

Léon Walras on the Worker-Entrepreneur¹

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Introduction

This study aims to clarify Walras' concept of the worker-entrepreneur by focusing on his theory of the entrepreneur, not only in his pure economics (e.g. general equilibrium theory) but also from other writings. It is well known that in Walras' pure economics, the entrepreneur receives no profits (i.e. *bénéfices*) in a state of general equilibrium. Under the hypothetical regime of free competition in his pure economics, Walras gave this zero-profit entrepreneur no realistic role, which raised a lot of criticism and theoretical questions among economists. However, in his social and applied economics, where he pursued the fairness and efficiency of a real economy, Walras argued for the real entrepreneur and its role based on his theory of the zero-profit entrepreneur in his pure economics. One role involves the possibility of the state-entrepreneur, designed to prevent extra profits for monopolies. The implications of this state-entrepreneur plan have been argued by several historians of economic thought, such as Boson and Dockès.

The aim of this research is to pay special attention to Walras' idea of the worker-entrepreneur, which has not been examined previously. In his pure economics, workers are considered the counterpart of entrepreneurs in the product and service markets. Walras emphasised the theoretical distinction between workers and entrepreneurs. Yet, he allowed for the possibility of real entrepreneurs that make a living as workers. Thus, Walras' entrepreneurs, in his pure economics, can be considered not as a class, but as a function. Therefore, Walras considered the Marx 'capitalist' the 'capitalist-entrepreneur',

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by his own definition.

With this study, I will show how Walras' idea of the worker-entrepreneur originates from his thinking about association movements, in which he engaged during his pre-Lausanne days. I will also show that the idea is theoretically connected to his zero-profit entrepreneur theory in pure economics, which he completed in Lausanne, and how he used it during his lifetime to criticise other economists' concepts of profits or of capital-labour relationships. Walras criticised the idea of profit that Karl Marx and Charles Gide professed, as the outcome of the exploitation of workers by leveraging his own idea of the worker-entrepreneur. Although Walras' analysis of profit produced by workers' skilfulness is fragmented, it is noteworthy to clarify the ignored aspect of Walras' theory of the entrepreneur, for it will shed new light on the traditions of Cantillon, J. B. Say, and Schumpeter, and others' discussions on post-20th-century entrepreneurship.

1. Entrepreneurs, workers, and capitalists in Walras' pure economics

In Walras' pure economics model, in the state of equilibrium, entrepreneurs are supposed to earn no profits. This idea has been criticised even by his contemporaries for its inaccurate description of real economic activity.³ To look at Walras' concept of the worker-entrepreneur with precision, let us begin by examining the clear distinction⁴ between the roles of entrepreneurs and those of workers and capitalists, in his pure economics.

Walras calls the holders of land as 'landowners', those of personal faculties as 'workers', and those of capital proper as 'capitalist'. The prices of the services of land, personal faculties, and capital proper are called as 'rent', 'wage', and 'interest', respectively. We must note that Walras used the French word 'profit' to refer to capital services⁵. Our English translation, 'profit' corresponds to Walras' 'bénéfice' in the original language in the same way as Jaffé's English translation of *Elements* does.⁶

³ For example, see F. I. Edgeworth's criticism in his review of the third edition of *Elements*: 'But surely, he goes too far in the way of abstraction when he insists that the ideal entrepreneur should be regarded as [making neither gain nor loss]' (Bridel 1996, 268).

⁴ For Jaffé's criticism of Morishima's misinterpretation of Walras' concept of profit and his distinction between capitalist and entrepreneur, see Jaffé (1980).

⁵ Walras, L. 1988, 264-265.

⁶ Jaffé 1954, 212.

