Structure of the theory of value of David Ricardo

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Summary

1. Foreword

The aim of this article is to clarify the character of the theory of value of Ricardo as a whole, by examining the theoretical structure of the first chapter of *Principles of Political Economy and Taxation*.

In section 2 we are going to try to clear up the particular construction of the theory of value of the first chapter of the 3rd edition of *Principles*, theory which is neither an improved version of the theory of Smith nor a germinal version of that of Marx. To show this point we will try to emphasize the theoretical framework into which Ricardo puts his theory of value in each stage of its development, and the method he adopts to develop it (by giving a special attention to the relation between first 3 sections and sections 4 and 5 of chapter 1 of *Principles*. From this attempt will emerge the fundamental character of the theory of value of Ricardo as a whole.

In section 3 of this article, we will try to analyse section 6 of chapter 1 of *Principles* (on the invariable measure of value) and the last manuscripts of Ricardo on *Absolute value and exchangeable value*. Why did he have to conceive the problems of the invariable measure of value? What was its meaning in the theory of value? What became of it finally? To examine these problems concerning the invariable measure of value will allow us, from a view point different from that of section 2 of the present article, to give another complementary basis for our characterization of the theory of value of Ricardo.

2. Structure of the theory of value of chapter 1 of *Principles*

The main work of Ricardo, *Principles of Political Economy and Taxation* (1st edition in 1817, 2nd in 1819, 3rd and last in 1821) was originally conceived as a revised version of his *Essay on the influence of a low price of corn on the profits of stock*.....published in 1815. *Principles*, its leitmotif being to determine 'the natural course of rent, profit and wages' i.e. 'the laws which regulate this distribution'[1], are identical to *Essay* in their common objective to describe the long-term evolution of the rate of profit in the course of the accumulation of capital and to trace the configuration of class conflicts between the landowners on one side and the capitalists and workers on the other side around this evolution of the rate of profit. But to attain this goal, *Principles* have as the first chapter the theory of value, a subject which had been touched lightly in fragmentary way in *Essay*, to develop on this basis the theory of distribution. Now we try to consider the chapter 1 of *Principles*, systematic development of the theory of value of Ricardo, to seek there its fundamental character.

As Sraffa explains in detail in the introduction of the editor, chapter 1 on value constitutes one of the parts which underwent the most extensive revisions during the preparation of 2nd and 3rd editions. Like all the other chapters, chapter 1 in the first edition was not subdivided in sections. It was in the 2nd edition that the subdivision into 5 sections and the subtitles for each section were introduced. It was only in the 3rd edition that chapter 1 was again divided into 7 sections. On the basis of this composition of the the 3rd edition of the first chapter, the theory of value of Ricardo has been often interpreted as being made up of 3 parts (embodied labour theory of value――determination of the value――, modification of the value, invariable measure of value), of which the first would occupy the central place. In other words, in spite of various problems of the theory of value of Ricardo (insufficiencies, contradictions, gaps...), its essence would lie well in the determination of the quantity of value of the commodities by the quantity of labour bestowed on its production (the first 3 sections being the core of his theory). In opposition to such a point of view, we will examine the reason why Ricardo adopted the theoretical construction mentioned above which may justify the interpretation according to which his theory of value would consist of "3 domains", and to this interpretation we will give a characterization of his theory of value enabling us to understand it as a whole.

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[1] Ricardo,D., *On the Principles of Political Economy and Taxation*, Works and Correspondence of David Ricardo by Piero Sraffa, Vol.I, 1951, p.5. Indicated hereafter in brief as I,5.

One of the principal reasons for which the theory of value of Ricardo adopted the construction mentioned above is its opposition to the theory of Smith. The very subtitle of section 1 makes clear Ricardo's opposition to Smith, refusing the theory of parallel movement of the wages and the price of the commodities[2]. During the development of the first chapter, the theory of Smith is subjected to explicit critical examinations only in the section 1 with the subtitle quoted in note 2, but the substantial critique of Smith continues beyond this section. Smith noted in chapter 6 of his *Wealth of Nations* that the determination of value by embodied labour (rule determining the ratio of exchange between commodities) is not valid any more after the appearance of 'the accumulation of capital and the appropriation of land' because the incomes on these means of production (profit and ground rent) which have become private properties constitute from then on the components of the value of commodities. Ricardo tries to subject each one of these elements to critical examinations. Such were the original objectives of the section 3 (concerning the profit) and following sections and of chapter 2 (concerning the ground rent)[3].

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[2] 'the value of a commodity, or the quantity of any other commodity for which it will exchange, depends on the relative quantity of labour which is necessary for its production, and not on the greater or less compensation which is paid for that labour.' I.11.

[3] Sraffa quotes in his note in the first paragraph of section 3 of *Principles* the text of Ricardo which had made the first 3 paragraphs of 1st and 2nd editions and which was eliminated from the 3rd edition. In reading this eliminated text, it becomes clear that the aim of section 3 and following sections of the 3rd edition was to examine the influence of the accumulation of capital on the determination of value, and that of chapter 2 related to the ground appropriation (this is why, in the theory of distribution of *Principles* which starts from chapter 2, Ricardo takes the ground rent, income derived from profit, in advance of the wages and the profit, 'fundamental' incomes. The ground rent, income derived from the profit, must be logically preceded by the profit as it is the case in Smith.). The elimination of these paragraphs in the 3rd edition could be explained by the fact that the structure of theoretical development conceived originally as critique of Smith was transformed into a positive development of the theory of Ricardo himself and then he took corresponding measures of change. However, in spite of this change (elimination of part of text), the fact remains that the theoretical construction of the 3rd edition had been originally motivated by critique of Smith. This critique is not only what justifies the development of the 1st section, but it is indeed the

In chapter 5 of *Wealth of Nations*, Smith develops his theory of value in the setting of a so-called 'simple commodity production' model, supposing that workers produce commodities with their own labour and offer them in exchange with other workers labouring under similar conditions. But, in passing to chapter 6, Smith leaves the 'simple commodity production' model and takes for a new object of his theory the commodity production in the modern capitalism composed of 3 classes (landowners, capitalists, wage labourers), to advance that the determination of value by embodied labour is not valid any more there. In his theory of the determination of the value of commodities, Ricardo follows seemingly this step of Smith by adopting at the outset the model of simple commodity production ('early stages of society', I,12), and after that introduces the capitalist relations. But, contrary to Smith, Ricardo does not recognize any fundamental difference between these two theoretical models and advances that the passage from the one to the other does not change at all the determination of value. However, this concerns only the external appearance of the theoretical development, caused by the attempt of Ricardo to build his theory by criticizing Smith and at the same time being based himself on the method of development of Smith. It is for this reason that there often exist gaps between the letter and the contents of the text. It becomes essential then, to decipher the text of the first chapter, to clearly realize the theoretical framework adopted at each stage of the development of chapter 1 "On value". Without entering in detail, one can say roughly speaking that the first edition of *Principles* adopts initially the model of simple commodity production and then passes to the model of capitalist production on the basis of an aspect of the development of Smith who follows literally the historical passage (from 'primitive and savage state' of the society to the state with 'accumulation of capital and appropriation of land'), while the 3rd edition presupposes from the very outset the capitalist relations, and these capitalist relations are submitted to various theoretical operations of abstraction. In chapter 1 of the 3rd edition, there is initially an abstract and simplified model for the determination of the value and then this simplification will be relieved to develop the determination of the value under less abstract conditions. Significant modifications brought to the details of text in 2nd and 3rd editions can be interpreted by reference to the de facto change of the principle of the development of chapter 1. This also applies to the elimination of the 3 paragraphs indicated above, which made regress the aspect of critique of Smith and

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leitmotif of the whole of the theory of value of Ricardo including his theory of ground rent. In this sense, it would be necessary to include the theory of rent as an indispensable constituent part in his theory of value.

made the theoretical construction of the 3rd edition a positive development of the theory of Ricardo according to his own certain method. In the subtitle of the first section referred to above, it is clearly indicated that the theory of Ricardo explicitly presupposes from the very beginning the commodities produced in the capitalist relations, and that therefore it aims at the determination of their values.

These are preliminary remarks on the whole of chapter 1 of *Principles*. We will examine below some significant points successively to grasp the fundamental character of the theory of value of Ricardo. We will tackle the problem of the invariable measure of value, which constitutes one of these points, in the following section jointly with the problems raised in the posthumous manuscript of Ricardo entitled by Sraffa *Absolute value and exchangeable value*.

I) Critique of the commanded labour theory of value of Smith

At the very beginning of the development of his theory of value, Ricardo quotes the text of Smith. Thus Ricardo builds his own theory by criticizing the theory of Smith while at the same time resting on this. After having delimited the field of application of the theory of value to the reproducible commodities under the conditions of unlimited competition following the example of Smith, Ricardo formulates his determination of the value of commodities as follows.

'In the early stages of society, the exchangeable value of these commodities, or the rule which determines how much of one shall be given in exchange for another, depends almost exclusively on the comparative quantity of labour expended on each.' (I, 12) 'If the quantity of labour realized in commodities regulate their exchangeable value, every increase of the quantity of labour must augment the value of that commodity on which it is exercised, as every diminution must lower it.' (I, 13)

What Ricardo asserts here, is of course the embodied labour theory of value, i.e. the determination of value (rule of ratio of exchange) by the quantity of labour 'bestowed', 'realized' in the commodities. Ricardo does not attribute this principle of the determination of value to his own originality, instead he formulates it by giving his approval to what the authority Smith had already stated. The text of Smith to which he refers here concerns what regulates the relations of exchange of the commodities within a theoretical framework in which the workers carry out the production only with their hands without capitalist relations nor means of production, and in which the workers having manufactured these commodities only with their labour appropriate them and offer them in exchange (tacit presupposition of the model of simple commodity production) and this state of society is compared to 'early stages of society' which would historically precede the 'accumulation of capital and appropriation of land'. There is no knowing whether Ricardo consciously adopted this theoretical framework of the determination of value of Smith when formulating his theory of value quoted above, but it can at least be said that the restrictive phrase 'in the early stages of society' put at the beginning of the text quoted above was added under the influence of Smith.

But, in the subtitle put before the body of text of section 1 of chapter 1 of *Principles* which starts with the determination of value we have just seen, are explicitly presupposed the capitalist relations in which the 'labour' was in fact that of employees who work in exchange for wages paid by their employers. There would thus intervene an abrupt change in the presupposed state of society between this subtitle and the beginning of the body of text of *Principles*, in which the determination of value by embodied labour is advanced, if one literally takes the restrictive phrase 'in the early stages of society'. In addition, the criticism of the measure of value by commanded labour of Smith (that Ricardo mistakes for the measure of value by the wages) precisely turns around the category of wages characterizing the capitalist relations. thus is abandoned here the model of simple commodity production, which means a return to the presupposition of the state of society in the subtitle. In addition, for this criticism, Ricardo draws argument from the determination of value by the embodied labour he advanced in relation to 'the early stages of society'. If one literally took the restrictive phrase in question, the text of Ricardo would be full of confusions.

