



## Rereading Marxian Theory of Relative Surplus-Value

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# Rereading Marxian Theory of Relative Surplus-Value

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## 1. Points at issue

In „Capital” Marx defined the concept of relative surplus-value as follows; “The surplus-value produced by prolongation of the working-day, I call absolute surplus-value. On the other hand, the surplus-value arising from the curtailment of the necessary labour-time, and from the corresponding alteration in the respective lengths of the two components of the working-day, I call relative surplus-value.”<sup>(1)</sup> According to the definition, all methods of curtailing the necessary labour-time are methods of producing relative surplus-value, there are therefore various methods by which the necessary labour time may be curtailed. Nevertheless, Marx gave emphasis to one method—the cheapening of the value of labour-power through the cheapening of the means of

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(1) K. Marx „Capital”, Vol. 1 „A Critical Analysis of Capitalist Production”, Progress Publishers. Moscow, p. 299. In the following sentences, I will quote from this edition.

subsistence—, so we find commonly this' method exclusively in interpretations of „Capital”. As another method, we may sometimes find extra surplus-value, but it is said problematic whether this is a method of producing relative surplus-value or not.<sup>(2)</sup>

However, if we consider the concept of relative surplus-value strictly „arising from the curtailment of the necessary labour-time”, it is in reality produced by several methods. For example, if the value of labour-power is constant, all methods of increasing value-production per minute by this labour-power come to curtail the necessary labour-time, inversely if the value-production per minute is constant, all methods of cheapening the value of labour-power come to curtail the necessary labour-time. It is therefore clear that the production of extra surplus-value is a method of producing relative surplus-value. Commonly interpretation of extra surplus-value is inadequate.

If we may draw a conclusion in advance, four methods of producing relative surplus-value are found in „Capital”. „Capital” grasped that these four methods are operating side by side in the circular movement of capital and at the same time they have operated one after another in the development of the capitalist mode of production.

In this paper I hope to make clear that relative surplus-value may be produced through various methods, and hope to consider what relation exists among them. Further, I will consider what logic permeates the theory of relative surplus-value in „Capital” and the corresponding history of the development of the capitalist mode of production. In the light of these consideration it will become clear why Marx gave emphasis to the method mentioned above.

In recent debates on contemporary capitalism, with the breakdown

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(2) For example, D. И. Розенберг „Комментарии ко первому, второму и третьему томам „Капитала” К. Маркса”.

of Keynesian theory of economic growth on the standard of full employment by means of financial policy, Marxist theory of state capitalism are also being reexamined. In these debates, one of the most important consciousness is that the crisis of contemporary capitalism since 1970 can not be avoided by economic policies such as income redistribution, but beyond that, must be caused by the deadlock of the capitalist mode of production itself. In other words, the question is about production and technical development,<sup>(3)</sup> rather than distribution and demand, therefore the current economic crisis can be solved logically and actually only by the analysis of the capitalist mode of production from a new point of view. Judging from these debates, the theory of surplus-value in „Capital” has never been made clear as the essence of monopoly profit and interest for the theory of contemporary capitalism, but the question where is the main source of surplus-value found, and what is the characteristic method by which it is produced in „late capitalism”. I cannot consider this question directly, but on the basis of this consciousness, I will try to reread the theory of relative surplus-value in „Capital”.

## 2. On various methods of producing relative surplus-value

I shall begin by listing all the methods of producing relative surplus-value according to the definition in „Capital”.

Though the curtailment of the necessary labour-time does not always arise from the cheapening of the value labour-power, the cheapening of the value of labour-power is bound to curtail the necessary labour-time. Assuming a social average labour, the necessary labour-time is

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(3) E. Mandel „Late Capitalism” translated by Joris De Bres, Verso, London, 1978

curtailed only by the cheapening of the value of labour-power. „Capital” assumes in whole parts the social average labour-power, so first I will make clear the method of producing relative surplus-value over the social average labour-power.<sup>(4)</sup>

In the analysis of commodity labour-power („Capital” chap. VI), Marx said on the value of labour-power as an element of this commodity that the value of labour-power is determined by the means of subsistence necessary for the reproduction of labour-power, and that this „means of subsistence must therefore be sufficient to maintain him in his normal state as a labouring individual”. Thus there is pointed out, firstly, the means of subsistence for „natural wants” such as food, clothing, fuel and housing, and secondly, the means of subsistence for „so-called necessary wants” depending to a great extent on the historical and social habits. „In contradistinction therefore to the case of other commodities, there enter into the determination of the value of labour-power a historical and moral element. Nevertheless, in a given country, at a given period, the average quantity of the means of subsistence necessary for the labourer is practically known”.<sup>(5)</sup> Further, the sum of the means of subsistence necessary for the production of labour-power includes the means necessary for the labourer’s family and for education or training of labour-power.

