

This article was downloaded by: [Professor Rodolfo Signorino]

On: 22 March 2012, At: 10:08

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Review of Political Economy

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/crpe20>

Piero Sraffa's lectures on the advanced theory of value 1928-31 and the rediscovery of the classical approach

Rodolfo Signorino ^a

^a Dipartimento di Studi su Politica, Diritto e Società G. Mosca, Università di Palermo, Italy

Available online: 19 Aug 2006

To cite this article: Rodolfo Signorino (2005): Piero Sraffa's lectures on the advanced theory of value 1928-31 and the rediscovery of the classical approach, *Review of Political Economy*, 17:3, 359-380

To link to this article: <http://dx.doi.org/10.1080/09538250500147080>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Piero Sraffa's Lectures on the Advanced Theory of Value 1928–31 and the Rediscovery of the Classical Approach

RODOLFO SIGNORINO

*Dipartimento di Studi su Politica, Diritto e Società G. Mosca, Università di
Palermo, Italy*

ABSTRACT *Sraffa's Lectures on the Advanced Theory of Value 1928–1931 and his two preparatory Notes of summer and November 1927 provide a wealth of material, up to now unpublished, for a reconstruction of the early stage of his inquiry into the cognate fields of pure economic theory and its history. The three manuscripts show that in the late 1920s Sraffa rejected the Marshallian constant-cost interpretation of classical economics, an interpretation to which he had adhered in his 1925 and 1926 papers. Moreover, in the Lectures, Sraffa presents for the first time his own interpretation of classical economics based on the concepts of surplus, physical real costs and asymmetric treatment of distributive variables.*

1. Introduction

Piero Sraffa's Archive at the Wren Library of Trinity College, Cambridge, includes a folder, catalogued as File D2/4, which contains a manuscript, in Sraffa's handwriting, of more than 120 pages. The manuscript is entitled 'Sixteen Lectures in Michaelmas Term 1928–1929 Advanced Theory of Value e 1929–1930 e Lent 1931' (hereafter *Lectures*); as the title indicates, it had been written by Sraffa for his course of lectures to students undertaking the economic tripos in the period from 1928 to 1931.¹

In the second half of 1927, Sraffa wrote two preparatory notes to the *Lectures*; the surviving manuscripts of these notes are now kept in two folders,

Correspondence Address: Rodolfo Signorino, Dipartimento di Studi su Politica, Diritto e Società G. Mosca, Università di Palermo, Piazza Bologni 8, 90134 Palermo, Italy. Email: signorin1969@libero.it

¹Sraffa started teaching at Cambridge in the autumn of 1928, one year after his arrival in England following an invitation by J. M. Keynes, and suddenly announced his desire to stop teaching in the autumn of 1930. Besides the lectures on the advanced theory of value, Sraffa gave only two other courses of lectures during his Cambridge years: *On Continental Banking* in 1929 and *On Industry* in 1941–43.

catalogued as File D3/12/3 and as File D3/12/4. The first file is a manuscript of about 70 pages entitled ‘Notes: London/Summer 1927 (Physical real costs etc.)’ (hereafter *Notes summer 1927*); while the second file is comprised of some bundles of sheets and some isolated sheets entitled ‘Notes, essentially preparations for Lectures 1928–1931’ (hereafter *Notes November 1927*).

Most of the *Lectures* appear to be an organic text. According to Jonathan Smith, the archivist of the Wren Library who has supervised the cataloguing of Sraffa’s manuscripts, ‘the detailed nature of the preparatory material for the tripos lectures on advanced theory of value read more like papers to be read to an attentive class—it is a text, not notes’ (Smith, 1998, p. 46). Similarly Heinz Kurz, in an overview of Sraffa’s unpublished manuscripts, writes that ‘we are in the possession of a full manuscript containing a detailed account of the contents of the lectures and for the greater part also fully worked out arguments in regard to the themes dealt with’ (Kurz, 1998, p. 440).² By contrast, both *Notes* (in particular those of November 1927) appear to be casual memoranda for personal use.

According to Kurz (1998, p. 438), in the course of his lifetime of research, Sraffa set himself three tasks: (i) to show that the marginalist theory of value is not the only available theory of value, (ii) to reconstruct and to develop the classical theory, a distinct and older theory of value, in order to demonstrate its explanatory value, and (iii) to show that the alternative marginalist theory is flawed.

In Sraffa’s published papers of 1925 and 1926, ‘Sulle relazioni fra costo e quantità prodotta’ and ‘The laws of returns under competitive conditions’, the rediscovery and reconstruction of the classical approach to the theory of value and distribution is only a side-issue. Sraffa examines the supply side of the Marshallian theory of value in an attempt to ‘separat[e] what is still alive from what is dead in the concept of the supply curve and of its effects on competitive price determination’ (Sraffa, 1926, p. 536). By contrast, the history of economic analysis and its relevance for contemporary economic theorists become a central focus of inquiry in the *Lectures*. The latter manuscript clearly exhibits a distinctive feature of Sraffa’s overall intellectual contribution to economics: constructive work at an analytical level is always intertwined with constructive work at a historiographical level. The *Lectures* constitute a valuable source of information, up to now unpublished, for all scholars who want to provide a reconstruction of the early stages of Sraffa’s inquiry into the cognate fields of pure economic theory and its history. It is not an exaggeration to claim that the *Lectures* show that by the late 1920s Sraffa had reached a deep understanding of the philosophical underpinnings, logical structure and theoretical domain of the classical theory of value. Once he finally got rid of the Marshallian interpretation of classical economics, Sraffa was able in the *Lectures* to expose and highlight the many conceptual differences between the classical theory and the marginalist theory. Such an understanding at a historiographical level constituted the background

²Professor Pierangelo Garegnani, Sraffa’s literary executor, has entrusted to Professor Heinz D. Kurz the overall responsibility for the preparation of the forthcoming edition of Sraffa’s unpublished papers and correspondence.

condition Sraffa needed to start his constructive work at an analytical level, that is to say, the formalization of the ‘fundamental propositions’, which 30 years later would grow into *Production of Commodities by Means of Commodities*.³ Key concepts in Sraffa’s 1960 interpretation of classical economics, such as the concepts of surplus or net product, physical real costs and asymmetric treatment of the distributive variables, are clearly delineated in the *Lectures*.

The manuscript of the *Lectures* is long and very complex: Sraffa tackles a good many intricate problems ranging from the history of economic thought to pure economic analysis. From p. 61 onwards Sraffa refines the ideas already presented in ‘Sulle relazioni fra costo e quantità prodotta’ and only partially summarized to Anglo-Saxon readers in the first part of ‘The laws of returns under competitive conditions’. A thorough analysis of this material and a comparison with Sraffa’s 1925–26 statements would require a paper of its own. Similarly, a separate paper would be needed to analyse in due detail the material placed at the end of the main manuscript of the *Lectures* but separated from it. I refer to some bundles of sheets containing the text of the lectures (particularly on Pareto’s general equilibrium approach) originally designed by Sraffa for his course and subsequently excluded from it. In what follows I shall deal only with the first 60 pages of the *Lectures*, where Sraffa puts forth some original material on the history of economic thought and its importance for contemporary students of the pure theory of value. Moreover, I shall concentrate on one historiographical theme: Sraffa’s reconstruction of the classical concepts of cost of production and distribution in comparison with the corresponding marginalist concepts.