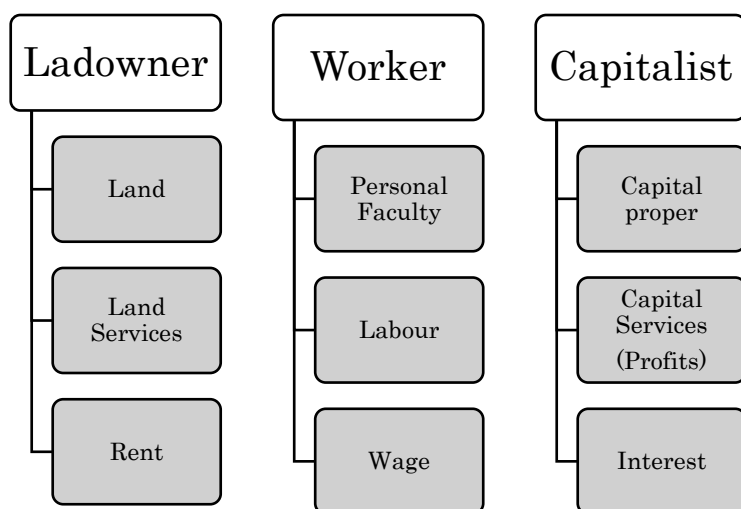


FIGURE 1. WALRAS' DISTINCTION OF THE THREE CLASSES

In Walras' theory of production in pure economics, the role of the entrepreneur is to lease land from the landowner, hire personal faculties from the worker, and borrow capital from the capitalist, and then, combine them in agriculture, industry, or commerce, to manufacture products. In the service market, landowners, workers, and capitalists are sellers, and entrepreneurs are buyers of various productive services. In the product market, entrepreneurs are sellers, and landowners, workers, and capitalists are buyers of products. Thus, workers and capitalists are always considered the counterparts of entrepreneurs in the product and service markets.

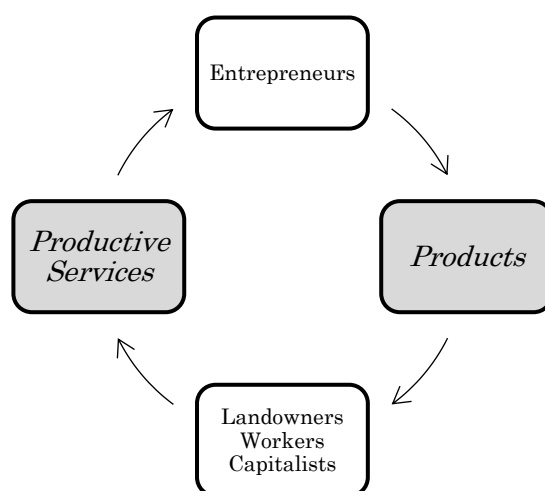


FIGURE 2. THE SERVICE MARKET AND THE PRODUCT MARKET IN PURE ECONOMICS

The actions of the landowners, workers, and capitalists in offering productive

services and demanding products are based on the desire to obtain maximum satisfaction. In the state of equilibrium, their satisfaction is maximised. On the other hand, the main spring of the entrepreneurs' actions is the desire to avoid losses and to earn profits. Under free competition, if there is profit (the selling price of the product exceeds the cost of the productive services required to manufacture the product), entrepreneurs will move towards this branch of production or expand their output so that the quantity of the product will increase, its price will fall, and the difference between its price and cost will be reduced. The reverse is also true. Following these processes, when equilibrium is reached, the product's selling price and cost will be equal, and therefore, the entrepreneurs' profits will be zero.

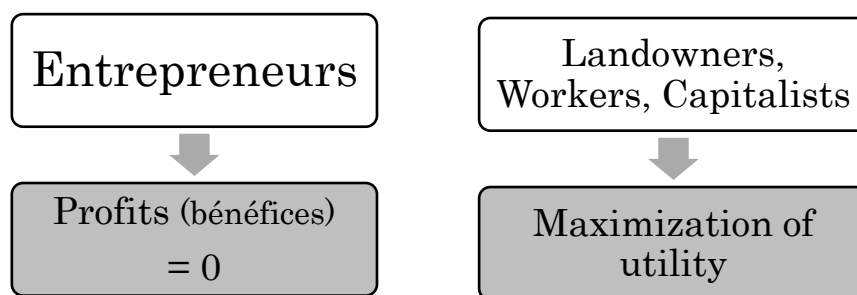


FIGURE 3. THE RESULT OF ACTIONS IN THE STATE OF EQUILIBRIUM

Interestingly enough, Walras insists that not only profits, but also entrepreneurs themselves, could disappear when a state of equilibrium is reached.

