Re-reading Carl Menger's *Grundsätze*
A Book That "Cries Out To Be Surpassed"

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"… to enter a path where even error is not entirely without merit" (VI [46])[1]

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Abstract

The paper reconsiders Menger's *Grundsätze* (1871). It recalls, first, that the theory of marginal utility was developed by representatives of the so-called "German Use Value School"; secondly, that Menger's criticism of the theories of value and distribution of the classical economists is based on severe misunderstandings; third, that his alternative construction is marred with difficulties spotted by Böhm-Bawerk and Wieser; fourth, that relative prices reflect inter alia the substances that "transmigrate" into commodities in the course of production. The *Grundsätze* are nevertheless a "great" work, because it invites to correct what is problematic in it and develop what is sound.

Keywords: Classical economics; Essentialism; German Use Value School; Imputation problem; Income distribution; Marginalism; Menger, Carl; Production; Rau, Karl Heinrich; Ricardo, David; Smith, Adam; Subjectivism; Successivism; Value.

JEL codes: A12; B12; B13; B31; D11; D24; D33; D42; D46; D51; D80; N00; O10.

[1] All isolated page numbers refer to Menger's *Grundsätze* (1871), while page numbers in square brackets refer to the English translation of it (Menger 1981). Unless otherwise noted, emphasised parts in quotations are Menger's.

1. Introduction[*]

Re-reading the works of major economists after years or decades typically confronts one with an author who seems to have changed in the meantime, some more, others less. In preparation of the Nice conference on Menger, I re-read his *Grundsätze der Volkswirthschaftslehre* (1871) plus some of his theoretical essays. I had studied his magnum opus for the first time more than forty years ago and had returned to it only in order to check specific propositions by him or find their precise locations. My view of his contribution today is in no small degree shaped by a significantly better acquaintance especially with the works of other major Austrian economists, in particular Eugen von Böhm-Bawerk, Friedrich von Wieser and Friedrich August Hayek. While these were keen to follow in Menger's footsteps, his reasoning did not always stand up to their critical scrutiny and inspired them to try to shed its weaknesses and improve upon its strengths. If there had ever been an "Austrian School" of economics, it was characterised by marked differences of opinion right from the beginning (see Kurz 2016).

In this paper I focus attention almost exclusively on what I consider to be some of the most important and relatively well worked out elements of the *Grundsätze,* disregarding the concluding chapter on money. (Menger's monetary theory was the object of several other contributions at the conference.) Menger put forward a number of valid observations of what reality suggested and stimulating ideas around them, but he did not always develop them sufficiently so that they could be transformed in analytical propositions and intertwined with the rest of his theory. Several of what may be called solitaires fell on fertile ground with his followers, who see Menger first and foremost through the lens these offer. I will briefly summarise what I consider to be the most important items in this regard in a separate section (Section 4). While I do not wish to dispute their importance in the *Grundsätze*, I feel justified to largely neglect them in what follows on the following grounds: first, they consist mostly of statements that he did not succeed in elaborating, in particular the role of uncertainty and the generation and absorption of new economically useful knowledge. Secondly, it is unclear to what extent they might affect the behaviour of the economic system as a whole and especially its stability, or lack thereof; think of the error-proneness of human decisions and actions, contagion and herd behaviour. Third, they do not in a straightforward and clear manner affect Menger's criticism of the classical theory of value and distribution. Hence, while I perfectly acknowledge that there is the "other" Menger, there is also "my" Menger and his explicit intention to surpass the

[*] This is the revised version of a paper given as the concluding lecture at the International Conference "Carl Menger one century later: originality and modernity" in Nice, France, 24-26 November 2021. I should like to thank Sandye Gloria and Ludovic Ragni for effectively organising the meeting against allpandemic odds, Marylène Fontana for her help and Sandye, Richard Arena, Gilles Campagnolo, Günther Chaloupek, Alexander Linsbichler, Ferdinando Meacci and Richard Sturn for valuable discussions during the days of the meeting. I am also grateful to Stephan Böhm, Günther Chaloupek, Christian Gehrke, Alexander Linsbichler, Anna Marcucci and especially Hans-Walter Lorenz for numerous valuable comments and suggestions on an earlier draft of this essay. It is only fair to say that some of the aforementioned see Menger's contribution in a different light; see, for example, Böhm (1992). Clearly, I alone am responsible for the following text and any remaining errors and misinterpretations contained in it.

doctrines of the classical economists. He was keen to explain all prices, including the rates of remuneration of factor services, from a unified point of view (X, 143) – that of scarcity.[2] In this way the so-called patchwork of the classical economists, which combined the principle of reproduction and that of scarcity, was supposed to be overcome. What precisely did Menger criticize in their doctrines, was his argument cogent and did he succeed in rendering their analyses obsolete?

In tackling these problems, I will refer occasionally to the most advanced version of the classical theory of value and distribution. This might be considered as unfair, because it is confronted with Menger's doctrine rather than some modern elaboration on it. Yet I am not aware that there are elaborations that go much beyond what Menger inherited to us.[3] Things are different in the field of classical economic theory ever since the publications of the edition of Ricardo's *Works and Correspondence* (Ricardo 1951-73), followed by Sraffa's book *Production of Commodities by Means of Commodities* (1960). It is to be stressed, however, that with a few exceptions the following argument could have been developed without any reference to modern reformulations of the classical system by simply comparing Menger's statements with what Smith and Ricardo actually have written and how especially Böhm-Bawerk and Wieser have received his work. It is in the interest of greater clarity that I occasionally refer to modern contributions to classical economic theory.[4]

I shall use the first edition of the *Grundsätze*, because the status of the so-called second edition, which was published by his son, Karl Menger, is unclear. In this context two facts ought to be recalled. First, the *Grundsätze* of 1871 contain only the "First, General Part" (*Erster, Allgemeiner Theil*) of a work which according to Menger's son was to be complemented by three further parts: Part 2 devoted to income distribution, credit and paper money; Part 3 to applied matters, including production and trade; and Part 4 to a critical discussion of the existing economic order and economic reform proposals (see Hayek 1968: XIII). Alas, none of these parts ever materialised. The *Grundsätze* are therefore a torso and do not deal with all the important themes that would have to be covered in a comprehensive investigation of economic problems. For instance, the book does not discuss the demarcation between the public and the private sphere and public and private goods. It also does not deal with foreign trade and the factors affecting the pattern of specialisation amongst countries. It presupposes essentially a closed economy with no discernible state activity, such as taxation, public expenditures and public debt. The focus

[2] We will see below in Section 5 that this claim is difficult to sustain vis-à-vis the fact that the prices of consumer goods (that is, "goods of first order") Menger takes to be given, decided exclusively in terms of consumers' utility estimations without, however, disclosing the precise mechanism by means of which this is supposed to happen. Incidentally, the German word for scarcity, *Knappheit*, is not used in the *Grundsätze*.

[3] See in this contex also Oskar Morgenstern (1972).

[4] As Sraffa's unpublished papers and his personal library kept at Trinity College, Cambridge, show, Sraffa in the second half of the 1920s and early 1930s studied carefully the works of major Austrian economists, including Menger, Böhm-Bawerk and Hayek, but also Vilfredo Pareto and Gustav Cassel. He jotted down comments on them either in notes he wrote or in the margins or flyleafs of the books he read.

is exclusively on catallactics. While Menger develops his reasoning against the background of an economy that grows and becomes more productive over time, he does not in any depth analyse its dynamic properties. There is no discussion of saving and investment and how these get coordinated, and what happens in the case of coordination failures. While Menger mentions technological progress in passing, he does not study how inventions come about, which of them become innovations and how new economically useful knowledge gets diffused throughout the economy. This is in marked contrast with Adam Smith's focus in *The Wealth of Nations* on the growing social division of labour – the Scotsman's catch-all concept of socio-economic development. Some of the latter parts of Menger's book, which deal with the situation in highly "civilized" societies, may even without too much of an exaggeration be said to resemble somewhat the marginalist concern of the allocation of scarce resources within a largely static framework of the analysis. Like many marginalists, Menger also advocated explicitly the view that the sole end of all economic activity is consumption.[5]

Soon after the publication of the *Grundsätze*, Menger informed friends that he intended to bring out a revised second edition. Alas, during the half of a century until he passed away in 1921 he failed to realise his plan. After his book, Menger published relatively little on economic theory, as is evidenced by the four volumes of his *Gesammelte Werke*, edited by Hayek (Menger 1968). For several years, much of his energy was absorbed by a (in my view largely barren) dispute over the appropriate method in the social sciences (*Methodenstreit*) with Gustav Schmoller and other representatives of the younger German Historical School (see Menger 1883, 1884, reprinted in vols II and III of Menger 1968; see also Milford 1989).[6] However, it is doubtful that this has been the main reason for his almost total abandonment of earlier publication and revision plans. As will be argued below, there is rather reason to think that compelling criticisms levelled at his theoretical construction and the elaboration of alternatives to it put forward by Böhm-Bawerk and Wieser had a sobering effect on Menger's aspirations as an economic theorist and may have prompted him to give up his original intentions.

[5] Numerous economists and political philosophers of different orientations stressed instead also the power motive. David Ricardo, for example, wrote: "We all wish to add to our enjoyments or to our power. Consumption adds to our enjoyments, – accumulation to our power." (We cite according to Piero Sraffa's Ricardo edition, *Works* VI: 134-5). It must be added, however, that power plays an important role in Menger's discussion of monopoly and bilateral monopoly, but what is absent is a discussion of systemic power as it was analysed, for example, by Adam Smith with regard to the "dispute" over wages between workers and "masters", in which the latter are said to maintain the upper hand. For a discussion of what may be called the *bête noire* in much of economics, power, see Kurz (2018).

[6] Menger (1884: IV) characterised the Historical School in the following way: "The point of departure, as well as the highest achievement of its evolution, is an external combination of solid historical knowledge and a careful but leaderless eclecticism in the domain of our science." He criticised Schmoller also for his authoritarian and intolerant professional attitude. A particularly worrying expression of it is contained in Schmoller's inaugural address of 1897 as rector of the Friedrich-Wilhelms-Universität (later Humboldt Universität), Berlin, in which he proclaimed: "Neither strict Smithians nor strict Marxians can today lay claim to being taken seriously [*vollwertig*]" (quoted in Weber in MWG, part I, vol. 12: 193). Not only Max Weber was strongly opposed to statements like this.

The fact that Menger's oeuvre is comparatively small, incomplete, contains doctrines that were highly controversial amongst his closest followers, and that we do not have his last words on the issues under discussion, puts modern readers into a difficult position: How could they possibly decide with confidence what the mature Menger thought about the various topics he had actually dealt with, or had planned to deal with in books that were never written? One should of course try to get out as much as possible from Menger's existing publications, newspaper articles, comments on economic policy issues, talks he gave, and so on.[7] However, this will not completely remove the uncertainty clouding Menger's standpoint on matters of economic theory. The limited thematic scope of his theoretical publications bears also the danger of taking the part for the whole, which involves a potentially highly misleading picture of the views he may actually have held. Be that as it may, I decided, as already mentioned, to focus attention almost exclusively on the *Grundsätze* and stay away from speculations about the development of Menger's thoughts. This is perhaps also justifiable in terms of the fact that his reputation and prestige as an economic theorist rests largely upon this book, whereas the so-called second edition had a negligible impact on the reception of his ideas.

The composition of the essay is the following. Section 2 is devoted to a discussion of the question of what constitutes the "greatness" of a work and explains implicitly also the subtitle of this essay. Section 3 turns to major influences on Menger's thought: British classical political economy and especially Adam Smith's *Wealth of Nations* and David Ricardo's *Principles of Political Economy*, on the one hand, and contributions of what became known as the "German Use Value School", with Karl-Heinrich Rau and Wilhelm Roscher as two of its towering figures, on the other hand. The focus of attention is on which elements in the analyses of these authors Menger adopted, which he modified to suit his purposes and which he rejected. As has already been explained, Section 4 summarizes briefly elements of Menger's analysis that play hardly any role in the sequel of this essay, which focuses on his criticism of the classical theory of production, capital, value and distribution. Section 5 deals, first, with Menger's time-phased, unidirectional view of production and confronts it with the circular view of the classical economists. Next his concept of "prospective price" is expounded, which highlights his "individual" or subjectivist point of view: deciding about the satisfaction of their needs in the future, consumers are assumed to determine somehow the future prices of consumption goods, which are then taken to radiate back in time and determine the prices of the inputs needed in their production.[8] Menger's "forward looking" approach and his method of Compounding the prices of inputs to give the prospective prices of consumer goods is then compared to the classical economists' "backward looking" approach and their method of

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[7] For a detailed assessment of Menger's works by a passionate Mengerian, see Campagnolo (2010, 2012). Campagnolo deserves special credit for having screened hitherto unpublished archives in Japan, especially the one at Hitotsubashi University, Tokyo, and in the United States at Duke University.

[8] Bukharin ([1919] 1927), who had attended lectures by Böhm-Bawerk in Vienna, contrasts the "individual" and the "social" point of view and takes Karl (sic!) Menger to be a major representative of the former and Marx of the latter.

