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Compatibility of Efficiency and Fairness:
How has Walras been misunderstood?

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(A draft of the introduction to my book *Léon Walras's Economic Thought: The General Equilibrium Theory in Historical Perspective*, to be published by Routledge in 2024)

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Abstract

This book aims to shed new light on Léon Walras's general equilibrium theory from a historical perspective. Walras's construction of the general equilibrium theory marked the dawn of modern economics. Although the theory was greatly developed in the 20th century, Walras's intentions and ideas behind the theory are still not fully understood. This introduction is intended to provide a clear picture of the aims of the book. It presents the basic structure of Walras's research program; the misconceptions Walras was subjected to by 20th-century economists; and the formation process of Walras's pure, social, and applied economics. Subsequently, it outlines each chapter of the book.

1. Walras and “Justice”

Léon Walras (1834–1910) is a French economist who constructed the general equilibrium theory in a mathematical form for the first time in history. General equilibrium theory is a price determination theory that intends to prove the efficiency of free competition. In his main work, *Eléments d'économie politique pure* (Elements of Pure Economics), of which the first edition was published in 1874–77, Walras described a state in which all economic agents maximize their satisfaction, and supply and demand are equaled in all markets, by using simultaneous equations. Walras's idea was refined first by Vilfredo Pareto (1848–1923), his successor at the University of Lausanne. Walras is considered the founder of the Lausanne School, which is characterized by the mathematical analysis of economic equilibrium. In the 20th century, many economists across the world developed Walras's ideas of general equilibrium into more mathematically sophisticated models, and microeconomics was systematized on this basis.

Today, Walras's influence on modern economics is immense. Even if you have never heard of Walras, if you take a microeconomics course at a university, you will be unconsciously acquainted with his ideas. My first encounter with Walras was similar. I took a microeconomics class as a first-year economics student and learned the price determination theory based on maximizing behaviors. The content of microeconomics was not very appealing to me at the time. I was rather interested in the ideological context in which such formalistic theories of human behavior were developed. This was followed by my second fateful encounter with Walras. In my third year, I took a course on reading French economic literature and had the chance to read the original text written by Walras. The professor in charge was a historian of economic thought and an expert on Pareto and the Lausanne School. The text used in the class was Walras's first book on Economics, *L'Economie politique et la justice* (The Economics and the Justice)², published in 1860. In this book, Walras discusses the relationship between economics and justice more than 10 years before constructing his general equilibrium theory. Walras's passion for social justice in this text impressed me deeply because the microeconomics analysis taught in another class seemingly had nothing to do with justice or socioeconomic reform. This was the decisive event that drove me to further explore Walras's economic thought.

In *L'Economie politique et la justice*, Walras divided the system of economics into two fields, namely the "theory of exchange," which is a natural science, and the "theory of property," which is a moral science, and clearly stated that the former should be the foundation of the latter. These fields later became Walras's "pure economics" and "social

economics," respectively. Applied economics was added to it only after the publication of the book, thus completing Walras's whole system of economics. Walras calls pure economics "the theory of social wealth," social economics "the theory of the distribution of social wealth," and applied economics "the theory of the production of social wealth. While pure economics, like the natural sciences, aims to pursue "truth," social economics pursues "justice" and applied economics pursues "utility." Specifically, pure economics discusses price determination under a hypothetical system of free competition³ and presents the general equilibrium theory. Social economics discusses land nationalization and tax exemption on wages as policies to create an equal starting point for people. Finally, applied economics examines the monetary system, labor markets, public services, and other areas where free competition cannot be applied.

Walras classified economics before his time, such as that during the time of Adam Smith⁴, as applied economics. Walras was dissatisfied with the liberal economists in the vein of Jean-Baptiste Say⁵, who pursued "profit" or efficiency without any scientific basis. Furthermore, he was also critical of the socialists' pursuit of "justice" without any scientific basis. In modern terms, Walras's social economics aims to achieve fairness, while applied economics aims to achieve efficiency. Pure economics provides a theoretical basis for each. Thus, with the division of economics into three fields, Walras was attempting to address the highly contemporary issue of the compatibility of efficiency and fairness. Note that, in Walras's consciousness, social and applied economics were inextricably linked to pure economics; and his belief in the compatibility of efficiency and fairness, passion for the realization of social justice, and pride as a "scientific socialist" remained unshaken throughout his life⁶.