On peut même, à cet état, faire abstraction de l'intervention des entrepreneurs, et considérer non seulement les services producteurs comme s'échangeant contre des produits et les produits comme s'échangeant contre des services producteurs, mais considérer même les services producteurs comme s'échangeant en fin de compte les uns contre les autres. (Walras, L. 1988, 284)

If we consider this abstraction, we may say that in Walras' pure economics, the entrepreneur is not a real class but rather, a function⁷. In fact, Walras allowed for the possibility of entrepreneurs that make a living as landowners, workers or capitalists in a real economy.

Ainsi, à l'état d'équilibre de la production, les entrepreneurs ne font ni bénéfice, ni

⁷ On this subject, see also Misaki (2012).

perte. Ils subsistent alors non comme entrepreneurs, mais comme propriétaire fonciers, travailleurs ou capitalistes dans leurs propres entreprises ou dans d'autres.

(Walras, L. 1988, 284)

What we must note here is the question why Walras, who explained that workers and capitalists could assume the role of entrepreneurs in a real society, emphasised on the necessity of the scientific distinction between their roles. He insisted that the entrepreneur receives neither wage nor interest by himself, and that his idea was clearly different from the British economists that identify the entrepreneur as capitalist, and the French economists that considered the entrepreneur as a special worker in charge of direction of the enterprise⁸.

Here, it is obvious that Walras, by referring to the French economist, implicitly criticised Jean-Baptiste Say's concept of the entrepreneur. As Walras and Say equally supposed a man in charge of the roles of the entrepreneur and of the worker, one might think that their ideas are not all that different, actually. Then why was Walras so harsh with Say on the definition of the entrepreneur? This question will be an important key to solving the implication of Walras' own idea of the worker-entrepreneur.

2. Walras on the state-entrepreneur and his criticism of Marx

In addition to the scientific distinction between the entrepreneur and the worker, Walras emphasised its distinction from the capitalist in his pure economics, which he shared with Jean-Baptiste Say⁹. In order to clarify Walras' own intentions, we must pay attention to his concept of the state-entrepreneur in his applied and social economics. With this idea, in theory, he gave only the role of the entrepreneur, but not that of the capitalist, to the state. This led Walras to criticise Marx by defining Marx's concept of capitalist as 'capitalist-entrepreneur' and to emphasise on the differences between their

⁸ « *Au point de vue scientifique, nous devons donc distinguer ces rôles, et éviter soit l'erreur des économistes anglais qui identifient l'entrepreneur et le capitaliste, soit celle d'un certain nombre d'économistes français qui font de l'entrepreneur un travailleur en le considérant comme spécialement chargé du travail de la direction de l'entreprise* ». (Walras, L. 1988, 280-281)

⁹ On the distinction between capitalists and entrepreneurs by Jean-Baptiste Say based on his concept of Industrie, see James (1977). In this paper, James compared Say's idea to that of Pierre-Louis Roederer (1754-1835). The comparison between Walras' theory of the entrepreneur and the latter is a subject for future analysis.

systems of collectivism.

(1) Walras' idea of monopoly and of the state-entrepreneur in his applied economics

In his applied economics¹⁰, Walras described two types of monopoly, namely, 'moral' and 'economic'. In both cases, the state is supposed to act as the only entrepreneur. 'Moral monopoly' means that the state takes it upon itself to produce public goods and services (for example, railway services)¹¹, which, Walras believed, are needed and demanded not by private interest, but by public interest of a nation or of a community. If the production were left to the market mechanism, which functions based on private interest, no private party would take it up. Therefore, Walras believed that production must be performed by a state-entrepreneur.

