" (Streissler 1990, 34). On Knies's influence on Böhm-Bawerk, see Hennings (1997, 55–56) and Salerno (2004, 11–12).

⁸ Knies was preparing his book *Der Credit* for publication during this period. In that work, he noted the Turgot-Pothier controversy over usury (Knies 1876, 346).

the critics. Indeed, Murray N. Rothbard ([1995] 2006, 402) thought the seminar paper reflected poorly on Böhm-Bawerk:

One of the striking examples of injustice in the historiography of economic thought is the treatment accorded to Turgot's brilliant analysis of capital and interest by the great founder of Austrian capital and interest theory, Eugen von Böhm-Bawerk. In the 1880s, Böhm-Bawerk set out, in the first volume of his *Capital and Interest*, to clear the path for his own theory of interest by studying and demolishing previous, competing theories. Unfortunately, instead of acknowledging Turgot as his forerunner in pioneering Austrian theory, Böhm-Bawerk brusquely dismissed the Frenchman as a mere physiocratic naïve land-productivity (or "fructification") theorist. This unfairness to Turgot is all the more heightened by recent information that Böhm-Bawerk, in his first evaluation of Turgot's theory of interest in a still unpublished seminar paper in 1876, reveals the enormous influence of Turgot's views on his later developed thought. Perhaps we must conclude that, in this case, as in other cases, Böhm-Bawerk's need to claim originality and to demolish all his predecessors took precedence over the requirements of truth and justice.⁹

It is beyond the scope of this introduction to address these accusations. Regardless, Weiss was wrongheaded to suppress the 1876 seminar paper. Had he truly understood his master's greatness, he would have realized that Böhm-Bawerk did not need protecting. Perhaps Böhm-Bawerk was not as original as Weiss wanted us to believe; still, the comprehensive scale of Böhm-Bawerk's system sets him apart from any predecessors (Schumpeter [1954] 1994, 847; Hennings 1997, 181). Even if he was unfair to Turgot, "Böhm-Bawerk's greatness as an economist needs no defense" (Rothbard [1962] 2004, 328n5).¹⁰

⁹ Rothbard ([1995] 2006, 413n10) referred readers to Groenewegen's classic articles on Turgot; in one of them, Groenewegen (1971, 327) wrote, "Böhm-Bawerk, for example, who devoted a separate chapter to Turgot's theory of interest in his critical history, was wrong when he described it as a fructification theory on the ground that Turgot had justified and explained interest rates by appealing to the rate of return to land. It can easily be shown that this is a misrepresentation." Lionel Robbins agreed that "Böhm-Bawerk is a bit unfair to his predecessors" ([1979–81] 1998, 288).

¹⁰ Joseph T. Salerno was close to Rothbard, and he reported that Rothbard considered Böhm-Bawerk the greatest economist of all time. See Salerno (2004, 3) on Böhm-Bawerk's influence on Rothbard.

TRANSLATORS' PREFACE

To our knowledge, this is the first English translation of Eugen von Böhm-Bawerk's seminar paper of 1876. Our English translation draws from three sources in German: (1) the original handwritten seminar paper located in the Hayek Library at the University of Salzburg; (2) a transcription from the Ludwig von Mises Collection in the Grove City College Archives; and (3) a transcription published by Kiichiro Yagi in March 1983. It seems Böhm-Bawerk never gave the paper a title. Hayek used the title "Zinstheorie von 1876" (Interest theory of 1876). The transcription in the Mises Collection has the title "Referat über Kapitalzins im Knies'schen Seminar" (Lecture on capital and interest in the Knies seminar).¹¹ Finally, Yagi (1983) used the title "Böhm-Bawerk's Jugendarbeit über den Kapitalzins" ("Böhm-Bawerk's First Interest Theory").¹² For this translation, we have chosen to use the English for Hayek's title, "Interest Theory of 1876."

There is no such thing as a perfect translation. A translator must make countless decisions. Different translators will invariably make different decisions, and this means no two translators will produce identical translations of the same work. Disagreement is almost inevitable in translation. In fact, if the same translator were to translate the same document twice, the two translations would almost certainly contain disagreements. This "disagreement problem" means every translation is open to criticism.

While the disagreement problem applies to all translations, Böhm-Bawerk's translators have noticed that his writing style compounds the problem. To be blunt, he was not a good writer. As Klaus Hennings noted, "There are many achievements to Böhm's credit, but the gift of being a good writer is not among them" (1997, 17). Böhm-Bawerk tended to write long and winding sentences. In their translation of *Capital and Interest*, George D. Huncke and

¹¹ Hülsmann (2007, 142n73) places the transcript in the Mises Collection, but the specified location is out of date. The current reference is Grove City College Archives, Ludwig von Mises Collection, series 1, box 3, folder 22, item 1. We thank Hilary Walczak for locating the document.

¹² It seems Yagi took this title from Hayek's handwritten note at the front of Böhm-Bawerk's original paper (Yagi 1983, 15). This title is also found in Groenewegen (1983, 607n104).

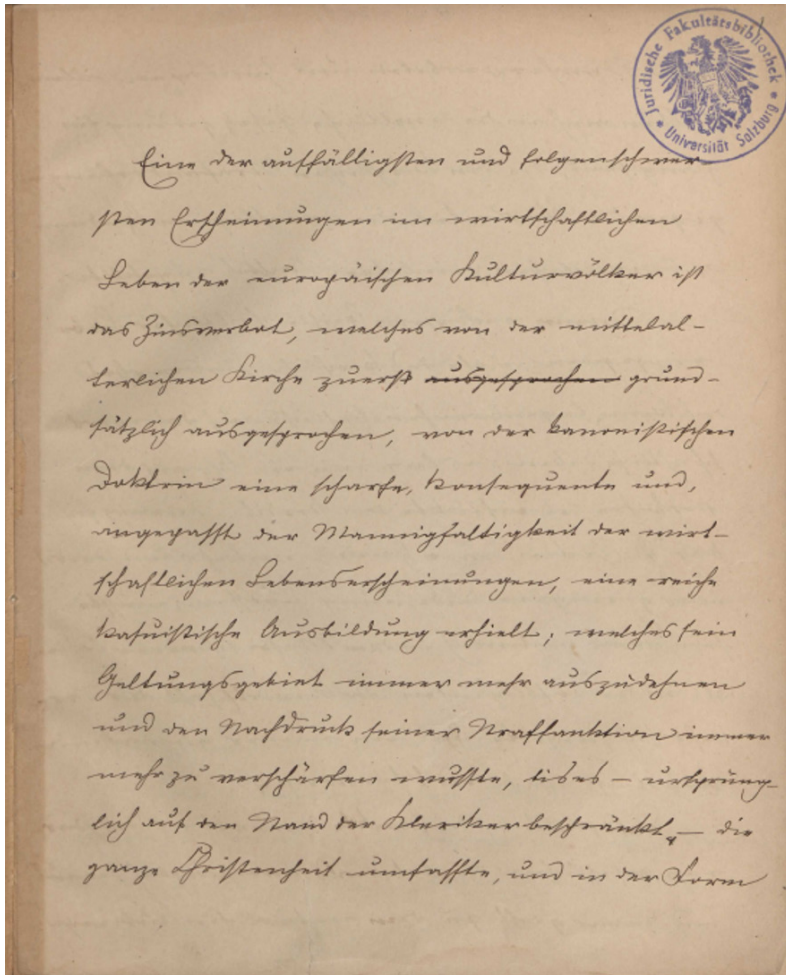
Hans F. Sennholz dismembered long sentences and paragraphs for English readers. They explained,

The translators have faced difficulties of which they hope little trace is to be discerned by the reader. Their chief obstacle was the necessity for the dismemberment of the ponderous and involved sentences and paragraphs that are characteristic of the writings of German scientists in general and of Böhm-Bawerk in particular. They sanguinely hope that they have achieved some measure of success in presenting his text in style and thought units which are more consonant with the spirit of our language and the mental habits of readers of English. (Böhm-Bawerk [1884] 1959, xii)

The translators adopted the Huncke-Sennholz approach to translating Böhm-Bawerk's "Interest Theory of 1876." Specifically, the translation breaks down long-winded German sentences to enhance readability in English. Improving the author's ideas is the greatest sin in academic translation, and literalists might argue that literal translation is the only way to avoid this sin. After examination, however, the translators are confident most translators would agree that any literal translation of Böhm-Bawerk's German is doomed to failure. Literalists are asked to take the disagreement problem and Böhm-Bawerk's writing style into consideration when judging the translation.