It is true that ‘almost exclusively' in the text quoted above was 'solely' in 1st and 2nd editions. From this one would think that Ricardo took for his theoretical model the simple commodity production which existed literally in the historical past, and the restrictive phrase 'in the early stages of society' remains intact. But the fact that he changed 'solely' into 'almost exclusively' in the 3rd edition seems to suggest the possibility of another interpretation. I.e., the state of society of historical past is not the object of the theory of Ricardo even at the initial stage of the determination of value by embodied labour, his object of theory is the capitalist relations just as in the subtitle. But he formulates the embodied labour theory of value only in disregarding the existence of the means of production and the hired labour (the fact that labour is that of employees and that the workers are not those who appropriate the results of their labour). But, even under these conditions, Ricardo could not completely remain unaware of the existence of the circumstances (differences in ratio between fixed capital and circulating capital, etc.), which were going to be at the origin of the problems of 'modifications of the value', and he had thus to say that the quantity of value depends not 'solely' but 'almost exclusively' on the amount of embodied labour. Therefore, what is in question here is not the primitive state of society itself, but a simplified model set up in bringing certain methodological operations to the commodity production under the capitalist relations, proper object of the theory of Ricardo. The method Ricardo adopts implicitly in the 3rd edition consists in successively building a theory of value on the same theoretical object while introducing step by step according to the development of his argument the factors he had disregarded at the beginning. We will see this in detail hereunder.

Having noted that the theory of Ricardo which determines the quantity of value by the quantity of labour 'bestowed', 'carried out (materialized)' in the commodities is advanced by disregarding the capitalist relations and the means of production, we see below how Ricardo criticizes the commanded labour theory of value of Smith on the basis of his own determination of value.

For Ricardo, the essence of the theory of value of Smith lies in the principle of the determination of value such as it was formulated in the two texts referred to above. Ricardo supports his own embodied labour theory of value by giving assent to the theory of Smith. But, according to Ricardo, Smith was not consequent on this point and halfway introduced another measure of value incompatible with the aforementioned principle of the determination of value. It is there that he begins his criticism. 'Adam Smith, who so accurately defined the original source of exchangeable value, and who was bound in consistency to maintain, that all things became more or less valuable in proportion as more or less labour was bestowed on their production, has himself erected another standard measure of value, and speaks of things being more or less valuable, in proportion as they will exchange for more or less of this standard measure. Sometimes he speaks of corn, at other times of labour, as a standard measure; not the quantity of labour bestowed on the production of any object, but the quantity which it can command in the market: as if these were two equivalent expressions' (I, 13-14)

In order that commanded labour and embodied labour be equivalent, it should consequently be supposed that coincide quantitatively what the employed person produced in the capitalist relations and the remuneration which is given to him, or one and the other constantly keep the same proportion by some reasons. It is for Ricardo a completely improbable presupposition. It is on this point that he bases himself to criticize the theory of Smith.

But in fact Ricardo mistakes in his way the commanded labour theory of value of Smith, so that they understand altogether different things by the same term commanded labour. And what Ricardo attacks is at the bottom the misinterpreted theory of Smith. We will show the difference of the commanded labour each of them understands (i.e. that Ricardo did not understand the problems of Smith) and ask ourselves about the meaning of what Ricardo wanted to affirm positively by this bad criticism.

Let us see concretely how Ricardo mistakes the text of Smith. His argument turns around the key category of 'value of labour'. Ricardo quotes the following text of Smith and adds to it comments to refute the thesis of Smith on the invariability of the 'value of labour' and to show that this value is prone to as much variation as that of any other commodities.

Here is the text of Smith Ricardo quotes. 'As labour may sometimes *purchase* a greater, and sometimes a smaller quantity of commodities, it is their value which varies, not that of the labour which purchases them', consequently, 'labour *alone never varying its own value*, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared.' (I, 16-17)[4]

Ricardo transfers this text of Smith into the context of his own theory completely different from that of Smith. For the point of view of Ricardo, what Smith advances in this text is the determination of the value of commodities by 'the comparative quantities of commodities, which are given to the labourer in exchange for his labour' (I, 17). And it is precisely in this point that the error of the theory of value of Smith resides, says Ricardo.

Ricardo bases himself, to highlight this error, on the variations in the value of (force of) labour (in particular its falls) by rises of the productivity in the branches of production of consumption goods for the workers. According to Ricardo, what determines the value (or the price) of labour is not the values themselves of the consumption goods, but the physical quantities of these consumption goods required by the workers to subsist 'under normal conditions'. These quantities are not of fixed value, but their value varies with the productivity of labour[5]. Ricardo thus makes usage of

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[4] Smith, A., *An Inquiry into the Nature and Causes of the Wealth of Nations*, Clarendon Press Oxford, 1976, Vol. I, pp.50-51.

[5] But, if such is the measure of value by commanded labour conceived by Ricardo, one will have to consider that only the commodities which can be given to the workers by way of payment of their wages i.e. only the commodities likely to be used for their consumption can be the subject of measure of value. It is to be noted in following the logic of Ricardo (cf. I, pp.16-20). If this is the case, how can the values of the commodities of luxury or of the means of production be measured, which constitute the commodities unable to be paid as wage goods? In other words, commanded labour such

these variations, from which even the 'value of labour' cannot be free, as the ground to criticize the thesis of Smith which consists in saying that the 'value of labour' is not prone to any variation and that one can thus adopt commanded labour as the invariable measure of value.

But in fact, this thesis of Smith does not mean the measur of value by the amount of wages as Ricardo understands it. According to the idea advanced by Smith in his text quoted by Ricardo indicated higher, the reason why the labour is constantly of an invariable value is that it is sacrifice, price independent of the quantity of the commodities that the worker (in Smith's theory he is not always an employed person) receives from the nature in exchange for his labour. From the point of view of Smith, it is for this that labour and not some product of labour constitutes the invariable measure of value. Smith bases himself on the structure of the original exchange between man and nature to advance his measure of value. The capitalist relation is not always implied there. For Ricardo, on the other hand, the capitalist relation is the only one conceivable relation of labour and thus for him any remuneration given in exchange for labour means inevitably wages. From this it follows quite logically that the determination of the value of commodities by the value of labour is identical to that by the wages. Ricardo thus made of completely other thing than the 'value of labour' of Smith his object of 'criticism of Smith'.

As we saw, to criticize the measure of value by commanded labour, Ricardo based himself on the variations of value (understood in terms of embodied labour) of commanded labour (in the meaning of employed labour). In other words, Ricardo examines the relevance of the commanded labour as invariable measure of value from the point of view of the embodied labour, which is for him the only one possible measure. This results in confusion on the meaning of the commanded labour in Smith and on the questions which he raises with this concept. For Ricardo, the 'value of labour' is nothing other than the value of the consumer goods the worker receives as the wages. Taking in this way the meaning of the 'value of labour', Ricardo restructures the whole of the commanded labour theory of value of Smith. (In this respect, Marx seems to adopt the same point of view as Ricardo[6].)

Our examination up to now on the criticism made by Ricardo of the theory of

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as Ricardo conceives it, can it be regarded as general measure of the value of commodities?

[6] Cf. Karl Marx, *Theories of surplus value*, translated from the German by G.A.Bonner and Emile Burns, Kelley, 1970, p.109.

Smith has arrived at a rather negative conclusion highlighting the confusion on the part of Ricardo. It is still necessary, independently of the question of relevance of this criticism, to consider what Ricardo positively advances through this criticism. In the context of his criticism of Smith's theory, Ricardo says: 'If the shoes and clothing of the labourer could, by improvements in machinery, be produced by one fourth of the labour now necessary to their production, they would probably fall 75 per cent; but so far is it from being true, that the labourer would therefore be enabled permanently to consume four coats, or four pairs of shoes, instead of one, that it is probable his wages would in no long time be adjusted by the effects of competition, and the stimulus to population, to the new value of the necessaries on which they were expended.' (I, 16) Therefore, in the long run, wages remains constant in physical terms of the quantity of wage goods independently of the variations in the productivity of labour. And the value of these constant real wages expressed in terms of embodied labour varies in inverse proportion to the productivity of labour. I.e., the wages are not the share allotted to the employed workers in what they produce, but the value of wages is given in a process other than the production process in which these employed persons engage (their life process determining the amount of wages expressed in terms of their consumption goods, and the production process of these wage goods determines the value of the wages). The causes of the variations of the value of wages are thus elsewhere than in the production process in which these employees work. If it is legitimate to interpret thus the text quoted above, one could say that Ricardo gives here de facto the essential of his concept of the wages. In other words, Ricardo gives, at the very outset of his theory of value, the fundamental points of his wage determination. We saw above that the embodied labour theory of value of section 1 of chapter 1 of *Principles* is made up on an extremely simplified model disregarding capitalist relations and all the means of production. What Ricardo positively advances through his criticism of Smith in this same section 1, is this essential of his concept of wages based on his determination of value. We will see later regarding the section 3 what means this essential of the concept of wages given in section 1 of the chapter on value. According to its subtitle, section 3 aims at advancing that the total value of commodities is determined by the sum of past labour and present labour. But the real contents of this section consist in discussing on the relation of distribution between the capitalist and the employee by explicitly introducing into the arguments the means of production and the capitalist relations (and thus profit). I.e., the theory of value of Ricardo is, from its fundamental structure, inseparable from the theory of relation of distribution. To section 1 is de facto allotted the role of determining beforehand the category of wages necessary for the argument in section 3[7]. We will see this hereinafter in detail. In any case, it seems to us that the points Ricardo has advanced positively through his critique of Smith can be situated as above in his theory of value.

Before finishing our examinations on the criticism of Ricardo in section 1 of chapter 1 of *Principles*, let us add a last point. In the subtitle of section 1, Ricardo affirms that the amount of the wages and its possible variations do not have any relationship with the determination of value. Does the text of section 1 contain a proof of this assertion? In the subtitle, the question was about the influence exercised on the value of the commodities by the variations in the amount of the wages paid to the workers employed for the production of these commodities the value of which is to be determined. The amount of the wages thus constitutes a condition of production of these commodities. And the question Ricardo posed at the beginning was to know whether or not the value of these commodities depends on this condition of production. Answering to it in the negative in the subtitle, Ricardo has advanced the embodied labour as the only one measure of value. But, the measure of value by commanded labour Ricardo submits to his critical examinations in section 1 is not, as we saw, the measure of the value of commodities by the amount of the wages as a condition of production of these commodities themselves the value of which is to be measured. This question has been replaced by another question about the relation of exchange between a certain quantity of employed labour and consumption goods. And Ricardo questions the relevance of determining the value of these consumption goods by a certain quantity of employed labour. Between the subtitle of section 1 and its text, although they both relate to the criticism of the theory of value of Smith, there is a shift between the questions each one treats respectively. And Ricardo's assertion advanced in the subtitle will be founded not

[7] During the last paragraphs of section 1, Ricardo mentions a topic he will resume later in the form of the problems of the invariable measure of value. Here again, the question is to know how to measure the 'value of labour', to know the direction of its variation, therefore question concerning the wages. If Ricardo tackles the problems of the invariable measure of value, it is not only to seek a measuring instrument of the quantities of values of commodities in general, but it is rather because he regards the measure of value as indispensable to the determination of the relation of distribution. The way in which Ricardo poses these problems in section 1 suggests this interpretation.

on the development of section 1 but rather on the whole of chapter 1 (and chapter 2) of *Principles* which constitutes the criticism of the theory of value of Smith at the same time as the positive development of the theory of Ricardo.

