

BÖHM-BAWERK'S VISION OF THE CAPITALIST ECONOMIC
PROCESS:

PART 1—INTELLECTUAL INFLUENCES AND CONCEPTUAL
FOUNDATIONS

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Böhm-Bawerk's scientific lifework forms a uniform whole. As in a good play each line furthers the plot, so with Böhm-Bawerk, each sentence is a cell in a living organism, written with a clearly outlined goal in mind. . . . He was a theorist, born to see—and to explain—large relationships; to seize instinctively but with a firm hand, on the threads of logical necessities. . . . He gave us an all-embracing theory of the economic process—one of the great analyses of economic life on the scale of the Classics and Marx—conceived on a Mengerian foundation and developed from the point of view of the one problem whose solution seemed to be still missing The theory of the socio-economic process is, in Böhm-Bawerk's pages unfolded for the first time as an organic whole of valuations and 'objective' facts. . . . (Schumpeter 1969, pp. 146-47, 189)

1. Introduction

Eugen von Böhm-Bawerk (1851-1914) has been justly recognized and celebrated as the founder of Austrian capital and interest theory and as the first economic theorist to discover the main significance of the phenomenon of time preference for the determination of the interest rate. However few beyond his direct students, such as Schumpeter (1969), Ludwig von Mises (1978, pp. 39-41; 1990) and Richard Strigl (2000), have come close to appreciating the full scope of Böhm-Bawerk's contribution to economic theory and his central role in the emergence and development of the early Austrian school. Friedrich A. Hayek (1992, p. 112), who for more than a decade toiled in the field of Austrian capital theory, was also cognizant of Böhm-Bawerk's seminal work

in elaborating and systematizing the central core of Austrian value and price theory. Of economists who reached maturity after World War 2, Murray N. Rothbard was profoundly influenced by Böhm-Bawerk's overall body of work. Even more than Mises, who adumbrated the capitalist economic process in much broader strokes, Rothbard closely followed Böhm-Bawerk as a meticulous system-builder who placed the theory of production at the center of his analysis of the market economy.¹

This paper is in the nature of a prologue to the treatment of Böhm-Bawerk's vision of the capitalist economy in a prospective second paper and deals with the intellectual influences and fundamental concepts that conditioned and infused this vision. By scrutinizing these aspects of Böhm-Bawerk's thought, we gain important perspective on his contribution. In particular, this endeavor sheds light on a number of heretofore neglected or under-appreciated points. First, Böhm-Bawerk's theoretical system emerged from the nineteenth-century German subjective-value tradition in which he was immersed, especially its foundational theory of goods. Second, the economists who had a formative influence on him during the maturing stages of his thought extended beyond Carl Menger. Third, the Böhm-Bawerkian theoretical structure was founded on a view of the economic world pervaded with non-calculable, systemic uncertainty in which the

¹ Of the twelve chapters of Rothbard's treatise, *Man, Economy and State* (Rothbard 1993), five chapters, encompassing 30 percent of its 987 pages, are devoted to production theory. Moreover, the book's index lists 39 separate page references to Böhm-Bawerk, second in number only to references to Rothbard's mentor, Mises. In sharp contrast to Böhm-Bawerk and Rothbard, Mises in his own treatise, *Human Action*, provides very skimpy detail on crucial areas of production theory. In fact in one of his regular letters to the directors of the Volker Fund reporting on the status of the manuscript that would become *Man, Economy and State*, Rothbard (1954) lamented, "Mises has very little detail on production theory, and as a consequence it took me many false starts and lots of what turned out to be wasted effort, before I arrived at what satisfied me as a good Production Theory." Also, when asked the question, "Is there any doubt that Mises was your primary influence?" Rothbard (1995, p. 2) responded: "I didn't think so, but Joseph Salerno once gave a talk in which he said *Man, Economy, and State* is more Böhm-Bawerk-oriented than Mises's *Human Action*. I never thought of it that way, but it may be true. When I was spelling out capital theory, I used Böhm-Bawerk primarily. I didn't think about it since I thought Mises was a Böhm-Bawerkian and didn't see any contradiction."

facts and values relating to future goods were a matter of subjective interpretation and appraisal. The treatment that Böhm-Bawerk afforded to these topics was much more penetrating and systematic than Menger's because it evolved out of Böhm-Bawerk's efforts to correct and complete the German theory of goods in order to provide an unshakeable conceptual foundation for his analysis of capital and interest. Indeed, in a sense, Böhm-Bawerk's mature vision of the capitalist economic process represented a logical unfolding of German goods theory. Finally, the theory of goods as reconstructed by Böhm-Bawerk was clearly the point of departure for Mises's formulation of economics as a science of human action.

Section 2 of the paper explores the primary influences on Böhm-Bawerk's intellectual development. Investigation into Böhm-Bawerk's endeavor to reconstruct and elaborate the theory of goods as the conceptual foundation for his system is undertaken in Section 3. This method of investigating Böhm-Bawerk's intellectual development by analyzing chronologically his important publications of the 1880's leading up to his *magnum opus*, *The Positive Theory of Capital* (Böhm-Bawerk 1959) published in 1889, mirrors the step-by-step procedure by which Böhm-Bawerk painstakingly formulated his theory of the capitalist economy. Thus, according to Böhm-Bawerk (quoted in Hennings 1997, p. 65):

I had perceived the outlines of my theory of capital as early as 1876 [mentioning them in an unpublished essay]. . . . I did not want to imperil my ideas by an undue, immature, and incomplete formulation. They were to be offered to the public when I was able to offer them as a finished product in harmony with a system of well-founded economic principles. Hence I worked for ten years at the

foundations of my theory by elaborating the theory of goods (1881), by scrutinizing critically earlier capital theories (1884), and by developing the theory of value (1886)—in preference to striving for popularity, as I could easily have done, by publishing original but still immature ideas ten years earlier.