2. Walras – misunderstood by his successors.

Despite Walras's intentions, modern economists have considered his pure economics or general equilibrium theory to be the whole of Walras's economics and have concerned themselves only with its theoretical elaboration. The attitude of ignoring Walras's social and applied economics and focusing only on pure economics is closely related to a misinterpretation of Walras's methodology of pure economics: economists in the 20th century considered Walras's general equilibrium theory as a positive model aimed at analyzing the real economy; from such a perspective, the discrepancy between Walras's model and the real economy was seen as a theoretical flaw, and many economists have devoted their efforts to correcting and developing it.

Moreover, Walras's general equilibrium theory intends to prove the efficiency of free competition. Walrasian economics and neoclassical economics, which are currently

following in its footsteps, trust in the automatic adjustment function of the market and have a negative attitude toward government intervention in the market. Therefore, many people believe that its original founder, Walras, also believed in laissez-faire.

Ironically, it was Pareto, heir to the Lausanne School, who determined these misconceptions. In a textbook interpretation, Pareto has made the interdependent character of general equilibrium theory more complete by eradicating Walras's assumption of cardinal utility, or measurability of utility, from the general equilibrium theory and introducing a theory of choice that assumes only ordinal utility. Behind these two economists, however, was a more serious methodological and ideological conflict.⁷ In terms of his political position, Walras was a lifelong "scientific socialist," and regarded Pareto as a laissez-faire advocate⁸. Pareto, while praising Walras's pure economics or general equilibrium theory, refused to lecture on social economics at the University of Lausanne because he considered it a premature application of the theory to reality. Pareto feared that Walras's social economics was a mere statement of his socialist ideology.

Pareto lectured on applied economics, but the content of his lectures was based on a completely different methodology from that of Walras. For Walras, pure economics is based on the idealized concept of free competition. Based on the conclusions of the efficiency of free competition proved in pure economics, applied economics has the task of organizing free competition as an actual institution. According to Walras, the conclusions of pure economics do not require verification in the real economy⁹. Their contact with reality is achieved by applying them to reality. Thus, "free competition" in Walras's pure economics is a completely different concept from laissez-faire. In contrast, Pareto's conception of pure economics is a method to capture the real economy, and applied economics is its sequential approach. For Pareto, free competition is a form of economic regime that exists in reality. From Pareto's perspective, Walras's mathematical method of pure economics is too metaphysical. To overcome this, Pareto moved on to a more empirical theory of choice. After Pareto, Walras's methodology of pure economics was ignored, and its development in the 20th century was determined by its theoretical consistency as an empirical model by Hicks, Samuelson, and others.

From the perspective of the history of economic thought, Schumpeter's (1883–1950) interpretation of Walras's work has been very influential. In *History of Economic Analysis*, he praised Walras's pure economics (general equilibrium theory) as the "Magna Carta" of the history of economic theory, but had a very cold attitude toward Walras's social and applied economics.

Unfortunately, Walras himself attached as much importance to his questionable

philosophies about social justice, his land nationalization scheme, his projects of monetary management, and other things that have nothing to do with his superb achievement in pure theory. They have cost him the good will of many a competent critic, and must, I imagine, try the patience of many of his readers. In any case, the tribute above must be understood to refer to his pure theory alone.

(Schumpeter, Joseph. A. [1954] 1994, 828. the emphases are mine.)

There are several reasons why Walras's social and applied economics did not receive the evaluation it deserved. First, unlike pure economics, they were never systematically completed. The first edition of Walras's *Eléments d'économie politique pure* was published in 1874 and 1877, followed by a series of editions including the fourth edition published in 1900, the last during Walras's lifetime, and the final edition, with slight modifications, published in 1926. Thus, Walras's pure economics spread around the world. Walras had initially intended to complete a systematic work on social and applied economics as well, but he was unable to do so because of health reasons¹⁰. He decided to publish collections of his articles in each field and published the first editions of *Études d'économie sociale* (Studies in Social Economics) and *Études d'économie politique appliquée* (Studies in Applied Economics) in 1896 and 1898, respectively.

Another interpretation that still holds great sway is that Walras was a socialist advocate in his youth, but turned to mathematical economics to secure his status. In other words, it is said that Walras turned from social economics to pure economics, leading to his disregard for social economics. For example, Michio Morishima (1923-2004) insists as follows:

In order to survive, Walras needed to preserve the Lausanne position he had barely won, and to do so, he had to compromise. Thus, he separated “science” from “socialism”, and in his *Elements of Pure Economics* published in 1874, he declared that economics should be divided into three branches: pure economics, applied economics, and social economics.