Reduction of prices to wages, profits and rents. Section 6 has at first a closer look at Menger's attempt to solve the "imputation" problem implied by his approach and the criticism levelled at it. Wieser objected that Menger's attempt leads to nowhere and that a proper solution would request setting up, and solving, a system of simultaneous equations. In carrying out this request himself, Wieser arrived at a system that exhibits salient features of the classical economists' doctrine and puts in sharp relief the objectivist elements at work. Next, Menger's explanation of income distribution is scrutinised. In his view, this problem and the imputation problem are two sides of a single coin. The focus of attention is on Menger's theory of capital and profits (interest), which treats capital goods proper and their utilisation as two separate goods. This led Böhm-Bawerk to accuse Menger of double-counting. It is also shown that Menger's assault on Ricardo's theory of rent lacks cogency and that his own theoretical construction depends crucially on the idea that the principle of intensive diminishing returns and intensive rent can be generalised to all factors of production and all industries alike. Section 7 turns to Menger's unyielding opposition to the idea that in explaining exchange values and relative prices the fact that commodities represent some objective properties, are carriers of some "substance(s)" or other, could play a role. Following Aristotle, he rejected the view that when commodities are exchanged for one another in a given proportion, this means that there must be a "common third", or *tertium comparationis*, that renders them commensurate. His criticism was directed at the classical economists, who reduced commodities either to the amounts of means of sustenance advanced in support of workers employed directly or indirectly in their production (William Petty) or to the corresponding amounts of labour "embodied" in them (Ricardo), viz. what became known as the labour theory of value. It will be argued that Menger's point of view is difficult to sustain: production involves the transformation of matter and energy from one form to another. Products therefore represent "masses cachées", hidden masses, as one observer remarked perceptively. Interestingly, a close reading of the *Grundsätze* confirms that Menger, who counted economics amongst the "empirical sciences", could not stick rigidly to his view and admitted that goods are possessed of "inherent characteristics". It is then recalled that according to the classical authors labour values explain relative prices only in exceptionally special circumstances. Ricardo, for example, relied on labour value-based reasoning only as a simplifying device and makeshift solution. He was perfectly aware of the fact that with a positive rate of profits compound interest effects thwart the labour value-reasoning. Interestingly, authors such as Böhm-Bawerk and to some extent also Menger developed their arguments, at least in parts, on the premise that the rate of profits is nil. Both Menger and Marx entertained an essentialist approach to the theory of value, the former in terms of abstract use value and cardinal utility, the latter in terms of abstract labour. Section 8 contains concluding remarks.[9]

[9] For an attempt to describe and assess the debates between advocates of classicism, Marxism and marginalism in German speaking countries, 1871-1932, see Kurz (1995).

2. On the "greatness" of a work

Do Menger's *Grundsätze* deserve the attribute "great"? There is no unanimous agreement in this regard amongst economists. While some admire Menger and praise his achievements, others dispute that he contributed important insights that are both novel and correct. But what constitutes greatness?

Joseph A. Schumpeter started his reasoning in *Capitalism, Socialism and Democracy*, first published in 1942, with a thorough discussion of Karl Marx's contribution to social theory and wisely opted for a definition of greatness of a work that is "independent of our love or hate", that is, our ideological predisposition. A work is great, he insisted, if it cannot die, that is, has "revivals" that reflect its "vitality". He added:

> We need not believe that a great achievement must necessarily be a source of light or faultless in either fundamental design or details. On the contrary, … adverse judgment or even exact disproof, by its very failure to injure fatally, only serves to bring out the power of the structure. (Schumpeter [1942] 2008: 3).

The conference on Menger in Nice as well as several other conferences organised worldwide on the occasion of the centenary of his death and the 150th anniversary of the publication of the *Grundsätze*, provide ample evidence of the continued interest in Menger's work and thus of its greatness in the sense Schumpeter intended.

However, there is another fact to which the attention ought to be drawn. Max Weber expressed it most convincingly in a talk to students in Munich in 1917, entitled "Wissenschaft als Beruf" (*Science is a vocation*). He pointed out that a work of art that "truly achieves 'fulfillment' will never be surpassed; it will never grow old" (Weber [1917] 2004: 11). Works of scientists, on the contrary, will typically "be obsolete in ten, twenty, or fifty years." He stressed: "That is the fate, indeed, that is the very *meaning* of scientific work" (ibid). He went on:

> Every scientific "fulfillment" gives birth to new "questions" and *cries out to be surpassed* [thus the sub-title of this essay] and rendered obsolete. Everyone who wishes to serve science has to resign himself to this. The products of science can undoubtedly remain important for a long time … But we must repeat: *to be superseded scientifically is not simply our fate but our goal. We cannot work without living in hope that others will advance beyond us. In principle, this progress is infinite*. (Weber 2004: 11; second emphasis added).

Seen from this vantage point, the interest in Menger today will to a large extent reside in whether his contribution gave birth to new questions and how loudly it "cried out" to be "surpassed and rendered obsolete". In other words, Menger's greatness (and a fortiori the greatness of any other scholar) is measured first and foremost by the stimulus he gave and still gives today to students and followers. How did he inspire them? Did they confirm broadly his intuitions and verify some of his specific propositions and doctrines? Did they find flaws in his argument that could not be remedied and challenged his overall construction? Or could these flaws be overcome and lead to an improved theory that preserves largely the *Gestalt* of what Menger had left? It hardly needs to be stressed that from this perspective admiration for a scholar is admissible, blind admiration is not.[10]

What applies to the relationship between Menger's students and critics, Böhm-Bawerk and Wieser in particular, and Menger applies equally to the relationship between Menger and the authors he studied and from whose works he benefited, including the classical economists: Menger proclaimed openly that his aim was to surpass their theories of value and distribution and render them obsolete. How well did Menger understand their contributions and which of their doctrines did he adopt and elaborate, which did he reject, and why? Are the criticisms of earlier and contemporary authors he put forward fair and compelling? In which respects did he manage to surpass them in terms of his own contribution, in which respects did he fail to do so? Did he fall behind them in some respects?

The following section provides a brief summary account of what are arguably the two most important sources of, and challenges to, Menger's theoretical construction – the British classical economists, especially Adam Smith and David Ricardo, and representatives of the "German Use Value School" (*Deutsche Nutzwertschule*). There are, of course, other authors that had a considerable impact on his thought, including Aristotle and Jean-Baptiste Say. But in my judgement their impact does not compare to that of the classical and German writers.

3. Major influences: British Classical Political Economy and German Use Value School

The British classical economists[11]

Menger wrote his *Grundsätze* with the explicit intention to supersede the doctrines of Adam Smith and Ricardo.[12] The core of their doctrines he identified with the explanation of relative prices of commodities in terms of their costs of production. These they reduced to quantities of labour expended directly and indirectly in their production. According to Menger, starting from labour in explaining values and prices was fundamentally mis-

[10] Followers of Menger today have inherited his oeuvre and will be judged according to how they further his legacy.

[11] For the sake of brevity, in the following I refrain from documenting in detail the views of the classical authors; see therefore the historical notes in Kurz and Salvadori (1995); see also Kurz and Sturn (2013), Kurz and Salvadori (2015b) and Kurz and Salvadori (2022), which cover all cases dealt with here.

[12] Despite this intention and his occasionally harsh criticism of Adam Smith, he held the author of *The Wealth of Nations* in high esteem, which is inter alia reflected by the fact that when tutoring Crown Prince Rudolph of Austria in political economy, he chose *The Wealth* as the basic reading. Compared to the *Grundsätze* with its extreme "individual" outlook, *The Wealth* is a much more complete and balanced economic text, amongst other things keen to delineate newly the realms of the private and the public sector. Teaching the offspring of a monarch a subject in terms of a book that had next to nothing to offer in this regard would certainly not have pleased Emperor and Court.

taken: the right starting point, he surmised, is the needy individual and its subjective estimation of things and goods, since it decides about what is to be produced, and how. The classical authors had, so to speak, put the cart before the horse. Putting things in their right order requested a *causal genetic* explanation that traced values, prices and the remuneration of factor services back to the utility individuals attributed to things. While Menger did not say so explicitly, in several places he insinuated that the classical authors did not consider the usefulness, or utility, of a product a *condition sine qua non* for it to have value. Nothing could be further from the truth. Ricardo (*Works* I: 11) emphasized: While utility "is not the measure of exchangeable value, … it is absolutely essential to it."

Causality and time-phased production. While Menger rejected the causality invoked by the classical economists', he shared their conviction that a general analysis was needed in order to understand the working of the economic system as a whole. This was characterised by private property in the means of production and consumption, the institution of wage labour, a growing social division of labour, the coordination of economic activity by means of interdependent markets, and the use of money as a medium of exchange. Very much like Smith and the classical economists more generally, Menger stressed the time-consuming character of *all* economic activities. He and the classical authors would have received the assumption of "instantaneous production", entertained in modern macroeconomics, with astonishment and disbelief. His attention focused, however, on production which he conceived as a linear or unidirectional process of finite duration – a sort of one-way avenue of limited length – that leads from inputs, that is, "goods of higher order", via several intermediate goods, or "goods of lower order", to final goods or means of consumption, that is, "goods of first order". While in the classical economists and especially David Ricardo we encounter cases of unidirectional production in numerical examples, designed to illustrate the argument in a simplifying manner, in their more general perspective on the matter they conceived production as a circular flow – the production of commodities by means of commodities. François Quesnay had famously proposed such a concept in the *Tableau Économique*, and Adam Smith had for a while tinkered with the idea of dedicating *The Wealth* to the head of the physiocratic school. In a circular flow, the reduction of a product (more precisely: a "necessary") to dated quantities of inputs, including labour, is, of course, infinite and not finite, as in the unidirectional case of Menger and other Austrian economists.

The classical economists were convinced that the series was convergent. On the assumption that all inputs (means of production and means of sustenance) can be reduced to labour, the sum of the series gives the amount of labour bestowed directly and indirectly upon a commodity, that is, the labour "embodied" in it, as Ricardo put it. In this perspective commodities reflect something real – the *physical real costs* or the *labour*, which have to be borne in order to overcome the *difficulty of production*. These costs have to be covered by the prices of commodities. Menger did of course not dispute that production involves costs, but he was of the opinion that the prices of goods of first order come first and costs only second, because they are taken to be derived from them. The subjective utility estimations of individuals determine directly the values and prices of consumption goods. These are given when it comes to the determination of all other prices, including the distributive variables. Menger's approach implies a causal, *successivist* analytical structure, in which (some) prices are explained in terms of (some other) prices.

The distribution of the social product. A further important difference between the analyses of Menger and the classical economists concerns their views of society and the laws according to which the social product is distributed. The classical economists took society as they experienced it, sub-divided in social classes – workers, landowners and capitalists. The members of these classes were seen to perform different roles in the economy, and a major concern of the classical authors was to establish the laws governing the distribution of the social product as wages, the rents of land and profits (and interest) in different stages of socioeconomic development. In one part of their theories, the theory of value and distribution, they explained the magnitudes of the distributive variables and the prices that supported them. This they did in an *asymmetric* way by taking real wages and the actual system of production as given and ascertaining property incomes, rents and profits, *residually*. This became known as the classical *surplus approach* to the problem of income distribution. In another part of their theories, the classical economists then analysed the factors affecting the long-run development of the economy and how this impacted on income distribution. Their focus was on capital accumulation, population growth, an increasing scarcity of natural resources and the role of different forms of technological progress. The central variable around which their reasoning revolved was the *general rate of profits*, which, in conditions of free competition, was taken to tend towards uniformity across all sectors of the economy due to the self-seeking behaviour of agents.[13] Was the general rate of profits bound to fall as the system developed, if yes, why? And did a fall decelerate the dynamism of the economy and make it end in a stationary state or, worse, send it into a tailspin?

Menger also sought to explain the level of wages, rents and profits in given circumstances and over time in different stages of civilisation. However, his approach differs markedly from that of the classical economists. While his reasoning is not always clear, he can be interpreted as considering all distributive variables determined indiscriminately in a *symmetric* way by the demand for and the supply of the services of the various factors of production. He may therefore be said to be one of the originators of a tradition in economics that became prominent with the rise of marginalism at the end of the nineteenth century. He sensed that this presupposes the (close to) full employment and full utilisation of all productive resources at all times.

General rate of profits? It is striking that in the *Grundsätze* the concept of a competitive rate of profits, which in Smith, Ricardo and later economists, including Austrians, was a focal point of the analysis, plays no role at all and a fortiori there is also no discussion of

[13] They allowed for differential rates of profit (and also of wages), if different employments of capital (and labour) were subject to different persistent circumstances; for an account of their views, see Kurz and Salvadori (1995: chap. 11).

its long-term trend. As will be argued below, Menger's theory of distribution, while rather opaque, contains several ideas that foreshadow concepts that became prominent with Böhm-Bawerk and marginalist theory more generally, such as a positive rate of time preference and the idea of the superiority of more roundabout processes of production (or, in neoclassical terms, that labour productivity rises with capital intensity). Clearly, Menger was not yet possessed of marginal productivity theory, but the "loss principle" (*Verlustprinzip*) he invoked points in its direction by asking, what would be the reduction in output if some input would be available in a smaller quantity.[14] The technical condition to be met in order for the social product to get just exhausted by the claims of the proprietors of the various productive resources, neither more nor less, that is, linear homogeneity, is not yet to be found in Menger.[15]

We now turn to the German Use Value School. Its representatives started from a critical examination of Adam Smith's doctrine with special reference to what was dubbed the "water-diamond-paradox". They felt the need to widen and deepen the concept of "use value", in the course of which marginal utility theory emerged in the first half of the nineteenth century.

The German Use Value School

Menger dedicated the *Grundsätze* "with respected esteem" to Wilhelm Roscher, the leading German economics professor at the time and a dominant figure of the older Historical School:

> It was a special pleasure to me that the field here treated, comprising the most general principles of our science, is in no small degree so truly the product of recent development in German political economy, and that the *reform* of the most important principles of our science here attempted is therefore built upon a foundation laid by previous work that was produced *almost entirely* by the industry of German scholars. (X [49]; emphases added)

In view of this statement one can only wonder, how was it possible that for a long time Menger's intellectual indebtedness to the Germans could pass unnoticed? Why did Erich Streissler (1990), who in another paper (Streissler 1997) called Menger a "German economist", have to remind us of what ought to have been obvious? Was it because readers regarded Menger's dedication as an expression of the notoriously void courtesy in the Habsburg Empire? But how could they ignore the numerous and detailed references to German authors in often longish footnotes in the book (see, for example, 78-81 and 109-

[14] Johann Heinrich von Thünen, whom Menger cites, had established the marginal productivity principle. Friedrich von Wieser (1884) was then to combine it with the marginal utility principle in a fully-fledged marginalist analysis several years after the publication of the *Grundsätze*.

[15] Knut Wicksell and Philip Wicksteed drew the attention to this condition. It deserves to be noted that the surplus approach of the classical economists, which considers profits as a residual, is not subject to this condition and actually could not be so, because the social division of labour is taken to depend on the "extent of the market" (WN I.iii.1). According to Allyn Young (1928: 529), this is Smith's central "theorem" and involves dynamically increasing returns.

113).[16] Also, Menger's claim to originality appears to be rather modest, crediting German scholars with having produced "almost entirely" the foundation upon which his own attempt at a "reform" of the most important principles of political economy rested. Could he possibly have aspired to become the founder of a fundamental re-orientation in economics? Be that as it may, Streissler (1997), for good reasons, rejected "the idea that Austrian economics arose armour-clad like Pallas Athena from Menger's brain".