II) Framework of the theory of value of Ricardo as theory of distribution

We saw that the determination of value by embodied labour such as it had been advanced at the beginning of *Principles* before the criticism of the commanded labour theory of value of Smith rested on an extremely simplified model disregarding capitalist relations and all the means of production, in which the independent workers would produce with naked hands so to say. It is obvious that normally human labour is not carried out in this manner, it needs necessarily means of production whatever they are. To ensure the validity of the determination of value given at the beginning within an extremely abstract theoretical framework, it is therefore necessary to introduce into the argument the means of production. Section 3 with the subtitle 'not only the labour applied immediately to commodities affect their value, but the labour also which is bestowed on the implements, tools, and buildings, with which such labour is assisted', has as its explicit objective to show that the determination of value by embodied labour given in section 1 does not at all undergo any change even if taking into account the means production, since the value of these means of production (among the means of production enumerated above are not included the raw materials. Ricardo always neglects them.) is embodied, according to its quantity and their durability, as as much of past labour, together with the immediate labour of the workers, in the value of their products and thus transferred in them. Because of the conception of history proper to Ricardo, who projects the capitalist relations of his time on all the past societies and identifies every means of production with capital, the introduction of the means of production into the argument was for him tantamount to that of the capitalist relations. Section 3 consequently has as its aim not only the transfer of the value of the means of production into the product, but at the same time the production and the distribution of the value of products under the conditions of capitalist relations. In other words, Ricardo develops in this section the fundamental structure of his theory of value, which is in fact also a theory of distribution. It is because of this that here, in addition to the concept of the wages given already in section 1, is given also the essential of the concept of the profit in opposition to the wages. Ricardo thus exposes the broad outline of his theory of production and distribution under the conditions of the capitalist relations such as he conceives them. And Ricardo repeats in this section 3 that the determination of the value by embodied labour undergoes no change within the theoretical framework of this section 3 which is more concrete than section 1, which stands in remarkable contrast to sections 4 and following. We will see hereinafter in detail from where this contrast comes.

By introducing the division of society into classes of capitalists and employees, Ricardo says as follows to affirm that the value of the commodities produced under these conditions is always given as before by the quantity of labour necessary for their production.

'All the implements necessary to kill the beaver and deer might belong to one class of men, and the labour employed in their destruction might be furnished by another class; still, their comparative prices would be in proportion to the actual labour bestowed, both on the formation of the capital, and on the destruction of the animals. Under different circumstances of plenty or scarcity of capital, as compared with labour, under different circumstances of plenty or scarcity of the food and necessaries essential to the support of men, those who furnished an equal value of capital for either one employment or for the other, might have a half, a fourth, or an eighth of the produce obtained, the remainder being paid as wages to those who furnished the labour; yet this division could not affect the relative value of these commodities'[8]. (I, 24)

It seems to us that the text quoted above can be regarded as the most clear development of the theory of value of Ricardo which consists of theory of production and distribution of value under the conditions of the capitalist relations, the subtitle of section 1 had as its explicit aim. The thesis Ricardo advances is that the determination of value by embodied labour remains unchanged under the conditions in which the

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[8] As is seen in the quoted text, Ricardo uses, after the example of Smith, hunting and fishing as two examples of branches of production to be compared, which can suggest a primitive stage of the technique of production at a primitive stage of society, and these branches as examples remain the same until the beginning of section 4 of chapter 1 of *Principles*. While using these examples, Ricardo speaks about something other than a lower stage of level of technique and productivity. He argues about the structure of the production and distribution of commodities under the conditions of capitalist relations. In regard to this point, a branch of production with developed equipments of production is not at all distinguished from hunting or fishing. It is in this sense that Ricardo says just after the passage quoted above, that 'if we look to a state of society in which greater improvements have been made, and in which arts and commerce flourish, we shall still find that commodities vary in value conformably with this principle.' (I, 24)

product of labour does not belong entirely to those who have produced it but is distributed between two different classes in the form of profit and wages, i.e. the non-influence of the distribution on the value. Now let us examine the theory of distribution of Ricardo (in the framework of the model of two classes excluding the land rent and the landowners) by an analysis of the text quoted above.

It is necessary first of all to notice the theoretical order of the categories of distribution, i.e. the fact that the argument starts from the side of the wages, profit coming thereafter. The concept of the wages is the same as that we saw during the examination of section 1. Here two determining factors of the wages are given: 1.'different circumstances of plenty or scarcity of capital, as compared with labour', 2.'different circumstances of plenty or scarcity of the food and necessaries essential to the support of men'. Item 1 relates to the relation of supply and demand on the labour market, which determines the amount of the real wages (expressed in terms of physical quantities of wage goods). According to Ricardo, these wages are subjected to the process of long-term adjustment by the variation of the population of the workers and can be regarded as a given and constant amount. Item 2 is in other words the difficulty of production of this constant amount of wage goods, i.e. the value of wages, which varies (increases in particular) with the price of corn as the main means of subsistence. The amount of wages is given previously to and independently of the production process, and the amount of the cost for the capitalist (input) is determined in accordance with that. Subtraction of this input from the produced value (output) leaves in the hands of the capitalist a profit as remainder.

It is the level of the wages which determines the distribution beforehand, the profit varying in its turn only in a passive way in inverse proportion to the movement of the wages. If the determination of the level of the wages in Ricardo's theory is as above, there is in this determination no factor particular to any branch of production. The wages must thus be theoretically at the same level in all the branches of industry. If a capitalist employs for a certain number of days a certain number of workers with the investment of a certain amount of capital, the value produced must be the same in any branch. Subtraction of the same amount of cost from this produced value must leave for remainder the same amount of profit. According to the assumption of Ricardo, the uniformity of the level of wages thus implies equally that of the rate of profit in all the branches (presupposition of the general rate of profit[9]).

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9 In the 2nd section of the book 3 of *Capital, The transformation of profit into average profit*, Marx analyses the mechanism allowing the capital of each branch to obtain profit

In the text quoted above, Ricardo, while stressing the constant validity of the determination of value by embodied labour in spite of the division of the product of labour between two classes, does not mention any investment of capital for the means of production (fixed capital according to the terminology of Ricardo) monopolized by one of two classes, and its recovery, i.e. he appears to neglect completely the starting point which was at the origin of his statement in this text. If it is only the concentration of the means of production in the hands of a part of society and the production with them that allow the categories of distribution (wages and profit) to exist as such, this apparent neglect seems very mysterious. In section 3 of chapter 1 of *Principles* Ricardo asserts, in agreement with the subtitle, that the amount of the whole of the value of the product is the sum of the immediate labour done by the employees and of labour already embodied (realized) in the means of production, and that therefore the determination of value by the embodied labour is maintained without reserve, in so far as the amount of the totality of the value of product is concerned. On the other hand, when he comes to speak about the distribution of the value of product, he concentrates only on the part of the capital invested as circulating capital and does not put into question the fixed capital, in spite of the fact that the distribution comes from the existence of the fixed capital, equivalent to the means of production for Ricardo. We said, just after the text quoted above, that the theory of value and distribution of Ricardo is most clearly stated in section 3. This clearness is due, it seems to us, to the fact that Ricardo *tacitly* disregards the part of the fixed capital when he speaks about the distribution[10]. We will enter

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at an equal rate proportionally to its amount. Question is here about the *average* profit formed by the redistribution and equalization between the branches through relations of supply and demand on the market of the profits obtained *initially at unequal rates individually by each branch*. The *general* profit of Ricardo is of different nature from the average profit of Marx. It seems to us that this difference comes from the theoretical framework Ricardo adopts when presupposing the general rate of the profit, and from the analysis of the production process of the capital (process of exploitation of surplus value proper to Marx in volume I of *Capital*, analyzes completely absent in Ricardo's theory).

[10] More exactly, Ricardo does not take as object of consideration the part of the fixed capital, when he confirms the non-influence of the distribution on the value, because in this case the relation between the fixed capital and the circulating capital is presupposed to be equal in all the branches and therefore it becomes possible to presuppose the non-influence of the existence of the part of the fixed capital on the

below in detail of what this can mean.

When speaking about the theory of value and distribution of Ricardo, it is absolutely necessary to mention the ‘inverse relation between the wages and the profit'. Ricardo says on this point in section 3 as follows. 'The proportion which might be paid for wages, is of the utmost importance in the question of profits; for it must at once be seen, that profits would be high or low, exactly in proportion as wages were low or high'. (I, 27) Certainly this text seems to advance the opposition of interest between wage labour and capital. But, if one remembers how the wages were conceived by Ricardo, the rivalry between these two classes does not seem inevitably to be the essential point that he asserts in this text. Since the wages are for him rather of an amount given in physical term, it would be legitimate to consider that he lays stress here on the movement of the value of this constant amount of the real wages in opposition to the profit. This opposition does not concern the relation between the wages and the capital, but it is rather about an opposition between the capital and the landed property, interest of wage labour not taking part in it (but insofar as the rise in the price of corn can have as its consequence a fall of the real wages along with the fall of profit, this opposition can indicate at the same time also that between labour and the landed property). In the theory of Ricardo, the amount of the real wages does not itself oppose the interests of wage labour against those of capital. This opposition does not seem to be the object of his economic theory. If one deduced immediately from the text of Ricardo describing the opposite movement of the wages and the profit the interpretation that he underlines here the opposition of the interests of the classes (it is actually implied as a general possibility), one would deviate from the problems of Ricardo in his theory of distribution and would incorrectly interpret his theory after the manner of the theory of surplus value of Marx.