2. Intellectual Influences

Böhm-Bawerk's primary influence was, of course, Carl Menger, the founder of the Austrian school of economics. Furthermore, his unique vision of the capitalist economic process can be interpreted as a logical development of the foundational ideas on goods, economizing, value, time and uncertainty, exchange and the pricing process laid out by Menger (1881) in his path-breaking *Grundsätze der Volkswirtschaftslehre* (*Principles of Economics*) published in 1871. Nonetheless, all of these ideas, including even the notion of marginal utility, were already current in the German subjective-value tradition, which stretched back to the first decade of the nineteenth century and took its main inspiration from J.-B. Say (Palyi 1928; Streissler 1990; Hennings 1997, pp. 26-52). Menger's great achievement was to integrate these concepts in such a way as to provide the outlines of a theoretical organon based on marginal utility that could be used to systematically analyze the causal processes determining real prices in all goods and factor markets in the economy (Salerno 1999).

Like Menger, Böhm-Bawerk was also steeped in the German subjective-value tradition and certainly absorbed much of it from the latter. However, Menger and Böhm-Bawerk had disparate personal influences in their formative student years and the latter read Menger's *Principles* only after he had already completed his studies at the

University of Vienna. Moreover he probably did not make Menger's personal acquaintance until 1875 and might not have been in close contact with him until after 1877 (Hennings 1997, p. 10). Menger's early influences were Peter Mischler (1821-64), his German-born economics professor during his undergraduate years at the University of Prague from 1860 to 1863, and Wilhelm Roscher (1817-1894), the author of the leading German economics textbook of the day to whom Menger dedicated his *Principles*, in which Roscher is also the most frequently quoted author (Streissler 1990, pp. 33-39, 52-53).

In contrast to Menger, Böhm-Bawerk's introduction to the German subjective-value tradition in all likelihood initially came from the Swabian native Albert E. F. Schäffle (1831-1903), who had immediately preceded Menger in the economics chair at the University of Vienna and whose tenure as professor (1868-1872) coincided with Böhm-Bawerk's enrollment as an undergraduate there. Böhm-Bawerk reportedly developed a serious interest in economics during this time and his course of study would therefore have involved obligatory attendance at Schäffle's lectures on political economy (Hennings 1990, pp. 9, 46, 176). Another important influence on Böhm-Bawerk in his years as a maturing economist was Karl Knies (1821-1898), who was the most theoretically oriented economist of the older German historical school and whose seminar in Heidelberg Böhm-Bawerk attended for a year during 1875-1876 (Streissler 1990, pp. 34-35; Hennings 1997, p. 10).²

² There is no evidence that Roscher, the other leader of the older historical school had much of a direct influence on Böhm-Bawerk, despite the high esteem in which Menger held him and the fact that Böhm-Bawerk attended his seminar in Leipzig in 1877 (Hennings 1997, p. 10; Streissler 1990, p. 34 fn.10). Short overviews of the career and work of Knies, Roscher and Schäffle can be found in Mai 1975, pp. 127, 195, 200. Roscher's work is also reviewed in Blaug 1986, pp. 207-208.

A brief overview of Schäffle's and Knies's thought will help illuminate the unique design of the theoretical architectonic that Böhm-Bawerk constructed on conceptual foundations derived from Menger's innovations in goods and value theory, which will also be briefly reviewed.

Albert Schäffle

Schäffle was one of “the two most strongly subjectivist authors” in the German branch of the Say tradition (Streissler 1990, p. 53) and “it was mainly through the agency of Schäffle that the Continental tradition of classical thought was known in Austrian universities in the 1870s” (Hennings 1997, p. 46). Schäffle also evoked a great deal of attention in Austria in 1870 with a series of public lectures criticizing socialism in the wake of widespread labor agitation in Vienna of the late 1860's (Hennings 1997, pp. 54-55).

In his textbook of 1867, Schäffle denounced the Ricardian tradition as “chrematistic,” unduly concerned with objective properties of commodities, and emphasized instead the subjective nature of goods and their value. Like the typical German textbook writer in this tradition, including Menger, the primary concept for Schäffle was that of goods, from which the concepts of economizing and subjective use value were then deduced.³ Thus Schäffle (quoted in Streissler 1990, pp. 53, 43) wrote:

“All goods become comparable in terms of value. Value [is] the significance of a good in the economic calculation of man. All economic calculation tries to

³ Recall that in Menger's *Principles* (Menger 1981) chapter 3 on “The Theory of Value” is preceded by chapter 1 on “The General Theory of the Good” and chapter 2 on “Economy and Economic Goods.” “Commodities” or goods with objective exchange value, the central concept of the British classical school, do not make their appearance until chapter 7, “The Theory of the Commodity.” In general, as Streissler 1990, p. 49) explains: “A standard German textbook will treat goods first, then wants, then the economy, as Rau already does in 1826; Menger uses the same sequence of subjects. . . . Roscher uses the series wants, goods, value, wealth, and the economy. These are called ‘the *fundamental* concepts’ in German economics.”

determine the smallest sacrifice necessary for full satisfaction. . . . Value [is] a relationship between all goods in human consciousness . . . [it is] predominantly of a *subjective* nature. It exists in a consciousness of purpose in matters economic.⁴

Schäffle viewed prices as determined by supply and demand and as the objective manifestation of value reflecting the community's opinion about the values of goods.⁵ As such, prices govern all economic activities, especially production. Costs are defined as value foregone, although Schäffle stopped just short of developing the full opportunity cost principle. All prices, including factor prices, are determined by an all-embracing competitive bargaining process for which Schäffle coined the term *Preiskampf*.⁶ The competitive bargaining process operates to equilibrate supply and demand in the short run and drive prices toward marginal costs in the long run. Schäffle was so eager to emphasize the interdependence of competitive price determination in the economy that he unfortunately used awkward and strained organicist analogies for which he was ridiculed and which obscured this vitally important element of his work. Consistent with his focus on competitive process, Schäffle conceived of rents and quasi-rents as compensation for the most efficient allocation of available resources, a reward for progress and efficiency,

⁴ Note that Schäffle's definition of value as "a relationship between all goods in human consciousness" with its emphasis on the ranking of goods is more correctly formulated than one current Austrian definition of value as "the relationship between a human mind and an object." As Guido Hülsmann has pointed out, it is impossible for an individual to "value" a single object since all values are relative. As we shall see below, Böhm-Bawerk gave the nineteenth-century German "theory of economic goods" its most sophisticated formulation, and it was this theory that Mises elaborated and systematized into a general theory of means and ends or "human action."