(Morishima 1994, 29–30)

In this book, I will show that this interpretation of Morishima is incorrect. Throughout his life, Walras never wavered in his pride as a scientific socialist, nor did he hide it. He maintained his belief that pure economics was the fundamental theory of his socialism. The three-part division into pure, social, and applied economics had been established before he was assigned to Lausanne. Morishima, who famously argued with Jaffé over the normativity of Walras's pure economics in 1980¹¹, oddly enough, agrees with Jaffé in

his assertion that Walras needed to conceal his socialist ideology.

The methodology of this book is contrary to Morishima's interpretation, who concentrated his research only on Walras's pure economics and discussed its reality, specifically its potential for dynamics. This book focuses on the interconnection of Walras's pure, social, and applied economics and aims to explore the intellectual background of his general equilibrium theory. However, it also differs from Jaffe's interpretation that Walras's general equilibrium theory itself is a normative scheme. As Walker (1984) correctly points out¹², although it is possible for the economist's "normative bias" to creep into his work without the writer being conscious of its influence, Jaffe's claim that Walras's pure economics was intended to be and is "a realistic utopia" is wrong. We may say that Jaffe's interpretation also contradicts Walras's methodology of pure economics. This book aims to carefully examine how Walras' idealistic model of pure economics relates to his policy arguments in his social and applied economics.

3. Evolution of the Studies on Walras

Walras boldly tackled the compatibility of efficiency and fairness, which is undoubtedly the most important issue in modern economics, with his own system of economics, consisting of pure, social, and applied economics. However, the contents of Walras's applied and social economics are only presented by collections of papers and lack a systematic explanation, which makes many parts of the text difficult to understand just by reading it. However, thanks to the 14-volume complete collection of economics writings of Walras and his father, *Œuvres économiques complètes*, published between 1987 and 2005 (Walras and Walras 1987–2005), we now know more about the historical and intellectual background of Walras's economics than ever before. Moreover, the International Walras Association (l'Association Internationale Walras, AIW) was founded in 1996 by Donald Walker. It aims at "promoting research on the works of Walras, furthering its diffusion and encouraging communication among scholars active in this field"¹³. Scholars here include not only economists who study Walras from a theoretical perspective but also historians of economic thought who focus on his economic thought¹⁴. Under these circumstances, there has been a great deal of ongoing research on Walras's economic thought.

Among the many outstanding research achievements, I would like to specially mention one book that inspired me to write this book. In 2010, the year that marked the 100th death anniversary of Walras, Pascal Bridel¹⁵ compiled a collection of papers to mark the occasion under the title *General Equilibrium Analysis: A Century after Walras* (Bridel 2011). Fourteen prominent scholars, including Nobel Prize-winning economists

Arrow and Solow, contributed to the volume. This book aims to synthesize the theoretical and historical studies of Walras's economics. Among the contributors, Bridel (2011) and Kirman (2011) point out the significance and difficulty of this task. Bridel, the only academic historian among the authors of the book, reconsiders the normative origin of Walras's general equilibrium model and the ambitious scheme embedded in it. He concludes his chapter as follows:

In Walras's anti-utilitarianism rational utopia a coalition between libre concurrence absolute and political equality was still thought possible. With Pareto, the arch-rational general equilibrium model broke from any social philosophy and acquired a life of its own in the hands of mathematical economists. Human being's rich plurality of motivations with which Smith, Condorcet and maybe Walras tried desperately to grapple disappeared for a long time from the horizon of most theoretical economist. (Bridel 2011, 22)

Kirman (2011) reconsiders the dominant modern interpretations of Walras's general equilibrium model and discusses how they are far removed from Walras's original intention. For example, for Walras, free competition only means that no one can influence prices. Walras himself does not specify the current conditions of perfect competition, including perfect information. The "auctioneer" who is supposed to appear in the tatonnement process, does not appear in Walras's discussion. Thus, the more economists strive for theoretical consistency in models that Walras himself could not articulate, the further they stray from Walras's original intention, which creates the unfortunate legacy of modern economics.