Finally, while the citations in the body of the translated text are from Böhm-Bawerk's original 1876 seminar paper, his original paper did not contain any footnotes. The translators' footnotes are included to illustrate a key point: Böhm-Bawerk's seminar paper is a vital link between Turgot and *Capital and Interest*. While most footnotes refer to Turgot or *Capital and Interest*, some refer to earlier economic thinkers who directly or indirectly influenced Turgot. Lastly, the footnotes explain certain Latin phrases used in the paper. It is hoped that the footnotes make the paper more accessible to modern readers.

Figure 1: First page of Eugen von Böhm-Bawerk's "Interest Theory of 1876"



Courtesy of the Hayek Library at the University of Salzburg.

INTEREST THEORY OF 1876

Eugen von Böhm-Bawerk

The prohibition of interest was one of the most noticeable and momentous phenomena in the economic life of the European cultures. It was first declared in principle by the medieval Church, receiving a sharp, consistent, and rich casuistic formation from the canonistic doctrine, and was then adapted to the diversity of the economic phenomena of life.¹³ Originally limited to the clergy, it had to extend its area of application more and more. And it had to intensify its penal sanction more and more until it encompassed the whole of Christianity. In the form of usury prohibitions and interest taxes, it also found its way into secular legislation everywhere, which added the more severe punishment of the secular penal law to the ecclesiastical penal threat against transgressors.

Although inspired by the spirit of Christian love, the ecclesiastical ban on usury did not exert a beneficial influence on economic life. It rested like a nightmare on trade. It stifled credit. It was felt little in times when commercial trade and credit enjoyed less importance¹⁴ but its pressure naturally weighed more heavily as greater trade in the flourishing national economy created an ever-increasing need for credit.

Soon the strict observance of the rigid legal ban turned out to be unbearable, and people naturally resorted to circumventing the law.¹⁵ Some forms of interest received legal approval thanks to tortuous scholastic interpretations.¹⁶ Since the authorized loopholes thus opened were not sufficient for the ever-increasing needs of trade, people continued to circumvent the law and to violate it more and more blatantly and visibly.

However, this practice was from the outset seriously damaging. The lender was always left with legal uncertainty. And all those

¹³ See Böhm-Bawerk ([1884] 1959, 12).

¹⁴ See Turgot ([1769] 2011a, 207) and Böhm-Bawerk ([1884] 1959, 12–13).

¹⁵ See Böhm-Bawerk ([1884] 1959, 16).

¹⁶ For example, Böhm-Bawerk ([1884] 1959, 17) discussed *lucrum cessans* (profit ceasing)—that is, the right to charge interest on a loan whenever profit on another investment is forgone.

involved experienced demoralization, which the conscious and habitual violation of the law always entails.¹⁷

In 1769, France still maintained the canonistic ban on interest to its full extent and under threat of severe criminal penalties.¹⁸ A usury trial that year revealed the worst immorality and corruption of a certain class of debtors on the one hand, and complete legal uncertainty and even a total lack of rights for creditors on the other hand. The usury law threatened a complete paralysis of lending and with it the stagnation of industrial production and trade. Finally, this situation could no longer remain hidden from a discerning eye. It had been directly caused by the legislation on interest, legislation that undermined the very morality it was designed to foster. These developments induced Turgot to write his *Mémoire sur les prêts d'argent* to combat the canonistic doctrine of interest.¹⁹

The purpose of this paper is to investigate this far-reaching controversy and the ideas Turgot developed about the nature and the origin of interest in his *Mémoire* and his *Réflexions sur la formation et la distribution des richesses*.²⁰

The original motive that led the Church to proclaim the ban on interest was the view that charging interest is forbidden by divine law. Numerous scriptural passages were interpreted in this way,

¹⁷ See Turgot ([1769] 2011a, 208).

¹⁸ See Böhm-Bawerk ([1884] 1959, 33).

¹⁹ See Turgot ([1769] 2011a) for the *Mémoire sur les prêts d'argent* ("Paper on Lending at Interest"). Although the *Mémoire* was written in 1769, it was not published until 1789. Turgot explained the purpose of the *Mémoire* as follows: "Some months ago a complaint was made to the magistrate at Angoulême against an individual who allegedly had exacted usurious interest rates in credit transactions. This complaint has caused a great deal of consternation as well as further complaints against lenders, and has thrown the whole credit structure of the area into confusion. Because credit has been so widely interrupted, bankruptcies are rapidly increasing. This financial crisis is of such importance, that the Royal Council should be informed. This paper has been written to provide the Council with a resume of events, and a solution to the problem" ([1769] 2011a, 205).

²⁰ See Turgot ([1766] 2011) for *Réflexions sur la formation et la distribution des richesses* ("Reflections on the Formation and Distribution of Wealth").

especially the much-discussed passage in Luke 6:35, *mutuum date nihil inde sperantes*.²¹

Subsequently, this external justification of the ban on interest through direct appeal to divine authority was supplemented by an internal justification; the reprehensibility of the ban on interest had to be proven by way of legal, economic, and moral reflections on the nature of loans and interest.

It was said that interest is a payment for the temporary use of a sum of money. According to the concept of a loan, the amount lent necessarily becomes the property of the borrower.²² The borrower is thus entitled to the use of his property by virtue of his right of ownership. To demand interest from the borrower would therefore be nothing other than to demand an additional, special price from the borrower for a right that is already his. This would obviously be contrary to justice.

The following economic reasoning then parallels the juridical one:

The lent money is necessarily used for consumption, as is the case for the transfer of other consumable things (except in the rare case that coins are given for other purposes, such for display, where the identical physical object is to be returned). The actual use of the borrowed money consists in the fact that it is spent on the purchase of other things, as wine is used for drinking or grain for eating. Therefore, if money was lent, that it would be spent was self-evident. The full settlement of the loan was effected, however, as soon as the borrower repaid the same amount that he had borrowed. If the lender took an additional payment for the use of the *pecunia*, would that not be the same as selling wine or grain as things in and of themselves and then selling their use separately for an additional price? (Endemann 1863, 16)²³

Hence, by juridical as well as economic deductions, it was proven that the use of borrowed money did not constitute an independent

²¹ “Lend, expecting nothing in return.” On Luke 6:35, see Aquinas (*Summa Theologica* 2.2.78.1) and Olivi ([1295] 2016, 30). For later statements, see Turgot ([1766] 2011, 45; [1769] 2011a, 217) and Böhm-Bawerk ([1884] 1959, 11).

²² Thomas Aquinas wrote, “When you lend money you transfer ownership of it to the borrower” (*Summa Theologica* 2.2.78.2). According to Turgot “the property in money passes to the borrower at the moment of the loan” ([1769] 2011a, 212). Also see Böhm-Bawerk ([1884] 1959, 14, 20, 23); [1889] 1959, 290).

²³ Also see Böhm-Bawerk ([1884] 1959, 14, 20).

object for which a special payment might be claimed in addition to the repayment of the principal.

If this nevertheless occurred—and with interest, it appeared to occur—then the loudly pronounced commandment of justice—that in trade, there should be an equality of value in exchange, and one should never take more than what one gives.

Also, in the view of the canonists, the temporal difference between the granting and the repayment of the loan could not justify interest, for “time is a common good of all, and therefore cannot be sold for money.”²⁴

Finally, it was concluded, reviving the old Aristotelian view (*Politics* 1.10), that money is by nature barren: *nummus nummum parere non potest*.²⁵ Therefore, on the one hand, it is unnatural for the lender to draw fruit from his barren money in the form of interest. On the other hand, the borrower cannot draw any means from the use of the barren sum of money to pay interest on it. The interest-receiving lender thus obviously enriches himself at the borrower’s expense.

Thus, canonistic doctrine supported the authoritative justification for the ban on interest that was taken from Holy Scripture using a system of internal deductions.

Turgot now turns his intellectual weapons against this canonistic doctrinal edifice by critically examining and refuting, point by point, the arguments on which it is based.

For our purposes, his most important observations involve his attack on the inner justification of the ban on interest. For, once he had succeeded in proving the inner weakness of this ecclesiastical dogma, it was easy for Turgot to show how an erroneous interpretation had

²⁴ Olivi ([1295] 2016, 46) mentions the argument that time cannot be sold because it is common to all. However, he raises some challenges to the argument.