In which regard did Menger benefit from the Germans? Did he absorb all that was valuable in their contributions? In which regard did he part company with them?

Cameralism and Adam Smith. Menger did not follow the Germans especially in the following two respects. First, these authors were brought up in the cameralist tradition of German economics. This tradition permeates much of their writings and attributes to the state and the public sector important roles for the functioning of society and economy. For this reason they generally did not endorse methodological individualism, but entertained a "social" point of view of economy and society. The aim of "reconstructing" society by starting from an isolated needy individual, Robinson Crusoe, was alien to them. At a given moment of time society shaped the individual much more than the individual shaped society. Apart from individual needs there existed collective, public and cultural needs, conditioned by society and the social groups to which people belong. While utility (*Nutzwerth*) became an important concept, they were no advocates of utilitarianism or hedonism.

In the *Grundsätze*, the state and the public sector play hardly any role. In some of his extant writings Menger expressed his opinion on aspects of the theme. These show that he did not propagate a society in which individuals are entirely left to their own devices, or a society with a minimum public sector at best, as it is often ascribed to Adam Smith.[17] There is no statement by Menger I am aware of to the effect that such a society would be sustainable and possessed of desirable properties.[18]

Revolution or reform? Secondly, the majority of German economists, to whom Menger refers, did not consider themselves as fundamentally breaking away from the received classical doctrines especially of Adam Smith, but rather as a correction and further elaboration of them. Bruno Hildebrand (1812-1878), in 1848, called Adam Smith the "Immanuel Kant of economics". Many of these authors saw themselves as Smithians of sorts.

[16] The translators of the book into English decided to move the "excessively long" footnotes ([39]) either to appendices or integrate them in the text.

[17] To be clear, the state in Smith is not the proverbial "night watchman state". It is rather, as Viner (1927) has shown, an entity of significant importance. Its tasks are not given once and for all, but will have to be adapted to the changing challenges the community faces in the course of its development. Smith's criticism concerns excessive state interventions in mercantilism and must not be (mis)interpreted as an opposition to state activity as such. He rather pleads for a modern constitutional and achievement-oriented state and against the old authoritarian one; see Kurz and Sturn (2013). As Smith stressed with regard to deliberate exaggerations contained in his book, these serve the purpose of alerting the reader to long established, but problematic views on important matters that he wished to correct: "If the rod be bent too much one way, ... in order to make it straight you must bend it as much the other" (WN IV.ix.4).

[18] Günther Chaloupek reminded me that Menger in his essay on money ascribes to the state the important role of regulating the medium of exchange from a certain point of its development onwards.

They tended to accept large parts of his doctrine, but with reference to Smith's water-and-diamond paradox in the theory of value (see WN I.iv.13), they gradually elaborated the concept of use value as a magnitude that depends on the quantity consumed of a commodity.

Marginal utility theory. Close scrutiny shows that only some building blocks of Menger's analytical edifice are genuinely novel, whilst the majority of them are already to be found in the literature he consulted. What is new, however, is the amalgamation of new and old. According to Schumpeter (1912), innovations consist essentially of "new combinations" of already known particles of knowledge, and in this respect Menger's *Grundsätze* clearly constitute an innovation.[19] However, it is a widespread myth in economics that Menger (and William Stanley Jevons) invented marginal utility theory. According to Chipman (2013: 42), the credit belongs to Karl-Heinrich Rau, Bruno Hildebrand, Karl Knies and Wilhelm Roscher, who in the first half of the nineteenth century developed "the essential ideas of the marginal revolution later associated with the names of Gossen (1854), Menger (1871) and Jevons (1871)." Chipman singles out Rau as arguably the most important innovator, who together with Antoine-Augustin Cournot actually caused the "marginal revolution".[20]

Early German contributions. Important ideas in early contributions of German economists that either recurred in the *Grundsätze* or could have done so are the following. Gottlieb Hufeland (1761-1817), in 1805, laid special emphasis on the cognitive aspects in consumer choices, the role of limited knowledge and misinformation, and the error-proneness of decisions. He was optimistic that in the course of civilization human knowledge of, and control over, nature would gradually increase, a view that recurs in Menger.[21] Johann Friedrich Eusebius Lotz (1771-1838), in 1811-1814, saw needs and wants as hierarchically ordered and came close to stating the concept of "lexicographic preferences". Characteristic features of early German contributions are: (1) subjectivist elements in explaining exchange value gain in importance relative to objectivist ones, without, however, becoming all-dominant; (2) while it is seen that the quantity of a commodity available to a consumer plays a role for the consumer's wellbeing, the concept of marginal utility as a function of the quantity consumed is still missing; (3) needs and wants are seen to be shaped to a considerable extent by society, and most of them are considered to be satiable, with the exception of fancied and artificial desires. Menger will

[19] The combinatoric metaphor to describe innovations was used by authors from Adam Smith via Marx and Schumpeter to Weitzman (1998); see Kurz (2022).

[20] The concept of marginal utility had however been anticipated by the Swiss Daniel Bernoulli in the context of a discussion of the "St. Petersburg paradox"; alas, his work was totally ignored for quite some time.

[21] One of the greatest sceptics in this regard was Max Weber, who concluded his essay on the *Protestant Ethic and the Spirit of Capitalism,* originally published in 1905-1906, with the speculation that "for the last stage of this cultural development, it might well be truly said: 'Specialists without spirit, hedonists without heart'; this nullity imagines that it has attained a level of civilization never before achieved" ([1930] 2001: 124).

later speak of “imaginary” needs and goods and reject the view that needs as a whole can get satiated.

Rau on the “paradox of value”. Rau distinguished between “species value” (*Gattungswerth*), which refers to a class of commodities characterised by similar qualities and is not related to the quantity consumed, and “concrete value” (*konkreter* [Nutz-]*Wert*), which is. By means of this distinction he sought to solve Smith’s “paradox of value”: while the latter’s value in use corresponds to “species value”, his value in exchange corresponds to “concrete value”. Comparing water and diamond involves, on the one hand, comparing two incommensurable entities – two species values. On the other hand it compares two commensurable ones – two concrete values, the consumption of which generates utility for the consumer, whose magnitude depends on the quantity consumed of each. Rau started from *separable utilities* derived from the consumption of different goods, as Menger was to do in his famous numerical examples of declining marginal utilities. While Rau originally assumed that all needs are satiable, he later abandoned this assumption, first with regard to luxuries and then with regard to all goods. He also emphasised that commodities are typically not simple things, but each of them is possessed of different characteristics, or of the same characteristics in different proportions. His argument thus foreshadows Kelvin Lancaster’s (1966) view that what consumers wish to acquire are not so much commodities themselves as the characteristics they possess. These characteristics are obviously tied to the materials or substances commodities contain. Menger denied that such substances had any role to play in explaining values and prices.[22]

Smith on the “parade of riches”. Before we continue, a frequent misinterpretation of the water-and-diamond example in Smith is to be cleared up. Critics, including Menger, interpreted him as if he was concerned exclusively with the relationship of an individual and the world of things and goods, which is the perspective Menger deliberately takes in his book. However, Smith insisted that the consumption or use of certain goods, for example diamonds, is a social act that cannot be captured in terms of a simple subject-object relationship, like in the case of water. As Smith made clear, a diamond is first and foremost a device to signal wealth, fortune and social position to other members of society. What matters is that the diamond is seen, not by the person who wears it, but by other people – it is a kind of “positional good” (Fred Hirsch). The more expensive it is, the better, because the not so well-off cannot afford it. Smith spoke aptly of a “parade of riches”, in which diamonds are a signalling device. Hence, according to Smith acts of conspicuous consumption by an individual are social acts that may have (positive or negative) external effects on others. There is no doubt that externalities of this kind are often

[22] In this context it is interesting to note that in the same year in which the *Communist Manifesto* was published, Hildebrand put forward an early criticism of socialist authors, especially Friedrich Engels (1844) (and Pierre-Joseph Proudhon). Engels’s contention that the German economists had failed to contribute anything useful to the state of the art as it had been handed down by Smith, Hildebrand rebutted by stressing that the Germans had established the view “that value is always a relationship of a thing to a person and to human society, and depends upon human estimation” (1848: 168). Menger (1871) does not comment on Engels, but adopts partially Hildebrand’s view, significantly dropping the reference to human society.

difficult to grasp and would require to make the utility of a particular individual not only depend on the bundle of goods he or she consumes or uses, but also on the bundles of numerous other individuals in the community.[23] A purely individual perspective misses important aspects of the problem.

Substitution in consumption. To Rau the fact that groups of commodities have certain common characteristics (for example, caloric content in the case of different kinds of food), implies the possibility of substituting one commodity for another. While Menger picked up Rau's idea, he did not take on board the implication it had for the question of the material contents of commodities in the theory of value and distribution. Ludwig Lachmann (1978) entitled a note on the Austrian economist "Carl Menger and the incomplete revolution of subjectivism". In the case under consideration, Menger should perhaps have left behind his subjectivist preoccupations and take account of the obvious objective aspect Rau had stressed.

Aggregate wealth. Rau discussed also Smith's estimation of the aggregate wealth of a nation and alternative proposals made by Jean-Baptiste Say and others. In this context he anticipated the idea of a diminishing marginal utility of income. Rau's reasoning is reflected in Menger's work, who however insisted against a proposal of Rau that aggregate wealth ought to be measured by utility. This presupposes, of course, a cardinal concept of utility.[24] He criticises Rau for having "denied the productivity of trade" and prides himself with having "completely disprove[d] this contention." His reference is to the case of pure exchange: "The effect of an economic exchange of goods upon the economic position of each of … two traders is always the same as if a new object of wealth had entered his possession. Trade is therefore no less productive than industrial or agricultural activity" (164n* [184n]). This is a problematic extension of the concept of productivity, since gains from pure exchange are one-off with limited scope, whereas gains from technological change and the corresponding increase in labour productivity are sustained gains, for which no upper limit is known.

"Imaginary" and "true" needs. Eberhard Friedländer (1799–1869), in 1852, rejected Say's idea of consumer sovereignty, and with explicit reference to the Chinese government's policy to curb the smoking of opium emphasised the role of the state in educating people and preventing them from consuming in ways that are detrimental to their health and to society at large. Karl Knies (1821–1898), in 1855, reiterated the view that goods belonging to the same species are substitutes, whereas some goods belonging to different species are complements. If only a single characteristic matters in a given situation, the

[23] Piero Sraffa in a note composed in the summer of 1927 commented on this necessity in the context of a discussion of the marginalist approach: "It would be as if in astronomy we said the movement of each star depends upon all the others, but we have not the faintest idea of the shape of the functions!" (D3/12/3: 63).

[24] Cardinal utility is clearly implied also in the following passage, in which Menger comments on a numerical illustration he uses. He stresses: "Thus when I designate the importance of two satisfactions with 40 and 20 for example, I am merely saying that the first of the two satisfactions has *twice the importance* of the second to the economic individual concerned" (163n* [183n], emphasis added; see also 158n* [179]).

choice will be in terms of the commodity that minimizes costs per unit of it. In case several characteristics matter, the choice is to be made across all of them. Knies rejected the view, which he wrongly attributed to Adam Smith, that the pursuit of self-interest is always beneficial not only to the individual, but also to society. Could this view be attributed to Menger? If only individual, subjective judgements are supposed to matter, the answer is yes. But, as Menger rightly stressed, many if not all people typically entertain also "imaginary" needs and strive for the possession of "imaginary" goods, which from a better informed point of view are much less beneficial to them than expected and may even be harmful. In this case a paternalistic attitude is understandable. Menger, to be clear, was no unconditional advocate of the "individual" point of view. Contrary to a widespread interpretation, he was no dyed-in-the-wool libertarian.

Also consumption takes time. A brief remark on Hermann Heinrich Gossen's book *Entwickelung der Gesetze des menschlichen Verkehrs und der daraus fließenden Regeln für menschliches Handeln* (*The Laws of Human Relations and the Rules of Human Action Derived Therefrom*) (1854) is appropriate. For a long time the book was ignored both inside and outside the German language area; its existence escaped also Menger, when writing his treatise. Gossen merits mention for especially two reasons. First, much of his argument revolves around the fact that consumption takes time and that the problem agents have to solve concerns, first and foremost, how to allocate scarce time to alternative uses or activities.[25] The purchase of goods comes into play only in the second place, because goods are needed to carry out activities. While Menger in passing alludes to the time-consuming character of consumption, he does not investigate its implications for economic theory. Taking into account in addition to the endowment constraint, which he mentions, a time constraint will affect the results derived not only quantitatively, but also qualitatively. Steedman (2001) has shown this in a careful study starting from Gossen with regard to modern micro and welfare economics, in which some of the received theorems can no longer be sustained. Secondly, notwithstanding Gossen's clumsy mathematical exercises and illustrations of marginal utility theory, formalising economic problems may be fruitful, because it helps to state them clearly, which is a prerequisite of solving them, and to check the consistency of arguments. A general antipathy towards the use of mathematics in economics, not uncommon amongst some "Austrian" economists, is difficult to sustain.[26]

In the following section I summarize briefly some of those ideas of Menger that play a peripheral role in the rest of this essay, but are considered by several of his followers as reflecting his true originality. I do not wish to dispute that several of these ideas deserve to be developed carefully and integrated into a coherent framework of the analysis. However, they are of little importance for his criticism of, and alternative to, the classical

[25] The fact that consumption takes time is almost totally ignored in today's conventional microeconomics, while Gossen's so-called two "laws" are still referred to.

[26] In several recent works, Linsbichler has dealt with the philosophy of Austrian economists and has especially scrutinised the problematic attitude of some of them towards the use of formal methods in economics; see, in particular, Linsbichler (2021).

theory of value and distribution for "commercial societies" (Adam Smith) or "higher levels of civilization" (Menger).

4. Menger: towards an "economic theory in time"

Three stages in the process of civilization. Menger develops his principles of economics against the background of three stages into which he subdivides broadly in abstract terms the process of civilization up until the time in which he wrote.[27] The first stage is one in which humans can barely satisfy their basic needs of food, clothing and shelter. The attention focuses on how to survive, but poor knowledge and a lack of control over nature implies fundamental uncertainty. The existence of the human race is constantly endangered because of an inimical environment and deadly conflicts over scarce resources. Transaction costs are very high or even forbidding and exchange is correspondingly rare and sporadic.