Incorrectly, because Marx affirms the class opposition based on his theory of

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relative value produced in each branch. Following is the text which give evidence to such a presupposition. 'Suppose that in the early stages of society, the bows and arrows of the hunter were of equal value, and of equal duration, with the canoe and implements of the fisherman, both being the produce of the same quantity of labour. Under such circumstances the value of the deer, the produce of the hunter's day's labour, would be exactly equal to the value of the fish, the produce of the fisherman's day's labour. The comparative value of the fish and the game, would be entirely regulated by the quantity of labour realized in each; whatever might be the quantity of production, or however high or low general wages or profits might be.' (I, 26) surplus value in his analysis of the production process of capital, which is altogether absent in the theory of Ricardo. The process of valorization of capital, which is the production of surplus value as a capitalist form of exploitation, is made possible only by a *prolongation beyond a certain point* of the working day. 'If we now compare the two processes of producing value and of creating surplus-value, we see that the latter is nothing but the continuation of the former beyond a definite point. If on the one hand the process be not carried beyond the point, where the value paid by the capitalist for the labour power is replaced by an exact equivalent, it is simply a process of producing value; if on the other hand, it be continued beyond that point, it becomes a process of creating surplus-value'[11]. I.e., to recognize the surplus value, it is necessary as a preliminary to realize that the duration of the working day is determined by nothing other than by the relation of force between capital and wage labour. Ricardo supposes a working day of given duration without giving particular reasons. And in his theory the real wages remain constant, as long as the equilibrium between the increase in the demand for labour and the growth of workers population is maintained during the ongoing of the accumulation of capital (which Ricardo supposes as long-term tendency). Consequently, nothing can exist that must be decided through the class struggle between wage labour and capital. This is the fundamental character of the capitalist relation such as it is conceived by Ricardo. According to certain point of view, there would be in the economic theory of Ricardo the theory of relative surplus value in spite of the absence of the theory of absolute surplus value, since it admits the economic existence of surplus (profit) and describes its dynamics on the basis of the embodied labour theory of value. However, the relative surplus value is thinkable, according to the conceptualization of *Capital*, only on the basis of absolute surplus value (prolongation of the working day) and the latter constitutes the essential precondition of the former. In other words, the surplus in Ricardo's theory is the 'residue' which arises 'naturally' by subtracting the real wages the amount of which is given from the product of a working day the duration of which is determined 'naturally'. Therefore the surplus of Ricardo does not result from class struggles[12]. Consequently, the theory of Ricardo

[11] Marx, K, *Capital*, volume I, Progress Publishers, Moscow, p.189-190.

[12] What we have just said rests on the following comment of Marx concerning the 'theory of surplus value' of Ricardo.' The total working day is greater than the part of the working day required for the production of wage. Why ? That does not emerge. The magnitude of the working day is therefore wrongly presupposed as fixed, and from this follow the consequences that they are directly false. The increase or reduction of surplus value can therefore be explained *only* from the growing or diminishing productivity of

concerning the inverse relation between wages and profit is not of a nature to be assimilated directly to the theory of surplus value. It rather concerns the opposition between the capital and the landed property, caused by the variations (increases in particular) of the value of the wages fixed in physical terms, variations caused in their turn by the degradation of arable land, with which the accumulation of capital is 'naturally' accompanied.

Ricardo had advanced, at the beginning of *Principles* the determination of the amount of the value of commodities by embodied labour. According to this determination, the amount of value is fixed by the quantity (length) of the *time of labour* necessary for the production. When Ricardo speaks about this labour time, it is always a 'working day (day's labour)' which constitutes the unit of it. Under the condition in which the intensity and the skill of labour are given, one working day as unit always expresses the same quantity of labour (thus it goes without saying that the number of working hours per day is given and constant. It seems to us that for Ricardo this is too obvious to become object of explanation). If the amount of wages per day per worker is given, the amount of capital spent to employ workers can thus be recognized as the index of carried out and embodied labour. As we saw, Ricardo expressed the amount of wages by the term 'value of labour'. This 'labour' would probably correspond to the 'force of labour' of Marx. I.e., in the terminology of Marx, Ricardo does not distinguish clearly 'living labour' (the amount of which is expressed by the duration of working time in the production process) and the 'commodities sold to the capitalist by the worker' (the amount of the value of which is expressed by the amount of wages). And, jointly with the fact that for Ricardo the amount of the part of capital assigned to the payment of wages is tantamount to the index of carried out and embodied labour, 'labour necessary for the production' as factor determining the value can mean for Ricardo equally both 'living labour required for the production' and the 'amount of wages *required to employ* this living labour'. This is revealed only in section 3 in which the capitalist relation (the relation between the wages and the profit) is explicitly introduced. As we will see below, this is of decisive importance in considering on the fundamental character of the 'embodied labour theory of value' of Ricardo.

III) Method of chapter 1 of *Principles*
——relation between the first half and the latter half——

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social labour, which produces the means of subsistence. That is to say, only relative surplus value is understood.'(Marx, *Theories of surplus value*, ibid., p.307.)

In section 3 of chapter 1 of *Principles* Ricardo developed in an extremely clear way his theory of the determination of value inseparable from his theory of distribution under the conditions of capitalist relations (the value of the commodities is determined by the quantity of labour necessary for their production), and he seems to have succeeded in getting rid of the ambiguity included in the theory of value of Smith. But, as we saw, Ricardo develops here the determination of value within a wholly abstract theoretical framework, supposing a capitalist production without any means of production. If he could advance the embodied labour as the only one single factor determining the value and affirm that 'no alteration in the wages of labour could produce any alteration in the relative value of these commodities' (I, 28), this was in fact possible only inside this theoretical framework.

In the history of economic thought, it is not rare that to Ricardo is attributed the merit to have gotten over the confusion of the two determinations of value in Smith's theory and developed in a pure form the embodied labour theory of value, which would be realized in the first half of chapter 1 of *Principles* while the latter half of it would reveal the weakness or defect of his theory and there he had to make modifications to his principle of the determination of value because of the insufficiency of his abstraction. Or, Ricardo, just like Smith, would suppose initially a 'primitive state of society' in which he could make of embodied labour the only one single principle of the determination of value, and, in passing to the developed capitalist relations he could not any more retain the validity of this principle and fell into a consequence similar to that of Smith (recognition of the influence of the variations of wages on the determination of value).

In opposition to these two points of view on chapter 1 of *Principles* we intend to show, in the light of what Ricardo himself says on the passage from (until) section 3 to the section 4 (and section 5), that there is no cleavage between the first half and the latter half of chapter 1 such as each one of those two points of view above presupposes——modification of the principle of the determination of value or change of the object of theory (historical passage)——, and that between them there exist only differences of theoretical procedure in the framework of one and the same approach on the same theoretical object (setup of the restrictive hypothesis and releasing of the restriction, although Ricardo does not make explicit this procedure in the form of a methodology).

For the first time in the last paragraph of section 3, Ricardo makes an allusion to that his theory in this section has validity only under certain restrictive conditions: 'A rise of wages would not raise them (commodities) in money value, nor relatively to any other commodities, the production of which required no additional quantity of labour, which employed the same proportion of fixed and circulating capital, and fixed capital of the same durability.' (I, p.29) Ricardo recognizes thus implicitly that it is never without condition that the wage increase, an other factor than embodied labour, remains without influence on the value of commodities. Two elements are evoked here: the 'proportion of fixed capital and circulating capital' and the 'durability of the fixed capital', Ricardo disregarded them *de facto* up to now. And he acknowledges so to say that the theory of value and distribution of section 3 is valid only under the special condition that these two elements are 'the same' in each branch of production. The 'modifications of value' in sections 4 and 5 relate to problems that the releasing of this special condition raises on the determination of value. Corresponding to the text quoted above, Ricardo raises the problem in the first paragraph of section 4: 'This difference in the degree of durability of fixed capital, and this variety in the proportions in which the two sorts of capital may be combined, introduce another cause, besides the greater or less quantity of labour necessary to produce commodities, for the variations in their relative value――this cause is the rise or fall in the value of labour.'[13] (I, p.30) If Ricardo is always interested in the influence of the variations of wages on value, it is obviously because he is always conscious of the theory of Smith mentioned in the subtitle of section 1, theory leading to the conclusion that 'the wage increase raises the prices of commodities'. The arguments on the 'modifications of value' advanced in sections 4 and 5 are motivated partly by the intention of Ricardo to refute this theory of Smith (this theory is now opposed to Ricardo by Malthus). In this sense, it could be said that it is on the arguments from section 4 that the subtitle of section 1 of chapter 1 of

[13] Ricardo had presupposed, in section 1, a simple commodity production without relation of classes nor means of production, carried out so to say with naked hands. In section 3, he had supposed too rudimentary means of production――simple tools――to be able to consider differences in the conditions of production. Only at the beginning of section 4, he introduces as object of his theory the 'fixed capital' (equipments and facilities of production) sufficiently developed so that there can exist differences in their durability. It would then seem to be possible to conclude that the theoretical development of Ricardo goes in parallel with the historical process, from the primitive state to developed capitalism. Ricardo had actually developed the text of the first and second editions of *Principles* so as to allow such an interpretation. But on taking account of the text of the 3rd edition and the changes brought to this text as a whole, it seems that Ricardo tends to suppose from the very outset of chapter 1 the developed capitalist relations.

Principles will be grounded. But, as we will see, sections 4 and following have a more positive significance as constituent part of the theory of value of Ricardo, at the same time as they are the development of critique of Smith.

Here some comments may be made on the variations of wages in Ricardo's theory as 'another cause' of the variations of relative value. There can be two possibilities as to the variations of the wages. One is the variations of the amount of wages caused by the variations of the real wages expressed in physical terms. The other is the variations of the amount of wages caused by the variations of the value of wage goods, real wages remaining constant. According to at least what Ricardo says on the wages in chapter 1, it is probable that he takes account rather of the second possibility. The first possibility concerns disequilibrium in the labour market between supply and demand or workers' struggle for wage increase. Both of these two factors are excluded from the theoretical framework of Ricardo, because disequilibrium in the labour market dissolves in the long run and the class struggle is not supposed to take part in the determination of the real wages. These are what is necessary to confirm concerning the variations of wages related to the 'modifications of value' in sections 4 and 5.

If the proportion between fixed capital and circulating capital and the durability of the fixed capital are different according to branches of production, the variations of the wages intervene together with the embodied labour as a determining factor of value, and thus the unitary determination of value by the embodied labour is 'modified'. We will hereafter examine the concrete contents of these 'modifications of value'. Here we quote the 3 paragraphs in which Ricardo seems to make methodological reflections on the relation between the first half and the last half of chapter 1 of *Principles*. These paragraphs come just after the definition of the fixed capital and the circulating capital given at the beginning of section 4.

'If men employed no machinery in production but labour only, and were all the same length of time before they brought their commodities to market, the exchangeable value of their goods would be precisely in proportion to the quantity of labour employed.

If they employed fixed capital of the same value and of the same durability, then, too, the value of the commodities produced would be the same, and they would vary with the greater or less quantity of labour employed on their production.

But although commodities produced under similar circumstances, would not vary with respect to each other, from any causes but an addition or diminution of the quantity of labour necessary to produce one or other of them, yet compared with others not produced with the same proportionate quantity of fixed capital, they would vary from the other cause also which I have before mentioned, namely, a rise in the value of labour, although neither more nor less labour were employed in the production of either of them.' (I, p.32-33)

These paragraphs precede the explanation of the 'modifications' of the determination of value by embodied labour, explanation Ricardo gives concretely using numerical examples. He clarifies here concisely the theoretical framework set in section 1, section 3, and sections 4 and 5, and thus the method of development Ricardo follows in his theory of value. Let us say in anticipation that the first paragraph explains the theoretical framework of section 1, the second that of section 3, and the third that of sections 4 and 5, and that Ricardo presupposes the capitalist relations and the general rate of profit in all these paragraphs. I.e., the general profit was already presupposed from the (pure) embodied labour theory of value of section 1, in which was adopted a model one could take for that of simple commodity production with independent producers working with their naked hands. Only the theoretical framework specific to this stage of theoretical development neutralized this general profit and made it invisible. Having confirmed these points, let us examine the text paragraph by paragraph.