Next, I discuss my learnings from these discussions: Until now, theoretical research has concentrated on making removing the theoretical inconsistencies in Walras's pure theory; as a result, interpretations that are increasingly far removed from Walras's original intent have become influential. Even if there are theoretical inconsistencies, it is important to faithfully understand Walras's intentions and, for this purpose, to consider the unity of pure, social, and applied economics. I have come to believe that it may solve, in turn, the mystery of pure theory and is conducive to the study of economic theory. As Walras's economic thought is one of the key sources from which modern economics emerged, an accurate and deep understanding of it will provide a new perspective on the problems facing modern economics.

4. The Formation Process of Walras's pure, social, and applied economics

To understand how Walras worked to realize efficiency and fairness throughout his life, let us review the formation process of his pure, social, and applied economics.¹⁶

Léon Walras was born on December 16, 1834, in Evreux, Normandy, France. His father, Auguste Walras (1801-1866), was a secondary school principal and school inspector who devoted himself to the study of economics, publishing works such as *De la nature de la richesse et de l'origine de la valeur* (1831) and *Théorie de la richesse sociale* (1849). Although Auguste did not become a successful economist, he profoundly influenced his son Léon's career as an economist.

In 1853 and 1854, Walras tried to enter the Ecole Polytechnique, a very elite school of science, but was unsuccessful. However, while preparing for the entrance examination, he read, for the first time, *Recherches sur les principes mathématiques de la théorie des richesses* (1838), the main work of Antoine Augustin Cournot (1801–1877), a pioneer of mathematical economics in France. Walras later declared in the preface to the fourth edition of *Elements of Pure Economics* (1900) that his father Auguste and Cournot were the main inspirations for his economic theories.¹⁷ Unable to enter the Ecole Polytechnique, Walras became a student at the Ecole des Mines in Paris in 1854. However, he was not interested in the content of the classes and spent his time writing art criticism and novels. Subsequently, in 1858, Walras was persuaded by his father Auguste to abandon his literary dreams and devote himself to the study of economics following in his father's footsteps.

Based on his father's advice, Walras wrote his first economic work, *L'Economie politique et la justice, examen critique et refutation des doctrines économiques de M. P.-J. Proudhon*¹⁸, which was published in 1860. In this book, Walras described the economic system that he supported as "Equality of Conditions and Inequality of Positions"¹⁹. This means that if we ensure people's starting equality through common ownership of land, we can leave the rest to free competition. Even if inequality arises as a result of differences in individual ability and effort, it does not violate justice, and neither common ownership of capital nor special distribution policies are required. Walras quoted his father's "Laws of Value Variations in a Progressive Society"²⁰ from *Théorie de la richesse sociale* (1849). The laws state that if the cause of value is attributed to rareté (scarcity), only land rents and land prices will increase due to capital accumulation and population growth. As the value of salary remains unchanged and the value of interest decreases, only the landowners will benefit from economic progress. Auguste concluded that the cause of poverty did not consist in the private ownership of produced capital, but of land. He strongly opposed the nationalization of other types of capital, believing that only if they nationalized land could the equality of the people be maintained.

Walras declared that it was his father's and his own socialism that was "scientific" and

that the socialism of Proudhon and other socialists was "empirical." The nationalization of land and free competition is the core of Auguste and Léon Walras's scientific socialism. The slogan of "Equality of Conditions and Inequality of Positions" was a belief regarding which Walras remained unbending throughout his life, and to prove its theoretical basis was the motivation for establishing mathematical pure economics. Shortly after publishing *L'économie politique et la justice*, Walras got an important comment from an engineer and saint-Simonian, Charles-Joseph Lambert-Bey (1804–1864)²¹. He admitted that free competition was a way of determining the quantity and price of products, but pointed out that no one had ever proved that it is the only and best possible way. Walras later gave the answer in *Elements of Pure Economics*, showing the efficiency of free competition by maximizing the utility of economic agents. Auguste's notion of scarcity refers to the ratio of absolute demand to absolute supply. Léon gave it a new meaning, that is, marginal utility, which enabled him to formulate a general equilibrium model. Walras later states in *Elements of Pure Economics* how these demonstrations in pure economics give us the basis for social economics and applied economics²².