On the other hand, 'economic monopoly' is concerned with the production of goods and services for private interest. Despite the demonstration of the efficiency of the absolute free competition in his pure economics, Walras anticipated that in a real economy, monopolies would tend to be organised in order to achieve efficiency with the development of circulation and of technology. The problem was about ways to prevent the entrepreneur from gaining monopoly profits. Walras believed that, even in the case of economic monopoly, the equilibrating mechanism of entrepreneurial behaviour would not be prevented if the entrepreneur always produced a level of output such that the production cost equalled its selling price. To achieve this outcome, the role of the entrepreneur should be assumed, not by an individual, but rather by a state, for fear that an individual may obtain extra profit by arbitrary control of output.¹²

Interestingly enough, Walras also suggests this concept in his pure economics theory. The following remark was added to the fourth edition of *Elements*, which was published in 1900:

Remarquons toutefois que, si la multiplicité des entreprises amène l'équilibre de la production, elle n'est pas théoriquement le seul moyen d'atteindre ce but, et qu'un entrepreneur unique qui demanderait les services à l'enchère et offrirait les produits

¹⁰ Walras introduced this idea in the chapter 'L'état et les Chemins de fer' in his *Etudes d'économie politique appliquée (EEPA)*, whose first edition was published in 1898. Walras wrote this chapter in 1875,¹⁰ at nearly the same time as the first edition of *Elements* was published in 1874-1877.

¹¹ When this chapter was written, the purchase of the Swiss railway by the state was in controversy. Walras intended to refute Michel Chevalier, who supported railway construction and management by private companies.

¹² Walras, L. 1992, 189.

au rabais, et qui, en outre, restreindrait toujours sa production en cas de perte et la développerait toujours en cas de bénéfice, obtiendrait le même résultat.

(Walras, L. 1988, 284)

(2) Walras' criticism of Marx on the profit as an origin of injustice in his social economics

We will proceed to the next important question, which is, 'How did Walras criticise Marx by using this idea of the state-entrepreneur?' Walras' definitive comments on Marx can be found in chapter 5, 'The Theory of Property' in his *Etudes d'économie sociale* (EES), the first edition of which was published in 1896¹³. This criticism was dealt with by only a few studies that are written in French, such as Boson (1951, 1963) and Dockès (1996).

Walras explained that in a Marxist regime, the state is supposed to take over the entrepreneurs of all sectors in order to prevent exploitation by private capitalist-entrepreneurs. Walras pointed out two defects of the Marxist regime from a practical perspective. One is the impossibility of measuring the scarcity of land services. The other is the inability of the state-entrepreneur to know beforehand which products to produce and which to eliminate. Walras insisted that this problem does not exist in the market system of price determination. In the Marxist system, in which prices are invariable, if demand is less than supply, the excess must be discarded. Walras explained that Marx's system, thus, sacrifices economic advantages in order to prioritise justice, that is to say, the prevention of exploitation of workers by capitalist-entrepreneurs.

On the other hand, Walras supported the private ownership of capital and the market determination of the price of capital service (the interest). However, he made exceptions. He insisted that capital services should be owned by individuals only when they are created by means of their wages, and that they should be owned collectively when they are created by the state by means of rent.¹⁴ Walras emphasised that the true cause of injustice is the rent earned by private landowners which, in a progressive society, increases in proportion to the scarcity of land services, rather than the interest of capital, which are, in general, gained by the savings of workers¹⁵. He insisted that the land and the rent amounts paid for its service should belong to the state. Thanks to the

¹³ This book contains many writings from before the publication of *Elements*, but the theory of property was newly written for EES.

¹⁴ Walras, L. 1990, 204.

¹⁵ See Lesson 36 (the definitive edition) 'The marginal productivity theorem expanding output. The law of general price movements in a progressive economy.'

rent, free public services will be provided. In fact, the nationalisation of land and the abolition of the tax system were not only the main subjects of Walras' social economics writings, but also his main beliefs since the 1860s, the beginning of his career.