²⁵ “Money cannot bear money.” Aristotle condemned interest: “The most hated sort [of wealth-getting], and with the greatest reason, is usury, which makes a gain out of money itself, and not from the natural object of it. For money was intended to be used in exchange, but not to increase at interest. And this term interest, which means the birth of money from money, is applied to the breeding of money because the offspring resembles the parent. That is why of all modes of getting wealth this is the most unnatural” (*Politics* 1258a39–1258b8). For influential statements of the sterility argument, see Aquinas ([1272] 2020, 40) and Oresme ([1358] 2020, 79).

been given to the appointed passages of Holy Scripture, and how the doctrine that had shackled the economic life of Europe for a millennium was built on the misunderstanding of God's word.

Turgot starts with his thesis: Interest finds its true and only complete justification in the right of property.²⁶ All other justifications are superfluous; all objections against the legitimacy of interest must collapse in the face of this axiom. Property is an inviolable right. The owner cannot be forced to dispose of his property against his will. If he wants to dispose of it, he can voluntarily agree to any conditions that he deems good. Similarly, the owner of a sum of money cannot be forced to lend it. Nevertheless, if he lends it, he may attach any conditions to it. And if he does this—if he charges interest, for instance—he only does what is his right. The legitimacy of interest is thus firmly rooted in the right of property, the basis of society (*Mémoire* sec. 23, 24; *Réflexions* sec. 74).²⁷

However, strong reservations immediately arise about this argument.

Is property truly an unlimited right? Is property an unrestrained right to arbitrary disposal over the object, regardless of whether the desired use is beneficial, indifferent, or harmful to the public good? May I then turn my weapon, because it is mine, against another? Do we not find in Roman law an abundance of legal restrictions interwoven into a whole system of “neighbor rights,” legal easements which compel the owner of an object to refrain from doing this and to tolerate that, even if he is the owner? Even in the legal system, the public interest stands above the individual interest, and the legal system must be able to restrict property without thereby violating it. And if the canonistic assertions were true—if indeed interest involves an unjust inequality, an exploitative cheating of the borrower by the lender as an unavoidable consequence—then, in the interest of true justice, legislation had to step in to defend against such inequity. If the canonistic assertions were true, then in spite of, or rather according to the true sense of, the natural law proposition invoked by Turgot—“What does not have to be absolutely forbidden, shall be permitted” (*Mém.* sec. 35)—interest, being immoral and injurious to

²⁶ Böhm-Bawerk made the same claim in *Capital and Interest* ([1884] 1959, 35).

²⁷ See Turgot ([1766] 2011, 45–47; [1769] 2011a, 211–12).

the public, must be forbidden.²⁸ Then charging interest was not only formally but also materially unlawful.

To justify the demand that the legislature leave the charging of interest free to private decisions, these widespread reservations first had to be dispelled. It had to be made plausible that interest is at least unquestionable by its very nature.

Even Turgot himself could not escape the feeling that his attempt to establish the nature and legitimacy of interest solely from the fact of property was inadequate. This is evidenced by the fact that he considered a detailed refutation of the canonistic arguments necessary. It is also seen in the way he repeatedly relies in his works on reasons taken from the nature of capital and loans when trying to prove that interest is necessary, despite his blatant disregard for the other reasons that had been put forward in science to justify interest (cf. *Réflex.* sec. 73, 74).²⁹

Sections 23 and 24 of his *Mémoire* are intended to prove the direct justification of interest from property.³⁰ But it is remarkable how Turgot is compelled to use considerations of an economic nature in his argument. For example, he gives significant consideration to the difference that time exerts on the value of goods, similar to the difference that location exerts on their value.³¹ He also refers to the benefit the borrower derives from the loan.

Moreover, from the inviolability of the right of property, it could only be deduced (in the best case) that interest on money in commercial trade must be tolerated consistently by the legal system. But how could one explain the occurrence of interest itself in this way? The interest-bearing loan is a voluntary contract. The lender demands interest, the borrower agrees to pay it. Why? Obviously not because the law allows it, but because it is to the advantage of both parties. On the part of the lender, interest is clearly beneficial. But what about the borrower? Why does the borrower agree to pay interest? Why can he decide to do so?

²⁸ See Turgot ([1769] 2011a, 219).

²⁹ See Turgot ([1766] 2011, 45–47).

³⁰ See Turgot ([1769] 2011a, 211–12).

³¹ See Böhm-Bawerk ([1889] 1959, 296–97).

If one wishes to answer this question—and one must do so if one wants to understand the essence of interest—then one must consider the intrinsic nature of a loan, the meaning and function of the lent capital.

Such an investigation will reveal whether interest is an unnatural or a natural institution. If it is natural, the legal system will not hesitate to confer upon it external legality. But conversely, one must not quickly dismiss moral and economic objections to an institution by appealing to its external legality. And all the less so if one must first verify its premise by an interpretation of the inviolability of property that is contestable even legally.

We shall now examine in detail how Turgot confronts the canonistic evidence.

The canonists demanded, as a requirement of equitability, that there should be an equality of value in exchange.³² By contrast, Turgot states that in every exchange there must necessarily be an inequality in the exchanged values. Exchange occurs because each contracting party accords a higher preference to the good received than to the good given up. Without this difference in appraisal of value, there can be no exchange.³³

As important as this is, it must not be overlooked that the difference in value between what is given and what is received benefits each of the two contracting parties in the exchange. Each person exchanges a good of lesser value for a good of greater value. Both parties are winners; neither party loses.³⁴ The matter seemed to be different with the interest-bearing loan. Here the lender gives 100 coins and after one year receives more, perhaps 105 coins, from the borrower. In this case, the lender alone always seemed to win, while the borrower always seemed to lose. This seemed

³² Aristotle stated that things must be “equated” in exchange (*Nicomachean Ethics* 1133a7–1133b28). See Böhm-Bawerk ([1884] 1959, 291).

³³ Turgot wrote, “The exchange, being free on both sides, can only be motivated by the preference of each of the contracting parties for the thing he receives over the thing he gives. This preference presumes that each attributes a greater value to the thing he acquires than to the thing he gives up, relative to his individual use and to the satisfaction of his needs and desires” ([1769] 2011a, 213). Also see Menger ([1871] 2007, 211).

³⁴ See Böhm-Bawerk ([1889] 1959, 215–16).

to be in contrast to the mutual gain that both parties realize when exchanging goods.

Therefore, to justify interest, it was necessary to prove that there is some special benefit to the borrower from the loan. Then the interest burden could be presented as just compensation for a special benefit.

The use of the lent amount—as the canonists had already concluded—is not a special benefit justifying an additional payment. The borrowed money becomes the property of the borrower. This is necessary because the natural destiny of the money is for use in consumption, and this does not allow its use to be separated from the full power of disposition legally attached to property. So the borrower is already entitled to the use of the lent money by virtue of his ownership, and no special equivalence of interest can be found in its use.

In the eighteenth century, the French jurist Pothier in particular advocated this argument (see Knies [1876, 347] for the core of his exposition).³⁵ Turgot's reply to this jurist, as spirited as it is harsh, is found in the second half of section 27 of the *Mémoire*.

³⁵ Robert Joseph Pothier (1699–1772) was a French jurist and professor of law at the University of Orléans. Böhm-Bawerk ([1884] 1959, 33–34) criticized Pothier and cited the following passage from his work:

It is but fair to demand that the values given in the case of a contract which is not gratuitous should be equal on either side, and that neither party should give more than he has received, nor receive more than he has given. Anything that a lender demands from the borrower, over and above what he has given him, therefore constitutes an unjust demand. For by the repayment of the original sum he has already received the exact equivalent of what he gave. In the case of things which can be used without being destroyed, a rental may legitimately be demanded because, this use being always separable (in thought at least) from the things themselves, it can be valued and a price put upon it. It has a price which is separable and separate from the thing. So that, if I have given a thing of this sort to any one for his use only, there is no good reason why I should not demand a rental (which is the price of the use I have allowed him) in addition to the restitution of the thing itself which has never ceased to be my property.