To simplify analysis, I shall divide the first 60 pages of the *Lectures* into two parts: from p. 1 to the first paragraph of p. 17 and from the second paragraph of p. 17 to p. 60. The first 17 pages of the *Lectures* may be interpreted as a sort of extended methodological preamble in which Sraffa explains why he gives so much emphasis to themes of history of economic thought within a course of lectures devoted to the advanced theory of value. For Sraffa, the very notion of theory of value employed by contemporary (Marshallian) economists justifies the widespread indifference towards the history of economics. In particular, the view adopted by contemporary Marshallian economists on the history of economics appear to Sraffa to be based on a few assumptions, which may be summarized by the following propositions.

Proposition 1: the theory of value is a department of economic theory substantially devoid of immediate practical applications.

³In the Preface of *Production of Commodities* Sraffa recalls that he has elaborated the ‘fundamental propositions’ of the 1960 book in 1928 and that he has shown them to Keynes. In the folder catalogued as File C239 there is a letter from Pigou to Sraffa dated January 1928. The letter allows us to infer that Sraffa has shown his ‘fundamental propositions’ not only to Keynes but also to Pigou. Moreover, it appears that Pigou, like Keynes, was led to think that the theoretical domain of Sraffa’s equations is restricted to the case of constant costs. Pigou writes: ‘Dear Sraffa, [...] your equations seem to me capable of being subsumed as a special case of the general analysis. You in effect are simply supposing that each of the three (or n) commodities is being produced under conditions of constant returns. Of course, an elaborate scheme of demand and supply is not needed in this case: but this case can be treated as a limiting case of the more general theory’.

Proposition 2: the Marshallian theory of value is the only scientifically correct theory of value. Thus it may be improved or refined but not radically criticized or discarded.

Proposition 3: the main, if not the only, worth of studying the history of economic thought is the knowledge of how the present theory of value has gradually evolved from past errors and misconceptions.

Accordingly, Sraffa makes use of the history of economic thought to subject these propositions to severe criticism. The historical examples selected by Sraffa are in fact targeted to show that all three propositions are false.

Contra Proposition 1: Sraffa claims that the theory of value is not an intellectual game; the theory had been originally elaborated and has always been used to provide general solutions to concrete political and economical problems in which well-defined class interests are deeply involved.

Contra Proposition 2: Sraffa claims that the Marshallian theory of value is not the only scientifically correct theory of value. In his view, a careful study of the history of economic thought reveals that the theoretical domain of the theory of value gradually changed as economists investigated different *quasita* by means of different analytical tools within different theoretical frameworks.

Contra Proposition 3: Sraffa claims that the duty of historians of economic thought is not to show how the theory of value has got rid of past errors and confusions: what Marshallian economists call past errors may instead be true propositions elaborated within a different approach to the theory of value.

From the second paragraph of p. 17 to p. 60 Sraffa shows that two different approaches to the theory of value exist, the objectivist approach of the classical economists and the subjectivist approach of the marginalist economists. Sraffa selects the concepts of cost of production and distribution as the fields upon which to measure the theoretical distance which separates the two approaches. Sraffa starts from William Petty, François Quesnay and the Physiocrats and arrives at Alfred Marshall by working through Adam Smith (pp. 27–35), David Ricardo (pp. 36–39), Nassau Senior (pp. 40–41), John Stuart Mill (pp. 42–46) and the Austrian economists (pp. 47–59). Sraffa makes use of examples taken from the history of economic thought in order to defend the following two theses:

Thesis 1: the notion of cost of production underwent a drastic semantic shift in the transition from the classical approach to the marginalist one

Thesis 2: the two different notions of cost of production underlie two different theories of distribution.

As far as Thesis 1 is concerned, Sraffa describes the classical notion of cost of production as a magnitude that has a strictly objectivist nature and which can be observed and directly measured. By contrast, the marginalist notion of cost of production is, for Sraffa, a strictly subjective magnitude, which cannot be observed and can be measured only indirectly. His explanation of this fundamental difference between the classical and marginalist concepts of cost of production is that they derive from two different views of the nature and goals of economic

theory. For classical economists, the goal of economics is twofold: (i) to discover the laws which determine the wealth of nations and its dynamics, and (ii) to discover the laws which determine income distribution among the various social classes. The fulfilment of such goals requires an objectivist notion of cost of production. For marginalist (particularly Marshallian) economists, the goal of economics is likewise twofold, but different: (i) to discover the laws that determine the economic behaviour of individual human agents, and (ii) to discover the laws that determine the equilibrium price of individual commodities. The fulfilment of such goals requires a subjectivist notion of cost of production.

As far as Thesis 2 is concerned, Sraffa claims that the classical notion of cost of production leads to an asymmetric theory of distribution in which the distributive variables are framed into different logical and chronological planes. Wages (in real terms) are the amounts of commodities that capitalist-entrepreneurs must advance to workers in order to enable them to undertake and complete the production process. Profits (in real terms) are the amounts of commodities that emerge at the end of the production process in the form of surplus or net product. By contrast, Sraffa argues, the marginalist notion of cost of production leads to a symmetric theory of distribution in which the distributive variables are framed into parallel logical and chronological planes. Marshall defines 'real cost of production' as the sum of 'efforts and sacrifices' borne by workers, capitalist-entrepreneurs and landlords; this definition is the basis for the marginalist view that the 'monetary expenses of production' constitute the sum of pecuniary incentives in terms of wages, profits and rents necessary to induce workers, capitalist-entrepreneurs and landlords to bear the loss of utility connected to the production activity. The chronological symmetry between wages, profits and rents reflects a symmetry in the distribution of property rights between workers, capitalist-entrepreneurs and landlords: wages, profits and rents are simply coordinate shares in the final product.

The structure of the paper is as follows. Section 2 brings together and discusses Sraffa's sparse hints on the classical theory of value and distribution in the published papers of the mid-1920s in comparison with his related statements in the *Notes* and the *Lectures*. In Section 3 the first 17 pages of the *Lectures* are scrutinized in order to reconstruct Sraffa's views on the nature and the role of the history of economic thought. Sections 4 and 5 deal respectively with Sraffa's twin comparisons—his comparison of the classical and marginalist notions of cost of production, and his comparison of the classical and the marginalist theories of distribution. Section 6 concludes.

2. From the 1925 and 1926 Papers to the *Notes* and the *Lectures*

In the Italian paper of 1925 and in the first part of the *Economic Journal* paper of the following year, Sraffa focuses on the critique of the received Marshallian theory of value, based on the *ceteris paribus* clause (see Signorino 2000a, 2000b, 2001a). The rediscovery of the distinctive features of the classical theory of value and distribution appears to be an important side-issue, but still a side-issue. Moreover, at this time Sraffa still adhered to the Marshallian

historiography, according to which the classical theory of value is based on the tacit assumption of constant costs (see Roncaglia, 1991, p. 378):⁴

The idea of interdependence between quantity produced and the cost of production of a commodity produced under competitive conditions is not suggested by experience at all and could not arise spontaneously. It can be said that *all classical writers accept implicitly, as an obvious fact, that cost is independent of quantity*, and they do not bother to discuss the contrary hypothesis. (Sraffa, 1925, p. 279 [1998, p. 325]; emphasis added)

Nonetheless, if one delves into Sraffa's 1925 argument one may uncover signs of his awareness that classical economics and marginalist economics are not identical theoretical entities. Sraffa's 1925 paper reveals that differences are manifold and concern

- (i) the foundations of the two theories,
- (ii) the *quaesita* each theory is designed to answer,
- (iii) the logical structure of the two theories,
- (iv) their theoretical domain.