In 'The Theory of Property,' Walras concluded his critique of Marx by referring to a rational society without the landownership and the monopolies, which he believes, are the real causes of injustice:

Dans une société rationnelle, sans propriété foncière et sans monopoles, les capitaux individuels ne peuvent généralement résulter que de l'épargne individuelle, c'est - à -dire d'un excédent des salaires sur la consommation; ils ne sont pas le résultat d'une exaction des entrepreneurs ni sur les propriétaires de services producteurs ni sur les acheteurs de produits, puisque les risques de bénéfices et les risques de perte de ces entrepreneurs sont corrélatif et, réserve faite des inventions et perfectionnement, se balancent en fin de compte. (Emphasis is mine. Walras, L. 1990, 205)

Thus, Walras explains that the profits (bénéfices) earned by the entrepreneur cannot be the result of exploitation, because it is reciprocal with the loss. We can treat it as the profit in disequilibrium. We may say that this is what he meant by the zero-profit entrepreneur in his theory of pure economics. At the same time, we must note that Walras admits the profit is earned by 'inventions and improvement' that would not disappear, and they were not dealt with in his pure economics. We will examine these two categories of the profits in the following sections in greater detail.

3. Walras' criticism of Charles Gide on the abolition of profits

In order to show how Walras' two concepts of profit matter for his idea of the worker-entrepreneur, I begin by reviewing Walras' critiques of Charles Gide¹⁶ on the abolition of profits in his unpublished note, whose title is 'Notes d'humeur'.

In this note, Walras mentioned Gide's inaccurate interpretation of his concept of the entrepreneur in *Principe's d'économie politique* (6th edition, 1898). Gide, as well as Walras, distinguished profit from interest and wages. What Walras denied is that entrepreneurs gain profits solely from monopolies and therefore, that profit should be

¹⁶ Charles Gide was Walras' good friend, who understood not only the significance of Walras' pure economics, but also his social economics, the merits of which were largely neglected at that time.

abolished¹⁷.

Gide sur moi....

p.537, Je considère l'entrepreneur comme investi d'un monopole !

(Walras, L. 2000, 539)

Walras explains that Gide's 'profits' (in French) corresponds to Walras' 'bénéfice' and its indispensable role in the equilibrating process in his pure economics, referring to the production not only for an individual, but also for a cooperative association.¹⁸

Le profit de M. Gide ... n'est pas autre chose, sous un régime de libre concurrence, que 'l'excédent du prix de vente sur le prix de revient' ou bénéfice, ce qui est corrélatif de l'excédent du prix de revient sur le prix de vente, ou perte, de l'entrepreneur. Le bénéfice et la perte sont deux éléments aléatoires nécessaires du moment où la production se fait avant la vente, et qui se produisent aussi bien l'un ou l'autre pour une association (coopérative ou autre) que pour un individu. Ils sont de plus le ressort indispensable de l'équilibre puisque le bénéfice attire les services producteurs des entreprises en perte et que la perte détourne ces services producteurs vers autres...en bénéfice. En supprimant le profit et sans s'occuper de la perte, M. Gide brise le ressort de tout le mécanisme économique (6 Avril 06).

(Walras, L. 2000, 540. Emphasis is mine.)

In his criticism of Gide in the note, Walras referred to the second category of profits, which are not correlative with the loss, in the same way as he did in his criticism of Marx. Walras insisted that this kind of profit is caused by the entrepreneur's

¹⁷ Gide (1898) said, *Enfin un grand nombre d'économistes aujourd'hui, considèrent l'entrepreneur comme investi d'un monopole*. He cited the names of Walras, Pareto, and Pantaleoni and continued as follows:

à peu près comme le propriétaire foncier, quoique avec des différences assez notables —et dès lors le profit apparaît comme le revenu d'un monopole. Ce monopole peut être naturel, c'est-à-dire résulter de certaines qualités personnelles exceptionnelles ou de certains avantages de situation; il peut aussi être légal et résulter par exemple d'un tarif de douance protecteur pu de brevet d'invention. Il peut résulter même de n'importe quelle circonstance, car le monopole n'est pas un fait exceptionnel : il est partout. (Gide 1898, 537-538)

¹⁸ Charles Gide was not only an economist, but also a cooperative socialist.

skilfulness.