It is an entirely different matter, however, with those objects which are known to lawyers as “fungible goods”—things that are consumed in the using. For since in the using they are necessarily destroyed, it is impossible to imagine a use of the thing which is distinct from the thing itself, and which has a value which is distinct from the value represented by the thing itself. From this it follows that one cannot convey title to the use of a fungible thing without conveying title to the thing itself. If I lend you a sum of money for your use, on condition that you pay me back the same sum after a stated

We are tempted to laugh when we hear reasonable and enlightened people argue that it is legitimate to charge rent on things not consumed by use, but it is illegitimate to charge rent on things destroyed by use. And all because one cannot separate the use of a thing from the thing itself. Are we to base the rules of morality and probity on such abstractions? Hey! No, no; men do not have to be metaphysicians to be honest people.³⁶

Now Turgot provides an example of a diamond that is rented out.³⁷ The diamond is returned at the end of the rental period, and still has the same value as before. In addition, there is a rental charge for the benefit derived from the use of the diamond. Why shouldn't this also be legitimate in the case of the money loan? The principal amount is returned at the end of the loan, the same as originally lent. In addition, "rent" is paid for the benefit drawn from the temporary use of the money—in a word, interest.³⁸

What! Am I to pay for the trifling use that I make of a piece of furniture or a trinket, and then be told that it is a crime to charge me anything for the immense advantage that I get from the use of a sum of money for the same length of time? And all because the subtle intellect of a lawyer can separate the use of a thing from the thing itself in one case, and not in the other! That is really too ridiculous!³⁹

period of time, then you receive from me simply that sum of money and nothing more. The use that you make of the money is included in the exercise of the property rights you acquire in the coins I lend you. There is no thing apart, nothing that you have received, outside of the sum of money. I have given you only this sum, and nothing but this sum. I cannot therefore justly ask you to give me back anything but the sum lent. For justice demands that only that which was given be returned. (quoted in Böhm-Bawerk [1884] 1959, 450n73)

³⁶ The translation of the *Mémoire* in *The Turgot Collection* is truncated and does not contain this passage. However, a similar argument can be found in *Réflexions* (Turgot [1766] 2011, 45–47).

³⁷ Turgot wrote, "The distinction often made in discussions about the legitimacy of interest between an object hired and consumed during use, and an object which is not consumed during hire, is also invalid. In hiring an object which is not consumed, such as a diamond, usefulness is obtained which must be paid for" ([1769] 2011a, 215).

³⁸ Cantillon ([1755] 2010, 181) made this argument before Turgot.

³⁹ Quoted in Böhm-Bawerk ([1884] 1959, 35).

Turgot does not at all seek to directly refute his opponent's peculiar approach. Rather, he goes about proving its opposite. As a means of proof, he uses an analogy: the analogy between the diamond and a sum of money—between rent and interest.

His only direct attack on his opponent's approach is his critique of his metaphysical and juridical sophistry, although Turgot himself does not know how to completely avoid such quibbles either. To escape the uncomfortable juridical objection that the right of use is included in the right of property, he creates property in the value of money and compares it to the jurist's property in the "piece of metal."

The whole question is too essential, however, for us not to get to the bottom of the matter. We must examine whether the nature of the matter coincides with the legal formula in this case. And we must examine whether the relationships Turgot draws by analogy are really the cardinal point, whether his analogy is correct and provides a reliable argument.

We value goods because they satisfy our needs—that is, because they create utility effects.⁴⁰ Every utility effect always results from a process composed of a more or less long series of physical causal relationships. The last link of the causal chain is always the utility effect. The first link is an impulse emanating from one of those "carriers of utility" we call goods—that is, objects in which a sum of natural forces is bound in such a form that man with their help can cause a utility process as described above. The impulse emanating from the good is characterized more specifically as a concrete feature of the natural forces inherent in the good. And this feature—capable of setting concrete beneficial processes in motion and thus able to impart concrete utility effects—we shall call *services* of the good.

If the services from individual goods stand out from each other in an eye-catching way, and if they are also divided into clearly distinguishable individual uses according to their outward appearance

⁴⁰ Menger ([1871] 2007) was the direct source of Böhm-Bawerk's utility theory of value. However, Böhm-Bawerk ([1881] 1962, 39) traced the utility theory of value back to Aristotle (*Nicomachean Ethics* 1133a7–1133b28). Early utility theorists include Aquinas ([1271] 2020, 31), Olivi ([1295] 2016, 3), and Buridan ([1336] 2020, 47–49). Later, Galiani ([1751] 1977, 20–22) and Turgot ([1769] 2011b, 168) were utility theorists, and Menger ([1871] 2007, 273, 296) cited both authors.

(or if they follow each other as in a continuous stream), one will always be able to trace the produced utility effect back ultimately to the natural forces lying dormant in the goods for the benefit of man.

While the ability to produce services in general is common to all goods, they differ considerably with respect to the degree of this ability. One difference lies in the nature of the services. Another, which concerns us here, lies in the quantity of the services of which a good is capable. We said that every good includes a sum of natural forces that are available to man. The sum can be large or small. For some goods, the entire force available in the good may have to be expended at once to achieve a single beneficial effect. Then the good has exhausted itself in a single service and perishes as such. (Neither the substance nor the natural force adhering to the substance perishes. But the substance is segregated: it assumes a form in which the natural force adhering to it becomes inaccessible to man, and man cannot call forth the activity of the natural force at will and direct it to his benefit.) For other goods, the sum of the available natural forces dormant in the good can be sufficient to give several, many, or infinite services. Thus, in fact, we have goods ranging from perishable food that is destroyed through our enjoyment of it to plots of land that have bestowed their benefits every year for millennia and will continue to bestow them every year for millennia to come.

On this ground is based the division of goods into consumable and durable goods,⁴¹ which is important for us. Consumable goods are those whose natural and appropriate use is necessarily connected with the complete exhaustion of their useful services. On the other hand, durable goods are those goods from which individual services can be extracted without exhausting their entire reserve of energy. Durable goods remain capable of further services after an individual service has been extracted.

We shall now define on this basis the terms “use” and “property,” which are relevant to our question. The use of a good can obviously consist of nothing other than producing the services peculiar to the good in order to gain the utility effects attainable from the good.⁴²

⁴¹ See Böhm-Bawerk ([1884] 1959, 148).

⁴² See Böhm-Bawerk ([1884] 1959, 149, 152).

Use may be partial or exhaustive. Use is partial when it seizes only a part of the services of the good, so that another part of the services is left unconsumed for future use. It is exhaustive when it seizes and thus depletes all the services of the good. The exhaustive form of use is also called consumption.⁴³

Property is the full power of disposition over a good.⁴⁴ Its economic content obviously consists in the power to produce all the services of which the good is capable and to direct them to one's advantage. Briefly, the relationship between use and property is this: property is the right to comprehensive, even exhaustive use of a good—*jus utendi, abutendi*.⁴⁵

As we now hold goods to be valuable for the sake of their services, wherever we see goods appearing in an exchange, the actual economic aim of the exchange is the disposal of the services that best correspond to the concrete needs which have given rise to the exchange.

If we derive a basis for classification from the foregoing description, all exchange transactions can be divided into two groups. Either all the services of a good form a uniform object of exchange; or individual services of a good are separated out, and the disposal of these individual services is transferred by way of exchange, while the sum of the remaining services the good is capable of remains at the disposal of the hitherto entitled party. In the first case, the legal expression for these exchange phenomena is the transfer of the property. In the second case, the legal expression is the granting of a right to partial use, a "right of use." Of course, here the term "right of use" is not taken in the special sense of the Roman "*jus usus*," but in a broader sense, which includes both the *in rem jura in re aliena*⁴⁶ and the solely obligatorily established rights of use. This

⁴³ See Böhm-Bawerk ([1884] 1959, 144–50) for an outline of his theory of use. Additional comments can be found in Böhm-Bawerk ([1884] 1959, 165; [1909] 1959, 196).

⁴⁴ See Böhm-Bawerk ([1881] 1962, 55; [1884] 1959, 142).

⁴⁵ "*Jus utendi* is the right to use property without destroying its substance. In contradistinction, *jus abutendi* is the right to abuse. It means the right do exactly as one likes with property, or having full dominion over property" (*Black's Law Dictionary*, 6th ed. [1990], s.v. "jus utendi").

⁴⁶ A right in the property owned by someone else, such as servitude, pledge, *emphyteusis*, *superficies*. Such rights impose restrictions on the exercise of the rights of ownership by the owner" (*Encyclopedic Dictionary of Roman Law* [1953], s.v. "ius in re (aliena)").

includes the relationships of lease and rent. The granting of a right of use is characterized more precisely as the separation of a part of the comprehensive rights of use contained in the property. This becomes the content of an independent right, in contrast to the sum of all other rights of use to the good, which remains as property. Of course, the granting of an independent right of use, separate from the property right, can take place only on those goods which are subject to a division of their services (i.e., on durable goods).