The second stage is one in which knowledge about needs and means to satisfy them is higher and so is productivity. In addition to basic needs, now also more sophisticated ones can be served. The division of labour is larger and increasing, and while interdependent markets begin to play a growing role in the economy, their institutionalization is feeble due to still considerable uncertainty and significant transaction costs. There is considerable price dispersion at any moment of time and across time, and non-competitive conditions prevail. Menger throws some light on the state of affairs on the first two stages in terms of his studies of isolated exchange and monopoly. With regard to bilateral monopoly he anticipates Böhm-Bawerks's concept of limit pairs (*Grenzpaare*) in horse trading, which define the interval in which the dispute over the price of the horse might eventually be settled. In these stages the gains from trade, in Menger's view a major source of rising incomes per capita, cannot be fully exploited.

It is only on the third stage that humankind manages to control nature more effectively and also improves significantly the understanding of itself and the world. Uncertainty gradually gets smaller without ever disappearing totally and the time horizon of humans expands. The need to provide for periods in the more distant future is a challenging task and leads to several improvements in the organization of production and distribution of commodities. Human knowledge grows, "true" needs and goods will gain in importance compared to "imaginary" ones, the diversity of needs and the goods available to satisfy them will increase, the security of people will improve, the institution of the market will get more and more firmly established, and types of competition begin to permeate the

[27] John Hicks in his book *A Theory of Economic History* (1969) asked: "Why should we not treat the Economic History of the World as a single process – a process that (at least so far) has a recognizable trend?" Parts of Menger's theory may be interpreted in the perspective suggested, with the accumulation of knowledge constituting the single process under consideration. Hicks (1976) actually qualified Menger's theory as an "economic theory in time" in contrast to an "economic theory out of time". (I am grateful to Stephan Böhm for having reminded me of this distinction.)

economic system. While in the previous stages there was conflict and rivalry amongst individuals and groups of people, there was no competition reflected in cost-minimizing behaviour of agents. In advanced civilizations with a well-established system of property rights, with public authorities enforcing the rule of law, and with a firm entrenchment of interdependent markets etc., competition will become the prevalent market form. Assuming with marginalist economists from the outset that there is even "perfect" competition, irrespective of whether its numerous prerequisites are met, Menger would clearly have considered as unacceptable.[28] Therefore his reasoning has with some justification been called "non-Walrasian".

In "civilized" economies, the activities of speculators and arbitrageurs will stabilize the movement of prices and reduce price dispersion. Due to these developments economic laws are gradually and visibly getting the upper hand over the law of chance and can properly be studied. While in times of fundamental uncertainty and economic restlessness rational calculation of costs and benefits is difficult, if not impossible, because the constraints in respect of which agents try to make the best of their businesses are swiftly changing, in sustained competitive conditions the principle of cost minimization shapes economic behaviour.[29] In the third stage, Menger insists, "effective prices" will obtain (see Section 5). These resemble strongly what the classical authors called "natural prices", conceived as centres towards or around which market prices tend to gravitate or oscillate. Menger also speaks of "economic prices", which corresponds to the classical economists' view of natural prices being cost-minimizing.

This is, in a nutshell, what might be called the core of Menger's highly abstract and philosophical vision of the process of civilization. It revolves around the growth of knowledge and the parallel reduction of uncertainty and error as a consequence of the desire of humans to improve their lot.[30] He does not support his story in terms of proper historical evidence, that is, exemplify the different stages he contemplates with reference to real societies in historical time. And while there are elements in it that are reminiscent

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[28] As Adam Smith famously put it, the "wretched spirit of monopoly" (WN IV.ii.21) never sleeps. It deserves to be mentioned that when with regard to the third stage Menger takes competition to prevail, he appears to have in mind the classical concept of "free competition", which is defined in terms of the absence of significant barriers to entry into and exit from markets, and not to the later marginalist concept of "perfect competition", which presupposes very large numbers of agents on both sides of the market. The theory of contestable markets can be said to capture an important aspect of the classical concept.

[29] There is however the following tension affecting Menger's perception of the different stages of society. Uncertainty is arguably high in the "early and rude state of society", to use Adam Smith's concept, for the reasons given. However, the third stage is typically characterized by a significant acceleration of the rate of technological and organisational progress, which has the potential of significantly disrupting economy and society. Yet in Menger's story this important fact is not taken into consideration.

[30] Adam Smith's remark about "the desire of bettering our conditions", which is said to come "with us from the womb, and never leaves us till we go into the grave" (WN II.iii.28), quickly comes to one's mind.

of Adam Smith's three stages theory of socioeconomic development, the crucial difference is this: with the analytical tools he elaborated, Smith was keen to stay close to actual historical developments.[31]

Knowledge, marketability and money. A few further elements of Menger's analysis deserve to be mentioned. He stresses repeatedly that information and economic knowledge is unevenly distributed amongst individuals, that commodities are interspatially and intertemporally differently marketable, and that different people have different access to liquidity. All these differences account for differences of opportunities and are reflected in significant dispersions of prices and rates of remuneration across space and time. A description of the situation in terms of Jevons' "law of one price" would involve a travesty of facts.

Institutions emerge gradually and are bound to adjust to changing challenges or die. Menger's focus of attention is in all this the needy human being. Cognitive processes precede the invention of novelties, accompany their introduction and continue after the adoption of the new and elimination of the old. What is a "good" is not given from the outside, but is the result of humans recognizing the useful properties of things. The transmigration from the world of things to that of goods is accompanied by the emergence of value, which individuals ascribe to goods. When do goods become objects of exchange, that is, commodities? This presupposes their marketability, which is tied to the fulfillment of a number of enabling conditions. Not all markets are equally well organized, as conventional economics assumes. Some perform rather badly, which ought to be taken into account when talking about the factors affecting prices. Again, the degree of civilization matters in this regard, because as it progresses, Menger is convinced, also market organization improves and commodities become more easily accessible.

Money is seen to emerge naturally out of the needs and possibilities offered during a particular phase in the course of socioeconomic development. It is not something the theorist could or should add to an otherwise moneyless model that portrays the economy as an optimally functioning machine – think of the First Welfare Theorem of general equilibrium theory. Money comes into play as the most liquid of all commodities, which facilitates exchange and trade. Interestingly, Menger stresses also its crucial role as a store of value. With a growing time horizon of individuals, the holding of money for precautionary reasons becomes more and more important. Money is arguably the best way to protect oneself against the contingencies and vagaries of life. In this regard Menger anticipates ideas that became prominent with John Maynard Keynes. Menger comes close

[31] This may be exemplified with reference to book IV of *The Wealth of Nations*, in which Adam Smith discussed not only in great detail the "mercantilist system", but also insisted that it involved an aberration from what he considered to be the "natural course" of things. The latter would have required to develop agriculture first and manufacturing and long-distance trade only thereafter, whereas mercantilist policy reversed the order. North, Wallis and Weingast (2009) called mercantilism the political economy of a "limited access society". Limited access via privileges, they argue, generates economic rents designed to render elites to cooperate instead of going to war. Coercion in such societies becomes institutionalised, with the unprivileged many just as "pieces upon the chess-board" that can be moved at will. Absolutism is the congenial form of government with the monarch as the monopolist supplier of grants and privileges.

to identifying the degree of civilization reached with the level of riches accumulated and the amount of money kept in reserve. He implies that with a future that is fundamentally uncertain there will be no ideal risk markets. The assumption entertained in general equilibrium theory that there is a complete set of futures markets, Menger would in all probability have received with astonishment.

Economics, I am inclined to summarize Menger's point of view, has to do with a highly complex subject matter. The task of economic theory is to try to see through the complexity as best as it can and establish a set of basic principles in terms of which we can improve our understanding of the economic world. The danger consists in trying to master the complexity by removing it altogether with the help of bold premises. Menger is aware of the limitations of the human mind to grasp the growing complexity of the world, which has to do with the fact that economic activities request time and extend into an uncertain future. They gradually change the world and impact on the direction history takes.

After this excursus we now return to Menger's criticism of the classical economists and his alternative construction. We begin with a discussion of Menger's view of the time-consuming character of production and its implications for his theory of value. The subsequent section then deals with its implication for his theory of income distribution. The latter is a by-product of what he called the problem of the "imputation" of the "prospective" prices of consumption goods to the prices of the productive services employed in their production.

5. Production, time and "prospective" value

Like Marx before and Böhm-Bawerk after him, Menger advocated a "successivist" approach to the theory of value and distribution, as Ladislaus von Bortkiewicz (1921: 17) characterised it. Although the theories of the three authors are different, they all look at economic problems from a *causal-genetic* perspective. This involves in a first step, which is the truly important one, to look for the unique source of all value. In a second step the authors then ascertain the values of the various commodities. While to Marx abstract human labour is the sought source, to Menger and his close followers it is (cardinal) utility or, as Böhm-Bawerk called it, echoing Marx, "use value in abstracto".[32]

Subjectivist causal-genetics

Menger, we have heard, conceives of production as a time-consuming *unidirectional* process in which after a "sometimes longer and sometimes shorter period of time" a consumption good obtains (135 n**, the English translation [159 n 21] is not optimal; see also 136 n*). Production is not conceptualised as a *circular* process, as, for example, in

[32] Close scrutiny shows that neither Smith nor Ricardo advocated successivist approaches.

Ricardo's "corn model" or in Robert Torrens' two-sectoral scheme of production.[33] To unidirectional production corresponds a finite series of dated inputs, to circular production (at least for certain products) an infinite series. In Menger's construction the needy individual is the true Demiurg of the economic world. The individual decides about the consumption goods it desires to consume at any moment of time, now and for some time in the future, and producers are assumed to align the production apparatus to these. A crucial premise of Menger's argument is that consumers determine already today in terms of their subjective preferences what he calls the "prospective price" (*voraussichtlicher Preis*) of a consumption good at a given future moment of time.[34] In fact, consumers are taken to decide autonomously the entire set of future prices of goods of first order. Since, according to Menger, in the course of the process of civilization both the number of consumers, their time horizons and the variety of consumer goods grow, this set is continuously expanding as time goes by. This is the starting point of Menger's analysis.

"Prospective" prices. Unfortunately, Menger leaves in the open how, precisely, this subset of all prices is ascertained. He does not tell the reader, inter alia: how prospective prices come about and in terms of which standard of value they are expressed; whether there is price dispersion between individuals, and if not, why not; and if there is price dispersion, which of the prospective prices will be used when imputing them to the inputs involved; what precisely are the time horizons of consumers at any moment of time, and how they are decided; whether the needs of individuals are compatible amongst themselves and with the productive resources available at any moment of time and across time; how their needs change in the case in which new products become available; how the instalment of the needed productive capacity at any moment of time is brought about by acts of investment and saving; how producers learn about prospective prices and interpret these as signals that impact on their behaviour; and so on. Question upon question, but no answers as far as I can see.

The reader can hardly escape the conclusion that Menger's reasoning in this all-important regard is astonishingly incomplete. How could it possibly bear the brunt of his theoretical edifice?

Consumer sovereignty. Menger treats the prices of consumer goods as data in the rest of his argument: they perform the role of a *deus ex machina* that determines the properties of the economic system without being also determined by them – there is no interdependence between this subset of prices and the other prices of the system, including the distributive variables. Consumer sovereignty may therefore be said to have a double meaning in Menger's construction: consumers are not only free to choose – they also dominate

[33] For a formal treatment and comparison of circular and unidirectional systems of production in a multi-commodity framework, see Kurz and Salvadori (1995: chap. 5).

[34] While in his book Menger repeatedly stresses that larger or smaller price dispersion is omnipresent, at this crucial juncture of his analysis he surprisingly appears to postulate that the law of a single price holds true. This would mean, among other things, that all consumers expect the same prices at different moments of time in the future, which strikes me as a very bold assumption.

the economic system and decide its features and future.[35] Since prospective prices reflect expectations, the entire argument hinges crucially on them. But can expectations be sensibly stipulated without reference to the actual state of the economic system? There are two differently demanding and comprehensive options open to the economist working in the tradition of Menger, it seems: first, to identify constellations in which expectations and the state of the system are mutually attuned to each other, and, secondly, to elaborate a theory of the dynamic interaction of the state of the economy and of that of the expectations of its members.[36]

Menger cannot sensibly be expected to have been possessed of such a dynamic theory, but we find in the *Grundsätze* considerations that can perhaps be interpreted as pointing in the direction of a reciprocal adjustment of the two states, resulting in a "*general* economic situation" (240 [248]), in which people are well informed, markets well organised, and there is free competition. In such a situation "effective prices" will obtain that are "economic" in the sense of minimizing costs. As has already been observed in the above, this is reminiscent of Adam Smith's concept of "natural prices", conceived as centres of "gravitation" of market prices.[37] Menger in fact uses explicitly the classical concept of "economic centres of gravity" (*ökonomische Schwerpunkte*) of the prices of goods (219 [231]).[38]

This interpretation is also suggested with view to commodities that involve some circularity in production. Menger mentions, for example, several agricultural products that are produced by means of themselves as seed (wheat, barley, wood etc.). They may be goods belonging both to the first and to higher orders and may therefore fetch different prices at a given moment of time, depending on the order under consideration. However, since they are materially indistinguishable, price differentials amongst them cannot persist, given agents' cost-minimizing behaviour. If the economy were in a self-replacing

[35] Menger can be said to be one of the early advocates of the view that investors perform an essentially passive or subservient role. In macroeconomic theory, exemplified by the Solow growth model, this view is reflected by the fact that there is no separate investment function; it is rather confounded with the savings function.

[36] Those "Austrian" economists, who are especially intrigued, and attracted, by Menger's remarks on time and uncertainty appear to go for the second and truly challenging option. However, if I am not mistaken, little progress has been made in this regard since the time of Menger. An obstacle in the way towards a better understanding of elements of the dynamic features of the economy seems to me to be the unwillingness of some of its representatives to take on board the findings of the mathematics of dynamical systems; see, for example, Gandolfo (1971) or Lorenz (1993). Rectifying Menger's analysis of "equilibrium" positions of the economic system appears to be too unimportant a task for some of them. They may be said to go for three birds in the bush rather than one in the hand.