The presupposition of the first paragraph is that the only circulating capital is employed in all the branches of production and the time which elapses until commodities are brought to market ('the durability of the circulating capital' according to the terminology of Ricardo) is also the same everywhere. It is a presupposition of the capitalist relations without use of any means of production, of any raw material. One could not regard such relations as really existing. At all events, values of all the commodities 'would be precisely in proportion to the quantity of labour employed'. Since here the totality of capital is spent for the payment of wages, and that consequently the amount of capital directly expresses the quantity of labour employed (number of workers multiplied by the number of working days), and that the quantity of labour employed is in direct proportion to the quantity of labour bestowed and embodied, the working day being a given and constant length, and that the value is supposed to be proportional to this quantity of embodied labour, the following equations are obtained. **Ratio of embodied labour=ratio of employed labour=ratio of amount of capitals=ratio of amount of values**. We will see below the importance of these equations. We said that the profit at general rate is already implicitly presupposed in the first paragraph quoted above expressing the theoretical framework of section 1. The ground for this is as follows. The two conditions which allow the equations above to hold are that the whole of the capital consists of circulating capital, and that this circulating capital has the same durability in all the branches of production. These conditions mean that the general profit is already implicitly presupposed which is in proportion to the two factors, i.e. the quantity of invested capital and the time elapsing between the investment and recovery. But, the part which constitutes this general profit being in the same proportion for the capitals of every branch, this general profit is compensated and disappears from surface on the level of the relative ratios of the values of the commodities. This is why the equations above hold without taking account of the profit and the profit does not intervene in the argument of section 1 in spite of its de facto presupposition.

Let us pass on to examinations of the second paragraph. The use of fixed capital is explicitly introduced here, but it is supposed to be of the same value, same durability in all the branches. These are the presuppositions that were made de facto in section 3. In this case also, the relative values of each commodity are given only by 'quantity of labour employed on their production' and therefore the equations above hold. The same reason mentioned concerning the circulating capital of the same durability also explains why the conditions added here again do not make obstacle for these equations to hold. The use of the fixed capital does not have any influence on the relation between the first term and the second term of the equations, the first equal sign remains valid. The fixed capital occupying the same proportion in all the branches, the relations between the sums of capital express directly those between the circulating capital. The intervention of the fixed capital does not at all change the relation between the second term and the third term of equations, therefore the second equal sign remains valid too. The validity of the third equal sign can be justified as follows. From now on part of the value of the fixed capital will be transferred in the produced value and will reappear in it. According to the presupposition of the second paragraph, the part of the produced value coming from the fixed capital for each period of production is equal to value of the fixed capital÷durability×(1+general rate of profit), this part occupies the same proportion in the sum of the produced value. It follows that the ratios of the values of commodities between the branches remain the same as if the fixed capital were not used. The use of the fixed capital presupposed in the second paragraph does not change the values of the third term and the fourth term. Therefore the third equal sign remains valid. Here also, as in the first paragraph, the general rate of the profit is presupposed.

It is for the first time in the third paragraph that differences of the conditions of production are introduced as object of examinations into each branch which operates using fixed capital. Not the relative values of the commodities of all the branches, but only those of the commodities which satisfy the requirements given in the two preceding paragraphs are determined only by 'the quantity of labour necessary to produce one or other of them'. (here is in fact already raised the problem of the invariable measure of value, problem to which Ricardo will tackle in section 6 of chapter 1 of *Principles*.) With regard to the commodities between which these conditions are not satisfied (this is rather the general case), 'the relative value of commodities was regulated by two causes instead of by one'[14]. These two causes are 'labour employed in the production' and 'value of labour' (value of the real wages). This third paragraph describes the theoretical framework of the sections 4 and 5 which relate to the problems of the 'modifications of value'. Since here is admitted that the proportion of the fixed capital and its durability vary according to branches, the second and third equal signs of the equations given above do not hold any more. These equations hold only in particular cases.

As the examinations above of the three paragraphs of section 4 show, the passage from the first half to the latter half of the theory of value of chapter 1 of *Principles* can be interpreted as the process of setup of the restrictive hypothesis and the releasing of the restriction, the capitalist relation and the general rate of profit being presupposed from the very outset. There is therefore not, between first half and latter half of this chapter, a transition in the object of theory from the primitive state of society to developed capitalism, nor a relation between the ‘right’ determination of value by embodied labour and the limit or defect of the theory of Ricardo. We think on the contrary that the whole of chapter 1 constitute the theoretical considerations on the same object according to a coherent method in its own way.

Ricardo says in the third paragraph quoted above that the value is regulated by the two causes. The regulation of the value by the two causes results in the 'modifications of value'.

IV) 'Modifications of value'

To consider the variations of value by 'two causes', Ricardo uses 5 numerical examples in sections 4 and 5. These examples refer to the difference with regard to the 3 points: 1.composition of fixed capital and circulating capital, 2.durability of the circulating capital or the time which elapses until commodities are brought to the market, 3.durability of the fixed capital. Ricardo considers that variations of value can be caused by these three factors jointly with the quantity of embodied labour, and he examines each one of these factors in each numerical example. It goes without saying that actually all these factors play together. But the variations of value by these 3 factors independent of the variations in the quantity of embodied labour are reduced in

[14]Letter of Ricardo to McCulloch, June 13, 1820, VIII, 194.

fact to the same problem (presupposition of the general rate of profit). We will then examine only the second numerical example (I,33-35), in which Ricardo treats successively the two distinct aspects of the problem of the 'modifications of value' supposing a difference in the relation between fixed capital and circulating capital. In this procedure the characteristics of what Ricardo calls the 'modifications of value' can be seen clearly.

In this numerical example, Ricardo examines, before tackling the problem of the variations of value according to those of wages, the difference in the amount of values produced in two branches which employ just the same quantity of labour, which constitutes the precondition to the examination of the influence of the variations of wages on value.

Let us suppose two branches which produce respectively corn and fabric. The first branch employs, with 5000 units of capital, 100 workers during 1 year (Ricardo expresses in this way the 'quantity of labour employed in the production'. And, in this case, 5000 units making the whole of the invested capital, the production must be carried out without means of production nor raw material, at least bought as commodities). The annual rate of profit is supposed to be 10 %. All the reasoning of Ricardo is based on the premise of the general rate of profit given a priori and left unexplained[15]. The value of capital one year after will be 5000(1+0.1)=5500. This amount is determined by the original amount of the capital and the rate of profit, not directly by the quantity of labour done by the workers employed by this capital. The capitalist of the first branch continues the production in the second year on the same scale and according to the same method. The sum of the value produced during 2 years in this branch will be thus 5500+5500=11000.

On the other hand, in the second branch which produces fabric, the capitalist employs in the first year 100 workers during one year by investing the same quantity of capital (5000 units) to make them manufacture a machine he will employ thereafter for the manufacture of cloth (Ricardo supposes here the manufacture of machine only with labour). The value of the machine completed at the end of the first year will be, as in the first branch, 5000(1+0.1)=5500. But, in the second year, the capitalist employs with

[15]The general rate of the profit at 10 % could be interpreted as meaning that the capital can usually employ a quantity of labour which is 10% larger than that which is contained in itself. But this interpretation applies at most to the circulating capital allotted to the employment of workers, absolutely not to the fixed capital which makes its appearance in the second year in the second branch.

5000 units of capital 100 workers, who produce fabric using the machine produced in the previous year (production with machine but without raw material). The amount of investment in the second year will be thus 10500 units (= 5500+5000). According to the presupposition of the general rate of profit at 10%, the value the capitalist will obtain at the end of the second year will have to be equal to 11550 units.

Ricardo draws from above the conclusion that the equal quantity of labour results in unequal amounts of value if the proportion of fixed capital in the whole of the invested capital varies according to branches.'Here then are capitalists employing precisely the same quantity of labour annually on the production of their commodities, and yet the goods they produce differ in value on account of the different quantities of fixed capital, or accumulated labour, employed by each respectively'. (I, 34)

The thesis Ricardo maintained until section 3 that the amount of value is given only by the quantity of labour bestowed for the production, must thus be 'modified' in the following way: whenever the fixed capital intervenes, it becomes an independent element exerting its influence on the determination of value, the amount of value is not always given only by the quantity of bestowed and embodied labour.

Below is a schematic representation of the numerical example of Ricardo.

	First year	Second year
Branch I	$A \rightarrow A(1+r)$	$A \rightarrow A(1+r)$
Branch II	$A \rightarrow A(1+r)$	$A+A(1+r) \rightarrow A(2+r)(1+r)$

Where A means the value of the invested capital, r the general rate of profit. The left term of each arrow indicates the input of each year, the right term the output. All the invested capitals are supposed to consist only of circulating capital, except those of branch II in the second year which consist of circulating capital A and fixed capital $A(1+r)$.

The sum of the value produced during 2 years is $2A(1+r)$ in the first branch and $A(2+r)(1+r)$ in the second branch. The difference between these two sums is $Ar(1+r)$. According to Ricardo, this difference cannot be explained by the quantity of labour spent for the production. According to the determination of the value based on embodied labour, since both branches employ 100 workers with capital A to draw the same quantity of labour from them, they must produce the same amount of value. Where then does this difference of the produced values come from? Ricardo explains it by the existence of the general (or natural) rate of profit. This general profit is grafted on the value of the fixed capital employed in the second branch in the second year. Ricardo makes intervene the general rate of the profit in the determination of value, which makes possible his presupposition of the profit grafted on the fixed capital. The profit becomes thus a constituent part of the value of commodities. It is because of this conception of the profit that Ricardo is obliged to recognize the second determining factor of value, which is the difference of the proportions that the fixed capitals occupy in the invested capital (in this case 0 % and 50 %).

The general profit grafted on the fixed capital is thus a value of unknown origin. For this part of the produced value the determination of value only by the amount of embodied labour is in fact already 'modified', even before Ricardo tackles the 'curious effect' exerted on the prices by wage increase.

Although Ricardo himself makes use of the term 'modify' in the subtitle of section 4, we put always in quotation marks the 'modifications of value' because we consider that the determination of value in Ricardo's theory does not suddenly undergo changes of principle in the section 4. Indeed, Ricardo regarded the determination by embodied labour as the principle of the determination of value, and although he had to recognize the 'modifications' of this principle by the use of fixed capital, he tended to underline, in order to try to escape out of the difficulties, the non-gravity of the influence of these 'modifications' (cf. I,36). But the theory of value of Ricardo was made by presupposing from the very outset the capitalist relations and the general rate of profit, and if the problems relating to the 'modifications of value' make their appearance not in the first sections of chapter 1 of *Principles* but only in section 4, it is not because here for the first time the principle of the determination of value should be modified, but only because these problems were as it were neutralized and made invisible because of the restrictive conditions set in the first sections. These are expressed in the equations given above, **ratio of embodied labour=ratio of employed labour=ratio of amounts of capitals=ratio of amounts of values**, which express the situation of this neutralization.