As far as differences on point (i) are concerned, Sraffa points out that the fall into oblivion of classical economics and the rise to dominance of marginalist economics implies a 'change in the basis of the theory of value, from cost of production to utility' (Sraffa, 1925, p. 279 [1998, p. 325]). In the 1925 paper, Sraffa does not thoroughly analyse the classical notion of cost of production and the conceptual differences between the classical and the marginalist notions of cost of production. By contrast, as is shown *infra* in Section 4, Sraffa devotes much space to this point in the *Notes* and in the *Lectures*.

As far as differences about point (ii) are concerned, Sraffa maintains that classical economics and marginalist economics are designed to solve two very different theoretical problems. Classical economics, particularly Ricardian economics, aims to elucidate the laws which determine the distribution of the social product among the various social classes and the historical dynamics of the distributive variables. By contrast, marginalist economics aims to elucidate the laws which determine the prices of individual commodities (see Sraffa, 1925, p. 319 [1998, p. 356]). In the *Notes* and in the *Lectures* Sraffa gives much emphasis to this point, which is simply hinted at in the 1925 paper (see *infra* Section 3).

Regarding the differences on point (iii), Sraffa states that classical authors employ the law of diminishing returns within the field of distribution and the laws of increasing returns within the field of production. He adds that

⁴As is well-known, Sraffa himself, in the Preface of *Production of Commodities*, acknowledges that he had adhered to the Marshallian constant-cost interpretation of classical economics in the Italian paper of 1925: 'The temptation to presuppose constant returns is not entirely fanciful. It was experienced by the author himself when he started on these studies many years ago—and led him in 1925 into an attempt to argue that only the case of constant returns was generally consistent with the premises of economic theory' (Sraffa, 1960, p. vi).

‘nobody, until comparatively recently, had thought of unifying these two tendencies in one single law of non-proportional productivity, and considering this as one of the bases of the theory of price’ (Sraffa, 1925, p. 279 [1998, p. 324]). Accordingly, for Sraffa the classical theory of value, contrary to the Marshallian theory of value, requires neither ‘a co-ordination of the different tendencies under one single “law of non-proportional costs”’, nor the construction of a supply curve such as to be ‘symmetrical to the corresponding demand curve for each commodity’ (Sraffa, 1925, p. 319 [1998, p. 356]). In the *Lectures* (from p. 61 onwards) Sraffa restates and elaborates upon the same line of thought.

Finally, as far as differences about point (iv) are concerned, Sraffa stresses that Ricardo uses the word ‘corn’ to indicate the whole of agricultural production. By contrast, Marshallian economists use the word ‘corn’ to indicate one single agricultural commodity among many others. Sraffa (1925, p. 324, fn 1 [1998, p. 360, fn 81]) quotes a passage from Marshall’s (1920) *Principles of Economics* to clarify that Marshall himself was aware of the peculiar meaning of the word ‘corn’ within the classical theory of value:

the term *corn* was used by [the English classical economists] as short for agricultural produce in general, somewhat as Petty (*Taxes and Contributions*, Ch. XIV) speaks of ‘the Husbandry of Corn, which we will suppose to contain all necessaries of life as in the Lord’s Prayer we suppose the word Bread doth’. (Marshall, 1920, p. 509, note 2)⁵

In Sraffa’s (1925) view, the different semantics of the word ‘corn’ within classical and marginalist economics stems logically from the fact that the classical economists, contrary to Marshallian economists, adopt an aggregate point of view.⁶ This second distinction about different points of view is of crucial importance for a correct understanding of Sraffa’s overall 1925 stance on the debate concerning empty economic boxes and their role within the pure theory of value. As noted by Clapham (1922), applied economists’ effort to classify real-world industries into the three Marshallian boxes labelled increasing, constant and diminishing returns proved totally unsuccessful. Sraffa argues that such failure does not derive from ‘objective circumstances inherent in the various industries’ but ‘is dependent on the point of view of the person acting as observer’ (Sraffa, 1925, p. 278 [1998, p. 324]). Both in ‘Sulle relazioni fra costo e quantità prodotta’ and in the *Lectures*, Sraffa stresses that the law of diminishing returns holds in the presence of a factor (typically land) whose total amount cannot be diminished or augmented. Such an assumption concerning land is a natural one

⁵The same message appears also in the *Lectures*: ‘It is true that Ricardo usually speaks only of the production of corn in connection with diminishing returns: but no doubt he uses the term “corn” for agricultural produce in general, as Sir W. Petty, in an often quoted passage, speaks of “the Husbandry of Corn, which we will suppose to contain all the necessaries of life, as in the Lord’s Prayer we suppose the word Bread does”’ (D2/4, pp. 68–69).

⁶As stressed by Sraffa, Pigou acknowledges that Marshallian analysis ‘is not designed for application to the output of a whole body of a country’s resources lumped together into a single industry’. The theoretical domain of Marshallian analysis is for Pigou to be limited to the conditions of production of a single commodity, which ‘is supposed to make use of only a small part of the aggregate resources of the country’ (Sraffa, 1925, p. 320 [1998, p. 356]).

in the classical theory, but it is inadmissible in the marginalist theory: land can legitimately be considered as a factor that cannot be diminished or augmented only from the point of view of the class of agricultural entrepreneurs considered as a whole. In contrast, the individual agricultural entrepreneurs considered by marginalist economists may vary at their will the amount of land employed just as they can vary the amount employed of any other factor of production, provided that they pay the corresponding factor price (see Sraffa, 1925, pp. 286, 301 [1998, pp. 330, 342]; and D2/4, pp. 55, 85).

Sraffa emphasizes the differences in the theoretical domains of classical and marginalist theory mainly in the *Notes summer 1927*. Here Sraffa explicitly writes that there are two radically different theories of value: the first theory includes in its theoretical domain the overall amount of the commodities produced by a given economy and synthesized by the word 'corn'; the second theory includes in its theoretical domain a single commodity taken in isolation from all the others (see D3/12/3, p. 4). According to Sraffa, Marshall did not fully understand all the theoretical consequences deriving from the differences in the theoretical domains of the two theories of value. As a result of this misunderstanding, Marshall tried to pour the old wine of the classical laws of returns into the new barrels of his symmetrical theory of value, based on the *ceteris paribus* clause. Marshall's attempt, according to Sraffa, has caused 'a good deal of confusion' which only a careful study of the history of economic thought can make clear:

The distinction between these two concepts of the range of the theory of value should be clearly kept in mind. A good deal of confusion usually is caused through the using of materials originally framed for the purposes of the wider theory by classical economists in connection with the narrower one. An obvious example—so obvious that it can hardly give place to misunderstanding—is the use of the word 'corn' by the English classical economists. [...] One has therefore to be very careful in applying Ricardo's statement about the value of 'corn' to problems in which it is relevant to understand corn as one of many commodities, as opposed to its meaning as a synthesis of all commodities. (An error in this way has been committed with the law of dim[inishing] returns as we shall see). [...] It should be incidentally remarked that corn, just for the reasons that it was particularly appropriate to represent all commodities in the classical theory of value, is highly unsuitable to be taken as an example in the restricted theory. Its production absorbs such a large share of the land of the world and labour, its consumption represents such a large share in the consumption of the majority of the population, that the condition *ceteris paribus* hardly represents the real circumstances in its production. (D3/12/3, pp. 12–13, 15)

The fruits of Sraffa's inquiry into the field of the historical development of the theory of value ripened in the late 1920s, in the *Notes* and in the *Lectures*. In the latter work Sraffa finally jettisons the Marshallian interpretation of the classical theory of value as based on the implicit assumption of constant returns to scale. In the *Lectures*, in fact, Sraffa denies that the theoretical domain of the classical theory of value is inevitably restricted to the case of constant costs:

The interdependence of cost and quantity produced is quite a modern idea. All the classical economists ignore it altogether so much so that it cannot even be

said that they assume constant costs to operate throughout as their argument implies, since they don't take the question into consideration at all; and their discussions of what are the causes of value refer only to whether it is only the quantity of labour, or also profit, or also rent: but they are all agreed in looking for the causes only on the side of supply. (D2/4, p. 66)

The above passage from the *Lectures* may be considered a turning point in Sraffa's understanding of classical economics, both from a historiographical and an analytical point of view, whose importance may hardly be overrated. Exactly the same interpretation of the classical point of view endorsed in the *Lectures* is, in fact, restated in the Preface of *Production of Commodities*, where, as is well-known, Sraffa (1960, p. v) claims that 'no question arises as to the variation or constancy of returns' in the first two parts of his 1960 book *or* in classical economics thanks to the method based on the assumption of given quantities (on the assumption of given quantities see Kurz & Salvadori, 1998, and Roncaglia, 2000, Chapter 2).