So how does the loan relate to the categories we have established? To begin with, the object of the loan is fungible goods—that is, goods that are generally consumable (at least in the private economic sense).⁴⁷

Regarding the question raised, the positions are opposed to each other. The canonistic doctrine sees in the loan the total transfer, in a legal and economic sense, of the lent amount into the property of the borrower in exchange for the reimbursement of a like equivalent at the time.⁴⁸

The opponents object: The intention of the lender is not to sell the substance of the loan. Rather, he wants to sell only the temporary use of it, while the substance of the loan shall remain with him. To this end, after the expiration of the contract period, he shall be reimbursed for the substance of the property in the form of the principal amount lent and for the use of the property in the form of a payment of interest. The temporary transfer of the property to the borrower is only a legal form here (although it is admittedly necessary).

This may be the intention of the lender. But if so, it is directed to something impossible. The obvious purpose of the loan, agreed upon by both parties, is to transfer to the borrower the disposal of the services of which the lent goods are capable. Since the goods are consumable, the legally and economically correct expression for this is the transfer of property. Likewise, it follows from the nature of consumable goods that the substance of the good cannot be separated from its use, because use destroys the good as such, according to its economic (obviously not material) substance. Therefore, if the lender wants to retain the substance of

⁴⁷ See Böhm-Bawerk ([1884] 1959, 166).

⁴⁸ See Turgot ([1769] 2011a, 212) and Böhm-Bawerk ([1884] 1959, 159).

a consumable good whose use he sells, he wants something that is simply impossible.

While he cannot possibly achieve this directly, we shall see whether he can achieve the same purpose indirectly. An instructive example of this kind is the Roman *quasi-usus fructus*. The *usus fructus*⁴⁹ is the most comprehensive, temporarily limited right to use another person's property. It is contrasted with the ownership, the *nuda proprietas*,⁵⁰ of the object as the power of disposal over the sum of those services of which the object will still be capable after the *usus fructus* has ended. By its very nature, *usus fructus* can only exist for durable goods. Now the same requirements of trade which brought the *usus fructus* into being could also make it desirable that a person should have the full power of disposal over a consumable object for a certain period of time, but that, after the expiration of this period, the unconsumed object should pass into the hands of another person. To use a consumable object temporarily and then to return it unconsumed seemed and was impossible. But it was possible to achieve the same purpose in an indirect way, by granting full property rights to the first person entitled to the use of the object, only obliging him to hand over another fungible object of the same kind to his successor after the expiration of the time limit set for his rights. Thus, each had exactly what he needed. The first had the full power of disposition, which was indispensable for the use of a consumable good. And the second had an unconsumed object of the same kind. But one should not be mistaken about this. In this way, a new, peculiar legal relationship had been created. And if it was called *quasi-usus fructus*, the analogy was derived far more from the external success than from the internal essence of the legal relationships compared.

One did not proceed differently if one wanted to connect the legal institution of the *depositum* with purposes and benefits that

⁴⁹ "The right to use (*uti, ius utendi*) another's property and to take produce (*fructus*) therefrom (*ius fruendi*), without impairing (i.e., destroying, diminishing, or deteriorating) its substance (*salva rerum substantia*)" (*Encyclopedic Dictionary of Roman Law* [1953], s.v. "*ususfructus*").

⁵⁰ "Mere ownership, i.e., when the owner has no right to use the object or to take the fruits thereof because these rights are vested in another either by a contract or through a personal servitude" (*Encyclopedic Dictionary of Roman Law* [1953], s.v. "*nuda proprietas* [*nudum dominium*]").

were incompatible with the nature of this institution. One created a new legal relationship based on the form of the traditional legal relationship and called it *depositum irregulare*,⁵¹ with the addition of *irregulare* indicating awareness of the added fiction.

Finally, one did not and does not proceed differently with lending. The lender cannot, as he wishes, grant the use of a consumable good to another and retain the unconsumed substance of it for his own future use. He therefore lets his object go completely but at the same time makes the borrower promise him the timely retransfer of another object of the same kind as the object provided. In this way, the interests of both parties are satisfactorily united. The borrower has, as he needs, the full power of disposition over the lent object. And the lender has at the agreed time an object completely equivalent to the lent object, which he may use just as if it were really identical to the lent object.

Thus the obstacle inherent in the nature of the consumable good was happily circumvented but not eliminated. And this seems to have been forgotten. The jurists knew well and expressly maintained that the *quasi-usus fructus* was not actually *usus fructus*. They knew well that in the *depositum irregulare* the deposited object by no means remained *res deposita* in the strictly juridical sense. But the jurists seem to have lost awareness of the fiction of lending when they defined interest as a payment for the temporary use of the lent amount. It was forgotten that the transfer of the use of a consumable object *salva substantia*⁵² is an unattainable ideal and that the way out found in the loan only makes it possible to bring about approximately those practical effects which that ideal would have in its wake if it could be realized.

And what would it mean to transfer to the borrower the property of the loan, and also the temporary (i.e., partial) use of the property? Nothing other than to grant the disposal of all the services of the property and then the disposal of a part of it. In other words, to

⁵¹ “A deposit of money or other fungibles wherein the depositary had to return not the same things, but the same quantity (*tantundem*) of money or things” (*Encyclopedic Dictionary of Roman Law* [1953], s.v. “*depositum irregolare*”). Also see Böhm-Bawerk ([1884] 1959, 167).

⁵² “The substance being saved, or preserved, without being diminished” (*Encyclopedic Dictionary of Roman Law* [1953], s.v. “*salva substantia*”).

transfer to him the full right of property and then a fraction of it—for example, the full right of property plus one-twentieth of the right of property. But this is inconsistent.

Let's return from this digression to the controversy between Turgot and Pothier. In my opinion, the result is that the jurist is correct: The use of the lent good does not constitute an independent object that interest could be considered the equivalent of. There is an essential difference between the loan on the one hand and lease and rent on the other. Namely, in lease and rent, there is a legal transfer of a part of the services of a good, as evidenced in the granting of a right of use. This demands a payment, an exchange price. And this obviously cannot be found in the simple restitution of the used object—that is, in the physical retransfer of that remaining sum of services which had not been the object of the exchange. Accordingly, one may not readily and directly conclude the legitimacy and intrinsic justification of interest from the legitimacy and intrinsic justification of rent. And so, finally, Turgot's remarks in the part of the *Mémoire* under discussion, which hold this point of view to be inadmissible, are erroneous up to this point.

There is an exception to this verdict in the same section 27 of the *Mémoire*. This exception is only spatially related to the arguments outlined above, and it cannot refute those arguments. This exception forms an independent, correct objection against the correctness of the canonists' main thesis: namely, that there is a difference in value between present goods and goods available in the future—between present goods and rights of claim.⁵³ After we briefly mention a controversial question that leads to that very problem, we will consider this idea in connection with several related statements of Turgot.

One of the pillars of the canonistic doctrine of interest is the proposition that money is barren.⁵⁴ Turgot counters this (except for the obvious inconsistency in canonistic position, which allows the purchase of annuities) in section 25 of his *Mémoire*.⁵⁵ First, Turgot argues that the fertility of all other goods, with the exception of land and livestock, is no greater than that of money; one can receive

⁵³ See Böhm-Bawerk ([1884] 1959, 169–70).

⁵⁴ See note 26 above.

⁵⁵ See Turgot ([1769] 2011a, 212).

rent for the use of the goods, and no one can deny the legitimacy of this. Second, one can buy land with (allegedly) barren money and thereby obtain a permanent yield.⁵⁶

We have already discussed the significance of the first objection. The latter argument, however, plays an important role in Turgot's system. The idea that one can buy land with money and thereby obtain a permanent income allows him to introduce profit from capital into his system. The income the capitalist earns from supplying capital to commercial activity must be at least as high as the income he can earn from using his capital to purchase land. Otherwise, the capitalist would prefer to purchase land with his capital.⁵⁷ This train of thought finds repeated expression in sections 59, 61, 63, and 68 of the *Réflexions*.⁵⁸ From this justification of capitalist gain, interest is then derived in sections 71 and 72.⁵⁹ The entrepreneur, lacking sufficient capital, decides without difficulty to borrow capital from a capitalist who is inclined to lend it to him. The entrepreneur grants the capitalist part of the profit he generates with the help of the borrowed capital. This part of the profit is interest.

Let us examine the validity of this argument. The issue is the fertility of money. Land generates a permanent yield. One can purchase land with money. Consequently, one can obtain a permanent yield with money. Therefore, money is fruitful.