The first paragraph of section 4 specifies well that the question here is the variations of value caused by those of wages. But, in the first phase of the numerical example on the 'modifications of value' we have just examined, Ricardo shows only that the same quantities of labour produce different amounts of values, without mentioning any variation of value caused by the variations of wages. However, these are two distinct questions, the first being fundamental while the second being only the secondary effect of the first. Consequently, it is completely logical that Ricardo starts by turning his attention on the differences in the conditions of production in disregarding the variation of wages and examines this latter thereafter (it is also why we chose the second numerical example as object of our examination).

Below is the schematic representation of 'curious effect' by which the wage increase does not raise the price in proportion but on the contrary lowers it (cf. I,35-36).

Branch II	First year	Second year
Before the wage increase	5000→5500	5500+5000 = 10500→11550 = 6050+5500
After the wage increase	5000→5500	5500+5000 = 10500→11495 = 5995+5500
		(5995=6050－55, 55=5500×1/100)

(the rate of increase in the wages being 1 %, the rate of the profit falls from 10% to 9 %. the product of the first year is used as fixed capital for the production of the second year. Since the value produced at the end of the first year remains the same afterwards as before the wage increase, it should be considered that the number of workers employed (and thus quantity of embodied labour) do not undergo any change. It would follow from this that for some unknown reason the capital of the same amount will continue to employ the same number of workers in spite of the wage increase.)

The effect of wage increase is not to raise the total value of product but to lower it from 11550 to 11495 (the amount of this fall is equal to the product of the value of the fixed capital and the rate of increase in the wages). The part of the capital invested as circulating capital undergoes no influence of the wage increase, and the value of the product resulting from this part remains unchanged after the wage increase, which has effect only on the rate of profit grafted on the value of the fixed capital. The value of this part of the product decreases in proportion to wage increase. It is this reduction in the profit grafted on the fixed capital which is at the origin of 'curious effect'.

From where comes the value corresponding to the profit added on the fixed capital? And why has the rate of the profit grafted on the fixed capital to change in parallel with the rate of the profit coming from the labour employed with the circulating capital? All these are quite simply presupposed and left unexplained. If this profit is not explicable by the principle of the determination of value only by embodied labour, this principle itself was already basically 'modified' (modified in fact, though implicitly, from section 1). The 'curious effect' is thus only the secondary effect involved by this profit obtained by using fixed capital in variable ratios. The second numerical example of Ricardo can be interpreted in this manner.

The degree of fall of the sum of value depends on the proportion which the fixed capital occupies in the invested capital. Therefore the capital made up only by the circulating capital (?) is not subject to any influence of wage increase. On the contrary, the capital consisting totally of fixed capital (?) undergoes the maximum of influence (the rate of its increase falls as much as the wage increase). However, they are the two extreme cases which are unthinkable even theoretically. In fact, every concrete case is somewhere between these two extreme cases (it is moreover necessary to take account of the raw materials constantly disregarded by Ricardo. In current context they could be included in 'fixed capital' (!).) The same movement of the level of wages (supposed to be general) has unequal effects on the values of commodities according to the composition of capital. It follows then that the same quantity of labour leads to values of unequal amounts, and that the values of commodities can undergo variations only because of variation of the wages without change in the quantities of labour spent on their production.

V) Fundamental character of the theory of value of Ricardo

We will draw up, in the last place, the balance sheet of our examinations up to now on the fundamental character of the theory of value of chapter 1 of *Principles* in resting on the last paragraph of section 6.

In sections 4 and 5 Ricardo introduces differences of the conditions of production to advance that the relative values as rates of exchange of the commodities are not given only by the quantities of labour employed for their production. And in section 6, by taking account of these circumstances, he makes clear the theoretical difficulties of presupposition of the 'invariable measure of value' capable of confirming unequivocally the 'real values' of all the commodities. In the last paragraph of this section, he once again disregards differences in the conditions of production between the branches just as he had done in the first 3 sections, and summarizes his theory of the determination of relative values of commodities solely by the quantities of labour employed for their production. One can thus consider that this paragraph summarizes in its 'pure' form the determination of value by the 'quantity of labour necessary to produce commodities', by disregarding completely the influence of the variations of wages on the relative values (subject of sections 4 and 5) which would be '6 or 7 percent' at most and which would never exceed this threshold (I, 36). Ricardo would have had to settle the problems of the 'modifications of value' and he devoted many pages to examine them, nevertheless he took the attitude to tergiversate by saying that in the last analysis the variations of value caused by the differences in the conditions of production, independent of the quantities of labour, are only tiny and that in roughly speaking the univocal determination of value still remains valid. One can thus consider that rather the theoretical model disregarding these 'trifling influences' can clearly express the essential of the theory of Ricardo. Below is the text of the paragraph put at the end of section 6.

'I have not said, because one commodity has so much labour bestowed upon it as will cost 1,000 *l.* and another so much as will cost 2,000 *l.* that therefore one would be of the value 1,000 *l.* and the other of the value of 2,000 *l.* but I have said that their value will be to each other as two to one, and that in those proportions they will be exchanged. It is of no importance to the truth of this doctrine, whether one of these commodities sells for 1,100 *l.* and the other for 2,200 *l.* or one for 1,500 *l.* and the other for 3,000 *l.* into that question I do not at present enquire; I affirm only, that their relative values will be governed by the relative quantities of labour bestowed on their production' (I, 46-7) In the note added at the end of this paragraph, Ricardo quotes comments on his theory made by Malthus and replies to him as follows: 'Mr. Malthus appears to think that it is a part of my doctrine, that the cost and value of a thing should be the same;——it is, if he means by cost, 'cost of production' including profits'. (I, 47)

This text summarizes clearly the fundamental character of the embodied labour theory of value such as is conceived by Ricardo. We have repeated that the theory of value of Ricardo always presupposes the capitalist production and the general profit. Also in the text quoted above, this presupposition is maintained. The value is said to be determined by the quantity of bestowed and embodied labour. What is used here as unit to express the quantity of labour, is not a unit of time during which the workers work in the production process, but the cost necessary to employ these workers (or rather this 'labour', according to the expression of Ricardo) in other words the amount of circulating capital. The wages paid per worker per day being given, the amount of wages (it directly expresses the product of the number of workers employed and the number of the days of employment) is worth for Ricardo the index of the quantity of labour spent by the workers. It is because employed labour is in Ricardo's theory everywhere homogeneous, and that one working day is of a given and fixed length (the unit of the quantity of embodied labour is thus a working day). In this way, the cost for the employer of workers and the quantity of labour spent keep constantly a given relation between them, and one of them can express the relative quantity of the other. But for Ricardo they do not have the same weight. It is only the cost spent by the capitalist which is significant for him (capitalist and Ricardo also). And the quantity of embodied labour can have significance only in relation to this cost. I.e., the theory of value of Ricardo is not of the nature of a bird's eye view observation of the capitalist economy, but it is constructed from the point of view of capitalists organizing production by investing costs in view of profit. It can in this sense be characterized as a bourgeois theory.

Ricardo says in the text quoted above that the cost does not so determine value as that the amount of cost spent in the form of wages becomes directly that of the value of the produced commodities, but that the relative value is fixed at a value higher than and proportional to the cost. It is because he thinks that the general profit and the value of fixed capital (which is supposed to keep everywhere the same relation to the circulating capital and to have everywhere same durability) are added to the wage cost at the same rate in all the branches. However, since the added part keeps always the same proportion, the relative values of the commodities are given as **ratio of the amounts of the invested capital for their production = ratio of the employed labour (number of workers multiplied by the number of working days)=ratio of embodied labour**. This is the restoration of the equations given on page 22. Why are they restored? Of course because the theoretical framework of the determination of value has returned here to that of the first 3 sections of chapter 1 of *Principles*. That these equations hold means that the value of commodities is determined by the addition of the quantity of the invested capital and the general profit everywhere at a same rate. And, as Ricardo recognizes it without ambiguity retorting to Malthus in the text referred to above, if the sum of the invested capital and the general profit can be called the 'cost of production', the value is determined by the cost of production. This is the simplest form to which is brought back the determination of value by 'labour necessary for the production' in the capitalist relations. The last sentence of section 6 of chapter 1 of *Principles* identifies the determination of value by the cost of production advanced in this paragraph with the determination of value by the 'relative quantities of labour bestowed on their production'[16].

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[16] Ricardo, in his *Notes on Malthus* (written from July to November 1820), after having expressed an idea similar to that of the text quoted above in response to Malthus who reproaches him for confusing the cost with the value, clears up with concision what he understands by the cost for the capitalist, the labour necessary for the production, the labour embodied in the commodities and the relative value of commodities, as follows (the text quoted above of *Principles* seems to be the reproduction of these sentences. cf. I, 47, editor's notes 3). 'it (commodity produced with the cost of £1,000 spent for the employment of workers) will sell for the same as another commodity the labour on which also cost £1,000; that is to say, that commodities will be valuable in proportion to the quantity of labour expended on them'. (*Notes on Malthus*, II, 34) 'The real value of a commodity I think means the same thing as its cost of production, and the relative cost of production of two commodities is nearly in proportion to the quantity of labour from first to last respectively bestowed upon them'. (II, 35) All these sentences are written from the standpoint of capitalist who invests cost and sells produced commodities. Ricardo says that the relative value of commodities (ratio of exchange, measured in monetary term) is in proportion to bestowed (expended) labour. If the terms 'labour', 'expended' are put in the context of the sentences quoted above, the 'labour' means first

3. The invariable measure of value and the concept of the absolute value —last manuscripts of Ricardo on *Absolute value and exchangeable value*—

Up to now, we examined the fundamental structure of the theory of value of Ricardo in following the development of chapter 1 of *Principles*, without mentioning the invariable measure of value, subject which cannot be neglected when considering the theory of value of Ricardo. It is the section 6 which takes the invariable measure of value as its title and subject, but in fact on this subject Ricardo expresses fragmentary points of view here and there since section 1. Section 6 constitutes the synthesis of these fragments. The invariable measure of value constitutes more than one topic in the theory of value of Ricardo. Actually it is closely related to the concept of value and commodity exchange in Ricardo's theory, so that this subject occupies a synthetic place in his theory of value. In this last section of the present article, we will see what the invariable measure of value means for the theory of value of Ricardo by examining his arguments relating to this problem in chapter 1 of *Principles* (section 6 above all) together with his last manuscripts *Absolute value and exchangeable value*[17].