3. The First 17 Pages of the *Lectures*

The first 17 pages of the *Lectures* have a marked methodological character. Sraffa makes extensive use of examples taken from the history of economic thought to criticize the received (Marshallian) view on the nature and the role of the theory of value and its history. Sraffa claims that Marshallian economists consider the theory of value as a purely abstract intellectual construction whose main target is to provide a general explanation of the equilibrium value of single commodities produced under the most varied conditions. Interpreted from such a standpoint, Sraffa goes on, the theory of value must necessarily start from a limited number of assumptions of a wholly general character:

The general theory of value being intended to take into account the common characteristics of the most diverse conditions under which the values of different commodities are determined, it is necessarily very abstract in character. It moves from a relatively small number of assumptions and deduces from them the way through which an equilibrium is reached. (D2/4, p. 1)

Consequently, the propositions and categories (such as Clapham's boxes) elaborated by the value theorists are not a fit subject for an empirical critique *à la* Clapham (1922). A critical evaluation of the empirical content pertains only to the assumptions and not to the conclusions of the theory of value. The latter may be scrutinized only from the point of view of their logical relationship with the assumptions of the theory:

It might therefore appear at first sight that the theory [of value] is a purely logical construction and that the attitude to take towards it in order to understand its implications is simply first to find out to what extent its assumptions correspond to the facts, since the conclusions will be to some extent representative, and then to follow the logical process of deduction. (D2/4, p. 1)

A further consequence of this train of thought for Sraffa is the irrelevance of a knowledge of the history of economic thought for contemporary economic theorists:

If that were so, then a knowledge of the history of the doctrine would have an importance for its own sake, but it would not be required for the understanding of the theory as it stands. The history would be simply the record of a series of mistakes which have been successively corrected. (*ibidem*)

Sraffa thoroughly disagrees with this point of view on the nature and role of the theory of value and its history. On the very first page of his 1926 *Economic Journal* paper, Sraffa reports J. M. Keynes's (and Marshall's) view of the theory of value, expounded in the Introduction to the *Cambridge Economic Handbooks*, according to which '*the theory of economics does not furnish a body of settled conclusions immediately applicable to policy*. It is a method rather than a doctrine, *an apparatus of the mind*, a technique of thinking, which helps its possessor to draw correct conclusions' (Keynes 1971–89, Vol. XII, p. 856, quoted by Sraffa, 1926, p. 535; emphasis added). For Sraffa, such a view deeply influences the direction of contemporary academic research on the theory of value insofar as it turns it into 'a theory in respect to which it is not worth while departing from a tradition which is finally accepted' (Sraffa, 1926, p. 536).

In the *Lectures*, Sraffa substantiates his 1926 indictment of the Marshall-Keynes' view on the theory of value by means of a threefold argument.

First Argument

The Marshallian view hides from sight the politico-ideological element underlying the genesis of any economic theory. According to Sraffa, economic theories arise from the attempt to find a general solution to concrete policy questions. Each economic theory advocates a well-defined solution to the policy questions under discussion in a given time and place. Each proposed solution has a direct bearing upon the rival economic interests at stake:

economic theories, whether ancient or modern, do not arise out of the simple intellectual curiosity of finding out the reasons for what is observed to happen in the factory or in the market place. They arise out of practical problems which present themselves to the community and which must be solved. There are opposite interests which support either one solution or the other and they find theoretical, that is universal, arguments in order to prove that the solution they advocate is conformable to natural laws, or to the public interest, or to the interest of the ruling class or to whatever is the ideology which at the particular moment is dominating. (D2/4, p. 2)

Second Argument

The Marshallian view implies that economists have always investigated basically the same questions by means of basically the same analytical tools within basically the same theoretical framework. In short, it implies that economics is a monoparadigmatic discipline. Sraffa holds that this implication is false. In the course of

time the theoretical domain of the theory of value has gradually changed since economists have pursued different *quæsita* by means of different analytical tools. (The analytical differences have been overshadowed by the fact that economists have used the same name for different concepts—for example, the notion of ‘cost of production’ in the classical theory and the very different notion of ‘cost of production’ in the marginalist theory.) Therefore, the very notion of theory of value turns out to be conceptually ambiguous insofar as it includes different theoretical frameworks within its boundaries.⁷ The conclusion to draw, for Sraffa, is that, contrary to the Marshallian view, a knowledge of the history of economic thought *is* relevant for contemporary economic theorists. Only a careful study of the history of economic thought can overcome the conceptual ambiguity of the expression ‘theory of value’:

In order to understand the modern theory of value it is necessary to have some knowledge of its history. This in the sense that the history is not only necessary in order to understand the origin of the theory, which is obvious; but it is also necessary in order to understand its significance, that is, the nature of the problems which it proposes to solve. (D2/4, p. 1)

Third Argument

The Marshallian view, by making economics a monoparadigmatic discipline, has the further implication that the only correct way to write the history of the theory of value is to treat it as a linear development from past error to present truth:⁸

some who have taken this way have definitively stated that the history of economic doctrines should only be a history of *true* doctrines, that is, it should show how successive truths have been gradually discovered, thus building up by gradual steps the present theory; what is the good of reviewing all the blunders which have been made by economists in the past? Of course, this point of view implies an absolute belief in the finality of present doctrines. (D2/4, p. 2)

⁷The reconstruction of the different meanings, which in the course of time economists have attached to the expression ‘theory of value’, is a theme to which Sraffa devotes much space also in the *Notes summer 1927*. Sraffa writes: ‘The very concept of the “theory of value” has undergone a deep transformation according to the problem which most intensely attracted in each period the interest of economists. Accordingly, widely different things are covered by the same expression. We may for the purpose in hand distinguish three conceptions corresponding to three well-defined periods: I. Causes and Nature of Wealth (1776–1820), II. Distribution of product amongst classes (1820–1870), III. Determination of price of single commodities. [. . .] The practical problem held in view by the first is “how to increase the national wealth”, by the second “how to change its distribution or how to justify the present distribution”, by the third “how to explain and how to foresee a change in the price of an article” (D3/12/3, p. 9). A few pages later, Sraffa goes so far as to propose that the two main theories of value, the classical and the marginalist one, should be indicated by means of two different names in order to avoid the confusion stemming from the fact that the very same name ‘theory of value’ indicates different theoretical objects (see D3/12/3, p. 16).

⁸On Marshallian historiography and its linear development thesis see Groenewegen (1991). According to Kuhn (1970), it is typical of scientists actively working within the boundaries of a ruling paradigm to defend the linear development thesis in the historical chapter of their handbooks.