The two premises are correct, but the ultimate conclusion is not. A landowner sells his land and now owns money-capital instead of land. If we prove that he derives a permanent income from his money-capital, then the fertility of money is proven. But if the person who bought the land derives a permanent income while there is no evidence that the person who sold it for money does, how can this prove the fertility of money? On the contrary, this phenomenon might allow us to suspect the productivity of money-capital in Turgot's general sense but does not allow us to deduce it rigorously. While it may suggest the productivity of capital, it is not an explanation for the productivity of capital, which is in great need of an explanation.

⁵⁶ See Turgot ([1766] 2011, 35) and Böhm-Bawerk ([1884] 1959, 40–41).

⁵⁷ See Böhm-Bawerk ([1884] 1959, 41).

⁵⁸ See Turgot ([1766] 2011, 35–39, 43).

⁵⁹ See Turgot ([1766] 2011, 44–45).

What, then, can motivate the landowner to exchange his land for money or movable property? More specifically, what can drive him to exchange the infinite series of services that his land contains for the limited quantity of services that are made available to him in the purchase price? What makes him willing to give up the yield of centuries or millennia, for instance, for an amount corresponding to the yield of twenty or twenty-five years?⁶⁰

The key to this mystery is found in the influence of time on the value of goods. We are not referring to changes over time in men and goods (the two factors at play in the formation of value) or in their relation to each other that might influence value. We are not referring to changes in human needs, changes in the objective suitability of goods for the satisfaction of human needs, or changes in the quantitative relationship between needs and available goods. Rather, we mean that goods available at different points in time for the satisfaction of our needs already have, *caeteris paribus*, different values.

This phenomenon originates from the fact that we value the satisfaction of a present need more highly than securing an equally intense satisfaction of an equally important future need. In turn, we value securing the satisfaction of a need at a point closer in time more highly than securing an equally intense satisfaction of an equally important need at a point more distant in time.⁶¹

The importance we attach to our needs and their satisfaction gives value to the goods that serve to satisfy them. From this results the following theory: The value of a good or service that can satisfy a present need is higher than the value of a good or service that can satisfy an equally important future need in an equally intense manner. And the difference is greater to the extent that the future need is more distant in the future. In other words: in the estimation of the value of goods, apart from the intensity of the need which is to be satisfied and the intensity of the satisfaction, the third value-determining factor is the time until the need must be satisfied. One may say that the value of a good is (apart from the quantitative relationship between need and available goods) higher the greater the intensity of the need it

⁶⁰ See Turgot ([1766] 2011, 34, 58) and Böhm-Bawerk ([1884] 1959, 42, 293).

⁶¹ See Böhm-Bawerk ([1889] 1959, 259–65) for his classic statement of time preference. Also see Böhm-Bawerk ([1884] 1959, 169–70, 382; [1889] 1959, 289, 341–42).

serves to satisfy, the greater the intensity with which the need can be satisfied, and the closer the need is to the present.

Our thesis makes no claims to being an axiom, but we shall briefly give some reasons, appropriate to this context, to prove it is true. First of all, we shall appeal to the experience of daily life, to self-examination, and to self-awareness. From a deductive perspective, it must be remembered that man is a physical organism and, like all organisms, requires an uninterrupted supply of goods for his needs. He cannot arbitrarily leave gaps in his supply of goods and then resume the supply later. Rather, any significant temporary gap in his supply of goods results in the destruction, or at least a substantial disturbance, of the human organism. Presently available goods protect against an interruption of his supply; goods available in the future cannot do this as well. Hence the preference for the former over the latter.

Needs express themselves as feelings of deficiency. These feelings of deficiency lend urgency to the importance of present needs. Future needs can be compared to present needs only with the help of an idea of the related feeling of deficiency—an idea that is always paler than the feeling itself. The further away in time the deficiency to be feared lies, the more colorless it becomes. Future evils—a felt deficiency is an evil for us—and future needs shrink in perspective compared with present ones the way a distant house is hidden by a hand held close to the eye. Present needs are just more urgent than future ones!

Finally, in the comparison of longer periods of time and the needs inherent to them, consideration of the temporal limits to the existence of the human organism is in the background. “*Certus quando, incertus an*”⁶² applies also to future needs and exerts a degrading influence on the valuation of those goods which are only able to serve future needs.

Among concrete economic phenomena that support our thesis, we may mention, for example, price formation with respect to land and the phenomenon observed by Rau of the lower concrete value for the present use of surplus goods (Rau 1855, 58, 76).

⁶² “A day of which one is certain that it will come (*certus an*) and when it will come (*certus quando*). Such days are calendar-days. Ant. *dies incertus*, an uncertain day, either uncertain as to when it will come (*incertus quando*, as, e.g., the day of a person’s death) or whether it will come at all (*incertus an*, as, e.g., the day of a person’s marriage)” (*Encyclopedic Dictionary of Roman Law* [1953], s.v. “*dies certus*”).

In the above analysis, the influence of time on the value of goods was traced back to the influence time exerts directly on the importance of needs themselves. In contrast to this, there is the view that also finds a difference in value between a presently available good and an otherwise similar good that will only become available in the future but explains it with the temporary use of the present good. This temporary use cannot be enjoyed in the interim from a good available only in the future. Therefore, the value of a good first available in the future must be discounted by the value of the temporary use compared to a good available in the present.

This view raises the question of whether the assumption of a difference in the quantity of the services available from each of the two goods does not then contradict the earlier assumption that the two goods being compared are the same.

After all, it is simply a question of showing the influence that the time of availability exerts on the value of the goods. For this reason, otherwise equivalent and similar goods were compared—that is, goods capable of yielding an equal quantity of similar and equivalent services. Provided that this is the case, it is not at all clear why, because we use one of the two compared goods earlier than the other, we should receive from the former one single service more or from the latter one single service less. We will just enjoy the services of the one good earlier and the services of the other later. We will receive from each of the two goods the same amount of similar services, without any difference in the amount of “temporary use.”

It seems this view is based on a meaning of the word “use” that deviates substantially from the definitions developed here as “services” and “utility.” This view understands the term “use” in a highly abstract, even figurative sense. For example, this definition also permits and encompasses services of goods that have already been consumed.

We shall now apply this developed theory on the influence of time on the value of goods to loans and interest. We shall follow Turgot. First, we encounter the clear and conscious expression of the main idea in the concluding words of section 23 of the *Mémoire*:

[Money] is sold for money when money in one place is given in exchange for the receipt of money in another, the type of transaction known as *foreign*

exchange, in which less money is given at one place to receive more of it in another, just as, in a transaction of lending at interest, less money is given at one time in order to receive more at another, because the difference in time, like that in space, causes a real difference in the value of money.⁶³

Then the application to the interest in section 27:

Where have they observed that to determine this value, it is only necessary to consider the weights of the metal handed over at two different dates, without comparing the difference in usefulness which exists at the date of borrowing between a sum currently owned and an equal sum which is to be received at a distant date? Is not the difference well known, and is not the trivial proverb, a bird in the hand is better than two in the bush, a naive expression of this well-known fact? Now if a sum actually owned is worth more, is more useful, is preferable to the assurance of receiving a similar sum in one or several years' time, it is not true that the lender receives as much as he gives when he does not stipulate interest, for he gives the money and receives only an assurance. Now, if he receives less, why should this difference not be compensated by the assurance of an increase in the sum proportioned to the delay? This compensation is precisely the rate of interest.⁶⁴

And at the conclusion of section 27:

In short, the object still assumes that which is in question, that is, that the money received today and the money which must be repaid in a year's time are exactly equal. In reasoning in this manner, it is forgotten that it is not the value of the money when it has been repaid that has to be compared with the value of the money when it is lent, but that it is the value of the promise of a sum of money which has to be compared with the value of a sum of money available now. . . . If it is assumed that a thousand francs and a promise of a thousand francs are exactly of the same value, an even more absurd assumption is made; if these two things are equivalent, why do people borrow?⁶⁵

⁶³ See Turgot ([1769] 2011a, 211). For some important statements of time preference before Böhm-Bawerk, see Olivi ([1295] 2016, 54), Lessius ([1605] 2010, 135), Galiani ([1751] 1977, 261), and Menger ([1871] 2007, 153–54).

⁶⁴ See Turgot ([1769] 2011a, 214–15).

⁶⁵ See Turgot ([1769] 2011a, 216).

Thus, the loan consists in the surrender of a sum of present goods against a sum of equivalent future goods.⁶⁶ Since, *caeteris paribus*, future goods have a lower value than present ones, the simple repayment of a quantitatively equal amount of goods would result in a difference in value between the amount lent and the amount repaid, to the disadvantage of the lender. Thus, to bring about an equivalence of value in the exchange, the amount returned must be greater. The additional amount is interest. Thus, interest derives its origin, justification, and legitimacy from the economic essence of the loan.