⁵ The following outline of Schäffle's economic thought where not specifically attributed is drawn from Hennings 1997, pp. 31-32, 37, 54-55, 86-87.

⁶ The use of this term as a standard to judge Schäffle's influence on later economists has been suggested by Hennings 1997, p. 90, fn. 48. The term was used regularly by Böhm-Bawerk and his own student H. von Schullern-Schrattenhoffen as well as by Friedrich von Wieser, Gustav Gross and Victor Mataja, all of whom were also taught by Schäffle. The word was not used by Menger and was mentioned but not used much by Menger's student, Robert Zuckerkandl.

and “thus the major element making for dynamic change in the economy” (Hennings 1997, pp. 32-33).

In commenting on the debate over the fate of the working class under capitalism that raged in the 1860s between German social democrats led by Ferdinand Lassalle and German laissez-faire liberals led by Hermann Schulz-Delitzsch, Schäffle sought to illuminate the *Wertfrei* economic principles involved.⁷ In criticizing Lassalle’s position, he resorted to the concept of a “temporal structure of the economic process” developed by one of the eminent pioneers of the German subjective-value tradition, F. W. B. Hermann (1795-1868).⁸ Elaborating on this concept, Schäffle (quoted in Hennings 1997, p. 37) characterized the function of capital and the capitalist-entrepreneur in proto-Böhm-Bawerkian terms:

It is the particular way in which labour’s services are temporally structured, in which production is separated in time and space . . . which conditions the peculiar position of workers in the economy, and which points to the basic reason for the position of the entrepreneur . . . who advances out of his capital, in the form of wages, the value of labour’s services which are not yet consumable.

He went on to argue that if the capitalist did not perform this function, then the laborer would have to acquiesce in a lengthy wait for his labor product or else the division of labor would be impossible. Thus capital was necessary for exploiting the benefits of the division of labor. Furthermore it is by virtue of his capital-advancing role that the entrepreneur becomes the director of production and pivotal agent of income distribution. Schäffle concluded that Lassalle’s call to abolish entrepreneurship was

⁷ Capsule summaries of the views of Lassalle and Schulz-Delitzsch can be found in Mai 1975, pp. 131, 202.

⁸ For a summary of Hermann’s career and intellectual contributions, see Mai 1975, p. 110.

wrong because the entrepreneur was indispensable to the proper operation of the economic process. Schäffle also took Schulz-Delitzsch to task for confusing credit and capital and, in doing so, briefly hinted at the systematic difference in value between present and future goods. According to Schäffle (quoted in Hennings 1997, p. 37), credit involves “an exchange between values with different maturities,” which occurs “whenever aims in the future are attained by sacrifices in the present.”

Finally, Schäffle propounded a remarkably precocious position on welfare economics that anticipated the position adumbrated by Murray Rothbard (1997) nearly a century later. As we will show in Part 2 of this paper, Böhm-Bawerk’s explicit attempt to refute Schäffle’s argument was predicated on his failure to perceive that values are strictly relative and subjective and so cannot be interpersonally compared, despite the fact that this was the implication of his own theory of exchange and price. Schäffle had argued that the equilibrium adjustment of demand and supply brought about by the *Preiskampf* operating under perfectly free trade is a position of maximum social welfare. To give a flavor of Schäffle’s views on this issue it is worth quoting the summary by Böhm-Bawerk (1973, pp. 130-31), postponing a consideration of his objections until later:

We remember that both parties to an exchange must achieve a gain that consists of the value differences of the goods given and received in exchange. Of course, the gain is all the greater the greater this value difference. Now unhampered competition brings about that the competitors *with the greatest value difference* actually make the exchange, that is, those buyers who attach highest value to the desired good when compared with the medium of exchange, and

those sellers who ascribe lowest value to the exchange good when compared with the price received. Therefore it seems that self-interest in the market place automatically and unwittingly assures achievement of highest possible exchange gains and thus greatest total gain for the economic well-being of society. There is, so it seems, economic harmony between the individual interests of the successful traders and the common interest of society.

This thought was expressed repeatedly in the remarkable writings of Schäffle on the formation of price. In it he maintains that the ‘natural exchange value’ as it emerges in the market with ‘normal economic competition’ equates supply and demand ‘most usefully’ and ‘socially most beneficially,’ and thus ‘produces the *greatest socially possible quantity of pure utility*.’⁹

Karl Knies

As noted, Karl Knies was the second direct and early influence on Böhm-Bawerk’s intellectual development.¹⁰ Although a founder of the older historical school, Knies was one of the leading theoreticians in German economics and, by the time Böhm-Bawerk attended his seminar, he had already published the first volume of his three-volume treatise on money and credit. This volume contained “a full-fledged theory of capital” which was oriented toward addressing the anti-capitalist criticisms of Marx and Rodbertus. In addition to a discussion of the role of capital and interest in production, Knies devoted a long chapter to a detailed analysis of the role of credit in an economy

⁹ This is not to imply that Schäffle was a proponent of laissez-faire policies. He was an interventionist who believed that in practice the *Preiskampf* was hampered by monopolistic elements and, therefore, he apparently favored “social” policies aimed at transforming the labor market. Although an early proponent of *Sozialpolitik*, however, Schäffle the consummate theoretician never joined the historicist dominated *Verein für Sozialpolitik* (Hennings 1997, pp. 37, 46, 54-55, 86). Also see Schäffle 1894, pp. 94-96, 125-27.