Needless to add, Sraffa is not persuaded of the ‘finality of present [Marshallian] doctrines’. That is the main reason why in the opening part of the *Lectures* he elaborates a historical picture of economics as a poliparadigmatic discipline, characterized by two radically different approaches to the theory of value and distribution, and as a discipline whose dynamics are mainly driven by exogenous material factors, such as changes in the conditions of production, and not by endogenous intellectual factors, such as scholars’ curiosity.⁹

The history of economics as reconstructed by Sraffa is a history of how the various economic theories have been forged within debates concerning questions of economic policy, and of how they have been employed to support the economic interests of one class against another. The discovery of truly and permanent scientific results appears to Sraffa to be a sort of (often unintentional) joint-product emerging from economists’ research activity. A few examples concerning this aspect of Sraffa’s historiography must suffice. Smith’s glorification of the doctrine of natural liberty as an engine of economic growth is to be framed, according to Sraffa, in the context of the rise to dominance of the manufacturing classes, who were intolerant of the mercantilist doctrine of State intervention:

the substance of [Smith’s] work and the very effort he makes to emphasise the existence of natural laws in economics must be understood essentially as a way of fighting against mercantilism and every form of interference with the freedom of trade. *That the necessities of his polemics against mercantilism led him to the formulation of general laws, and that this result has a permanent scientific value, may be regarded almost as a by-product of the way in which he advocated a practical policy.* (D2/4, pp. 4–5; emphasis added)

In the same vein, Sraffa claims that the Ricardian theory of value is to be judged from the standpoint of the Corn Law debate, in which the economic interests of the landlords, opponents of the free-trade doctrine, were counterposed to those of the urban entrepreneurs, supporters of the free-trade doctrine. According to Sraffa, Ricardo pursues basically a political purpose (to demonstrate that rent does not enter into cost of production and is therefore taxable), not a theoretical purpose (to elaborate a logically watertight theory of value):

[Ricardo] was a business-man and spent most of his life in the Stock Exchange. His interest in political economy originated in the political controversies of his day in which he took part, and for many years his contributions to economics were pamphlets of a practical character. Only in the later years of his life did he take an interest in theory for his own sake and wrote his *Principles of Political Economy*. *His theoretical work, notwithstanding its abstract appearance, is deeply influenced by his practical interests.* [. . .] Ricardo’s main interest . . . was not so much distribution in general between all those who take a part in it as

⁹To take just one example, Sraffa explains the rejection of the classical concept of the wage-fund by contemporary economic theorists by remarking that the wage-fund theory was supported when England was an agricultural economy and was discarded when England became a manufacturing economy. In this regard Sraffa writes: ‘This is a typical example of what seems to be a very general fact: that is to say, that the change in economic doctrines is more often due to changes in the conditions of production than to the discovery of new truth’ (D2/4, p. 34).

distribution between the landlord on one side and all the others on the other. [...] *The essential thing for Ricardo's practical purposes was to prove that rent does not enter into the cost of production of that final part of the product which regulates value. For this purpose it was indifferent whether cost of production included only labour or also the use of capital; and this explains the carelessness of Ricardo in stating his position in this respect.* (D2/4, pp. 5 ff; emphasis added)

If, in Ricardo's day, the main social conflict was between landlords and urban entrepreneurs, Sraffa goes on, a few years after Ricardo's death the opposing classes were capitalists and workers. Socio-economic conditions having changed, Ricardo's economics becomes a dreadful tool of propaganda for the rising socialist movement:

In a conflict between landlords and manufacturers, particularly when this word is meant to include both employers and workers, [Ricardo's theory of labour-value] works in the interest of the manufacturers. But in a conflict between labour and capital it obviously becomes a strong argument in favour of labour. (D2/4, p. 11)

According to Sraffa, in the second half of the nineteenth century, the ruling class sought a different theory of value, one endowed with less revolutionary political implications than Ricardo's. Hence the ruling class enthusiastically welcomed the apparently new theory of diminishing marginal utility, put forth by Jevons, Menger and Walras. The novelty of the theory of marginal utility is only apparent, Sraffa notes, since the very same theory had been proposed by Cournot, Dupuit and Gossen in the first part of the nineteenth century and had been largely ignored. Hence, for Sraffa, the success of the marginalist theory in the last three decades of the nineteenth century is mainly due to political and not to purely scientific reasons.¹⁰ The contrast between the complete failure met by earlier theorists of marginal utility and the ready and widespread acceptance found by that very theory in the 1870s:

cannot be explained by the stupidity of the people in 1850, when they rejected the theory advanced by Gossen, and their intelligence in 1870 when they accepted the same theory as stated by Jevons. I rather prefer to accept prof. Fetter's and Sir W. Ashley's view, that there is a close relation between the emerging of Marxism and the extraordinarily ready acceptance which the theory of marginal utility [gained] amongst orthodox economists. And that

¹⁰In the same vein, in the *Notes summer 1927*, Sraffa writes: 'The labour theory of value was devised by Ricardo as a stick to beat landlords (rent does not enter into cost of production). But later, having been advocated by Marx to beat the capitalists, it was necessary for the defenders of the present system to devise a new theory, the utility theory of value' (D3/12/3, pp. 10–11). Sraffa remarks that the law of diminishing returns had a similar destiny. This law has been neglected at the moment it was first discovered, but was subsequently rediscovered and generally accepted. Sraffa's explanation of such ups and downs is that the law was rediscovered when it was found useful in the political debates of the time: 'Another curious example of this phenomenon to which we shall come across is that of the law of diminishing returns: having been discovered by Turgot, and again by Anderson, it was simultaneously rediscovered by West, Malthus and Ricardo when it was wanted for practical purposes (when it was found suitable for an advocated solution of the problems of the day) and generally recognized and accepted' (D3/12/3, p. 12).

conservative minded people were only too glad to seize an opportunity of getting rid of the labour theory of value, notwithstanding the enormous authority it derived from the tradition of the classical economists. (D2/4, pp. 15–17)

Sraffa's historiographical thesis has an important corollary: if no purely scientific reason has sentenced the classical theory of value and distribution to oblivion, then there is no purely scientific impediment to the attempt to rescue the classical theory of value and distribution from oblivion and to develop its still unexplored analytical potentialities. Given Sraffa's belief in the truth of the main premise, the cogency of this corollary may be said to have oriented Sraffa's entire research since the 1930s.

4. The Classical versus the Marginalist Notion of Cost of Production

Starting from the second paragraph of p. 17 of the *Lectures*, Sraffa carries out a detailed analysis of the evolution of the concept of cost of production in the course of the history of economic thought.¹¹ He reconstructs the classical notion of cost of production as a magnitude which (i) is strictly objectivist, and (ii) is observable and directly measurable. Sraffa identifies Petty, Quesnay and the Physiocrats as the classical economists who have most rigorously adhered to this notion of cost of production. In Sraffa's view, these economists elaborated a concept of cost of production fully equivalent to that of physical amount of economic resources destroyed in the course of production. Labour is an element of cost insofar as a given amount of subsistence goods must be advanced to workers to allow them to perform their productive activity. Hence, Sraffa concludes, within the theoretical world of Petty and Quesnay, any phenomena related to workers' psychical sphere is wholly irrelevant to costs accounting:

For Petty and the Physiocrats cost [...] is a stock of material that is required for the production of a commodity; this material being of course mainly food for the workers. *But Petty wants to make it quite clear that his notion of cost has nothing to do with the pleasant or unpleasant feelings of men*, and he defines 'the common measure of value' as 'the day's food of an adult Man, at a Medium, and not the day's labour'. *This cost is therefore something concrete, tangible, and visible, that can be measured in tons or gallons.* (D2/4, p. 21; the first and third emphases are mine, the second is Sraffa's)

¹¹The reconstruction of the different meanings of the expression 'cost of production' in the objectivist approach of the classical economists and in the subjectivist approach of the marginalist economists is a theme to which Sraffa devotes an entire bundle of sheets entitled 'Degeneration of cost and value' in the *Notes November 1927*. Sraffa writes: 'A. Smith + Ricardo + Marx indeed began to corrupt the idea of cost—from food to labour. But their notion was still near enough to be in many cases equivalent. The decomposition went on at a terrific speed from 1820 to 1870: Senior's abstinence and Mill's mess of the whole thing, Cairnes brought it to the final stage "sacrifice" [...] Simultaneously a much bigger step was taken in the process of shifting the basis of value from physical to psychical processes: Jevons, Menger, Walras. [...] It was only Petty + the Physiocrats who had the right notion of cost as "loaf of bread". Then somebody started measuring it in labour, as everyday's labour requires the same amount of food. Then they proceeded to regard cost as actually an amount of labour. Then A. Smith interpreted labour as the "the toil and trouble" which is the "real cost" and the "hardship"....'