[37] Recall, however, that Smith and Ricardo's "natural prices" involve a general *rate* of profits, whereas Menger's "effective prices" do not.

[38] In this context it deserves to be mentioned that Menger perceptively notes that the demand for commodities is typically time-variant even in "normal" economic circumstances. This might introduce a discontinuity in the economic process and disturb the steady flow of production. Yet, he interjects, in advanced economies this problem is taken care of by a judicious cost-minimizing combination of a steady rate of production, especially since the beginnings of mass production, and the building up or running down of stocks of storable products to meet fluctuating levels of effectual demand (227 [238]; see also 238-9 [246-7]).

state, a single price would obtain for a given good at a given time, irrespective of its destination as a means of consumption or a means of production. Menger appears to implicitly assume such a state of affairs in much of his argument.

The classical Method of Reduction and Menger's Method of Compounding

The Method of Reduction. Menger's time-phased ordering of goods echoes Adam Smith and David Ricardo's tracing back of the "natural price" of a commodity to dated outlays for the quantities of inputs needed in its production, properly discounted forward at the ruling rate of profits. This method became known as the *Method of Reduction*. Adam Smith argued that in this way the price of a commodity could be entirely resolved into wages, rents and profits paid at the various stages of production through which the commodity has to pass on the way to its completion. And Ricardo saw the total quantity of labour "embodied" in a commodity as being equal to the sum of all direct and indirect amounts of labour expended in the course of its production. We may, for short, call this perspective backward looking. (As will be seen below, this must not be interpreted as referring strictly to the concept of historical time.)

Menger's point of view may instead be called forward looking. (As will be seen below, here a historical interpretation cannot possibly be escaped.) The consumer's need sets in motion a production process that gives rise to a flow of inputs, which eventually yield the consumption good. In the course of its production, costs are incurred by the inputs needed *en route*, which imply the payment of incomes to the proprietors of productive resources. These costs and incomes, Menger maintains, are determined by the prospective prices of the consumption goods. This is known as the problem of "imputation", on which more below. Here it suffices to stress that in Menger's view the prospective prices of consumption goods may be conceived as the result of compounding the imputed cost elements according to their dates of occurrence. We may call this Menger's *Method of Compounding*. It is not clear, however, which endogenously determined discount or profit factor is to be applied, because, as we have heard already, Menger has no concept of a (competitive) rate of return on capital.

Logical or historical time? Which kind of technological knowledge presupposes Smith and Ricardo's "backward" looking perspective, which Menger's "forward" looking one? Smith and Ricardo's reduction method has variously met with the severe misunderstanding that it implied a *regressus ad infinitum* to the time of Adam and Eve and even before and therefore to technological knowledge of the past. However, Smith and Ricardo left no doubt that the methods of production on which they based their reasoning are exclusively the *currently* employed methods, and not the methods of times long gone. The reference is essentially to logical, not historical time. Therefore, what matters are the costs of *re*production of the various commodities, not their historical costs. These authors also stressed that the methods on the basis of which prices are ascertained are the methods *actually* operated side by side, so that the system of production as a whole generates a steady flow of outputs of all commodities, consumption goods and intermediate products.

It allows for the self-replacement of all used up means of production, because all stages into which the process of production of a commodity can analytically be subdivided in a time-phased perspective exist *simultaneously*.

In Menger's case it is not clear whether the methods employed in a hypothetically more or less distant future are only the methods known today, or whether some entirely new methods reflecting technological knowledge that has yet to be discovered are assumed to be employed. To the best of my knowledge, Menger does not clarify his position in this regard. If entirely new technological knowledge is supposed to play a role in this, then one can only wonder whether the brunt of the reasoning should be borne by the expectations and prospects of consumers instead of producers, who can be expected to know better what is in the pipeline of research and development. And, as has already been indicated in the above, there are huge problems regarding Menger's reference to expectations, the time horizons of agents, and the mechanism that is supposed to coordinate them and the actual economy. Since Menger's central concept of given "prospective" consumer prices is hanging in the air, so is his entire analytical construction.

Devoid of the concept of a general competitive rate of profits, it is unclear which rate, if any, Menger uses in his compounding. He writes, for example:

> Now if, in ordinary life, we see that buyers of goods of higher order never pay the full prospective price of a good of lower order for the complementary means of production technically necessary for its production, that they are always only in a position to grant, and actually do grant, prices for them that are somewhat lower than the price of the product, and that the sale of goods of higher order thus has a certain similarity to discounting (Escomptiren), the prospective price of the product forming the basis of the computation (135-6 [158-9]).

This is not a very clear statement. It is especially irritating, because the imputation of the price of the final good to the inputs collaborating in its production ought to exhaust this price, that is, leave neither a surplus nor a deficiency. We shall come back to this problem in the following section in the context of a discussion of Menger's theory of capital and interest.

6. The "imputation" problem and the theory of income distribution

Menger's attempt to explain all prices exclusively in subjectivist terms led him straight away to the problem of "imputation" of the (given) prices of goods of first order to the prices of all goods of higher order cooperating in their generation.[39] These include wages,

[39] Streissler (1969: 244-5) argued: "It is self-evident that any social science can only concern itself with subjective phenomena, simply because the objects of analysis are subjective relations, relations between human beings." Two comments on this view appear to be appropriate. First, it differs from Menger's, who in the first place focuses attention on the relationships between humans and things, not humans and humans. Secondly, while there is no doubt that subjective relationships matter, they typically find some objective expression, or "objectivisation", to use Menger's term, as the classical authors insisted. See on this, Section 7 below.

rents and profits.[40] It is obvious that Menger's theory of distribution presupposes a proper solution of the imputation problem. Alas, this Menger did not provide, as both Böhm-Bawerk and Wieser confirmed. Here we focus on Wieser's criticism, which is more interesting than Böhm-Bawerk's, who, following in Menger's successivist footsteps, also faced the imputation problem – and also failed to solve it.

Wieser's critique of Menger's solution

Simultaneous vs. successivist reasoning. In his treatise *Über den Ursprung und die Hauptgesetze des wirthschaftlichen Werthes* (1884), Wieser scrutinised carefully Menger's reasoning and was not convinced.[41] He insisted that the argument had to be firmly grounded in a theory of production that respects the nature of modern industrial economies, in which "Not even the crudest tool is made without the help of another tool" (1884: 115). That is to say, production is circular and does not begin with unassisted labour. In his work *Der Natürliche Werth* of 1889, Wieser deepened his reflections on the issue and tackled the imputation problem. Assume that the values of n goods of first order have already been ascertained by means of marginal utility theory, just as Menger had stipulated. If the amounts of the m goods of higher order needed in the production of them are known, a system of linear equations can be set up, in which the values of the goods of higher order are the only unknowns (Wieser 1889: 85-8). The solution of the imputation problem therefore amounts to solving a system of simultaneous equations. Apparently Menger was not aware of this.

Wieser went on by assuming that $m = n$, as if this was the most natural thing to do. Clearly, if $m > n$, the system would be underdetermined, whereas with $m < n$ it would be overdetermined. But why should the number of goods of the first order be exactly equal to the number of goods of higher order? No convincing reason for this is given. Yet even if this condition happens accidentally to be met, there is no reason to presume that the solution makes economic sense.[42] Menger's respective argument is obviously inconclusive. Can his overall approach still be salvaged in one way or other and serve as a compelling alternative to the classical approach?

As I interpret Wieser, his implicit answer to the first part of the question is a resounding no. Two ideas stick out in his reasoning: first, since production in his view is circular, the

[40] Menger mentions also entrepreneurial incomes, which the classical economists subsumed under wages.

[41] It ought to be mentioned that we owe to Wieser the term "Grenznutzen" (marginal utility). He may also be said to have "solved" the imputation problem in a completely marginalist framework that combines marginal utility and marginal productivity theory; see Kurz and Sturn (1999: 94-100).

[42] Some of the prices could, for example, be negative. However, in a system without joint production negative prices make no economic sense, because there are no "bads" or "discommodities" (Jevons) or waste products, whose disposal is costly. Things are different in a system with joint production: to the negative price of a bad corresponds a positive price of the disposal activity. In this context it is perhaps worth mentioning that Menger in one place (51-2 [95]) deplores that even "the most insignificant kinds of scrap (*Abfälle*) are … not available to us in such great quantities that we could not employ still greater quantities of them." The contention that there is an insufficient supply of waste comes as a surprise, unless one assumes implicitly that waste products are not bads, but goods of higher order, for which there is an excess demand at the current prices.

grouping of prices in two strictly separate sets, one containing goods of first and the other one goods of higher order, is not possible. There are in particular what Wieser called "cost goods" (*Kostengüter*) (1889: 108), which are to be found both amongst inputs and outputs. But how can one in these conditions start from *given* values of certain products as outputs without involving also the values of the same kind of products as inputs? Do not *all* values have to be considered *unknown*s and determined *simultaneously*? Secondly, Wieser for a few pages (1889: §§37-40) leaves the Austrian world of *strict scarcity* of all goods and enters the opposite world of strict *reproducibility*. It is a kind of John von Neumann world with a given real wage rate for simple labour, but without joint production and fixed capital. In it, Wieser maintains, there will be a positive rate of interest, if and only if more can be produced of various (possibly all) goods than what is being used up of them as cost or capital goods. That is, a positive rate of interest presupposes a *physical social surplus*. In this case, Wieser insists, "the capital goods have to be imputed a net return out of the total result, *just as if they reproduced themselves directly together with a surplus*" (1889: 130; emphasis added). The surplus is the material substratum of interest alias profits. Physically speaking, the general rate of interest (profits) is the ratio of the set of commodities in the surplus product in the numerator and the set of commodities in the capital advanced in the denominator (Wieser 1889: 139). However, since surplus and capital do not in general exhibit the same commodity composition, it seems to follow that they cannot be directly compared, but have to be rendered commensurate with the help of the prices of commodities. Yet since these depend on the rate of interest, and the rate of interest depends on them, the prices of all commodities *and* the rate of interest can only be determined simultaneously.[43]

Prices and the rate of profits are interdependent. Wieser's remarkable reflections have important implications both for the theory of Menger and that of Böhm-Bawerk, Wieser's brother in law. First, a successivist approach has to be replaced by a simultaneous one. Secondly, the quantity of capital available in an economy, consisting of different kinds of capital goods, cannot be taken as given independently of, and prior to, the determination of the prices of commodities and the rate of interest: prices and the rate of interest have rather to be determined simultaneously. The rate of interest therefore cannot be conceived as reflecting the relative "scarcity" of the endowment of capital, because it has to be known in order to ascertain the latter. Third, Böhm-Bawerk's concept of the "average period of production", designed to aggregate heterogeneous capital goods, cannot gener-

[43] This is Wieser's highly interesting argument. However, contrary to what has been stated in the above, the rate of profits can be ascertained independently of prices, provided the system of production is in a form, in which the vector of the surplus and that of the capital employed are multiples of each other, or is *hypothetically* brought into such a form. Early soundings of the basic idea underlying this possibility can be traced back to Ricardo and Torrens. Authors such as Georg von Charasoff elaborated on the idea. It found its definitive expression in Piero Sraffa's *Hilfskonstruktion* of the Standard system, in which the rate of profits "appears as a ratio between quantities of commodities irrespective of their prices" (1960: 22). As Sraffa showed, the relation "is not limited to the imaginary Standard system but is capable of being extended to the actual economic system of observation" (1960: 22).

ally be sustained, because it also depends on this rate. Abstracting from this fact by ignoring compound interest, as Böhm-Bawerk does, implies contradicting the competitive conditions, which it seeks to deal with. Fourth, a positive rate of time preference, which Menger (128 [153]) had postulated and Böhm-Bawerk had then taken up and developed into his "law" of the "higher estimation of present needs compared with future ones", cannot be considered a "ground" of a positive rate of interest (see also Kurz 1994). Taking it to be such a ground, Wieser argued, takes the effect of a positive rate of interest wrongly for its cause, since once there is a positive rate, rational agents are bound to "discount" (1889: 139 and 134).[44]

We may conclude by saying that Wieser in the process of scrutinising carefully Menger's reasoning had to acknowledge that crucial elements of it could not be sustained. Drastic corrections were needed, which, however, directed him further and further away from a purely subjectivist perspective and made him integrate objectivist elements in his analysis. The result of his respective investigation exhibits important parallels to the classical surplus approach to the theory of value and distribution. Accordingly, the general rate of profits and relative prices are fully determined by two factors: the system of production actually in use and the share of wages in the social product. The latter reflects the relative strengths of the contending parties, workers and "masters", in the "dispute" over the distribution of the social product, as Adam Smith (WN I.viii.12) had insisted.

Since Menger did not provide a consistent solution of the imputation problem, what are we to make of his theory of income distribution? Apparently, there is no reason to expect a coherent explanation of the sharing out of the product amongst different claimants. Yet as his statement prepended to this paper as a motto rightly emphasised, "even error is not without merit". In fact, humans learn by committing errors, provided they then succeed in correcting them.

Menger's theory of income distribution and its critics

Menger's main argument presupposes throughout that all productive resources available in the economy at a given moment of time are fully employed. Since consumers are keen to satisfy their needs as best as they can, and since according to Menger the "*capacity* of human needs to *grow*" is "infinite" (38 [82-3]), collective satiation is taken to be impossible. From this he appears to infer that the full utilisation of all productive resources can safely be assumed. The economy may experience what Menger calls "pathological phenomena" (*krankhafte Erscheinungen*) (128), but these seem to be taken to be of negligible importance. The distributive variables are thus assumed to be explicable in terms of a single principle only: that of their relative scarcity.

Wages. Menger treats wages only towards the end of his remarks on income distribution in §3 of Chapter III of the *Grundsätze*, and devotes barely three pages on them. In my view, the only thing that deserves mentioning is the following. Menger emphasises

[44] Interestingly, Wieser was not the only Austrian economist to reject the concept of a positive rate of time preference. His former student Joseph Schumpeter was also critical of it.

that the services of labour are not always "goods or even economic goods simply because they are labor services; they do not have value as a matter of necessity" (150 [170]). This remark appears to be directed at the classical authors, but Menger fails to provide any evidence that these actually advocated the incriminated view. They did not. It suffices to cite Ricardo:

> If a commodity were in no way useful, – in other words, if it could in no way contribute to our gratification, – it would be destitute of exchangeable value, however scarce it might be, or whatever quantity of labour might be necessary to procure it. (*Works* I: 11)

This should be clear enough.