¹⁰ The summary of Knies’s contributions contained in this paragraph is based on Hennings 1997, pp. 33, 37-38, 55-56.

containing a temporal structure of production. He also explicitly propounded the idea that the common element in all forms of capital is the relationship to the satisfaction of future wants. While Knies does not advance any major new ideas on capital and interest in his treatise, he does provide a systematic and comprehensive summary of the ideas of previous writers in the German subjective-value tradition, particularly Hermann, Hans K. von Mangoldt (1824-1868), and Schäffle.¹¹

Carl Menger

This brings us to Menger's influence on the formation of Böhm-Bawerk's theoretical vision and how it compared to the influences of the latter's teachers, Schäffle and Knies. There is no denying that Menger's *Principles* had a fundamental effect on Böhm-Bawerk during his maturation as an economic theorist and that its basic concepts pervaded all of his written work.¹² In particular he absorbed Menger's key insight that the central task of economic theory was to explain the exact causal processes that determine the prices really paid in the economy. This causal-realistic theory of price determination would be predicated on the unifying principle of marginal utility and comprehend all markets in the economy, including factor markets. Menger (1981, p. 49)

¹¹ Curiously, in his voluminous writings, Mises does not refer to this tradition or its significance for the intellectual formation of his master, Böhm-Bawerk. However Mises (1998, p. 697) did identify Schäffle as one of a handful of "eminent economists," including Vilfredo Pareto, Enrico Barone and N. G. Pierson, who had "touched upon the problem" of economic calculation under socialism. Of Knies, Mises (1984, p. 27) wrote that he was one of the few German professors in the second and third quarters of the nineteenth century who "wrote valuable contributions to economic theory" and whose book, along with those of Hermann and Mangoldt, "will be remembered in the history of economic thought." Summaries of Mangoldt's career and work can be found in Mai 1975, p. 147 and Blaug 1986, pp. 147-49.

¹² Böhm-Bawerk (1962, p. 107 fn. 8) implicitly expressed the precise scope of his intellectual debt to Menger in lauding him as "that genius . . . whose name it is impossible to extol too often or beyond his deserts whenever there is any discussion of the problems affecting the unshakable fundamentals of economic science" (Böhm-Bawerk 1962, p. 107 fn. 8). In the same vein, Böhm-Bawerk (1962, pp.41) praised Menger's *Principles* "as a truly epoch-making work in its establishment of this specific concept [of what constitutes a good] and also of the supremely important basic concepts of economic science generally."

clearly spelled out his proposed research program, which he never fully carried out, in a passage in the Preface of the *Principles*:

I have devoted special attention to the investigation of the causal connections between economic phenomena involving products and the corresponding agents of production, not only for the purpose of establishing a price theory based upon reality and placing all price phenomena (including interest, wages, ground rent, etc.) together under one unified point of view, but also because of the important insights we thereby gain into many other economic processes heretofore completely misunderstood.

The *Principles*, however, was only an introduction to a prospective multi-volume treatise on economic theory that Menger never completed because he became sidetracked by the *Methodenstreit* with the “younger” German historical school. Most of the book was therefore devoted to reformulating and integrating, on the basis of marginal utility, the theories of goods, economizing, and value inherited from the German subjective-value tradition. Menger provided only the rudiments of a theory of consumer prices and no theory of factor *pricing* or the money costs of production utilized in the economic calculations of entrepreneurs.¹³

The influence on Böhm-Bawerk of Menger’s vision of a comprehensive and unified theory of the pricing process was reinforced by Schäffle’s conception of the *Preiskampf*, the competitive bargaining process that operated to determine prices throughout all markets. Moreover, Böhm-Bawerk perceived that the role of marginal

¹³ Menger did however outline a brilliant solution to the problem of imputing *value* to the individual complementary factors of production in a Crusoe economy, a solution that, as we shall see, would later be developed into the Austrian variant of the marginal productivity theory of factor pricing by Böhm-Bawerk (Salerno 1999, pp. 88-90, 98-99).

utility as the regulating principle in Menger's discussion of an individual economy, especially as it was elaborated into a theory of "indirect utility" or opportunity cost by Friedrich von Wieser, naturally lent itself to extension to Schäffle's competitive pricing process operating in a money exchange economy.¹⁴

Böhm-Bawerk was further inspired by Menger's insight that the concept of causality was fundamental to the definition of a good and all goods occupied a place in "the causal nexus of goods" (Menger 1976, p. 56). For Menger, goods' production and allocation were the objective manifestation of the causal chain that was anchored in subjective wants of individuals. Consumer goods were valued and produced because they were perceived as the direct cause of satisfaction of concrete human wants. Complementary goods of successively higher orders were valued as indirect causes of want satisfaction because their sequential combinations in a given production process brought into being the final, consumer good.

Menger thus recognized dual and opposite lines of causation in economic activity binding all goods together as both cause and effect. On the one hand, higher-order goods were the objective *cause* of the coming into being of lower-order goods and eventually of the satisfaction of concrete human wants. On the other hand, the subjective valuation of higher-order goods was the *effect* of their objective position in the production process that culminated in the emergence of the directly want-satisfying consumer good. There existed relations of substitution as well as complementarity in the causal nexus of goods because in the Mengerian individual economy, the various categories of concrete wants competed with one another for the satisfaction afforded by the available quantities of

¹⁴ See Hayek (1992, p. 112) on the limited but significant influence of Wieser's ideas on Böhm-Bawerk in the sphere of value theory.

economic goods of all orders.¹⁵ Schäffle's attempts at "organic" explanations of the *Preiskampf* must have exercised a parallel influence in alerting Böhm-Bawerk to the multiple and intersecting causal relationships binding together markets and prices within the capitalist economic process.

Despite Menger's admittedly enormous influence on him, the original stimulus for Böhm-Bawerk to formulate a general theory of the economy from the standpoint of distribution theory, and the theory of capital and interest in particular, came from Schäffle and Knies and only in a negative sense from Menger (Hennings 1997, pp. 54-66). Both of Böhm-Bawerk's German teachers in their own way attempted to refute the claims of socialism by working out a theory of capital and interest that accorded a central role to the time element. In addition, both—but especially Schäffle—used the theory as a point of departure to elaborate a much more comprehensive theory of the economic process. In contrast, in Menger's *Principles*, the theory of factor pricing in general, and interest theory in particular, represented a gaping lacuna in the application of marginal utility theory (Salerno 1999, pp. 98-99).