At the end of a given production cycle, the excess of final product over the amount of commodities which must be put aside to allow a new production cycle to begin constitutes the surplus ('produit net' or net product) generated by the economic system. For Sraffa, the concept of surplus, as much as the objective and directly measurable notion of cost of production, turns out to be the distinguishing and permanent contribution of Petty and the Physiocrats to classical economics:

The whole system of the Physiocrats turns upon the conception of cost which I have outlined. The essential question for them is the 'produit net' or net produce, that is the difference between the total aggregate of goods advanced and consumed in production and the aggregate of goods produced. [...] This idea of the 'net produce' or surplus product, regarded as a difference between an amount of goods advanced (consumed) in production and the larger amount of goods produced is the cornerstone of the Physiocratic system. But while their view that only agriculture produces a net surplus [...] was soon discarded, the notion of the surplus product plays an important part in classical economics. (D2/4, pp. 25, 27)

The first breach of the objective and directly measurable notion of cost of production were carried out by Adam Smith. Sraffa stresses that the *Wealth of Nations* contains some conceptual ambiguities regarding the notion of cost of production. There are some elements that clearly derive from the Petty-Quesnay tradition; but there are also other elements that are alien to that theoretical tradition. These latter elements, subsequently developed by J. B. Say in France and W. N. Senior in England, among others, are what, for Sraffa, paved the way to the radically different notion of cost of production proposed by marginalist economists in the second half of the nineteenth century. In particular, Sraffa refers to the connection Smith draws between cost of production and the 'toil and trouble' caused to workers by their labour activity. Smith's connection of these two ideas is for Sraffa the Trojan Horse through which phenomena related to the psychological sphere of individual agents involved in production take their first steps into mainstream economic analysis, and Marshall's praise of this aspect of Smith's thought supports Sraffa's view:¹²

¹²In the *Lectures* Sraffa restricts himself to highlighting Smith's conceptual ambiguities without expressing a definite historiographical judgment on the role played by Smith in the development of the theory of value, particularly as a 'corruptor' of the Petty-Quesnay approach. By contrast, in a sheet entitled 'History' kept within the *Notes November 1927* Sraffa explicitly claims: 'A. Smith had strong "vulgar" tendencies: he can truly be said to be the "founder of modern economics"'. Moreover, Sraffa describes the situation of the theory of value in the years that elapsed between Ricardo's death and the rise to dominance of marginalist economics in the following terms: 'Period dominated by [John Stuart] Mill: Marx stands here towering as the last of the classical amongst the vulgars, just as Smith stood isolated among the classical, being the first of the vulgars'. The content of Sraffa's judgement on Smith as well as Sraffa's terminology, suggest that Sraffa's view on the history of economic thought at the time of the *Lectures* is somewhat influenced by Marx's reading. It is not possible in this paper to analyse in due detail the relationship between Marx's historiography and Sraffa's historiography in the late 1920s. Here it is possible to mention a brief paragraph written by Sraffa in a block-notes kept in the folder catalogued as File D3/12/11 and dated November 1927 where Sraffa mentions Marx's *Histoire des Doctrines Economique* and emphasizes the role played by the history of economic analysis in the making of Marx's economic analysis.

A. Smith adopted this notion of surplus, and with it the idea of cost of the Physiocrats. But he has also a different idea of cost—and it is in a sense true that the Wealth of Nations as a whole represents the connecting link between the eighteenth century economics and the modern one. Thus he conceives of labour as an amount of “toil and trouble”: although he uses this expression only incidentally, Marshall has thought it so important and significant as to say that ‘the point of view . . . from which a commodity is regarded as the embodiment of measurable efforts and sacrifices was conquered for us by A. Smith’. (D2/4, p. 27)

With David Ricardo the concept of cost of production turns back into the objectivist riverbed of Petty and Quesnay. Sraffa acknowledges that Ricardo, as much as Smith, focuses on human labour, leaving the other elements of cost of production somewhat in the background. Nonetheless, Sraffa underscores that the Ricardian notion of human labour is totally free from the subjectivist overtones present in Smith’s notion and thus it perfectly fulfils the two requirements of the Petty-Quesnay approach. The Ricardian notion of human labour, as reconstructed by Sraffa, is strictly objectivist:

[Ricardo] reduces cost to a single element, labour, with some doubts as to whether to include the services of capital in addition to the labour that has produced the capital goods—and [. . .] definitively excludes rent from cost. I do not propose to deal at this stage with Ricardo’s notion of cost, and particularly with the significance of his exclusion of rent from it. [. . .] At present I am only tracing the transformation of the notion of cost from the original one of a stock of material goods, to the conception of an amount of human sacrifice—that is to say the gradual transition from an objective to a subjective point of view. It is only this aspect of Ricardo’s theory that we are considering. *Now for Ricardo, all considerations about the pleasantness or unpleasantness of labour are irrelevant to this question.* Workers are paid in exact proportion to what is required to keep them alive and efficient, and thus to enable them to produce: the amount of wages necessary for this object is completely independent of the different sacrifices made by workers in different trades. Of course in trades in which greater efforts are expected higher wages will be paid, but this only to the extent that the greater effort requires a greater amount of food in order to be accomplished. (D2/4, pp. 36–37; emphasis added)

Sraffa locates at the opposite end of the theoretical spectrum the notion of cost of production elaborated by marginalist economists in the second half of the nineteenth century. For Sraffa, the marginalist notion of cost of production is a magnitude which (i) has a strictly subjective nature, and (ii) is neither observable nor directly measurable. Sraffa identifies Marshall and the Austrian economists as the most rigorous exponents of the subjectivist notion of cost of production. Sraffa’s Marshall makes cost of production semantically equivalent to the notion of disutility or negative utility insofar as Marshall defines ‘real cost of production’ as the overall amount of ‘effort and sacrifices’ which individual human agents incur because of their decision to employ their own resources in production. Thus, contrary to the classical notion of cost of production, the Marshallian notion of cost of production concerns phenomena that take place within the psychological sphere of individual agents. As such, it turns out to be a magnitude

which can't be directly observed and can be measured only indirectly by means of the monetary rule:¹³

Marshall regards the 'real cost of production' of a commodity as the sum of 'efforts and sacrifices' involved in the abstinences or waitings and in the labour of all kinds that is directly or indirectly required for the production of a commodity. Real cost therefore is an aggregate of the unpleasant feelings of various sorts felt by the individuals connected with production. [...] [Cost in the sense of Marshall] is absolutely private to each individual, and can only be measured (if at all) by means of the monetary inducement required to call forth the exertion. (D2/4, pp. 20–21)