Menger then adds: "many labor services cannot be exchanged by the laborer even for the most necessary means of subsistence" (150-51 [170]), and concludes: "Neither the means of subsistence nor the minimum of subsistence of a laborer, therefore, can be the direct cause or determining principle of the price of labor services" (151 [171]). Again, one can only wonder who according to Menger has ever advocated such a view amongst the classical authors.

Menger time and again stresses the importance of the principle of scarcity in determining the rates of remuneration of factor services, but what precisely this means remains unclear. Readers are not told how the wages of labour are determined in a given place and time, and whether they meet the "minimum subsistence of the laborer". This should not come as a surprise, because he is not possessed of a theory that would back up a notion.[45]

Rents. Menger frontally attacks Ricardo.[46] The value of land and of land services, he insists, is subject to the same "general laws" as all other goods and services. He "protests" against Ricardo, who is said to have "mistakenly" considered differential fertility (or location) to be the true principle of rent. The true principle, Menger insists, is once more the principle of scarcity. He then chastises Ricardo's alleged view that in the case of land of uniform fertility or in the case of marginal land there can be no rent, and maintains: "It is evident rather that even the … least fertile pieces of land in a country where land is scarce would yield a rent, *a rent that could find no explanation in the Ricardian theory*." (147 [169]; emphasis added)

To see that this criticism cannot be sustained, we just have to turn to the passage in Ricardo's chapter "On Rent" in the *Principles*, to which Menger refers. There Ricardo writes: "On the first settling of a country, in which there is an *abundance of rich and fertile land, a very small portion of which is required to be cultivated* …, there will be no rent" (*Works* I: 69; emphasis added). Hence contrary to Menger's contention, Ricardo stated explicitly that the land under consideration here is *not* scarce. In the sequel he then emphasises that only land that *is* scarce will fetch a rent, because "no one would pay for

[45] Several interpreters of the classical authors took them to hold an "iron law of wages", according to which the real wage rate is constant in the long run. Nothing could be further from the truth; see, for example, Kurz (2010, 2016).

[46] According to Campagnolo (2010: xv), Menger even "condemned Ricardo's views".

the use of land, when there was an abundant quantity not yet appropriated, and, therefore, at the disposal of whosever might choose to cultivate it" (ibid). Once again one can only wonder how Menger arrived at his misconception.

To be clear about Ricardo's theory of rent, some further observations are perhaps useful. First, Ricardo focused attention on extensive diminishing returns and extensive rent, because in reality differences in fertility or location are ubiquitous. But he also dealt with intensive diminishing returns and intensive rent. While his analysis marked a considerable step forward, it was far from perfect; see the critical account in Kurz and Salvadori (1995: chap. 10, esp. section 6). Secondly, Menger in his criticism above assumes that all available land is actually employed. However, this will hardly ever be the case: just think of plots of land whose fertility is very low and could not feed those who cultivate it; labour productivity would then be low and we would have a situation as the one Menger contemplates in his discussion of wages above. In the hypothetical case of a huge area of homogeneous and fertile land and a relatively small population, it would make no sense to cultivate the entire land and spread out workers and other resources across it. Cost-minimizing behaviour would rather prompt producers to employ only a part of the land and leave the rest idle. In cultivating the employed part, the method that exhibits the maximum average labour productivity will be used. Third, Menger mocks Ricardo's definition of rent as the compensation paid to the owner of land for the use of its "original and indestructible powers" (*Works* I: 69). However, there are good reasons for Ricardo to have developed his argument under this proviso. First, it allowed him to differentiate sharply between rents and profits, "for it is found, that the laws which regulate the progress of rent, are widely different from those which regulate the progress of profits, and seldom operate in the same direction" (*Works* I: 68). Ricardo in fact showed that in the case in which capital accumulates and the population grows, but in which there is no further technical progress, the rents of land tend to rise, whereas the general rate of profits tends to fall. Secondly, it allowed him to treat land as an inexhaustible resource and to distinguish it sharply from exhaustible ones, such as coal or ores. Land could, of course, also be exhausted as a consequence of its use, but for the sake of clarity the cases of inexhaustible and exhaustible resources ought to be strictly kept apart.[47]

Finally, the attention deserves to be drawn to the fact that the marginalist theory of value and distribution, which Menger's *Grundsätze* foreshadowed in some respects, consists essentially in a generalisation of the principle of intensive diminishing returns and intensive rent from homogeneous land and agriculture to all factors of production and to all sectors of the economy. Menger was apparently amongst the early authors who were convinced that such a generalisation was indeed possible and who actively promoted it in

[47] See in this regard the formalisation of Ricardo's theory of exhaustible resources and how it compares with the Hotelling Rule in Kurz and Salvadori (2001, 2015a).

his book. Ironically, the starting point was a concept we owe to Ricardo (and other authors, such as Malthus and Edward West), who however never appears to have tinkered with the idea that it was capable of generalisation.[48]

Profits. Menger reserves by far the largest space to the explanation of profits. According to his Austrian critics it is the most problematic part of his theory of income distribution. Before we turn to their criticisms, the following observations are in place. According to Menger, capital, that is, the aggregate of means of production available in the economy, is "productive" and interest alias profits are the remuneration of its proprietors for capital's productive services. Böhm-Bawerk (1884) therefore reckoned Menger's theory amongst the "utilisation theories" of capital and interest in the tradition of Jean Baptiste Say and W. B. F. Herrmann. A necessary condition for interest to be positive, Menger stressed, is that capital services are scarce. Menger, like Smith and Ricardo before him, focuses attention on competitive conditions. These enforce cost-minimizing behaviour, which Menger confirms, but he does not also confirm another implication stated by the aforementioned and numerous Austrian economists later, namely, the tendency towards a uniform rate of profits. Since Menger does not provide reasons for this, one can only wonder how he could ignore such a concept, which turned out to be central in political economy ever since the works of Adam Smith and Anne Robert Jacques Turgot.

Menger's critics and especially his Austrian followers benefited from Menger's theory of profits in a twofold way: it allowed them to display their astuteness in pointing out flaws in his argument, and it contained ideas and concepts they could then develop themselves and integrate into their own constructions. Especially Böhm-Bawerk profited from the *Grundsätze*, because they anticipated two of the famous three "grounds" he put forward in an attempt to explain the cause and level of interest: (i) a positive rate of time preference and (ii) the superiority of more roundabout processes of production.

Menger refers to the value of goods of higher order as their value "*in der Gegenwart*", translated as "*present* value" (135 [158]; emphasis in the original). Strangely enough, he adds: "The *present* value of these goods of higher order by themselves is therefore equal to the value of the respective product minus the value of the services of the capital employed" (135 [158]). Two things deserve to be noted. First, Menger in this passage apparently considers all inputs as capital goods of sorts, whereas in a more general perspective there should also be inputs such as labour and land etc. Secondly, and more importantly, it is unclear which items are being discounted, because he explicitly states that the "value of the services of the capital employed" is *not* amongst them. Yet according to the net present value method of ascertaining the value of a stock of capital goods today, *all* future net payments of the services of the stock have to be discounted to the present. By excluding the services of capital goods from this, is there anything Menger is actually discounting? In the *Geschichte und Kritik der Kapitalzinstheorien* (1884), the first part of his *Kapital und Kapitalzins*, Böhm-Bawerk spotted the confusion.

[48] In recent debates in the theory of value, distribution and capital, advocates of a classical approach have again expressed doubts about the tenability of this idea; see, for example, Kurz (2020),

Double counting. To Menger, capital represents two separate goods: "capital goods proper", on the one hand, and their utilisation or services, on the other. While the prices of the capital goods are said to refer only to the capital goods proper, interest is a separate price paid as a compensation for their use. According to Böhm-Bawerk, to consider the utilisation of a capital good as an independent carrier of value in addition to the capital good itself involves a serious misconception and amounts to double counting. The value of a capital good, he insisted, involves all the payments for the future "utilisations" or services of it for the rest of its life. These services are inextricably tied to the capital good itself and do not, and cannot, exist independently of it. While Böhm-Bawerk couched his criticism in highly diplomatic terms, his final verdict was merciless: to him "the entire theoretical orientation that culminates in his [Menger's] work" on capital and interest is a failure (1884: 195).[49]

Menger's disenchantment. Böhm-Bawerk's criticism must have deeply affected Menger. The former's attempt at appeasement by claiming to have developed his own theory of capital and interest as a direct continuation of his, Menger's, must have seemed like mockery to him. As Schumpeter famously reports: Menger "severely condemned it from the first. In his somewhat grandiloquent style he told me once: 'The time will come when people will realize that Böhm-Bawerk's theory is one of the greatest errors ever committed'" (Schumpeter 1954: 847, n. 8).[50] Was Menger's inability to revise the first edition of his book and compose the other three volumes he had in mind the result of what must have been to him a dreadful intellectual defeat, inflicted upon him by one of his closest followers? It is safe to assume that he eventually realised that Böhm-Bawerk's objections were right. But what were Menger's options then? Was there any possibility to remedy the blunder and salvage his construction? And if the answer was yes, could he elaborate a theory that stood up to what Böhm-Bawerk and Wieser, both elaborating on some of his ideas, had accomplished in the meantime? Or was he the victim of a second mover advantage grasped by his former students? There is reason to think that he was. His article "Zur Theorie des Kapitals" of 1888 (reprinted in Menger 1968, vol. III) may be seen as a fairly timid attempt to strike back.[51] Eventually he appears to have understood that the game was over, and he fell silent.

Unidirectional production and monotonicity. The assumption of unidirectional production Menger and his followers entertained may be said to have had an important long-

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[49] Several Austrian economists including, for example, Schumpeter, shared Böhm-Bawerk's criticism (but not necessarily his alternative explanation), as did representatives of other currents of economic thought. Georg von Charasoff commented perspicuously on the dispute between the two Austrians: while Menger at first assumed that the value of the product and that of the inputs employed are equal to one another, he then realised that this left no room for profits. Yet his "belated attempt to explain the fact of profits was so clumsy that it was criticised unsparingly and dismissed by his most talented pupil and apostle" (Charasoff 1910: XX). See also the discussion in Kurz (1994: 72-79).

[50] Menger's anger still permeates his highly critical obituary of Böhm-Bawerk, who passed away in 1915.

[51] Hayek (1968: XXV-VI) calls Menger's essay "important" because Menger conceives capital as an amount of money to be invested profitably and rejects Smith's concept of capital as produced means of production; and because he insists that a concern with the origin of a commodity is irrelevant from an economic point of view. These observations do not strike me as very profound.

term effect. It led to the view that the production of consumption goods is more capital intensive than that of capital goods, since consumption goods (goods of first order) obtain at the very end of production processes, whereas intermediate (alias capital) goods (goods of higher order) obtain in the "middle", so to speak. This has as a further implication that with a rise (fall) of the ratio of the rate of interest and the real wage rate (*r/w*), consumption goods will become more (less) expensive relative to capital goods. In case there is a choice of technique, that is, there are several processes of various lengths available to cost-minimizing producers to produce (some) consumption goods, the choice will be made according to cheapness. On the assumption that the technical alternatives can be ordered monotonically with the *r/w*-ratio, the higher (lower) is *r/w*, the lower will be the capital intensity of the cost-minimizing processes and the shorter their length. The ultimate result of starting from unidirectional production and adding some further seemingly unobtrusive assumptions is the well-known marginalist inverse relationship between the "factor input proportion" and the so-called "factor price ratio", that is

$$\partial(K/L)/\partial(r/w) < 0,$$

where K represents the value of capital and L the amount of labour employed. Accordingly, the capital intensity (*K/L*) of each single process as well as that of the economic system as a whole is inversely related to the *r/w*-ratio.

With circular production this need not be the case: the capital-labour ratio may rise with a rise of the *r/w*-ratio within at least some interval(s). There may be what is now known as "reverse capital deepening" (see Kurz 2020).

We now turn to Menger's rejection of the classical economists' idea that each and every produced commodity may be conceived as representing specific quantities of inputs, which could be reduced to a certain amount of a single substance, such as "corn" or "food" (Petty) or "labour" (Ricardo). These quantities are taken to play a role when it comes to the determination of relative prices and the general rate of profits.

7. *Les masses cachées* and the "value theory of labour"

The agents of production. In his book Menger stresses time and again that the values and prices of commodities have nothing to do with the "internal properties (*innere Eigenschaften*)" (60-61 [101]) of commodities. This dictum is a recurring mantra in his book. It is meant to oppose the diametrically opposed mantra of the classical economists that commodities represent something real, some substance(s) or other, which must be taken into account in the theory of value and distribution. In Menger's interpretation of the classical authors, this something, the substance of value, is labour. The following section scrutinises critically his reasoning and seeks to clarify, why it is especially here that his subjectivism turns out to be untenable. Values and prices, it will be argued, reflect what Piero Sraffa in his unpublished papers, commenting on earlier authors, called "les masses cachées", hidden masses, or physical real costs, including the means of subsistence of workers. The perspective of the classical authors is well expressed in a statement by James Mill, a friend of Ricardo's:

> The agents of production are the commodities themselves. ... They are the food of the labourer, the tools and machinery with which he works, and the raw materials which he works upon." (Mill 1826: 165)

Value – purely subjective?

Value, Menger insist, is a purely subjective thing, it is "nothing inherent in goods, no property of them, nor an independent thing existing by itself" (86 [120-21]; see also 119 [146]). Does from this follow that what matters as regards the values of goods, and what matters exclusively, are the subjective estimations of consumers, whereas the objective characteristics of the goods that are effectually demanded and get produced do not? Menger in fact infers this and insists with implicit reference to the classical authors: "Objectification of the value of goods, which is entirely *subjective* in nature, has nevertheless contributed very greatly to confusion about the basic principles of our science" (86 [121]).

In the following we ask: (1) Can consumers be expected to care about what they get when buying a commodity – its "inner texture" (*innere Beschaffenheit*) (115 [141]), as Menger puts it? (2) Can producers be expected to know the amounts of particular services and substances that are needed, and paid for, per unit of output in the production processes they control? We will see that irrespective of consumers' subjective estimations, what matters with regard to value, and what in normal conditions matters only, to which Menger refers, is which commodities consumers will *actually* buy. It is their factual decision to purchase certain commodities rather than others, which activates the system of production and decides about which inputs will productively be consumed in which quantities. These inputs have been interpreted as "transmigrating" into the commodities produced and as constituting its physical contents. Is it conceivable that this productive metabolism plays no role in the determination of (relative) prices of commodities, as Menger contends?