After the analysis of absolute and relative surplus-value „Capital” once more returned to the value of labour-power (Chap. XVII), and said that the value of labour-power is determined by „the value of necessaries of life habitually required by the average labourer”. „The quantity of these necessaries is known at any given epoch of a given society, and can therefore be treated as a constant magnitude. What

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(4) „Capital” Vol 1 p. 51, p. 192, p. 288, p. 489, etc.

(5) *ibid.* p. 168

changes, is the value of this quantity". Further, „the expenses of developing labour-power" and „the cost of maintaining the family of the labourer" are also pointed out as two other factors that enter into the determination of the value of labour-power, but it is said that „both these factors are excluded in the following investigation".

Judging from these description, „Capital" grasps that value of labour-power = a unit value of means of subsistence X the extent or quantity of the means of subsistence. And the extent of the means of subsistence is understood to cover 1) the means of subsistence for „natural wants" 2) that for „so called necessary wants" 3) the expenses of education or training of labour-power 4) the cost of maintaining the labourer's family.

Now, the value of labour-power is determined by a unit value of the means of subsistence and their quantity, and changes with the change in these two elements. Therefore, in the first place, supposing that the quantity of the means of subsistence is constant, the value of labour-power falls with the reduction in value of the means of subsistence. This fall in the value of the means of subsistence follows the development of productiveness of labour which produces the means of subsistence. „Capital" places emphasis, as mentioned above, on this method of producing relative surplus-value.

In the second place, supposing that a unit value of the means of subsistence is constant, the value of labour-power changes with the change in the extent or quantity of the means of subsistence. If the latter is reduced, the former falls. Though the extent or quantity of the means of subsistence is determined by various factors and changes

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(6) *ibid.* p. 486.

(7) H. Satako „On the Value of Labour-Power" („Theory of Wage-Labour in Capital" 1977. Shinhyoron, Tokyo).

by many factors, „in a given country, at a given period, the average quantity of the means of subsistence necessary for the labourer is practically known” or „the quantity of these necessary is known at any given epoch of a given society”. In other words, their extent or quantity changes with historical development or social difference. And their extent or quantity is also said to be the extent „to maintain him in his normal state as a labouring individual” or the quantity „habitually required by the average labourer”. From these descriptions we can understand that „Capital” grasps the extent or quantity of the means of subsistence as being mainly changed by the existent form of labour-power which is produced by the consumption of the means of subsistence. The extent or quantity is understood to be determined by the historical and social existent form of average labourers.

Therefore even though the value of a unit of the means of subsistence is constant, their extent or quantity changes with the change in the existent form of the average labourers. If the average labour is simplified and the average labour-power is abstracted with the development of capitalist mode of production, the extent or quantity of the means of subsistence of average labourer is reduced and the value of labour-power falls. We will discuss this in detail in the next section.

From these consideration of the average labour-power, we can point out two methods of gaining relative surplus-value through the fall of the value of labour-power.

Thirdly, we will consider labour-power other than average labour-power, labour-power of exceptional productiveness. This labour operates as intensified labour and it creates in equal periods of time greater value than average labour, and supposing that the product of this labour is sold above its individual, but under its social value, it achieves greater value-production than average labour. Thus, even

though the value of labour-power is constant, the necessary labour-time of labour of exceptional productiveness comes to be curtailed. This is the method of producing extra surplus-value.

It is often said to be questionable whether the production of extra surplus-value is included in the production of relative surplus-value, but this question itself arises from the interpretation that relative surplus-value is produced only by the fall of the value of labour-power. The production of extra surplus-value is no doubt a method of producing relative surplus-value, because it comes literally „to curtail the necessary labour-time”.

From the considerations up to this point, „Capital” pointed out at least three methods of producing relative surplus-value. These three methods are summarized in the following description. „Machinery produces relative surplus-value; not only by directly depreciating the value of labour-power, and by indirectly cheapening the same through cheapening the commodities that enter into its reproduction, but also, when it is first introduced sporadically into an industry, by converting the labour employed by the owner of that machinery, into labour of a higher degree and greater efficiency, .....<sup>(8)</sup> The phrase „directly depreciating the value of labour-power” means depreciating through the change of existent form of labour-power itself. It is the second of the cases mentioned above.

If we summarise the three methods of producing relative surplus-value as mentioned above, we can infer the fourth method of producing the same. That is to say, the first and the second methods are those through the fall of the value of labour-power and the third method originates from greater value-production of labour when the value of

(8) „Capital” Vol 1 p. 383



labour-power is constant, so in the case of the value of labour-power being increased, supposing the increasing rate of the value-production of a working day  $>$  the increasing rate of the value of labour-power, then the necessary labour-time also comes to be curtailed and the rate of surplus-value rises.