With the Austrian economists the notion of cost of production becomes semantically equivalent to the notion of opportunity cost. Since the same factor of production (or good of lower order in Austrian terminology) may be used in the production of different consumption goods (or goods of first order, say x and y), the production of x implies that a given amount of factors of production cannot be used to produce y . The loss of utility deriving from the fact that the y is not actually produced is, for Sraffa, the Austrian notion of cost of production of x :

Labour is nothing but one of these goods of lower order, as any of the materials used in production: [...] It enters into cost according to the Austrians not as an effort or a sacrifice, but in the shape of the utility lost owing to its not being available in other uses when it is applied to a particular production. Thus, the Austrians very nearly identify themselves with the theory of opportunity cost, which regards all costs, and not only labour, as made up of the utilities lost in the alternative employments which would have been available for it. (D2/4, pp. 48–49)

As remarked in Section 3 above, Sraffa holds that, over time, economists have elaborated different theoretical frameworks to investigate different *quaesita* by means of different analytical tools. Such a historiographical thesis leads Sraffa to claim that different value theorists have elaborated different notions of cost of production as a tool to tackle different problems. Hence, each notion of cost of production must be appraised in terms of its congruence with the specific questions addressed by each theory of value:

In taking such opposite views [on cost] Petty and Marshall are quite consistent with their general conceptions about the method of economics and the nature of its subject matter. [...] I should like to notice that between these two notions of real cost it is not necessarily so much a question of one of them being right and

¹³The status of being observable and directly measurable for the magnitudes put at the heart of the theory of value is a theme to which Sraffa devotes much attention also in the *Notes summer 1927*. Sraffa writes: 'a method of measurement, even if inapplicable in practice, has a very great theoretical importance even if rough and approximate as the money test; in fact it helps us to conceive, we could not otherwise. Particularly so in the case of utility: we have no direct way of apprehending it, of learning its existence: we have got its notion from an obsolete hedonistic psychology, and—on the collapse of the latter—we have simply kept it standing as an explanatory hypothesis, the explanation of demand price' (D3/12/3, p. 61). For more on this point, see Signorino (2001b).

the other wrong, as of one being relevant for dealing with one set of questions, and the other for an entirely different sort of questions. (D2/4, pp. 21, 24–25)

For Sraffa, classical economics has the specific aim of detecting the laws that determine the wealth of nations and its dynamics and the laws that determine the distribution of the wealth of nations among the various social classes. The attainment of these aims requires that the surplus generated by the economy can be determined in an unambiguous way. This in turn justifies the classical notion of cost of production as the amount of physical resources employed in production:

For Quesnay, and the earlier Physiocrats, the idea of cost is not necessarily linked up with that of price or value; the cost is for him an element of the productive process, which must be exactly measured in order to compare it with the product and thus determine whether the product contains a surplus over and above cost. (D2/4, p. 25)

Similarly, Marshallian economics has the specific aim of detecting the laws that determine the economic behaviour of individual human agents and the laws that determine the equilibrium price of individual commodities. The attainment of these aims requires a method for measuring, in an unambiguous way, individual sensations and their balancing at the margin: ‘The whole of Economics is regarded by M[arshall] as a method for measuring the motives of individuals and for balancing exactly utilities with disutilities, that is to say, pleasures and sacrifices’ (D2/4, p. 22). This in turn justifies the Marshallian notion of cost of production as the sum of unpleasant feelings experienced by the individual human agents involved in production: ‘It is only when cost is conceived as a quantity of disutility, that is to say of negative utility, that it can be brought together with marginal utility in a single theory of value’ (D2/4, p. 18).

5. The Classical versus the Marginalist Theory of Distribution

Sraffa’s meticulous work of clarification, in the first part of the *Lectures*, of the conceptual differences existing between the classical and the marginalist notions of cost of production is not a mere scholarly exercise. As stressed in Section 3 above, for Sraffa the genesis of any economic theory is to be traced into specific class interests. That may be why Sraffa emphasizes that the different notions of cost of production employed by classical and marginalist economists entail different views on the subject of income distribution, and why he claims that the different conceptions of income distribution are ‘the most important consequence of these opposite views of cost’ (D2/4, p. 22).¹⁴

¹⁴The analysis of the different theories of distribution elaborated by classical and marginalist economists is not to be considered a detour from Sraffa’s main line of argument on the theory of value. On the contrary, such an analysis is strictly tied to the aim of clarifying the conceptual differences existing between the classical and the marginalist theories of value. According to Sraffa, in fact, ‘*in the background of every theory of value there is a theory of distribution*. The real problem to be solved by a theory of value, that is: “Why is a commodity exchanged with another in a given ratio?” is constantly transformed into the entirely different one: “How is the price received for the product distributed between the factors of production?”’ (D2/4, p. 4; emphasis added).

For Sraffa, the classical objectivist notion of cost of production leads to an asymmetric theory of distribution in which the distributive variables (particularly wages and profits) are framed into different logical and chronological planes. Sraffa's reconstruction of the classical approach implies that real wages consist of the commodities that capitalist-entrepreneurs must advance to workers in order to put them in a condition to start and accomplish the labour activity. By contrast, profits (in real terms) consist of the amount of commodities which emerge at the end of production as surplus or net product and which are the exclusive property of capitalist-entrepreneurs. The chronological asymmetry between wages and profits reflects an asymmetry in the distribution of property rights between workers and capitalist-entrepreneurs. Workers have the right only to subsistence and, once they have received it in the form of wages, they give up any right to the final product that will emerge at the end of production. Capitalist-entrepreneurs, once they have paid wages to workers, have the exclusive right to the final product, both the part that is to be set aside in order to start the next production cycle and the remaining part that constitutes profits:

Petty and all the classics [...] regard [wages] as a necessary means of enabling the worker to perform his work. The food and the clothing of the worker are equally necessary as his tools and raw materials. [...] In other words, the wages of the worker belong to the same class of necessities as the fuel of machines or the hay of horses. [...] *This view leads to a conception of wages and profits as two things of a radically different nature.* Wages are a stock of goods that exists *before* production and which is destroyed during the productive process: they come thus to be identified with capital or at least with an important part of capital. Profits (and rents of course) are *a part of the product*, and precisely the excess of the product over the initial stock. All the product belongs to the capitalist, who has advanced the wages: out of it he draws his profits and uses the rest to replace the capital consumed, thus replenishing the wages fund to be used in the following process of production. *There never is at any one moment of time a division of the product between capitalist and worker; their incomes are received at the opposite ends in time of the period of production in relation to which they are paid.* (D2/4, pp. 23–24; emphasis added)

By contrast, Sraffa argues, the subjectivist notion of cost of production leads to a symmetrical theory of distribution in which the distributive variables are all framed into logical and chronological parallel planes. The symmetry on the logical plane derives from the fact that marginalist economists assume that the productive employment of each economic resource, be it labour or land or capital, entails a loss of utility to its owner.¹⁵ Therefore, for Sraffa, marginalist

¹⁵According to Sraffa, Senior's theory of abstinence marks the turning point towards the symmetrical view of distribution. While Smith, in some passages of the *Wealth of Nations*, had associated the supply of human labour with the 'toil and trouble' suffered by the workers, Senior associates the supply of capital with the capitalist's abstinence from present consumption: 'The fundamental change in point of view was brought about by Senior, whose *Political Economy* was published in 1836. For Senior, wages and profit are to be considered as the reward of peculiar sacrifices, the former the remuneration for labour, and the latter for abstinence from immediate enjoyment' (D2/4, p. 39).

economists are obliged to consider wages, as well as rents and profits, as the monetary incentives necessary to induce workers, landlords and capitalists-entrepreneurs to allocate their resources to production. To clarify the difference between the classical economists and Marshall on the definition of wages, a difference entailed by their different views on cost of production, Sraffa makes use of an illuminating metaphor: 'To visualize this distinction you may conceive the wages in Marshall's sense as the carrot which you show to a donkey to induce it to run; the wages in the classics' sense to the other carrots which you must actually give to the donkey for eating, before there is any question of inducement, just to keep it alive' (D2/4, p. 23).