Consumers. Menger rightly stresses that what people do depends on their information and knowledge about the cosmos of things and goods and that they have every reason to investigate this cosmos carefully (see, for example, 1-3 [51-2]). There is no reason to presume that they are always or at least most of the time well informed about the effective properties of goods and whether and how these satisfy their needs. Actually, as Menger stresses, there is even no presumption that individuals know well what their needs really are: some of the needs they entertain are said to be just figments of their imagination. There are "*imaginary*" needs, goods and values (*eingebildete Bedürfnisse, Güter* und *Wert*) (4 [53], 85 [120]). However, he is convinced that

> As a people attains higher levels of civilization, and as men penetrate more deeply into the true constitution of things [*das wahre Wesen der Dinge*] and their own nature [sic], the number of *true goods* becomes constantly larger, and … the number of imaginary goods becomes progressively smaller. It is not unimportant evidence of the connection between accurate knowledge [*wahre Erkenntnis*] and human welfare that the number of

> so-called imaginary goods is shown by experience to be usually greatest among peoples who are poorest in true goods. (4 [53-4]; emphasis added)

Here we need not dwell on whether Menger's speculation is overly optimistic on the one hand – just think about the cancerous growth of fake news and conspiracy tales in recent times – and underestimates the need of poor people to judge correctly their necessaries – since this may decide about their survival – on the other hand. What matters in our context is that according to Menger a solid knowledge of the *objective* characteristics of things and goods is in the very best interest of people and that "experience" tells us that this knowledge increases with civilization.[52] The trajectory the economy is assumed to follow is therefore towards a "*general* economic situation" (240 [248]), in which people are fairly well informed, information differentials are modest, markets are well "organized" and institutionalised, and competition is close to "complete" on both sides of the market (ibid). Then, Menger opines, "effective prices" will obtain. These are "economic prices" that cover all costs of production. "Speculators" (*Arbitrageurs*) (243 [251]) are said to quicken the movement to such a state of affairs.

Gravitation towards "effective prices". These passages echo Smith's argument about the process of gravitation of market prices to their "natural" levels in conditions of free competition – with a single, albeit most important exception that has already been mentioned in the foregoing. According to Smith this process brings about at the same time a tendency towards a *uniform rate of profits* on the capitals invested in the different industries. The establishment of natural prices and of a general rate of profits are indeed, as Smith emphasised, two sides of the same coin: they follow from the cost-minimizing alias profit-maximising behaviour of agents, enforced by brisk – or "complete" (Menger) – competition (see Kurz 2015). And while Menger stresses the role of competition and of profit maximisation, the concept of the general rate of profits surprisingly does not surface in his argument.[53]

If, as Menger stresses, the subjective element gradually loses in importance relative to the objective one as civilisation proceeds, is his uncompromising rejection of an "objectification" of the value of commodities still sustainable? If not, Menger may of course still be right with regard to the *kind* of objectification the classical authors advocated, but this is a different issue to which we turn below. Goods and commodities are typically complex things, not simple ones. They "embody" different substances (chemical, physical and other) and represent different characteristics. Following Menger, with civilisation

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[52] The following warning seems, however, to be necessary: better information about the (real) characteristics of commodities does not *eo ipso* lead to better decisions. For example, a given (and incomplete) level of information about the real characteristic of two commodities that are substitutes may nevertheless result in the choice of the (objectively) superior good. Partially improving the level of information of the consumer with regard to the characteristics of the two commodities may distort the consumer's ranking and lead to the choice of the inferior good. Partially more and better information therefore need not lead to (objectively) better decisions.

[53] In other "Austrian" economists, the concept of a general rate of profits (or interest), assumes centre stage; see, for example, Böhm-Bawerk. In Hayek (1931) the concept appears as "equilibrium rate of interest", which corresponds to Wicksell's "natural" rate of interest.

"*les masses cachées*" gradually come to light, a fact the attentive observer can hardly overlook. And, as we shall see further down, Menger is an attentive observer. But before we come to this, a fundamental cleavage between the views of Menger and Schumpeter ought to be pointed out. While in Menger consumers rule the roost, in Schumpeter entrepreneurs, that is innovators, do.

Consumers vs. entrepreneurs. The uncertainty about the properties of certain goods is particularly high when there are radical product and process innovations that entail entirely new needs and possibly destroy old ones. In such situations people have only vague and often false ideas about the true properties of what is new. Schumpeter (1912) insisted, using occasionally drastic language, that it is not the needy individual that autonomously changes preferences and forces the production apparatus to swing around, but the entrepreneur who by offering new goods and using all kinds of marketing methods compels consumers to learn new patterns of consumption and shapes their preferences.[54] While every once in a while Menger suggests that his argument is to apply to an economy that experiences technical progress, the element of "creative destruction" that Schumpeter emphasised, plays no noteworthy role in his reasoning. Therefore, one of the most important causes both of widespread uncertainty and entrepreneurs challenging consumer sovereignty by means of innovations is of negligible importance in Menger.

Objectification

Producers. As regards producers, Menger leaves no doubt: they cannot but respect the "*causal connections* between goods" (*Causal-Zusammenhang der Güter*) and seek "to discover the economic laws to which they are subject" (7 [56]). They are bound to do this in the interest of staying in the market. For a given state of technical knowledge this means that with regard to each and every process of production and the corresponding time-phased pattern of input use, horizontal and vertical complementarities amongst inputs have to be respected. There may be some opportunities to substitute one input for another if inputs belong to the same species of goods and possess several characteristics. For a given set of technical alternatives, in competitive conditions producers will respond to the choice of technique problem involved by choosing the profit-maximising methods of production. Menger refers in this context to states of "equilibrium" (136n, 172-4 [159n, 191-2]). In such states, as we have already heard, effective prices obtain.[55] The set of relative prices brought about by competition and cost-minimizing behaviour therefore cannot but reflect the quantities of matter and energy (substances and services) transformed from one form or configuration to another. Menger in fact emphasises that "it is necessary in the manner of *all other empirical sciences*, to attempt to classify the various

[54] Schumpeter and especially American institutionalists such as Thorstein Veblen and John Maurice Clark debunked the myth of the autonomous individual, which Menger appears to cherish.

[55] Menger points out that there is a reservation price with regard to each commodity, below which the owners of the commodity are not willing to sell it (see 240 [248]). This is the lowest price at which an owner is willing to part company with quantities of the commodity in his or her possession. This echoes again almost verbatim Smith in *The Wealth*.

goods according to their *inherent characteristics* [*innere Gründe*]" (7 [56]; emphases added). Menger himself therefore leaves no doubt that some objectification of goods is both needed and possible.

As we have seen in the above, the classical economists, who may be said to have advocated a kind of thermodynamic view of production *ante litteram*, had already somewhat understood this, as had Wieser in his critical disquisition on Menger's theory. And also Menger could not stick firmly to his purely subjectivist perspective and referred, for example, to the carbon or tannin "content" etc. of alternative means of heating (116 [142]). The important thing to note is this: whether consumers know accurately what is contained in commodities or whether they hold fancy beliefs about it is totally irrelevant in the present context. What matters, is which goods they purchase. Producers who survive the competitive battle can in turn be expected to be perfectly aware of their expenses and physical real costs of production, which must be covered by the prices they charge. Otherwise, they might go bankrupt with their economic weight vanishing.

Physical real costs and prices. The implications of what has just been said are far-reaching but cannot be expounded in sufficient detail here. A few remarks must suffice. In the simple case of single-product systems *without* a surplus, the means of sustenance of workers and the means of production, both necessary inputs, just get reproduced. Each and every product can now be reduced to, or resolved in, an overall amount of any of the other products that is directly or indirectly used up in its production. The relative prices of any two commodities can then be shown to be proportional to the relative total amounts of any product needed in their production and ascertained by means of the Reduction Method. It can also be shown that if the quantities of labour employed are made explicit in the system, that is, the means of sustenance mentioned are replaced by the amounts of (possibly heterogeneous) labour employed times the real (i.e. commodity) wage rates; and if the different kinds of labour are reduced to one kind of labour by using the wage differentials, then relative prices can be seen to be proportional to the relative amounts of total labour needed in the production of the various commodities. In these conditions a value theory of labour holds, whereas in systems with a surplus it generally does not. The argument can then be extended to the case of economies with a surplus, in which, flukes apart, relative prices will deviate from relative quantities of labour embodied. But also in the with-surplus economy the quantities of commodities consumed productively matter when it comes to determining relative prices and the general rate of profits.

Labour and value

The classical economists. It is interesting to notice that Smith entertained a value theory of labour only in the case of the "early and rude state of society" prior to the appropriation of land and the accumulation of capital, that is, for only a little more than a page in *The Wealth*. Outside that state relative prices are said to deviate from relative labour values, but Smith had relatively little to say about these deviations.

Ricardo studied alternative systems of production in much greater depth and improved considerably our knowledge about them, but he, too, failed to provide a fully comprehensive theory. Not possessed of such a theory, he decided to rely on the value theory of labour as a makeshift solution, which, he speculated, provided a good approximation to a correct theory of relative prices and income distribution. It was clear to him that relative prices and the general rate of profits depend not only on the methods of production actually employed, but also on real wages (or the share of wages). He was clear that a good deal of the difficulties of the subject had to do with compound interest effects.

Menger. He rejects the labour value-based explanation of relative prices, but since his own explanation does not get much beyond the proposition that prices equal all costs incurred and incomes paid, we are given just an adding-up scheme, not much different from what Adam Smith had proposed. Since Menger does not really explain how (relative) prices are determined in given circumstances, nor what the corresponding (relative) labour values would be, he is unable to say whether the two are different, and if they are, by how much. His opposition to the labour theory of value therefore lacks a solid foundation. He would have greatly benefited from studying Ricardo more deeply, because Ricardo had already demonstrated when a value theory of labour holds strictly and when not. It holds strictly only in exceptionally special conditions, in particular when the input proportions in all lines of production are the same or when the rate of profits is nil.

Austrians and marginalists. Ironically, other Austrian and marginalist authors, while criticising the classical economists for advocating the labour theory of value, arrived at the result that in equilibrium relative prices are *exactly* equal to the amounts of labour embodied in the various commodities. This result depends obviously on their adoption of one or the other of the special conditions mentioned. Böhm-Bawerk, for example, ascertained his "average period of production" – the device by means of which he sought to aggregate the heterogeneous capital goods forming the initial endowment of the economy – by assuming a zero rate of interest, which ruled out compound interest effects. He did so even though his ultimate aim was to determine the actual rate of interest in the system, which was supposed to be larger than or at most equal to the given rate of time preference. His device amounted to using labour values as aggregators of capital goods. Böhm-Bawerk's fierce criticism of Marx notwithstanding, his approach in the regard under consideration is the same as Marx's, who, in determining the general rate of profits, assumed the "organic composition of capital" of the economy as a whole to be given in labour value terms.

A few examples should suffice to illustrate labour value-based reasoning in marginalist and Austrian economists. William Stanley Jevons ([1871] 1965: 182-9) concluded his respective disquisition by insisting that "we have proved that commodities will exchange in any market at the ratio of the quantities produced by the same quantity of labour" (182). Similarly, Wieser (1884: 159-60), Philip H. Wicksteed ([1884] 1999: 717-18), Böhm-Bawerk (1892: 329-30) and John Bates Clark (1899: 390). What these authors rejected, was the special causal structure they interpreted the classical authors to advocate, not the putative results of their studies – some kind of labour-based theories of value.

Menger and Marx. Let me conclude this section by comparing the *essentialism* in the theory of value and distribution in Menger with that of Marx. The former traces value back to abstract utility, the latter to abstract labour. Both were comrades in arms in rejecting the idea that commodities could represent chemical or physical properties or physical real costs. Menger, in a passage in the *Grundsätze*, compared the quantities of goods of higher order that are combined with one another in producing a good of first order with "chemical reactions, where only a certain weight of one substance combines with an equally fixed weight of another substance to yield a given chemical compound" (139 [162]).[56] With reference to the fact that inputs can within limits be substituted for one another, Menger rejected the idea of fixed proportions of substances contained in a commodity. While this objection is obviously correct, it does not follow, as we have seen in the above, that substances do not matter at all when it comes to ascertaining relative prices. As soon as the problem of the choice of technique has been decided, but not earlier, the substances involved are known. Interestingly, just four years earlier Marx in volume I of *Capital* (1867) opposed also the idea that the use values productively consumed in the generation of a commodity could determine exchange value in analogy to a chemical compound whose weight was determined by the weights of the elements that constitute it. As he wrote: "So far no chemist has ever discovered exchange value either in a pearl or a diamond" (Marx [1867] 1954: 87). While readers may find this jibe amusing, as Marx appears to have found it, both Marx and Menger failed to look at the *system of production* as a whole – the entire socioeconomic metabolism, in which the production of commodities by means of commodities is one of the core parts. One is reminded of Lord Henry Wolton's statement in Oscar Wilde's *The Picture of Dorian Gray*: "The true mystery of the world is the visible, not the invisible."

8. Concluding remarks

The guideline of my argument in this essay derives from Max Weber's dictum that every scientific work "cries out to be surpassed and rendered obsolete". I have combined criticisms of Menger's *Grundsätze* by others with my own and have drawn the attention to the construction of alternatives inspired by his work. Eugen von Böhm-Bawerk and Friedrich von Wieser in particular tried to overcome the shortcomings of his doctrine and surpass it. More generally, Menger's book contains numerous ideas and concepts that invited readers to test their faculty of judgment, critical capacity and ability to improve upon, or replace, parts of a theoretical edifice that are difficult to sustain. The hope Menger expressed in the preface of his book, which is used as the motto of this essay, that the errors committed were "not entirely without merit" turned out to be justified.

[56] In 1808 John Dalton published his atomic theory, which became the basis of chemistry. Several economists investigated whether, and to what extent, this theory could bear fruit in the theory of production and value.

Several of them were spotted and some of them corrected by his former students and later critics.