In 1860, there was another important event in Walras's life. He attended the International Tax Conference held in Lausanne, Switzerland in July²³. Walras's attendance at the conference led him to a teaching position at the Académie de Lausanne (later the University of Lausanne) ten years later in 1870. In the same year, 1860, Walras joined the newspaper *La Presse*, founded in 1836 by the newspaper magnate Émile de Girardin (1806–1881), and worked in its economic department²⁴. After eventually quitting *La Presse* due to a disagreement over the content of an article, Walras joined The Chemins de fer du Nord (The Northern Railway), the predecessor of today's French National Railways (SNCF), in 1862, and took a position in the secretarial department. During this period, he made several attempts to publish his own economics journal, but failed to obtain government permission and it never materialized. Meanwhile, Walras's classification and definition of the three branches of economics—pure, social, and applied economics—was almost completed²⁵.

In January 1865, Walras became one of the founders and investors of La Caisse d'escomptes des associations populaires (the People's Association Discount Bank), a limited liability company, with Léon Say (1826–1896) as the chairman. Léon Say was an economist and a businessman and the grandson of Jean-Baptiste Say. He was a director of the Northern Railway Company when Walras joined it, and he recommended Walras to join. In April of the same year, Walras resigned from it to become the managing director of the bank, where he devoted himself to the cooperative movement. In 1866, Walras published the cooperative magazine *Le Travail* (The Labor) with Léon Say, for which he wrote many articles. In 1867–1868, Walras gave six lectures²⁶ to the clients of the bank

and the readers of *Le Travail*, which were published in the book *Recherches de l'ideal social* (1868). In 1868, the discount bank went bankrupt; thus, Walras's plan of cooperative movement ultimately failed. The magazine also ceased publication, and Walras lost all his fortune in settling his debts.

In 1870, Walras's destiny was set in motion. The Académie de Lausanne had decided to establish a new course in economics in the canton of Vaud, Switzerland, and Walras was invited to apply for it. Swiss politician Loius Ruchonnet (1834–1893) sent him this news. Ruchonnet had learned of Walras from the International Tax Conference in Lausanne in 1860, and he was the head of the public education department in the canton of Vaud in 1870. In his application, Walras's lecture plan was based on pure, social, and applied economics. The selection committee consisted of seven members, three prominent local figures, and four university professors, but three of the university professors opposed Walras's hiring on the grounds that it was a dangerous idea that would adversely affect students. After deliberations, Walras was hired on a one-year contract and left France at the outbreak of the Franco-Prussian War to teach for the first time in Lausanne on December 16, 1870, his 36th birthday. At his inauguration, Ruchonnet declared Walras the right professor of economics for the scientific solution of social problems in place of the agitated socialism of the time.

After his appointment in Lausanne, Walras began to work in earnest on mathematical pure economics. Taking his father's scarcity theory of value as the starting point, his task was to present a price theory that would provide a basis for the efficiency of free competition. Therefore, he formulated a mathematical theory of two-commodity exchange based on Cournot's idea of demand functions, which he summarized in a paper entitled "Principles of the Mathematical Theory of Exchange" in 1873. In deriving the demand curve, Walras was guided by his colleague Antoine-Paul Piccard (1844–1920), a professor of mechanics, on the principle of maximization, which led him to the law of equal marginal utility. Thus, Walras stepped away from his father Auguste's crude concept of scarcity and acquired the concept of scarcity as marginal utility.

After publishing his 1873 paper, Walras learned that William Jevons had already published a similar theory in Britain. While acknowledging Jevons's primacy in the theory of marginal utility, Walras generalized the subject of exchange from two commodities to many commodities to demonstrate his originality. Furthermore, he developed his argument from the theory of exchange to the theory of production and capital formation. Finally, the first edition of *Elements of Pure Economics* was published in two volumes in 1874 and 1877. It is well known that the theory developed by Walras is called the general equilibrium theory because it deals with a situation in which all market participants maximize their utility under constraints (subjective equilibrium) and supply and demand

are equalized in all markets (market equilibrium). Walras's pure economics was extended to the theory of capital and money, which culminated in the publication of the fourth edition of *Elements of Pure Economics* in 1900, the last during his lifetime.

From the 1870s, Walras's pure economics had been gaining support in Switzerland, Italy, the U.S., and other countries around the world. The only exception was his native France, where Walras's wish to teach at a French university was never fulfilled. After the collapse of the cooperative movement led by Walras and Léon Say at the end of the 1860s, their relationship deteriorated. While Léon Say certainly had tremendous influence in the French economics community, holding such important positions as Minister of Finance in the 1870s and 1880s, the rejection of Walras's economics in France cannot be explained solely by personal feelings.