3. Reconstructing The Theory of Goods

The monograph *Rechte und Verhältnisse vom Standpunkte der volkswirtschaftlichen Güterlehre. Kritische Studie* appeared in 1881 and was Böhm-Bawerk's first publication. It was based upon the *Habilitation* thesis that he submitted to

¹⁵ For the overarching importance of the concept of causality in Menger's system, see Salerno 1999, pp. 81-83, 98.

the University of Vienna near the end of 1879 (Hennings 1997, p. 10).¹⁶ The work was translated into English as *Whether Legal Rights and Relationships Are Economic Goods* (Böhm-Bawerk 1962). However, a more accurate idea of the contents of the work is provided by the literal translation of the German title: *Rights and Relationships from the Standpoint of the Economic Theory of Goods: Critical Studies*.¹⁷ For the work is in effect a critical treatise on the German theory of goods.

In his Preface to the monograph, Böhm-Bawerk (1962, p. 30) contended that the “basic *economic doctrine of the theory of goods* . . . was in need of correction in several respects, or at least of such revision as to make it truly comprehensive and universally valid.” Such revision was required because goods theory embodied “concepts and truths fundamental to every economic train of thought.” Böhm-Bawerk re-emphasized the importance of the theory of goods in his introductory chapter, where he wrote that goods “constitute the primary material with which economic science makes it its business to deal.” What Böhm-Bawerk (1962, pp. 32-33) found lacking in goods theory was a clear and unambiguous answer to the question of whether legal rights and contractual relationships were to be classified as “goods” from the point of view of economic science. His interest in addressing this issue stemmed from his research into the theory of capital and interest and his realization that such clarification was indispensable to the formulation of such a theory.¹⁸

¹⁶ Menger was one of the readers of the thesis and apparently actively campaigned for its acceptance, which was only grudgingly given by its other reader, Lorenz von Stein (1815-1890). The thesis was officially accepted in early 1880 (Hennings, pp. 10-11). Von Stein, a conservative or corporate state socialist, was influenced by Louis Blanc and other French Utopian socialists (Mai 1975, p. 215).

¹⁷ I am indebted to Guido Hülsmann for providing this translation.

¹⁸ It is noteworthy that Schäffle also had addressed the status of rights and relationships in the theory of goods in 1864 in what Böhm-Bawerk (1962, p. 32) termed “a highly significant monograph.”

Böhm-Bawerk (1962, pp. 39-41) argued that previous economists had successfully resolved two of the three fundamental problems posed by goods theory. First, the economic concept of goods as things that serve as tools or means for attaining human well-being had been more or less properly delimited from other concepts, especially the ethical concept, of goods. Second, the problem of elaborating the various criteria implied by the economic concept of a good—what Böhm-Bawerk calls “conditions precedent of goods-quality”—was resolved “pre-eminently through the work of German economists.” Starting with the work of Ludwig H. von Jakob (1759-1827)¹⁹ in 1805, the solution to the problem was progressively developed until it “attained a form that is characterized by formal completeness and final definitiveness” especially in the work of Menger. The third, and unresolved, problem was enumerating “the categories of economic good,” that is, identifying the various kinds of concrete things that fulfilled the theoretical criteria of a good.

Before tackling the solution to this problem, Böhm-Bawerk (1962, pp. 41-42) spelled out the several preconditions of a good for an economizing individual, “adher[ing] essentially to Menger” but correcting him in “one minor respect.” For a thing to attain the status of a good for an economizing individual, the following conditions must be simultaneously present: 1. a human need; 2. the thing must be objectively adapted to satisfying the need or want; 3. the individual must be cognizant of the usefulness of the thing to satisfy the want; 4. the individual must also possess the technical knowledge necessary to utilize the thing to satisfy his want; and 5. finally, he must possess power of disposal over the useful thing. Böhm-Bawerk’s minor correction

¹⁹ For an overview of the life and work of Jakob, an economist and Kantian philosopher, see Mai 1975, p. 119).

of Menger lay in his listing the fourth precondition separately from the third, differentiating general cognition of a thing's usefulness for the attainment of one's end from the practical knowledge of how to actually utilize it as a means to achieve his end.

As Böhm-Bawerk (1962, p. 42) recognized, all but the second precondition are “less inherent in the things themselves than in the economic subjects for whom they are or are not goods.”²⁰ From this insight, Böhm-Bawerk (1962, pp. 42-45) logically deduced a series of propositions regarding goods that implicitly established economics on a praxeological foundation. Goods-quality is not a purely objective attribute of a thing, but a relationship that must exist between a thing and an economic subject. Goods-quality may be created or destroyed purely by a change in subjective relationships and in the absence of any change in objective conditions. A thing is never a good *per se*, but always a good for a particular economic subject—“just as every good must be good ‘for something,’ so also it must be good ‘for somebody.’” Finally, there is a distinction between goods as concrete means to ends, which as such meet the criteria of an economic good, and goods as non-marginal and abstract ultimate ends, such as happiness, contentment, peace of mind and so on, which are beyond the purview of economic science. This last in particular is a crucial insight because it opens the door to the praxeological conception of economics as a science of means.²¹

²⁰ In an article pruning the errant non-praxeological elements from the Austrian goods and value theories inherited from Menger and Böhm-Bawerk's, Mises (2003 p. 185) noted that the second and third preconditions should simply be replaced with, “the *opinion* of the economizing individuals that the thing is capable of satisfying their wants.”

²¹ As Mises (1998, p. 93) pointed out, “It is customary to call the end the ultimate good and the means goods. In applying this terminology, economists mainly used to think as technologists and not as praxeologists. They differentiated between free goods and economic goods. . . . Only the economic goods are the substratum of action. They alone are dealt with in economics.” For a recent critique of the central concepts of modern welfare economics, “collective goods” and “external benefits,” based on Böhm-Bawerk's theory of goods, see Campan 1999.