Ricardo became aware of the problem concerning the invariable measure of value relatively late in his writings. In *Essay on the profits* this problem did not exist, in the first and second editions of *Principles* it was not an independent topic. Ricardo

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of all the wages paid to the workers and the 'quantity of labour' the amount of the wage cost, and 'expended' only relates to the 'expense' of this cost by the capitalist. But, as we have seen in detail up to now, under particular conditions 'expended labour' can also have the meaning of 'quantity of labour spent by the workers to produce commodities'. This is shown in the last sentence quoted above which affirms that the value and the cost and the quantity of labour spent (bestowed) are proportional one to another, with only one restrictive clause concerning the quantity of labour spent which would be 'nearly in proportion to' the two other terms. It is because the quantity of labour spent is not exactly in proportion to the cost and value whenever there are differences in the conditions of production between the branches, and because this disproportionality is negligible however. This coincides with the theoretical structure of the theory of value of Ricardo.

[17] The 3 editions of *Principles* and the last manuscripts were written at different times. But apart from minor points for the problem itself of 'research of the invariable measure of value', such as modification of the choice of the commodities serving as invariable measure, there is no difference of principle between the 3 editions of *Principles* and the last manuscripts.

mentioned it only incidentally in speaking briefly of the utility of some commodities which would be 'of an unvarying value (…), a standard by which the variations of other things might be measured'(I, 17, editor's footnote 3). But in the third edition Ricardo devotes to it much more space in section 1 (cf. ibid.), and the new section has for its subject the invariable measure of value. After the publication of the third edition this problem became his main theoretical concern. And in his last manuscripts *Absolute value and exchangeable value* he reconsiders the whole of the theory of value of *Principles* from the point of view of the invariable measure of value. The problem of invariable measure thus gained weight in the course of time. What pushed Ricardo to consider again and again this problem was the publication of *Principles of political economy* (1820) and of *The Measure of Value* (1823) of Malthus and the controversy raised by this last work, in which Ricardo himself took part. But more basically, his concern on the subject of the invariable measure of value is an expression of the re-examinations of his theory of value made by himself at the time of these controversies.

It is in the following way that Ricardo raises de facto the problem of the invariable measure of value. 'Two commodities vary in relative value, and we wish to know in which the variation has really taken place. If we compare the present value of one, with shoes, stockings, hats, iron, sugar, and all other commodities, we find that it will exchange for precisely the same quantity of all these things as before. If we compare the other with the same commodities, we find it has varied with respect to them all: we may then with great probability infer that the variation has been in this commodity, and not in the commodities with which we have compared it. If on examining still more particularly into all the circumstances connected with the production of these various commodities, we find that precisely the same quantity of labour and capital are necessary to the production of the shoes, stockings, hats, iron, sugar, &c.; but that the same quantity as before is not necessary to produce the single commodity whose relative value is altered, probability is changed into certainty, and we are sure that the variation is in the single commodity. We then discover also the causes of its variation'. (I, p.17-8, the last 4 paragraphs of section 1 including the paragraph quoted here are entirely rewritten in the 3rd edition.) Although in this text Ricardo does not raise the problem in the form of search for a commodity which functions as invariable measure of value, here are following questions which were not raised up to now: how to know the variations of value before ascertaining the invariability of value, how Ricardo seizes the commodity exchange, how to distinguish the 'variations in the relative value' from the 'real' variations'. At the same time, the viewpoints of Ricardo on these questions expressed in the paragraph quoted above seem to us to be as many presuppositions of the whole of his arguments on the invariable measure of value we will examine.

Let us consider first how Ricardo grasps the commodity exchange. He supposes variations in the exchange ratio between two commodities, which are exchangeable against all kinds of other commodities, and wants to confirm in which of these two commodities the variations of value really occur. They are freely exchangeable one against the other, and the proportion of exchange between them is naturally regulated by the amounts of their values, for some unknown reason. In other words, all the commodities are provided, from the outset, with social validity as money and the commodity exchange is perceived as exchanges between equivalent pieces of money in the form of various values in use. 'To measure the value' then amounts to ascertaining the proportions of exchange (relative values) by really carrying out the exchange such as it is defined above. The (variations of) relative values ascertained (or measured) in this way do not always reflect the (movements of) values determined by the quantities of labour embodied in proportional relation with the cost of production. Hence comes the problem of search for an invariable measure of value.

Ricardo tries first to attribute as far as possible the causes of variations of proportions of exchange to the commodities whose value is to be measured, in referring to several commodities as criteria and not to only one. But this does not guarantee that the variations be eliminated on the side of these several commodities as measures, which remain uncertain as measures. Ricardo then proposes a second solution which consists in directly examining the conditions of production of each commodity. We will see hereinafter that the search for commodities as invariable measures of value is in fact the intermediate solution between these two solutions (plural commodities as measures and direct examination of the conditions of production of commodities to be measured).

The ultimate cause of the variations of value is for Ricardo in the variations of the conditions of production, which it would be possible to check directly. The amount of value is fixed and recognizable before the exchange. I.e., according to him, if one examines 'all the circumstances connected with the production of these various commodities', more concretely the 'quantity of labour and capital' (I, 18) necessary to the production, one could say with certainty in which of these commodities reside the causes of the variations of relative value. As early as in this paragraph, added to section 1 parallel with the inclusion of section 6 in the third edition which has as its subject the problem of the invariable measure of value, Ricardo advances the determination of the amount of value independent of exchange and the possibility of knowing this amount.

This point will be retained throughout his arguments on this subject, which will raise serious problems likely to make ambiguous even the meaning of search for the invariable measure of value.

Having noted these points relating to the text quoted above from section 1, let us pass on to examination of the agruments of Ricardo on commodities chosen to be the invariable measure of value.

These arguments are developed in section 6 of chapter 1 of *Principles* and in the last manuscripts *Absolute value and exchangeable value*. It seems to us that Ricardo raises his problem and proposes his provisional solution in these two writings in the same way. We take the latter as main object of our examination. These manuscripts are composed of the draft and its revised fair copy. Although this copy develops the arguments in a more ordered way, it interrupts halfway and for this reason does not contain the whole of the points developed in the draft. Then we will examine mainly this first draft. One can consider that these manuscripts without subdivisions are made up in the following way:

1. Definition of the problem (necessity of the measure of value). IV, 361.
2. Summary of sections 1 to 3 of chapter 1 of *Principles*. IV, 362-368.
3. Difficulties of the generally applicable invariable measure of value, explained within the same theoretical framework as that of sections 4 and 5. IV, 368-371.
4. Proposal of provisional solution. IV, 372.
5. Critical examinations of contemporary economists (Torrens, McCulloch among others). IV, 372-379.
6. 12 proposals. Summary of the points 1 to 4 above. And presentation of the concept of absolute value. IV, 379-389.
7. Critical examinations of contemporary economists. IV, 390-395 (end of the first draft).

If the first draft has such a structure, the research on the problem of the invariable measure of value, which took form only in the third edition, can be regarded as re-examinations of the theory of value of Ricardo made by himself in reaction to the controversies fought at that time around this problem. As we saw at the beginning of this section, the invariable measure of value does not constitute only one topic of the theory of value of Ricardo, which one can clearly see also in the composition of this first draft. A special attention may be paid to the fact that the passage from heading 2 above to heading 3 corresponds clearly to the way in which the chapter 1 of *Principles* is developed. And research of the invariable measure of value concerns the problem of the same nature as that which Ricardo tackles from section 4 of chapter 1 of *Principles* in the form of 'modifications' of the determination of value by embodied labour. This problem appears here in the form of difficulties of choice of an invariable measure of value.

These difficulties are expressed as follows. 'The difficulty then under which we labour in finding a measure of value applicable to all commodities proceeds from the variety of circumstances under which commodities are actually produced.' (IV, 368) 'Altho' each would bear the same relative value to things produced under circumstances precisely similar, yet each would not bear the same relative value to the other which was not produced under similar circumstances.' (ibid, 369-370) 'there is no such thing in nature as a perfect measure of value [.....] the great causes of the variation of commodities is the greater or less quantity of labour that may be necessary to produce them, but there is also another though much less powerful causes of their variation which arises from the different proportions in which finished commodities may be distributed between master and workman'. (ibid, 404-405)

According to Ricardo, for a commodity to be a perfectly invariable measure of value, it must fill the following two conditions (cf. I,44). One is that the quantity of labour necessary for its production does not undergo any variation, the other is that the commodities, the values of which are to be measured with this commodity as their measure, are produced under the conditions of production[18] identical to this measure commodity. With regard to the first condition, Ricardo says that no commodities can fulfill it completely, since the quantity of labour necessary for its production varies with the variations of the technique of its production and those of natural conditions. As for the second, it cannot be satisfied either, since all the commodities can never be produced rigorously under the same conditions. If such is the case, the search for an invariable measure of value does not consist in seeking and finding a commodity capable of really fulfilling this function, but rather it consists in clarifying the necessary theoretical conditions to directly grasp the variations of the values of commodities by a measure commodity, which is only 'theoretically conceived' (I, 45).

The problem is that the values of the commodities, conditions of production of

[18] The conditions of production about which Ricardo speaks here are three in number: 1.the proportion between fixed capital and circulating capital, 2.the durability of the fixed capital, 3.the durability of the circulating capital. In his last manuscripts, Ricardo adopts this third condition of production, which is 'the time which must elapse before one set of commodities can be brought to market', as representative of these three conditions of production (cf. Introduction of Sraffa to *Principles*, I. xlv)

which differ from those of the commodity chosen as measure, cannot be correctly measured by this measure (even if the first condition above is met). This problem comes from the fact that the values of commodities vary not only with the quantities of labour necessary for their production but also with the wages, 'another cause' of the variations of value, as soon as differences in the conditions of production are admitted. Whatever the measure chosen, the values of the commodities, the times of production of which are longer than that of this measure, vary in inverse relation to the variations of wages even in the absence of any change in the quantities of labour necessary for their production, and with regard to the commodities, the times of production of which are shorter than that of this measure, the variations of wages exert influences of the same direction as these variations on their values. Only commodities produced in the same length of time of production as that of the measure do not undergo any variation of their values by the variations of wages, amounts of their values being regulated only by the quantities of labour necessary for their production. If one then adopts as measure of value a commodity, the time of production of which is longest among all the commodities, the variations of wages directly involve those of all the other commodities, in different degrees according to the length of time of their production (it is the case in which Ricardo would come to agreement with Smith and Malthus and say that 'the rise of the wages is accompanied by the rise of prices'.) On the contrary, if one chooses as measure of value a commodity, the time of production of which is shortest among all the commodities, the values of all the other commodities will vary in inverse relation to the variations of wages. In both cases, in which the measure of value is a commodity produced under the conditions of production at these two extremes, the influence of variations of the wages, second determining factor of the value, is accentuated to the maximum although in opposite direction. If the measure of value is an intermediate commodity between these two extremes, this influence will be minimized.