The spread of Walras's pure economics in France was hindered, as is often pointed out, partly by Walras's socialist advocacy, including land nationalization, and partly by his mathematical method. In France, liberal economists in the vein of Jean-Baptiste Say, who had once rejected the use of mathematics in economics, formed the orthodox school, and when Walras presented his paper "Principles of the Mathematical Theory of Exchange" at the Academy of Moral and Political Sciences in Paris in 1873, Walras was heavily criticized by the orthodox economists. Walras was labeled an anti-liberal because the introduction of mathematics into economics would lead to the denial of human free will²⁷. The second edition of *Elements of Pure Economics* published in 1889 was unceremoniously criticized by the orthodoxy for Walras's support of slavery because the definition of "human faculty" and its pricing in the book justify slavery²⁸.

In France, the position of professor of economics at the Collège de France, the highest rank of economists in France, was first held by Jean-Baptiste Say from 1830 to 1832, followed by a succession of orthodox economists in the same vein, and by the liberal economist Pierre Paul Leroy-Beaulieu in 1880 (1843–1916)²⁹. The Academy of Moral and Political Sciences and the Paris Economic Society, founded in 1842 by Joseph-Clément Garnier (1813–1881), were also strongholds of the orthodox school. The *Journal des économistes*, published by Guillaumin from 1841, was the only economics periodical in France until 1887.

Walras's relationship with the orthodox economists was complicated by the fact that he had worked for the *Journal des économistes* in 1859 and published his first book *L'Économie politique et la justice* in 1860 with Guillaumin, the journal's publisher. However, Walras's insistence on land nationalization at the Lausanne International Tax Conference that same year drew the ire of the editors of the *Journal des économistes*. In 1873, Walras's article "Principles of the Mathematical Theory of Exchange," together with a letter to Jevons, with whom he began corresponding after its publication, was

published in the journal. This is because Garnier, the then editor-in-chief of the journal, was proficient in mathematics and understood Walras's mathematical economics. In the *Etudes d'économie sociale*, Walras frequently mentions Garnier, distinguishing his admiration for him from that of other orthodox economists. The relationship between Walras and the journal deteriorated in 1881, when Gustave de Molinari (1819–1912), a Belgian liberal economist who strongly supported the French Orthodox I school, became the editor-in-chief. In 1887, Charles Gide (1847–1932), a friend of Walras, published the journal *Revue d'économie politique* in opposition to the *Journal des économistes*. Walras became a collaborator of the journal. Gide was a cooperative who opposed laissez-faire while having a good understanding of Walras's mathematical methods.

The rejection in France during the 1870s and 1880s, along with his excessive workload at the university, was exhausting for Walras, and he retired from the University of Lausanne in 1892. After a year's rest, Walras regained his energy and decided to tackle his remaining work in social and applied economics. As stated in the preface to *Etudes d'économie sociale*³⁰, he gave up the idea of publishing systematic books on these subjects, such as *Elements of Pure Economics*, and decided to publish them as collections of papers, focusing on those that had already been published. The first editions of *Etudes d'économie politique appliquée* and *Etudes d'économie sociale* were published in 1896 and 1898, respectively.

On June 10, 1909, the University of Lausanne celebrated the 50th anniversary of Walras's life as an economist. At this time, Walras was already widely recognized as the founder of the Lausanne School and the theory of general equilibrium. At this anniversary celebration, he delivered a commemorative lecture entitled "Ruchonnet and Scientific Socialism"³¹ to a large audience, emphasizing that he had followed through on his original aspiration as a young man and perfected pure economics as the basic theory of his scientific socialism. Walras believed that pure economics, although it formed the basis of his social and applied economics, was not everything, and that economics was complete only when all three fields were combined. Seven months after this lecture, on January 5, 1910, Walras passed away at his home in Clarens Switzerland in the presence of his daughter Aline and son Georges.

5. Outline of the book

This book focuses on the interconnection of Walras's pure, social, and applied economics by making full use of his original writings in French, which have not received much attention until now. It discusses the historical and intellectual background of Walras's economics from two perspectives: the origins of Walras's economic thought and

a reconsideration of his modern, misunderstood conception of economics. The book consists of an introduction, two parts consisting of six chapters, a conclusion, and an appendix.