How does the canonistic doctrine approach this side of our question? It replies with the inexplicably crude and meaningless platitude “Time is the common property of all men and therefore cannot be sold for money!”⁶⁷

Now there is another potential objection to be met: Given that there is a difference in value between present and future goods and that this demands that the lender be repaid an additional amount over and above the principal, how can the borrower pay such an additional amount in interest without being economically exploited? The answer is that the borrower can and must also produce interest. This leads us once again to the question of the productivity of capital.

It is a fact, as scientifically irrefutable as it is remote from awareness in everyday life, that the economic value of the means of production is determined by the expected value of the goods produced with their help (see, e.g., Menger [1871] 2007, 150).⁶⁸ The

⁶⁶ Turgot wrote, “In a loan at interest, the object of the valuation is the use of a certain quantity of value during a certain time” ([1766] 2011, 44). Also see Böhm-Bawerk ([1884] 1959, 170; [1889] 1959, 290).

⁶⁷ Böhm-Bawerk ([1884] 1959, 14–15) suggests that Aquinas introduced the “selling time” argument against interest. But the idea that lenders sell time can be traced to a fifth-century palea called *Ejiciens*. It was incorporated in Gratian’s *Decretum* (1.88.11) around 1180. For influential statements, see Aquinas (*Summa Theologica* 2.2.78.1) and Olivi ([1295] 2016, 46).

⁶⁸ In his *Principles of Economics*, Menger wrote on imputation, “It is evident that the value of goods of higher order is always and without exception determined by the prospective value of the goods of lower order in whose production they serve. . . . [G]oods of higher order can attain value, or retain it once they have it, only if, or as long as, they serve to produce goods that we expect to have value for us”

prospective value of the product is the sum of the contribution to production of each of the individual factors of production.⁶⁹ The factors of production are either commodities or human labor. Assume, for example, that the completion of a product requires an equal share of commodities and labor. If the product represents a value of 100, then the commodities and the human labor will each represent a value of 50.

However, production is a process that occurs through time. Control over the factors of production necessary to produce a certain good does not provide the means to satisfy present needs with a present product, but only provides a future product. We shall assume in our example that one year of labor is necessary for the production of the product. Under these circumstances, we may observe how the value of our commodities advances over time. The commodities we have disposal over will have a utility effect with a value of 50 in one year. From the argument above, it is evident that a future utility effect with a future value of 50 must have a lower value today, let us say 5 percent lower, or approximately 47.5. This is the present value of our commodities as means of production.

If we now let production actually occur, we see after its completion that the utility effect, which at the beginning of the production period was only available in the future, is now available in the present. Now we can assign to the product the full value of 100, and to the share of the commodities it contains the full value of 50.

What has happened? The value of the commodities grows from 47.5 to 50 in the course of the production period as a result of the production process. This is by no means at the expense of the appreciation of the cooperating labor, but completely independent of it. Imagine that at the beginning of the production period, someone offered to lend the worker commodities worth 47.5 on the condition that he return to the lender a value of 50 in one year. Or, equivalently, imagine that someone offered to lend the worker a sum of money with a value of 47.5 to purchase those materials, on the condition that he return to the lender money with the value of 50 in one

([1871] 2007, 150). Also see Böhm-Bawerk ([1881] 1962, 104; [1884] 1959, 138–39; [1889] 1959, 169).

⁶⁹ See Böhm-Bawerk ([1884] 1959, 411–12).

year. Either way, the worker could obviously agree to the contract without any disadvantage, particularly without having to sacrifice any part of his natural wage. On the contrary, it might well be that without this contract he would not have found an opportunity to use his labor as advantageously. The worker could, in short, pay the required interest without any economic disadvantage.⁷⁰

The reason for this phenomenon resides in the temporal convergence of goods to needs that takes place during the production period. In the means of production, we always have disposal only over future products—that is, over the satisfaction of future needs. There is a temporal gap between the means of production, which we have, and the needs we can satisfy with them.⁷¹ Only the progress of time can fill this gap. With every day, year, or decade that we leave productive goods unused, the needs that we can satisfy with them also move a day, a year, or a decade into the future. As a result the value of a productive good inevitably remains below the future value of the product. It is production that builds a bridge between the present and the future. Production creates from the means of production present goods with which we are able to satisfy present needs and which we then give undiminished valuation.

Production leads to an increase in the *ratione temporis*⁷² reduced value of the means of production up to the full value of the finished product capable of satisfying present needs. This increase is the source of the phenomenon that has been called the productivity of capital—the capacity of capital to generate value from itself.

Looking back, if we now summarize in its main points the result of our reflections on the great controversy that has occupied us, the following propositions appear:

⁷⁰ In the following years, Böhm-Bawerk used this reasoning to criticize socialism. See Böhm-Bawerk ([1884] 1959, 263–67; [1889] 1959, 308–12; [1896] 1962; 240; [1909] 1959, 74–77).

⁷¹ Turgot wrote on advances, “Every type of labor, in agriculture, in industry or in commerce, requires advances” ([1766] 2011, 31). He repeated, “It is impossible to undertake any commerce without advances” ([1766] 2011, 42).

⁷² “By reason of time.”

- The justification of interest from the inviolability of property rights is insufficient.
- A loan does not include a right of use separable from the disposition of the substance that could be considered as the equivalent of interest.
- The fact of the exchange of land for capital is not the cause but a consequence of the productivity of capital, so it cannot explain the latter.
- The time difference, which necessarily occurs in the loan between lending and repayment, sets a value difference. This demands as compensation a quantitative excess of the amount repaid over the amount lent. That is interest. From this follows the naturalness and legitimacy of interest.

Finally, a comment on the scope of this essay should be added. Interest is a price, and its level is influenced by various factors. This essay only tried to establish one, fundamental element of interest, which is the influence of time on the value of goods. The other factors affecting the rate of interest, as well as the influence of time on the magnitude of the value of goods, were outside the scope of this essay.

REFERENCES

- Aquinas, Thomas. (1271) 2020. "Thomas Aquinas: Commentary on Aristotle's *Nicomachean Ethics* (c. 1271)." Translated by C. I. Litzinger. In *A Source Book on Early Monetary Thought: Writings on Money before Adam Smith*, edited by E. W. Fuller, 29–33. Northampton, Mass.: Edward Elgar. Original-language essay written c. 1271.
- . (1272) 2020. "Thomas Aquinas: Commentary on Aristotle's *Politics* (c. 1272)." Translated by Richard J. Regan. In *A Source Book on Early Monetary Thought: Writings on Money before Adam Smith*, edited by E. W. Fuller, 34–40. Northampton, Mass.: Edward Elgar. Original-language essay written c. 1272.
- Böhm-Bawerk, Eugen von. (1881) 1962. "Whether Legal Rights and Relationships Are Economic Goods." In *Shorter Classics of Eugen von Böhm-Bawerk*, edited by H. F. Sennholz, translated by G. D. Huncke, 25–145. Grove City, Pa.: Libertarian Press. Original-language essay published in 1881.

- . (1884) 1959. *History and Critique of Interest Theories*. Vol. 1 of *Capital and Interest*, translated by G. D. Huncke and H. F. Sennholz. South Holland, Ill.: Libertarian Press. Original-language edition published in 1884.
- . (1889) 1959. *Positive Theory of Capital*. Vol. 2 of *Capital and Interest*, translated by G. D. Huncke. South Holland, Ill.: Libertarian Press. Original-language edition published in 1889.
- . (1896) 1962. "Unresolved Contradiction in the Marxian Economic System." In *Shorter Classics of Eugen von Böhm-Bawerk*, edited by H. F. Sennholz, translated by A. Macdonald, 201–302. Grove City, Pa.: Libertarian Press. Original-language essay published in 1896.
- . (1909) 1959. *Further Essays on Capital and Interest*. Vol. 3 of *Capital and Interest*, translated by H. F. Sennholz. South Holland, Ill.: Libertarian Press. Original-language edition published in 1909.
- . 1924–26. *Gesammelte Schriften*. Leipzig: Holder-Pichler-Tempsky.
- Buridan, Jean. (1336) 2020. "Jean Buridan: Commentary on Aristotle's *Nicomachean Ethics* (c. 1336)." Translated by Chantal Saucier and Edward W. Fuller. In *A Source Book on Early Monetary Thought: Writings on Money before Adam Smith*, edited by Edward W. Fuller, 47–53. Northampton, Mass.: Edward Elgar. Original-language essay written c. 1336.
- Cantillon, Richard. (1755) 2010. *An Essay on Economic Theory*. Edited by Mark Thornton. Translated by Chantal Saucier. Auburn, Ala.: Ludwig von Mises Institute. Original-language edition published in 1755.
- Ebeling, Richard M. 2001. "Eugen von Böhm-Bawerk: A Sesquicentennial Appreciation." *Ideas on Liberty* (February): 36–41.
- Endemann, Wilhelm. 1863. *Die nationalökonomischen Grundsätze der kanonistischen Lehre*. Jena.
- Fisher, Irving. 1907. *The Rate of Interest: Its Nature, Determination and Relation to Economic Phenomena*. New York: Macmillan.
- . 1930. *The Theory of Interest as Determined by Impatience to Spend Income and Opportunity to Invest It*. New York: Macmillan.
- Galiani, Ferdinando. (1751) 1977. *On Money*. Translated by Peter R. Toscano. Ann Arbor, Mich.: University Microfilms International. Original-language edition published in 1751.