Up to this point, Böhm-Bawerk was recapitulating and refining what he believed to be the gist of goods theory handed down by his predecessors in the German subjective-value tradition. One of his great theoretical breakthroughs occurred as soon as he turned to his stated task of clarifying “the categories of economic goods.” Noting that these categories must “find a place for all genuine contributions to human well being,” Böhm-Bawerk (1962, pp. 49, 50) insisted that nonmaterial “personal services” be included alongside “material goods” as a category of good, a position that most contemporary economists, especially French and English, had finally come to accept but without adequately comprehending why. Focusing first on “corporeal goods,” Böhm-Bawerk (1962, pp. 67-68) pointed out that the usefulness of such goods in satisfying human wants consisted of “the activation for the delivery of useful renditions of the forces of nature residing in them.” Indeed it was impossible to conceive of the utilization of a good in any other way than either the intentional activation or reception of the useful renditions of services emanating from the good. The fact that the useful renditions of service are based on natural powers that inhere in a material good does not imply that the good itself is a purely objective phenomenon. Böhm-Bawerk employed the example of the production and consumption of a poem to illustrate that the good is inextricably bound up with the want-satisfaction process that traverses and links the objective and subjective realms. Wrote Böhm-Bawerk (1962, p. 69):

Be it granted that the poet’s soul must have originated thought and emotion, and be it further granted that only in another soul and through intellectual powers can those thoughts and emotions be reproduced, but the path from soul to soul leads through the physical world for one stretch of the journey and on that stretch the

intellectual element must make use of the physical vehicle, that is to say, of the forces or powers of nature. The book is that physical material vehicle.

As we shall see in Part 2, Böhm-Bawerk conceived the time-consuming production process in a capitalist economy as a process that wound its course from “soul to soul” via the competitive bargaining process in factor and, eventually, consumer-goods markets and culminated by rendering a concrete service in satisfying specific human wants. Böhm-Bawerk (1962, p. 77) concluded, therefore, “the concrete renditions of service are means for the satisfaction of want in a more real sense than are goods themselves. . . . [I]t is not goods but . . . the renditions of service that emanate from those goods which constitute the smallest independent units of our economy and that the former (i.e., goods) constitute only complexes of the latter, that goods are therefore a secondary category.”²² Böhm-Bawerk’s theoretical innovation in identifying renditions of services as “the veritable basic element of our economy” followed naturally from Menger’s praxeological emphasis on “individual concrete wants” in developing the theory of marginal utility.²³

Having elucidated the fundamental position of renditions of service, Böhm-Bawerk had no trouble in establishing personal services or “the means to well-being which belong to the *subjective world of the personal ego*” as a category of good. He pointed out that in a world where slavery no longer existed neither the person himself

²² Böhm-Bawerk’s distinction between material goods and renditions of service forms the basis of the Fetter-Rothbard theory of rent: “In regard to a durable good . . . the price of the unit service is distinguishable from the price of the ‘good as a whole.’ It is obvious that *the rents are the fundamental prices*. The marginal utility analysis has taught us that men value goods in *units* and not as wholes; the *unit price* (or ‘rent’) is, then, the fundamental price on the market” (Rothbard 1993, 1:417-18).

²³ “The natural unit of means-of-satisfaction will be the one that corresponds to the means of satisfying one unit of our wants or to the attainment of one unit of our purposes. . . . For the whole make-up of the human mind and spirit is such that it is inevitable, whenever man appraises his emotions, his needs and his purposes . . . that he begins by establishing a unit of those emotions, needs and purposes” (Böhm-Bawerk 1962, pp. 74, 76).

providing the services nor the “talents, powers and qualities” that enable him to provide such services but only the renditions of service themselves can be considered as goods.

Armed with these two categories of goods, the renditions of service by material goods and by human beings respectively, Böhm-Bawerk (1962, pp. 59-66, 79-83) was easily able to show that legal claims to material goods and to partial utilization of such goods do not constitute separate categories of good. Rather, to the extent that they are enforceable—and only to such an extent—they are one of the preconditions of a thing’s goods-quality, viz., the power of disposal over the thing. A thing does not become a good until it becomes someone’s “property.” Outside a Crusoe economy this requires the recognition and enforcement of the individual’s right to control the thing. Böhm-Bawerk (1962, pp. 58-59) summarized his argument as follows: “[W]herever a good is to serve an economic purpose, there must, under all circumstances, be present some factual possession, some physical controlling power adequate for the economic purpose concerned. . . . Hence a legal right or the legalized power of disposal over a thing is nothing more nor less than a necessary reinforcement supplied by a politically organized state of the physical power which is needed by the owner of a good as a condition of its economic utilization.”

The same argument applies to contractual “rights to partial utilization” of an object, as in lease or rental contracts, which are simply rights to “renditions of service as independent economic entities” (Böhm-Bawerk 1962, p. 81). To ascribe the status of an independent good to such contractual rights would be redundant. Böhm-Bawerk (1962, p. 82) used the example of hiring a taxi to drive home his point. For the taxi passenger, “it is impossible, therefore, to speak of his power of disposal over the rendition of service

[from the taxi] as an independent good beside and in addition to the rendition of service itself.”

Böhm-Bawerk made some of his most significant contributions to economic theory when he addressed the question of whether “rights to the future yield of goods” or, what we might broadly refer to today as “financial assets” constituted a separate category of goods. In the case of a “payments-claim” or the legal right to demand repayment of a debt, which Böhm-Bawerk (1962, pp. 83-85) considered to be theoretically the most important of this group of rights, the “true goods” are “the objects themselves that constitute the matter of the debt.” These are the anticipated renditions of services that the creditor is entitled to claim at some definite time in the future. The payments-claim thus endows its owner with power of future disposal over a real thing. Hence it is not a good *per se* but merely one precondition of “future goods-quality” in the same way that a property right in a thing is one of the preconditions of “an already present goods-quality.”