Part 1 of the book reconsiders the relationship between Walras and his predecessors Adam Smith (1723–1790), Jean Baptiste Say (1767–1832), and Achille Nicolas Isnard (1749–1803), who are believed to have had a decisive influence on Walras's general equilibrium theory. Part 2 reveals Walras's views on the labor market, entrepreneurship, and disinterested human nature such as sympathy, which have been left out of his general equilibrium theory and, thus, remain misunderstood to date. The appendix discusses the little-known ideas of pioneering Japanese Walrasian economist Miyoshi Hayakawa (1895–1962).

Chapter 1 clarifies what Walras learned from Adam Smith by examining Walras's quotations of Smith and his handwritten notes in the *Wealth of Nations* belonging to the Walras Library in Lausanne. It will show that although Walras's general equilibrium theory has often been compared to Smith's "invisible hand," Walras himself had no intention of developing it in his pure economics. In his applied economics, Walras was influenced by Smith's analysis of the division of labor in terms of efficiency. However, Walras did not share an explanation of its origin in his social economics, which suggests the reason why Walras never quoted Smith's *Theory of Moral Sentiments*.

Chapter 2 presents Walras's critique of Jean-Baptiste Say. Walras constructed his general equilibrium theory, greatly influenced by Jean-Baptiste Say's ideas, especially those of the entrepreneur. However, Walras was harshly critical of the laissez-faire doctrine of Say and his successors. Walras feared that he would be misunderstood as a laissez-faire advocate by the readers of *Elements of Pure Economics*. The chapter aims to clarify how Walras criticized Say's laissez-faire doctrine, despite basing his theory of the entrepreneur on Say's ideas.

Chapter 3 reconsiders the well-known similarities, such as simultaneous equations and numéraire, between the economic theories of A.N. Isnard (1748–1803) and Walras and shows how they reached completely opposing conclusions on economic policies. It focuses on the two economists' different attitudes toward physiocrats and compares their ideas on surplus, labor, and the tax system. The origins of the general equilibrium theory in France are revealed from not only a theoretical perspective but also an ideological one.

Chapter 4 focuses on Walras's idea of the entrepreneur and labor market in his pure, social, and applied economics and clarifies his special understanding of the capital–labor relationship, which is completely different from that of Karl Marx. Walras was opposed to workers' strikes for higher pay and the minimum wage system. However, this does not

mean that he was optimistic about workers' conditions in his day or believed that only market mechanisms might improve them. He remained strongly determined all his life to solve worker poverty based on his general equilibrium theory.

Chapter 5 discusses Walras's concept of the worker-entrepreneur in relation to his plans for cooperative association and shows how this concept is connected to his general equilibrium theory. We will pay special attention to Walras's explanation of the origin of profits in not only his pure economics but also his other writings. It is well known that in Walras's general equilibrium model, the entrepreneur receives no profit, and that the model also lacks in the analysis of uncertainty. From a theoretical perspective, these features of Walras's model have been deemed flaws. We will shed new light on the significance of this mysterious entrepreneur in Walras's general equilibrium theory from historical and intellectual perspectives.

Chapter 6 clarifies Walras's concept of "sympathy" and disinterested human aspects and how he related them to economic activities. His general equilibrium theory intends to prove the efficiency of free competition and assumes that economic agents act to maximize their satisfaction. Although Walras never addressed the concept of sympathy in his pure economics, his social economics shows that his argument regarding sympathy did not change before and after he presented the general equilibrium theory. Finally, to better characterize Walras's concept, this chapter compares it to that of Adam Smith.

In the Appendix, I present the economic thought of Miyoji Hayakawa, who first translated Walras's works into Japanese and was a pioneer of econometrics. Hayakawa was also active as a writer dealing with poor farmers. This discussion will not only shed light on an intellectual aspect of the diffusion of neoclassical economics in Japan, but also be relevant to the contemporary theme of the relationship between economics and literature.

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² Walras, L. [1860] 2001.

³ See the preface of *Elements of Pure Economics*. Walras, L. [1874–1877–1900] 1988, 11.

⁴ For Walras's interpretation of Smith, see Chapter 1 of this book.

⁵ See Chapter 2 of this book for Walras's critique of Say.

⁶ See Walras's speech the year before his death. Walras, L. [1909] 1987.

⁷ On this point, see Bridel and Mornati (2009) and Kirman (2021).

⁸ On this point, see also Misaki (1999).

⁹ Walras, L. [1874–1877–1900] 1988, 53–54.

¹⁰ See section 4 of this chapter.