Gide. Suppression du bénéfice d'entreprise.

Deux espèces de bénéfice : 1 par circonstances amenant l'élévation du prix de vente au-dessus prix de revient : corrélatif de perte. Inévitable. Utile à la société; 2 par habileté de l'entrepreneur : mérité et légitime. C'est alors grâce à lui que l'entrepreneur devient peu à peu capitaliste, que le simple salarié qui a épargné pour se faire entrepreneur se trouve finalement un personnage civil, politique, etc.

(Walras, L. 2000, 539. Emphasis is mine.)

Here, Walras referred to the second category of profit as a means of becoming a capitalist for the worker-entrepreneur. In other words, he posited the case of a worker becoming an entrepreneur and then becoming a capitalist by earning these profits. If these profits are abolished, as Gide insists they should, workers will be unable to become capitalists by saving. This led us to examine Walras' idea of encouraging workers to become capitalists by saving, which he proposed when he engaged in the association movements in his pre-Lausanne years, and kept at until the end of his career.

4. Profits and workers in Walras' plan of association movements

In this section, I begin by examining how Walras' idea of the worker-entrepreneur is rooted in his plan when he was involved in the foundation and administration of the cooperative association in the period between 1865 and 1868¹⁹. According to the lectures²⁰ he delivered to the workers at that time, Walras' first aim was to encourage workers in the association to own capital by saving.²¹ It must be noted that, in these lectures, Walras already shows the same distinctions²² among rent, wage, interest, and profits, as he would show in *Elements* in the 1870s.

Walras supposed three associations, that is, of consumption, production, and credit. In

¹⁹ In January 1865, when la caisse d'escompte de association populaire was founded with the president Léon Say, Walras was elected as one of the directors.

²⁰ « Les associations populaires de consommation, de production et de crédit » (1865)

²¹ « avènement des travailleurs à la propriété du capital par l'épargne » (Walras, L. 1990, 22).

²² This paper does not deal with the different definitions of profit in his first work on economics, *L'économie politique et la justice* (1860), which Walras established under the strong influence of his father Auguste.

every association, the members (workers) were supposed to save money, as a regular deduction from their wages, little by little. It would create capital to encourage workers to save more money easily. We will now look at how savings were supposed to occur in these associations.

In the association of consumption, capital is supposed to go to the funds for the stores kept by the members individually. Owing to the decrease of the purchase price as a result of large scale buying, workers can buy everyday commodities at lower cost and save more money. In the association of production, capital goes to the foundation of the ateliers managed by the members as a group and their purchase of raw materials. Here, Walras explains that profits come from the decrease in cost by production on a large scale and also that, because of the improvement of labour productivity, workers are paid higher wages, which can encourage them to save more.

In the association of credit, capital goes to the loan of money for industries managed by the members individually. The interests paid by debtors are supposed to be divided among the members according to their holdings. In the credit market, the rate of interest sometimes goes up too high to be paid from the wages. Then, workers will be shut out of the market. In that case, the association of credit can become their collective guarantor.

Walras explained that the profits (bénéfice) of the association come from the lower prices of products, higher wages, and lower rates of interest²³. In this sense, we may say that workers in the association, who receive the profits, can be regarded as entrepreneurs. Walras tried to encourage these worker-entrepreneurs in the association to be capitalists by the profits of the association²⁴.

Here, what we must note is the distribution of the profits. Walras supposed that all the profits, as well as losses, should be divided among the members according to their holdings of capital by emphasising their two different roles as capitalists and as workers in the association.