Although the resolution of this issue was apparently straightforward, Böhm-Bawerk recognized that futurity was an inherent element of economizing activity and raised profound problems that had not previously been addressed by the theory of goods. Thus he initiated a systematic transformation of German goods theory into a theory of action that was not completed until his student Mises published his treatise on *Nationalökonomie* in 1940, which was rewritten and published in English as *Human Action* in 1949. His first efforts in this direction yielded seminal analyses of the roles in economizing of time, foresight, intertemporal valuations, uncertainty, causality, and “wealth computation” or monetary calculation.²⁴

²⁴ Of course, Menger had dealt with all of these topics but in a cursory and less methodical fashion (Salerno 1999, pp. 90-93).

Böhm-Bawerk (1962, p. 87) pointed out that “economic science is not concerned only with *today*,” because human beings develop “economic foresight” as soon as they begin to strive after the “objective means” for ensuring future well-being. Once this has occurred, “the future has gained a sure and important place in our economizing,” and we evaluate our anticipated wants and availability of goods against our existing wants and goods. Accordingly, “our economic behavior in the present” is “governed by the prospective presence of future needs just as if they were already upon us in the present.” Thus had Böhm-Bawerk introduced the concept of an intertemporal scale of valuations.

As Böhm-Bawerk (1962, pp. 90-92) noted, however, “nothing that is future is for us *absolutely certain*.” Thus when dealing with claims to future renditions of service—whether these be in the nature of a debt claim or the ownership of a durable good like a house—neither the actual disposal over these future goods nor, *a fortiori*, their value is assured. Rather our objective power to utilize them as well as their subjective value to us are subject to “probabilities of an infinite number of degrees of probability which will range from something bordering on complete certainty” to “mere doubtfulness” and on to “an almost disappearing possibility.” Nonetheless, the very nature of economizing dictates that such uncertain future advantages are taken account of and valued in some manner. Anticipating the distinction between what Mises (1998, pp. 105-15) later called “class probability” and “case probability,” Böhm-Bawerk did not believe that the expected values of uncertain future goods could be objectively calculated and summed up.²⁵ The circumstances determining the maturing of an individual’s claim to a specific future good into actual disposal over useful renditions of service in the anticipated

²⁵ Mises’s terms correspond to what are today called, much less felicitously, “risk” and “uncertainty.”

economic situation were unique and incommensurable. According to Böhm-Bawerk (1962, p. 91-92), therefore,

[W]e cannot differentiate ‘sure dollars’ from ‘probable dollars’ and again from ‘possible dollars’ and . . . if we could, we should not arrive at a final uniform total, any more than we arrive at a sum resulting from adding apples, pears and plums. Consequently, we can do no more than transfer the gradation in the degree of probability from the area where it exists but cannot be expressed, *the degree of probability*, to an area where it does not exist but where it can be expressed, namely, the magnitude of the prospective advantage. That is to say we modify *the magnitude of the prospective advantage* or modify the estimation of value we place upon it.²⁶

In other words, appraising the value of a claim to a future good involved an individual’s qualitative and subjective understanding or forecast of the unfolding of the unique events relating to the good’s coming into being and the transformation of this qualitative forecast into a quantitative uncertainty discount in objective and certain present dollars. Thus, for example, legal title to a house of given durability and serviceableness built on the San Andreas fault may be appraised at a lower value by an individual than title to a house of the same durability and serviceableness built elsewhere, because his power of disposal over its future renditions of service are less probable in the first case. Unfortunately, Böhm-Bawerk went astray by comparing this subjective process of appraising uncertainty discounts for future goods to the very different case of

²⁶ Thus Böhm-Bawerk’s novel approach to probability reflected implicit awareness of the gist of the criticism later leveled by Mises (1998, p. 107) against modern probability theory: “The problem of probable inference is much bigger than those problems which constitute the field of the calculus of probability. Only preoccupation with the mathematical treatment could result in the prejudice that probability always means frequency.”

objectively calculating the expected value of a lottery ticket. While correctly perceiving that its “true” expected value never equaled the actual *ex post* value of any individual lottery ticket, Böhm-Bawerk (1962, p. 92) leaped to an erroneous inference:

“Objectively considered, this manner of computing wealth (except for the case of complete certainty) *always* leads to a result that is wrong.” In fact, the appraisal of a future good or of an individual’s overall wealth, *while always fallible, is not always wrong*, because the calculation is always instrumental to economizing or action. If the act of production or exchange that the calculation informs results in a surplus of utility gained over utility surrendered, then it is correct. But this was a minor flaw in Böhm-Bawerk’s path-breaking analysis of the fundamental futurity and uncertainty that characterized all valuations and choices.

By clarifying the nature of future goods and the method of their evaluation in the present, Böhm-Bawerk (1962, pp. 100-107) was preparing the ground for his foundational explication of the nature and productivity of capital goods. He began by adopting Menger’s conception of “orders of goods” and identifying as a class of future goods the present possession of goods of “more remote order”—the term he preferred to Menger’s “higher order.” This subclass of future goods was of “paramount importance” because “to it belongs the entire mass of goods which constitute the *capital* of our economy.”

The theoretical construction of “a serial structure, or *succession of orders of goods*” embodies the idea of causality, which is intrinsic to the goods concept. For Böhm-Bawerk, then, his theory of capital is nothing more than the elaboration of the logical implications of German goods theory (1962, p. 100):

All goods, by the very terms of the concept ‘good’ itself have one feature in common. That feature is that they are capable of constituting a link in the chain of cause and effect—the causal chain . . . between human needs and the satisfaction of those needs. Now this causal relation may be direct or remote; it may be immediate or it may function by way of one or more intermediate links of the chain. In the nature of things these intermediate links of the chains are themselves goods, and the transmission of the utility takes place in such manner that from goods of remote utility there are first produced other goods which are closer by one stage to the (final) stage of direct utilization; then through these goods there is effected either the direct satisfaction of the want, or the production of still another good which, in its turn, occupies a place that is one stage closer to that which represents the satisfaction of the human want.