There remains the main question: Did Menger accomplish what he had advertised as his main task? Did he succeed in surpassing and rendering obsolete the classical economists' and especially Ricardo's approach to theory of value and distribution? While for some time in the history of our subject it looked as if he, together with Jevons and Léon Walras, had indeed managed to supersede or at least marginalise classical economics, viz. the so-called "marginal revolution", things are invariably more complicated. First, the theories of Menger, Jevons and Walras do not form the unity as which they are often presented. Menger was not the Walrasian yet to come out. Secondly, things have changed since the publication of the *Collected Works and Correspondence of David Ricardo* (Ricardo, *Works*, 1951-1973), edited by Piero Sraffa with the collaboration of Maurice H. Dobb, which shed new light on Ricardo's contribution. Sraffa's book *Production of Commodities by Means of Commodities* (1960) then demonstrated the fecundity of the latter by providing a coherent formulation of the classical surplus approach to the theory of value and distribution. It also laid the foundation of a critique of marginalist theory, which came to the fore in the so-called Cambridge capital controversies (see, for example, Kurz and Salvadori, 1995: chap. 14 and Kurz 2020). Close scrutiny of Menger's criticism of the classical economists shows that he repeatedly misunderstood them and occasionally even misrepresented them. He missed the analytical depth of Ricardo's contribution and therefore failed to supersede his theory of value and distribution. In my view, George Stigler fully grasped the greatness of Ricardo, when he wrote:

> Ricardo, with his great power of abstraction and synthesis, was a master-analyst. … Measured by the significance of the variables and the manageability of the system, he fashioned what is probably the most impressive of all models in economic analysis. (1952: 206-207)

It would of course be ridiculous to claim, or expect, that the criticisms reported in this essay contain anything that comes close to an "exact disproof" of Menger's construction, to use Schumpeter's words cited in Section 2 above. However, I believe to have shown with reference especially to the objections Böhm-Bawerk and Wieser put forward, that Menger's theory is seriously flawed. Yet, as Schumpeter has reminded us, such demonstration may, but need not, "injure fatally". If it fails to do so, it "only serves to bring out the power of the structure" of Menger's contribution.

References

Böhm, S. (1992). Austrian Economics Between the Wars: Some Historiographical Problems, in B. J. Caldwell and S. Boehm (eds), *Austrian Economics: Tensions and New Directions*, Boston, Mass., Kluwer Academic Publishers, pp. 1-30.

Böhm-Bawerk, E. v. (1884). *Kapital und Kapitalzins. Erste Abtheilung : Geschichte und Kritik der Kapitalzins-Theorieen*. Innsbruck, Wagner. English translation (1890), *Capital and Interest*, London, Macmillan.

Böhm-Bawerk, E.v. (1892). Wert, Kosten und Grenznutzen, *Jahrbücher für Nationalökonomie und Statistik*, Third Series, vol. 3(58), no. 3: 321-367.

Bortkiewicz, L. v. (1921). Objektivismus und Subjektivismus in der Werttheorie, *Ekonomisk Tidskrift*, 21: 1-22.

Bukharin, N. (1927). *Economic Theory of the Leisure Class*. Translation of the Russian edition published in 1919 by Ted Crawford, Moscow, International Publishers.

Campagnolo, G. (2010). *Criticisms of Classical Political Economy: Menger, Austrian Economics and the German Historical School*, London, Routledge.

Campagnolo, G. (2012). Deutsche Archive in Japan und das Beispiel: Carl Menger und sein Verständnis der *Nikomachischen Ethik* des Aristoteles, in H. D. Kurz (ed.), *Der Einfluss deutschsprachigen wirtschaftswissenschaftlichen Denkens in Japan*. *Studien zur Entwicklung der ökonomischen Theorie*, vol. XXVII, pp. 131-176.

Charasoff, (1910). *Das System des Marxismus: Darstellung und Kritik*, Berlin, H. Bondy.

Chipman, J. (2013). *German Utility Theory: Analysis and Translations*, Abingdon and New York, Routledge.

Clark, J. B. (1899). *The Distribution of Wealth. A Theory of Wages, Interest and Profits*, New York, Macmillan.

Engels, F. (1844). Umrisse zu einer Kritik der Nationalökonomie. *Deutsch-Französische Jahrbücher*. 1./2. delivery, Paris. Reprinted in MEGA (Karl Marx/Friedrich Engels Gesamtausgabe), vol. I/2, Berlin, DeGruyter, pp. 467-494.

Gandolfo, G. (1971). *Economic Dynamics: Methods and Models*, Amsterdam, Elsevier.

Gossen, H. H. (1854). *Entwickelung der Gesetze des menschlichen Verkehrs, und der daraus fließenden Regeln für menschliches Handeln*, Braunschweig, Friedrich Vieweg & Sohn.

Hayek, F. A. (1931). *Prices and Production*, London, Routledge and Kegan Paul.

Hayek, F. A. (1968). *Einleitung*, in C. Menger (1968), pp. VII-XXXVI.

Hicks, J. (1969). *A Theory of Economic History*, Oxford, Clarendon.

Hicks. J. (1976). Some Questions of Time in Economics, in A. M. Tang et al. (eds), *Evolution, Welfare and Time in Economics*. *Essays in Honor of Nicholas Georgescu-Roegen*, Lexington, Lexington Books.

Hildebrand, B. (1848). *Die Nationalökonomie der Gegenwart und Zukunft*, Frankfurt, Literarische Anstalt.

Jevons, W. S. ([1871] 1965). *The Theory of Political Economy*, London, Macmillan. Cited after the reprint of the 5th ed., New York, Kelley, 1965.

Kurz, H. D. (1994). Auf der Suche nach dem „erlösenden Wort": Eugen von Böhm-Bawerk und der Kapitalzins, in B. Schefold (ed.), *Eugen von Böhm-Bawerk's Geschichte und Kritik der Kapitalzins-Theorieen*, Düsseldorf, Verlag Wirtschaft und Finanzen, pp. 45-110.

Kurz, H.D. (1995). Marginalism, Classicism and Socialism in German-speaking Countries, 1871–1932, in I. Steedman (ed.), *Socialism and Marginalism in Economics, 1870–1930*, London and New York, Routledge, pp. 7–86.

Kurz, H. D. (2010). Technical Change, Capital Accumulation and Income Distribution in Classical Economics: Adam Smith, David Ricardo and Karl Marx, *European Journal of the History of Economic Thought*, 11: 1183–1222.

Kurz, H. D. (2015). Adam Smith on Markets, Competition and Violations of Natural Liberty, *Cambridge Journal of Economics*, 40(2): 615-638.

Kurz, H. D. (2016). German and Austrian School, in G. Faccarello and H. D. Kurz (eds), *Handbook on the History of Economic Analysis*, Vol. 2: *Schools of Economic Thought*, Celdenham and Northampton, Edward Elgar, pp. 251-273.

Kurz, H. D. (2018). Power – The *Bête Noire* in Much of Modern Economics, *Artha Vijnana*, LX(4): 319-376.

Kurz, H. D. (2020). The theory of value and distribution and the problem of capital, *European Journal of Economics and Economic Policy: Intervention*, 17(2): 241-64.

Kurz, H. D. (2022). On Machine Ages: Causes, Forms and Effects of Technological Change, in H. D. Kurz, M. Schütz, R. Strohmaier and S. Zilian (eds), *Smart. The Routledge Handbook of Smart Technologies*, London, Routledge, pp. 56-76.

Kurz, H. D. and Salvadori, N. (1995). *Theory of Production. A Long-Period Analysis*, Cambridge, Cambridge University Press.

Kurz, H. D., and Salvadori, N. (2001). Classical Economics and the Problem of Exhaustible Resources, *Metroeconomica*, 52(3): 282-296.

Kurz, H. D., and Salvadori, N. (2015a). The 'Classical' Approach to Exhaustible Resources: Parrinello and the Others, in H. D. Kurz and N. Salvadori, *Revisiting Classical Economics. Studies in Long Period Analysis*, London, Routledge, pp. 304-316.

Kurz, H. D. and Salvadori, N. (eds) (2015b). *The Elgar Companion to David Ricardo*, Cheltenham and Northampton, Edward Elgar.

Kurz, H. D. and Salvadori, N. (2022). *Competition, Value and Distribution in Classical Economics. Studies in Long-Period Analysis*, London, Routledge.

Kurz, H. D. and Sturn, R. (1999). Wiesers "Ursprung" und die Entwicklung der Mikroökonomik, in B. Schefold (ed.), *Vademecum zu einem Klassiker der Österreichischen Schule*, Düsseldorf, Verlag Wirtschaft und Finanzen, S. 59-103.

Kurz, H. D. and Sturn, R. (2013). *Die größten Ökonomen: Adam Smith*, Konstanz and Munich, UVK Lucius.

Lachmann, L. (1978). Carl Menger and the Incomplete Revolution of Subjectivism, *Atlantic Economic Journal*, 6(3): 57-59.

Lancaster, K. (1966). A New Approach to Consumer Theory, *Journal of Political Economy*, 74(2): 132-157.

Linsbichler, A. (2021). Philosophy of Austrian Economics, in J. Reiss and C. Heilmann (eds), *The Routledge Handbook of the Philosophy of Economics*, Routledge, Abingdon, pp. 169-85.

Lorenz, H.-W. (1993). *Nonlinear Dynamical Economics and Chaotic Motion*, 2nd ed., Berlin, Springer.

Marx, K. ([1867] 1954). *Capital. A Critique of Political Economy*, vol. I., London, Lawrence & Wishart.

Menger, C. (1871). *Grundsätze der Volkswirthschaftslehre*, Vienna, Wilhelm Braumüller. Reprinted in Menger (1968), vol. I.

Menger. C. (1883). *Untersuchungen über die Methode der Sozialwissenschaften und der Politischen Ökonomie insbesondere*, Leipzig, Duncker & Humblot. Reprinted in Menger (1968), vol. II.

Menger, C. (1884). *Die Irrthümer des Historismus in der deutschen Nationalökonomie*, Vienn, Alfred Hölder. Reprinted in Menger (1968), vol. III.

Menger, C. (1968). *Gesammelte Werke*, four vols, ed. by F. A. Hayek, Tübingen, J. C. B. Mohr.

Menger, C. (1981). *Principles of Economics*. Translation of Menger (1871) by J. Dingwall and B. F. Hoselitz, Glencoe, I., Free Press.

Milford, K. (1989). *Zu den Lösungsversuchen des Induktionsproblems und des Abgrenzungsproblems bei Carl Menger*, Vienna, Austrian Academy of Sciences.

Mill, J. (1826). *Elements of Political Economy*, 3rd ed., London, Henry G. Bohn.

Morgenstern, O. (1972). Thirteen Critical Points in Contemporary Economic Theory: An Interpretation, *Journal of Economic Literature*, 10(4): 1163-1189.

North, D. C., Wallis, J. J. and Weingast, B. R. (2009). *Violence and Social Orders. A Conceptual Framework for Interpreting Recorded Human History*, Cambridge, Cambridge University Press.

Ricardo, D. (1951-1973). *The Works and Correspondence of David Ricardo*, 11 volumes, edited by P. Sraffa with the collaboration of M. H. Dobb, Cambridge, Cambridge University Press. In the text cited as *Works*, followed by the volume number.

Schumpeter, J. A. (1912). *Theorie der wirtschaftlichen Entwicklung*, Berlin, Duncker und Humblot.

Schumpeter, J. A. ([1942] 2008). *Capitalism, Socialism and Democracy*, New York, Harper & Row. Reprint of the 3rd ed. 1950 as the first Harper Perennial Modern Thought Edition 2008.

Schumpeter, J. A. (1954). *History of Economic Analysis*, New York, Oxford University Press.

Smith, A. ([1776] 1976). *An Inquiry into the Nature and Causes of the Wealth of Nations*, two vols, in Campbell, R. H. and Skinner, A. S. (eds), *The Glasgow Edition of the Works and Correspondence of Adam Smith: Vol. II.1 and II.2*, Oxford, Oxford University Press. In the text referred to as WN.

Sraffa, P. (1960). *Production of Commodities by Means of Commodities*, Cambridge, Cambridge University Press.

Stigler, G. J. (1952). The Ricardian Theory of Value and Distribution, *Journal of Political Economy*, 60(3): 187-207.

Steedman, I. (2001). *Consumption Takes Time. Implications for Economic Theory*, London, Routledge.

Streissler, E. (1969). Hayek on Growth: A Reconsideration of His Early Theoretical Work, in E. Streisssler, G. Haberler, F. A Lutz and F. Machlup (eds), *Roads to Freedom. Essays in Honour of Friedrich A. von Hayek*, London, Routledge and Kegan Paul, pp. 245-285.

Streissler, E. (1990). The Influence of German Economics on Menger and Marshall, in B. J. Caldwell (ed.), *Carl Menger and his Legacy in Economics*, Durham, Durham University Press, pp. 31–68.

Streissler, E. (1997). Carl Menger, der deutsche Nationalökonom, in B. P. Priddat (ed.), *Wert, Meinung, Bedeutung. Die Tradition der subjektiven Wertlehre in der deutschsprachigen Nationalökonomie vor Menger*, Marburg, Metropolis Verlag, pp. 33–88.

Viner, J. (1927). Adam Smith and Laissez Faire, *Journal of Political Economy*, 35(2): 198-232.

Weber, M. ([1930] 2001). *The Protestant Ethic and the Spirit of Capitalism*, translated by Talcott Parsons, London, Routledge.

Weber, M. ([1917] 2004). Science as a Vocation, in *The Vocation Lectures*, translated by R. Livingstone and edited by D. Owen and T. Strong, Indianapolis, IN, Hackett Publishing Co.

Weitzman, M. (1998). Recombinant Growth, *Quarterly Journal of Economics*, 113(2): 331–360.

Wicksteed, P. H. (1899). Das Kapital: A Criticism, *To-day*, October 1884, pp. 388-411. Reprinted 1999.

Wieser, F. v. (1884). *Über den Ursprung und die Hauptgesetze des wirthschaftlichen Werthes*, Vienna, Alfred Hölder.

Wieser, F. v. (1889). *Der Natürliche Werth*, Vienna, Alfred Hölder.

Young, A. (1928). Increasing Returns and Economic Progress, *Economic Journal*, 38(152): 527–542.

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