Enfin, c'est une conséquence pratique de cette doctrine que, dans toute société coopérative, les deux rôles de travailleur et de capitaliste restent parfaitement distincts en chaque associé en même temps qu'ils sont par lui cumulés, c'est-à-dire que tous les associés, en tant que travailleur, reçoivent de la société un salaire fixe au taux exact détermine sur le marché du travail, et que ces mêmes associés, en tant que capitalistes, participent soit aux bénéfices, - soit aux pertes - de la société dans la proportion

²³ Walras, L. 1990, 77.

²⁴ Workers become capitalists immediately after they save, which coincides with his definition of the 'capitalist' in *Eléments*.

rigoureuse de la quotité de leur part de capital social. On peut formuler plus brièvement cette conclusion en disant que, dans toute société coopérative, les salaires du travail étant compris dans les frais généraux, les bénéfices – ou les pertes – appartiennent ou incombent au capital, et doivent se distribuer ou se répartir au prorata du capital.

(Walras, L. 1990, 172. emphasis in the original)

From this explanation by Walras, three questions arise.

First, one might think that it is the interest and not the profit that should be divided according to the capital among the capitalists according to Walras' definition in pure economics. Was Walras confused about the distinction between the interest and profits at that time? Our answer to the question is negative. For, as we have already seen, Walras mentioned the distribution of the interest among the members according to their holdings in the association of credit. Walras clearly did distinguish between the distribution of profits and the distribution of interest.

Walras held the same view until the end of his career. In his autobiography, he says:

Notre but était ... quant à la différence entre le prix de vente et le prix de revient, de la répartir au prorata du capital auquel seul appartiennent les bénéfices par la raison que seul il supporter les pertes. (Walras, L. 2001, 14)

It shows that Walras insists that the profits should be distributed according to capital because he thinks that it is only the capital that could make up the losses. We may say that he proposed this idea from a practical viewpoint, although it is different from the scientific definition of the roles of the entrepreneur.

The second question is about the nature of the profits earned by the association. Do the profits that Walras refers to in the association plans, belong to the first category of profits that are correlative to the losses, or the second category that are based on the entrepreneur's invention, improvement, and skilfulness, which will not disappear? Indeed, Walras referred to the losses, but he supposed not only the profits that are correlative of the losses, but also the profits that will not disappear, for it could encourage the worker-entrepreneur to be a capitalist. Then, how would each worker's invention, improvement, and skilfulness increase these profits?

As pointed out already, Walras referred to the higher wages as a result of the improvement in labour productivity as the profits of the association. However, unfortunately, Walras' argument on the labour productivity in each worker is too fragmental to discuss how innovative the worker-entrepreneur could be. In his

association plan, the role of the entrepreneur is given rather to the association, than to each member of the association.

However, the existence of the second category of the profit earned by the worker-entrepreneur would play an important role until the end of his career. In *Notes d'humeur*, Walras says the following as a criticism of Marx's system:

Non pas abolir le capital et le capitalisme, mais faire que tout le monde soit capitaliste. (Walras, L. 2000, 575)

Conclusion

Walras admits the existence of profits earned by the entrepreneur's invention, improvement, and skilfulness. The existence of this kind of profit gives workers-entrepreneurs in the association a chance to become capitalists, which Walras insisted, when he criticised other economists such as Marx and Gide on profits being emphasised as the origin of injustice.

It is clear that Walras' perspective of the worker-entrepreneur is totally different from that of J. B. Say's entrepreneur although both suppose the man in charge has two roles, that of a worker and of an entrepreneur, all at once. This paper does not deal with Say's considerable influence on Léon Walras by way of his father Auguste, in the formation process of his theory of entrepreneurs, and his idea of the association plans. It will be an objective for future research.

Another question to be examined further, is how Walras analysed the worker's invention, improvement, and skilfulness, as the origin of the profits raised not only by the association, but also by the individual worker-entrepreneur in other writings than his association movements. Answering this question will lead us to shed new light on the tradition of entrepreneurship in the history of economic thought.

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