Referring to Menger’s two laws, Böhm-Bawerk (1962, p. 102) argued that the goods-quality and value of every good of remote order is conditioned by the goods-quality and magnitude of value, respectively, of the goods of successively less remote orders for whose production they serve. Ultimately every link in the causal chain of goods derives its economic significance “from *one and the same source, namely, the want.*” In defending Menger’s law of value that the total value of all goods of remoter orders are determined by and exactly equal to the value of the goods of the first order to whose production they contribute, Böhm-Bawerk was the first economist to state the law of opportunity costs as it applies in production.²⁷

²⁷ As Hayek (1992, p. 112) noted, despite the fact that it has come to be called “Wieser’s law,” Böhm-Bawerk “developed the law of costs with utmost lucidity three years before Wieser, albeit in off- hand fashion and in an obscure part of his book.”

The objection that Böhm-Bawerk aimed to refute by enunciating what he later called “the law of cost” stemmed from a misinterpretation of the empirical fact that some of the goods of remoter order employed by a single producer, particularly the various kinds of labor, already possessed an established value or price. This being the case, the opponents of Menger’s law argued, how could it be reasonably maintained that the value of the product determined the value of the labor and capital goods expended in its production rather than the other way around. Böhm-Bawerk responded that many goods of remoter order had “a multiplicity of ways of utilization” and therefore drew upon “a multiplicity of sources of value.” He then proceeded to elaborate this insight regarding the existence of nonspecific factors of production into the doctrine of opportunity costs:

If a good of remote order, such as human labor, because of the multiplicity of the possible avenues of application attains an estimation of value via a large number of channels, then its value with respect to one single object to which it has been applied and which is considered separately by itself, will appear to be something definitely established and firmly determinable. And in that event, since we are inclined to use goods of definite value for the production of other goods only if the product can attain at least equal or perhaps greater value, than it is easily possible that the labor, regarded from a biased viewpoint, can appear as *causing* the value of the product (Böhm-Bawerk 1962, p. 103-104, fn. 5).

It is indeed a tribute to both his creative genius and his intense single-mindedness that Böhm-Bawerk conceived the law of opportunity costs as a stepping-stone to the clarification of a problem in the foundations of capital theory.

Although the value of goods of remoter orders is a “derived value,” it is also “prospective in nature” and “anticipates the facts.” The reason for the “anticipatory” or forward-looking character of the value of remoter-order goods is precisely that they must be transformed through time-consuming processes into goods of progressively less remote orders before they can finally release their future utility. For Böhm-Bawerk (1962, pp. 95), however, the present value placed on goods of remoter order and on future goods in general is the result of an individual and uncertain process of “wealth computation.” This process is “an operation replete with subjective interpretations and insinuations.” This mental operation is designed to give the economizing individual more than a mere listing of “the things comprising [his] wealth”; rather it is designed to provide “some estimation of their significance, their economic importance . . . their *value*, in order that we may add them up and compare them with other accumulations of wealth (Böhm-Bawerk 1962, p. 86). The uncertain, subjective and fluctuating “capital values” that are summed up into an individual’s wealth are thus distinct from his objective possession of presently existing, concrete goods of remoter orders that constitute “capital.”²⁸ Böhm-Bawerk (1962, p. 105) characterized the relationship between capital value and capital in the following manner:

All capital value is an *anticipation* of the value of the prospective consumptible end-product. Production, of which capital is the tool and the material (e.g., machines and raw materials) is the condition, the justification and the

²⁸ Elsewhere Böhm-Bawerk (1962, p. 97) differentiated “the materials of wealth” from the “forms of wealth.” The former, which include, in addition to concrete capital goods, both durable and stored consumer goods, “are patently identical with the genuine goods which in actual fact lend support to our life and our well-being.” The latter are the appraised values of our diverse rights and relationships that bear some probability of the promise of future renditions of service and are “mere creatures of our subjective interpretations.”

materialization of the value which has temporarily been ascribed to capital goods; it is the process by virtue of which the future value of a capital good is transmuted into the present worth of the matured consumptible end-product, the process which leads to capital's fulfillment and justification.

Although Böhm-Bawerk did not here address the issue of how monetary calculation of capital values guided entrepreneurs in allocating concrete capital goods, his clear distinction between the two concepts was a seminal contribution to economic science and was a crucial step on the road to the development of a complete theory of monetary calculation by Mises.

Having thus thoroughly analyzed the category of future goods and incorporated it into the theory of goods, Böhm-Bawerk was finally ready to pose the defining, but theretofore unasked, question of capital and interest theory that would shine new light on the avenue to its solution. Böhm-Bawerk (1962, p. 105) first restated his conclusion that production, which involved "transformation of capital goods into consumptible goods, is not a process of creating values." Rather value is attributed to capital goods in anticipation of their time-consuming, *physical* transmutation into objects directly yielding renditions of service in satisfying concrete human wants. Hence the "productivity of capital," which has no existence in the dimension of value, could not be the cause of the value phenomenon of interest. Thus, as Böhm-Bawerk (1962, p. 106) was first to perceive, the central question to be answered in explaining the phenomenon of interest is: "If the prospective value of the product has already been ascribed to the producing capital in advance, how is capital, in the course of production to produce a 'surplus value'?" Or more concisely: "Whence this phenomenon of capital outgrowing itself?" Not only

would this simple query become forever associated with Böhm-Bawerk's name, but his tenacious and meticulous pursuit of its answer eventually yielded a brilliant vision of the dynamic capitalist economic process that has suffused the works of his doctrinal descendants down to the present day.

With his typical modesty Böhm-Bawerk (1962, p. 106) concluded that his momentous breakthrough in capital and interest theory, which was the fruit of his ingenious reconstruction of goods theory, was “merely a slight indication of the existence of a problem which, in my opinion, has received far too little attention on the part of economic science. I hope to be able to offer a solution at some future time in an independent work toward the preparation of which the present work constitutes a preliminary labor.” These words were written in 1881, at the age of thirty. Before he turned forty he would offer to the world a solution that would propel him to the forefront of economic theorists. This solution and his further contributions leading up to it will be dealt with in Part 2 of this paper.

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