¹¹ In 1980, William Jaffé, a historian of economic thought, and Morishima, a theoretical economist had a famous controversy over the normativity of Walras's pure model. Jaffé emphasized the static elements of the model and its normative character, while Morishima argued that Walras intended a dynamic, positive model. Today, there is much criticism of both. On this controversy, see Morishima (1977, 1980) and Jaffé (1980).

¹² After criticizing Jaffé's interpretation, Walker goes on to emphasize the significance of Walras's realistic and dynamic approach in pure economics. He shows that the idea of "a written pledge" in the tâtonnement process, which is an emblem of Walras's static approach, was not introduced until the fourth edition of *Elements of Pure Economics* and concludes that Walras was at first such a realist as to be interested in arguing disequilibrium, but later in his life, became a formalist (Walker 1996). He, thus, considers Walras's increasing tendency from a dynamic to a static approach to be a "decline." In 2014, Walker published an English translation of *Elements of Pure Economics* (Walras, Walker, and van Daal 2014). While Jaffé's English translation, which is currently the most popular, is based on the definitive edition of 1926, Walker's 2014 translation is based on the third edition of 1896, which Walker most highly praises. For the criticism of Walker's English translation, see Baranzini (2017) and McLure (2020). This book is also intended to refute Walker's interpretation, which completely ignores Walras' intentions.

¹³ <https://wp.unil.ch/walras/the-association/presentation/>

¹⁴ A selection of papers presented at the first three conferences of the association was published in 2005 under the title *Etudes Walrassiennes*. The editors use the adjective "Walrassien" in the sense of referring directly to the writings of Walras and that of "Walrasien" in the sense of using concepts that would have their origin in the writings of Walras (Baranzini and Diemer 2004, 17).

¹⁵ For a collection of his studies on Walras, including his criticism of Walker, see Bridel (2022).

¹⁶ His autobiographical notes (Walras [1893–1909] 2001) provide much information about the formation process of Walras's economic thought.

¹⁷ On this point, see also Chapter 2 of the book.

¹⁸ On this book, see section 1 of this chapter.

¹⁹ *Egalité des conditions, inégalité des positions.*

²⁰ « les lois de variation de la valeur du capital et de la valeur de revenu ». On this subject, see also Misaki (1999).

²¹ Walras, L. [1898] 1992, 418–419.

²² « De plus, une importante vérité, que les économistes ont encore affirmée, mais non démontrée, est enfin établie, à l'encontre des négations socialistes, à savoir que le mécanisme de la libre concurrence est, à certaines conditions et dans certaines limites, un mécanisme automoteur et autorégulateur de transformation des épargnes en capitaux proprement dits aussi bien que de transformation des services en produits. Et ainsi, en matière de capitalisation et de crédit comme en matière d'échange et de production, la conclusion de l'économie politique pure nous fournit le point de départ de l'économie politique appliquée. Dans un cas comme dans l'autre, cette conclusion indique, en outre, nettement la tâche à remplir par l'économie sociale. » (Walras, L. [1874–1877–1900] 1988, 425).

²³ Walras's retrospective on this meeting, "Remembrances of the Lausanne Conference" was published in his second economic work, *Theorie critique de l'impôt* (1861). It was also reproduced in the second edition of *Etudes d'économie sociale: théorie de la répartition* (1936). (Walras, L. [1896] 1990)

²⁴ De Girardin also attended the International Tax Conference in Lausanne, and Walras's extraordinary respect for this man is evident in his "Remembrances of the Lausanne Conference. Further, Walras' disagreement with the editor-in-chief at the time he joined "La Presse" is interestingly mentioned in the note at the beginning of Part I of

Etudes d'économie sociale.

²⁵ See Walras's letter to Jules du Mesnil-Marigny, dated December 23, 1862, letter 81 in Jaffé 1965, vol. 1, 117–125.

²⁶ It was reproduced in *Etudes d'économie sociale: théorie de la répartition.* (Walras, L. [1896] 1990)

²⁷ On its historical and methodological background, see Muller (2017).

²⁸ On this subject, see Chapter 4 of this book. For the reviews of Walras's *Element of Pure Economics*, see Bridel (1996).

²⁹ On Walras's critique of Leroy-Beaulieu, see Part IV of Walras, L. [1896] 1990.

³⁰ Walras, L. [1896] 1990, 3.

³¹ Walras, L. [1909] 1987.