Under these conditions, Ricardo had to content himself with the following provisional solution. The measure he proposes is 'one which may fairly be considered as the medium between these two extremes, and as agreeing more nearly with the circumstances under which the greater number of commodities are produced than any other which can be proposed. He does not propose it as a perfectly correct measure for none such can be obtained but as one more nearly approaching to that character than any that has been suggested' (IV, 372)

If the measure of value is a commodity, the time of production of which is one year, the values of most of the commodities will be measured with exactitude, because these are produced under the same conditions of production as those of the measure (they are supposed to be agricultural produce in the majority, hence their time of production is one year). The values of the other commodities, the times of production of which are shorter or longer than one year, will be subject to various influences exerted by the variations of wages according to width and direction of their deviation from the average. But these variations in the two directions will tend to be compensated. And if the measure of value is an intermediate commodity, a maximum of compensation will be obtained. In this manner, Ricardo tries to contain as much as possible the effects of the one of both determinants of value by adopting the intermediate commodity as measure of value. The solution reached by Ricardo does not go further. It is far from being a 'perfect measure of vaue', and thus the unitary determination of the amount of value by the 'quantity of labour necessary for the production' is not maintained in principle.

One can summarize as above the position of Ricardo on the problem of choice of an invariable measure of value and his solution. Now let us examine some fundamental points contained in the procedure of Ricardo. His arguments, aiming to choose a commodity most appropriate to the function of the measure of value, seem to rest on the following presupposition. I.e., the value of each commodity is predetermined before the exchange by its conditions of production (they are, in the last manuscripts, the quantity of labour for its production and the time of production), and all the commodities are supposed to be exchangeable one against the other according to these predetermined amounts of their values (commodities as money). To measure the value is to express the proportions of exchange of a commodity against all the others in terms of the former (prices), and the relevance of this commodity as measure of value depends on whether the prices in terms of this commodity correctly express the relative relations values of all the commodities, and on whether these prices never vary but according to these predetermined values. No commodity can satisfy these conditions perfectly. In face of this impossibility of finding the invariable measure of value, Ricardo had to accept an 'intermediate' commodity.

If the procedure of Ricardo is as above, there must exist a 'Value', independent of and logically prior to its measurement (evaluation) by the exchange. Besides, the amount of value, given in advance by the conditions of production, must be recognizable without having recourse to its measurement by the exchange. It should be retained that the essential of the reasoning of Ricardo is to examine the relevance of the commodity candidate for the function of the measure of value in using the amount of value of this commodity, known beforehand. In other words, the amount of value is known in advance without taking the trouble of measuring it with the measure commodity. In this reasoning of Ricardo, the measure and the object of measure are replaced reciprocally.

As we saw, the argument of Ricardo on the invariable measure of value was from the outset full of ambiguities in its meaning[19].

The procedure of Ricardo in his search for the invariable measure of value thus consists in examining the relevance of the measure commodity by means of another measure located at a more fundamental level. This latter 'measure' is the 'absolute value', which appears in the title of these manuscripts given by Sraffa. Expressions such as absolute value or real value are used sometimes in *Principles* or letters of Ricardo[20], but their use is always without precise definition. Ricardo advances for the first time in his last manuscripts the idea of the absolute value as criterion of evaluation of the invariable measure of value. One could indeed say that one of the reasons of the importance of these manuscripts is that 'it develops an idea which existed previously in Ricardo's writings only in occasional hints and allusions: namely, the concept of a real or absolute value underlying and contrasted with exchangeable or relative value.' (note of the editor, IV, 359). Many commentators embraced the point of view on these manuscripts, according to which the most significant contribution of Ricardo to the theory of value and also the bench mark connecting him with Marx reside in the fact that Ricardo reached the concept of the absolute value towards the end of his life[21], and it is necessary to see there the greatest merit of these manuscripts published for the first time by Sraffa. We will conclude the present article by examining the character of this absolute value in Ricardo's theory.

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[19] S. Bailey had pointed out this with perspicacity. His questioning to Ricardo: 'If the quantity of producing labour really determines the value of commodities, it seems on a first view useless to require for a measure an object of which the producing labour is invariable, when we may have recourse to the labour itself.' (Samuel Bailey, *A Critical Dissertation &c.*, London, 1825, p.177) If Ricardo had been confronted with the question put in this way, he would not have been able to retort. Ricardo had not directly answered to the work of Bailey quoted here, published after his death, but his following monologue seems to express his position on the interrogation of Bailey. 'Have we no standard in nature by which we can ascertain the uniformity in the value of a measure? It is asserted that we have, and that labour is that standard.' (IV, 381) On the other hand, the evaluation of Marx on the invariable measure of value of Ricardo is roughly speaking in agreement with that of Bailey. Cf. Marx, *Theorien über den Mehrwert*, MEW, Bd.26Ⅲ, S.131, 135.

[20] Cf. Introduction of Sraffa to *Principles*, I, xlvi, lxii.

[21] Such a point of view is represented by R. Meek, *Studies in the Labour Theory of Value*, second edition, 1975, New York and London, p.110-16.

The term 'absolute value' is adopted by the editor as a part of the title of the manuscripts, but it is in fact very little used in the text of these manuscripts. In accordance with the function of the concept of the absolute value ('measure of the measure'), Ricardo uses this term in the context of his search for the means to confirm the relevance of a measure commodity. This context relates to proposals 8, 9, 10 in the 12 proposals of the first draft (in the fair copy there are corresponding passages——cf. IV, 401-403——, which seem to be more developed version of the draft. The first version being more concise, we take the text of it for our examination).

Ricardo begins to approach the concept of the absolute value in questioning on the possibility of existence of a 'natural' criterion to confirm the invariability and the general relevance of a measure of value, just as the criterion for the measure of weight or of length. Here is the opening lines of proposal 8. 'Have we no standard in nature by which we can ascertain the uniformity in the value of a measure? It is asserted that we have, and that labour is that standard. The average strength of 1000 or 10,000 men it is said is nearly the same at all times. A commodity produced in a given time by the labour of 100 men is double the value of a commodity produced by the labour of 50 men in the same time.' (IV, 381) Hence it is 'labour' which is 'natural standard' capable of measuring with certainty the amounts of value. One could find here the concept of the 'absolute value', concept which has for its ultimate (even natural) basis the quantity of embodied labour. However, Ricardo adopts in his last manuscripts a theoretical framework similar to that which he adopted in *Principles*, hence the text quoted above does not advance in an univocal way the quantity of embodied labour as ultimate basis of value.

The labour in Ricardo's theory is always the wage labour employed by the capitalist. It is for this reason that the quantity of labour is expressed in terms of a number of workers, the working time per day being supposed to be given. More significant is that in the two branches of production in which the amounts of value are strictly in proportion to (employed) labour the time of production is supposed to be identical, which seems to us to mean more than the technical operation to suppose identical the time of production simply in order that the proportion of the quantities of labour as numbers of workers employed multiplied by the number of working days (time of production) can be expressed as the proportion of the numbers of workers employed. As we saw above (cf. Introduction of Sraffa to *Principles*, I, xlv, lxi), in his last manuscripts Ricardo makes the differences in time of production represent all the differences of the conditions of production. Therefore, if he supposes identical times of production in two branches, this means that he is supposing null the differences in the conditions of production between them. Only on this assumption the 'labour' is 'natural standard'. When he advances the concept of absolute value in these manuscripts, Ricardo adopts the same theoretical framework we saw concerning *Principles* (capitalist relations and general rate of profit supposed a priori).

The 'quantity of labour' as the last recourse making it possible to examine the relevance of the measure of value, such as it is advanced in proposal 9, is valid as such only under the above restrictive conditions, which is however made explicit only in the proposal 10 in which the term 'absolute value' makes its first appearance. Following is the essential of proposal 9. 'Having discovered this standard we are in possession of an uniform measure of value as well as an uniform measure of length [.....] and if we have any doubt whether our measure itself has varied in value there is an easy method of correcting it by ascertaining whether the same quantity of labour neither more nore less is necessary to produce the measure, and making a correction or allowance accordingly.' (IV, 382) The measure of value is thus always maintained in a correct state by making quantity of labour employed for the production the immovable point of reference. But this is not unconditional. The following proposal 10 makes it explicit. What Ricardo asserts in proposal 9 must be put in the context. It would be erroneous to isolate it from this context and interpret it as if Ricardo determined here the absolute value purely and simply by embodied labour.

Proposal 10 begins with the following sentences. 'This measure would have all the merit contended for if precisely the same length of time and neither more nore less were necessary to the production of all commodities. Commodities would then have an absolute value directly in proportion to the quantity of labour bestowed upon them. But the fact is otherwise, some commodities require only a day for their production, others require 6 months, many a year and some 2 or 3 years.' (IV, 382) Then some concrete examples come in which the amounts of value of commodities produced in different times of production (i.e. conditions of production) do not correspond strictly to the quantities of labour. It is obviously because here also the general profit is always presupposed. In this quotation is used only once the term 'absolute value'. If this concept is put into the stream of logic from proposal 8 to proposal 10, it becomes obvious that the absolute value of Ricardo means the value determined solely by the quantity of employed (embodied) labour and that it is valid as such only between the commodities produced under the same conditions of production. And this absolute value is regarded as empirically recognizable apart from the social relations which is the commodity exchange.

If this is the case, contrary to what is often alleged in the literature, it would be wrong to say that Ricardo consolidated the position of the unitary determination of value (i.e. ratio of exchange) of commodities by embodied labour as he pursued his reflection on the invariable measure of value after the publication of the third edition of *Principles*. According to the text quoted above, the absolute value is indeed 'directly in proportion to the quantity of labour bestowed upon them'. But what he affirms is rather that the absolute value in this sense does not work as rule of ratio of exchange of all the commodities, and thus he arrives at the conclusion that the perfect measure of value is not possible even to conceive theoretically much less to specify concretely.

If the absolute value conceived by Ricardo is such as is regulated only by the quantity of embodied labour proportional to the quantity of employed labour, the concept of value Ricardo reached finally in his last manuscripts is of relative nature in the sense that this value is regulated by 'two causes' of which each one exerts variable influences according to difference in the disparities of the conditions of production between the exchanged commodities. In his last manuscripts as in his letter to McCulloch of June 13, 1820, Ricardo expresses the same idea of 'two causes' which regulate the value. 'The great cause of the variation of commodities is the greater or less quantity of labour that may be necessary to produce them, but there is also another though much less powerful cause of their variation which arises from the different proportions in which finished commodities may be distributed between master and workman'. (IV, 404-405) Although 'much less powerful' compared with labour necessary for the production, the existence of the regulating factor of the commodity exchange other than the 'absolute value' was inherent in the theoretical construction of the theory of value of Ricardo since the first edition of *Principles*. The text quoted above from the last manuscripts does nothing but confirm this.

If he still continued to seek the invariable measure of value as 'great desideratum in Pol. Econ.' (IV 396) while constantly recognizing its impossibility in principle, and proposed a laborious solution we have just seen, it is probably because he wanted to minimize the influence of the 2nd regulating factor of value coming from his presupposition of the general profit in order to unify the principle of determination of value. The absolute value in his last manuscripts may express this theoretical tendency of Ricardo. But such a tendency might not be confounded with fundamental structure of his theory of value we examined in detail in the preceding sections.