As Sraffa perceptively noted, while in the classical theoretical world wage-goods must necessarily exist before production begins, in Marshall's theoretical world this constraint is not binding. All that is necessary is that workers have the prospect of gaining a sufficient monetary reward for their labour to balance the disutility of working. Needless to add, the same psychological mechanism must hold also for the two other types of individual actors in the production scene, capitalist-entrepreneurs and landlords:

For Marshall [wages, interest and profit] are the inducement required to call forth certain sacrifices, which are equally necessary for production, and they are also the reward of those sacrifices. Their importance to production is equally subordinate: what is really necessary for producing is only the efforts, not their rewards. It is not necessary for the actual goods which compose real wages and profits to be in existence at the beginning of the process of production—the hope, or the promise of these goods is equally effective as an inducement. They operate on production only by being expected, but *they come into existence only when production is finished, as shares in the product.* (D2/4, pp. 22–23; emphasis added)

If in the classical theoretical world the chronological asymmetry between wages and profits reflects an asymmetry in the distribution of property rights between workers and capitalist-entrepreneurs, in the Marshallian theoretical world the chronological symmetry between wages and profits reflects the symmetry in the distribution of property rights between workers and capitalists-entrepreneurs. Marshallian workers, as much as Marshallian capitalists-entrepreneurs, have the right to a well-defined share on the final product. In short, within the Marshallian theoretical world wages and profits are simply coordinate shares in the final product.

Given Sraffa's historiographical thesis concerning the meta-scientific reasons that explain the ready acceptance of marginal utility theories among orthodox economists in the second half of the nineteenth century (see Section 3 above), it should come as no surprise that Sraffa uses the categories of logical and chronological asymmetries to depict the classical theory of distribution and the categories of logical and chronological symmetries to depict the Marshallian theory. The classical asymmetries on the planes of logic and time versus the Marshallian symmetries for Sraffa simply are the translation in the language of formal economic models of the asymmetry versus the symmetry on the political plane foreshadowed by the two theories.

6. Final Remarks

This paper has analysed Sraffa's unpublished *Lectures on the Advanced Theory of Value 1928–1931* and two preparatory *Notes* of summer and November 1927 in order to provide a rational reconstruction of his view on the nature of pure economics and the pattern of its development through time. The paper has also discussed Sraffa's interpretation of the classical and marginalist concepts of cost of production and distribution.

The paper has shown that in the *Lectures* Sraffa proposes an original interpretation of the history of economic thought in order to criticize the Marshallian view on the nature and the scope of the theory of value and its history. Sraffa advances three claims: (i) the theory of value is not an intellectual game since it was originally elaborated and consistently used to provide general solutions to concrete economic and political questions; (ii) the Marshallian theory of value is not the only scientifically correct theory of value since past economists have investigated non-Marshallian *quasita* by means of non-Marshallian tools; and (iii) the duty of historians of economics is to detect and evaluate the philosophical and analytical features that characterize the different approaches to the problem of value and distribution, in particular the objectivist approach of classical economists and the subjectivist one of marginalist economists.

Furthermore, the paper has investigated the reasons for Sraffa's focus on the concepts of cost of production and distribution as the fields upon which to measure the theoretical distance separating the classical and the marginalist approaches. The proposed interpretation is that, for Sraffa, the notion of cost of production underwent a drastic semantic shift in the transition from the classical approach to the marginalist one and that the two different notions of cost of production underlie two different theories of distribution. Sraffa describes the classical notion of cost of production as a magnitude which, unlike the marginalist notion, has a strictly objective nature and which can be observed and directly measured. Moreover, Sraffa claims that the classical notion of cost of production, unlike the marginalist notion, leads to an asymmetric theory of distribution in which the distributive variables are framed into different logic and chronologic planes. The crucial issue is that the classical chronological asymmetry between wages and profits reflects an asymmetry in the distribution of property rights between workers and capitalist-entrepreneurs, an asymmetry that is alien to the marginalist theoretical world.

Acknowledgments

I wish to thank without implicating Annalisa Rosselli and Neri Salvadori for their comments on a previous version of the paper.

References

- Clapham, J. H. (1922) On empty economic boxes, *Economic Journal*, 32, pp. 305–314.
Groenewegen, P. (1991) Alfred Marshall and the history of economic thought, *Quaderni di Storia dell'Economia Politica*, 9, pp. 59–87.

- Keynes, J. M. (1971–89) *The Collected Writings of John Maynard Keynes* (E. Johnson & D. Moggridge, Eds) (London: Macmillan).
- Kuhn, T. (1970) *The Structure of Scientific Revolutions*, 2nd edn (Chicago: University of Chicago Press).
- Kurz, H. D. (1998). Against the current: Sraffa's unpublished manuscripts and the history of economic thought, *European Journal of the History of Economic Thought*, 5, pp. 437–451.
- Kurz, H. D. & Salvadori, N. (1998) Given quantities, in: H. D. Kurz & N. Salvadori (Eds) *The Elgar Companion to Classical Economics*, Vol. I (Cheltenham: Edward Elgar).
- Marshall, A. (1920) *Principles of Economics*, 8th edn (London: Macmillan).
- Roncaglia, A. (1991) Sraffa's 1925 article and Marshall's theory, *Quaderni di Storia dell'Economia Politica*, 9: 373–397.
- Roncaglia, A. (2000) *Piero Sraffa. His Life, Thought and Cultural Heritage* (London & New York: Routledge).
- Signorino, R. (2000a) Method and analysis in Piero Sraffa's 1925 critique of Marshallian economics, *European Journal of the History of Economic Thought*, 7, pp. 569–594.
- Signorino, R. (2000b) The Italian debate on Marshallian (and Paretian) economics and the intellectual roots of Piero Sraffa's 'Sulle relazioni fra costo e quantità prodotta'. A note, *History of Economic Ideas*, 8, pp. 143–157.
- Signorino, R. (2001a) An appraisal of Piero Sraffa's 'The laws of returns under competitive conditions', *European Journal of the History of Economic Thought*, 8, pp. 230–250.
- Signorino, R. (2001b) Piero Sraffa on utility and the subjective method in the 1920s: a tentative appraisal of Sraffa's unpublished manuscripts, *Cambridge Journal of Economics*, 25, pp. 749–763.
- Smith, J. (1998) An archivist's apology: the papers of Piero Sraffa at Trinity College, Cambridge, in: 'Omaggio a Piero Sraffa (1898–1983). Storia Teoria Documenti', a cura di Neri Salvadori, *Il Pensiero Economico Italiano*, 6, pp. 39–54.
- Sraffa, P. (1925) Sulle relazioni fra costo e quantità prodotta, *Annali di Economia*, 2, pp. 277–328; quoted from the English translation in: L.L. Pasinetti (Ed.) *Italian Economic Papers*, Vol. III (Bologna: Il Mulino-Oxford University Press, 1998).
- Sraffa, P. (1926) The laws of returns under competitive conditions, *Economic Journal*, 36, pp. 535–550.
- Sraffa, P. (1960) *Production of Commodities by Means of Commodities. A Prelude to a Critique of Economic Theory* (Cambridge: Cambridge University Press).