- Garrison, Roger W. 1999. "Eugen von Böhm-Bawerk: Capital, Interest, and Time." In *Fifteen Great Austrian Economists*, edited by R. G. Holcombe, 113–22. Auburn, Ala.: Ludwig von Mises Institute.
- Groenewegen, Peter D. 1971. "A Re-interpretation of Turgot's Theory of Capital and Interest." *Economic Journal* 81, no. 322 (June): 327–40.
- . 1977. *The Economics of A. R. J. Turgot*. The Hague: Martinus Nijhoff.
- . 1983. "Turgot's Place in the History of Economic Thought: A Bicentenary Estimate." *History of Political Economy* 14, no. 4 (Winter): 585–616.
- . 2009. "Some Critical Perspectives on Böhm-Bawerk's *Capital and Interest*, Volume I, *A Critical History of Economic Theory*, with Special Reference to his Treatment of Turgot, John Stuart Mill and Jevons." *History of Economics Review* 50 (1): 31–45.
- Hennings, Klaus H. 1997. *The Austrian Theory of Value and Capital: Studies in the Life and Work of Eugen von Böhm-Bawerk*. Brookfield, Vt.: Edward Elgar.
- Huerta de Soto, Jesús. 2008. *The Austrian School: Market Order and Entrepreneurial Creativity*. Northampton, Mass.: Edward Elgar.
- Hülsmann, Jörg G. 2007. *Mises: The Last Knight of Liberalism*. Auburn, Ala.: Ludwig von Mises Institute.
- Knies, Karl G. A. 1876. *Der Credit 2 of Geld und Credit*. Berlin.
- Langholm, Odd. 2009. "Olivi to Hutcheson: Tracing an Early Tradition in Value Theory." *Journal of the History of Economic Thought* 31, no. 3 (June): 131–41.
- Lessius, Leonard. (1605) 2010. "Leonard Lessius: *On Buying and Selling* (1605)." Translated by Wim Decock, Nicholas De Sutter, and Bernard Dempsey. In *A Source Book on Early Monetary Thought: Writings on Money before Adam Smith*, edited by Edward W. Fuller, 134–36. Northampton, Mass.: Edward Elgar. Original-language edition published in 1605.
- Menger, Carl. (1871) 2007. *Principles of Economics*. Translated by J. Dingwall and B. F. Hoselitz. Auburn, Ala.: Ludwig von Mises Institute.
- Mises, Ludwig von. (1924) 2002. "Eugen von Böhm-Bawerk: In Memory of the Tenth Anniversary of His Death." In *Between the Two World Wars: Monetary Disorder, Interventionism, Socialism, and the Great Depression*. Vol. 2 of *Selected Writings of Ludwig von Mises*, edited by Richard M. Ebeling, 329–32. Indianapolis, Ind.: Liberty Fund. Original-language edition published in 1924.

- . (1959) 2007. “*Capital and Interest: Eugen von Böhm-Bawerk and the Discriminating Reader.*” In *Economic Freedom and Interventionism: An Anthology of Articles and Essays*, edited by Bettina Bien Greaves, 155–57. Indianapolis, Ind.: Liberty Fund.
- Olivi, Peter of John. (1295) 2016. *A Treatise on Contracts*. Edited by Sylvain Piron. Translated by Ryan Thornton and Michael Cusato. St. Bonaventure, N.Y.: Franciscan Institute.
- Oresme, Nicholas. (1358) 2020. “Nicholas Oresme: *Treatise on Money* (1358).” Translated by Charles Johnson. In *A Source Book on Early Monetary Thought: Writings on Money before Adam Smith*, edited by Edward W. Fuller, 70–88. Northampton, Mass.: Edward Elgar. Original-language work written in 1358.
- Rau, Karl H. 1855. *Grundsätze der Volkswirtschaftslehre*. Leipzig.
- Robbins, Lionel. (1979–81) 1998. *A History of Economic Thought: The LSE Lectures*. Edited by Steven G. Medema and Warren J. Samuels. Princeton, N.J.: Princeton University Press. Original lectures given 1979–81.
- Rothbard, Murray N. (1962, 1970) 2004. *Man, Economy, and State with Power and Market*. Auburn, Ala.: Ludwig von Mises Institute. *Man, Economy, and State* first published in 1962 and *Power and Market* in 1970.
- . (1995) 2006. *An Austrian Perspective on the History of Economic Thought: Economic Thought before Adam Smith*. Auburn, Ala.: Ludwig von Mises Institute.
- Salerno, Joseph T. 2004. “Böhm-Bawerk’s Vision of the Capitalist Economic Process; Part 1—Intellectual Influences and Conceptual Foundations.” Paper presented at the Austrian Scholars Conference 10, Auburn, Ala., March 18–20.
- Schulak, Eugen Maria, and Herbert Unterköfler. 2011. *The Austrian School of Economics: A History of Its Ideas, Ambassadors, and Institutions*. Auburn, Ala.: Ludwig von Mises Institute.
- Schumpeter, Joseph A. (1914) 1997. “Eugen von Böhm-Bawerk, 1851–1914.” In *Ten Great Economists: From Marx to Keynes*, 143–90. London: Routledge. Essay first published in 1914.
- . (1954) 1994. *History of Economic Analysis*. Edited by Elizabeth Boody Schumpeter. New York: Oxford University Press. First published in 1954.

- Streissler, Erich W. 1990. "The Influence of German Economics on the Work of Menger and Marshall." In *Carl Menger and His Legacy in Economics*, edited by B. J. Caldwell, 107–30. Durham, N.C.: Duke University Press.
- Thornton, Mark. 1999. "Richard Cantillon: The Origin of Economic Theory." In *15 Great Austrian Economists*, edited by Randall G. Holcombe, 13–28. Auburn, Ala.: Ludwig von Mises Institute.
- Tomo, Shigeki. 1997. "On the Development of Böhm-Bawerk's Interest Theory from 'Fisherian' to 'Wicksellian.'" *History of Economics Review* 26 (1): 1–10.
- Turgot, Anne Robert Jacques. (1766) 2011. "Reflections on the Formation and Distribution of Wealth." Translated by P. D. Groenewegen. In *The Turgot Collection: Writings, Speeches, and Letters of Anne Robert Jacques Turgot, Baron de Laune*, edited by David Gordon, 3–65. Auburn, Ala.: Ludwig von Mises Institute. Original-language reflections written in 1766.
- . (1769) 2011a. "Extracts from 'Paper on Lending at Interest.'" Translated by P. D. Groenewegen. In *The Turgot Collection: Writings, Speeches, and Letters of Anne Robert Jacques Turgot, Baron de Laune*, edited by David Gordon, 203–21. Auburn, Ala.: Ludwig von Mises Institute. Original-language essay written in 1769.
- . (1769) 2011b. "Value and Money." Translated by P. D. Groenewegen. In *The Turgot Collection: Writings, Speeches, and Letters of Anne Robert Jacques Turgot, Baron de Laune*, edited by David Gordon, 163–82. Auburn, Ala.: Ludwig von Mises Institute. Original-language essay written in 1769.
- Wieser, Friedrich von. 1929. *Gesammelte Abhandlungen*. Tübingen: J. C. B. Mohr.
- Yagi, Kiichiro. 1983. *Böhm-Bawerk's First Interest Theory with C. Menger–Böhm-Bawerk Correspondence 1884–85*. Study Series No. 3. Tokyo: Center for Historical Science Literature, Hitotsubashi University.