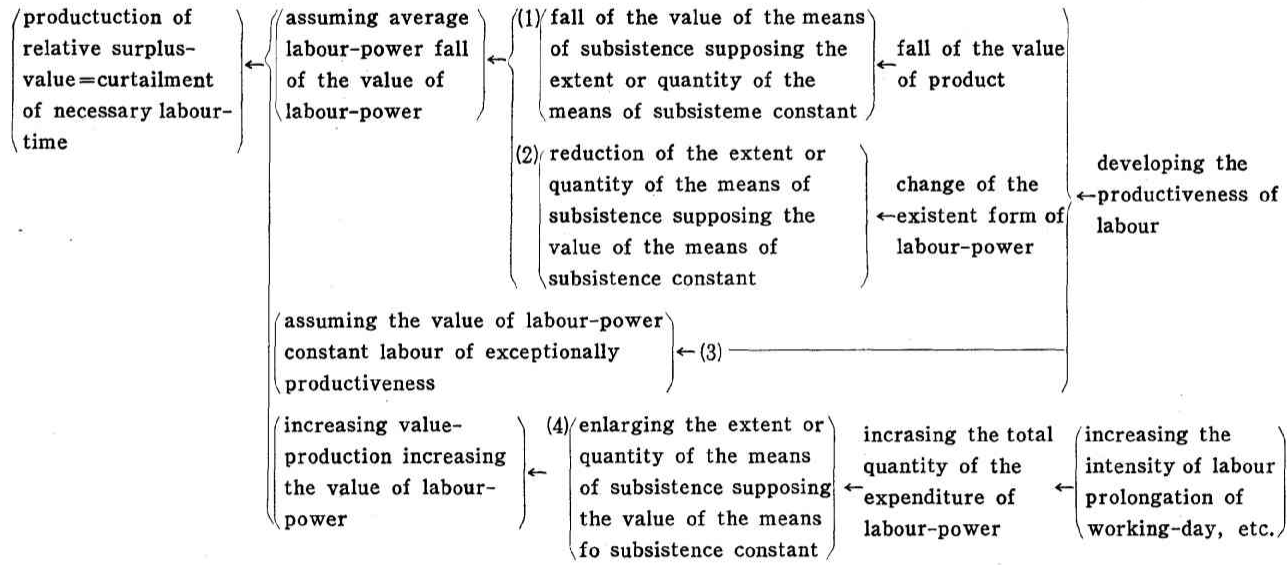
„Capital” discusses this method in the analysis of „Changes of Magnitude in the Price of Labour-Power and in Surplus-Value” (Chap. XVII). „The value created varies with the extent to which the intensity of labour deviates from its normal intensity in the society. A given working-day, therefore, no longer creates a constant, but a variable value……. It is clear that, if the value created by a day’s labour increases……, then the two parts into which this value is divided, viz., price of labour-power and surplus-value, may both of them increase simultaneously, and either equally or unequally”. From this description, this method is understood to originate from increased intensity of labour. The increased expenditure of labour-power by increased intensity of labour comes on the one hand to increase the quantity of labour and so the value created. On the other hand it increases the quantity of the means of subsistence necessary for covering the expenditure of labour-power and so the value of labour-power. We will discuss this in detail in the next section.

The four methods of producing relative surplus-value that we have considered up to this point, are shown in the following diagram.

The first method of producing relative surplus-value in „Capital” I describe as the „general method”. „Generally speaking, the mode of producing relative surplus-value consists in rising the productive power of the workman, so as to enable him to produce more in a

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(9) *ibid.*, p. 491. This is stated more clearly in the French edition „*Le Capital*” p. 226



given time with the same expenditure of labour". The second method is described as „the special method of producing relative surplus-value"<sup>(10)</sup>. „How far this result is also attainable, without cheapening commodities, will appear from an examination of the particular modes [the special methods] of producing relative surplus-value, to which examination we now proceed"<sup>(11)</sup>. The third method, namely the method producing extra surplus-value, I describe as the „individual" method. „The capitalist who applies the improved method of production..... does individually, what the whole body of capitalists engaged in producing relative surplus-value, do collectively"<sup>(12)</sup>. In the following section I will try to characterize this fourth method.

### 3. On the special method of producing relative surplus-value

Relative surplus-value is produced not only by the general method, but also by various other methods. I have arranged these methods formally, so to speak, in the foregoing section. We may consider that these various methods are going on side by side in the actual circular movement of capital, though the leading method changes in the steps of development of capitalist mode of production.

After the definition of the concept of relative surplus-value „Capital" restricts the theme of the analysis as follows; „The object of all development of the productiveness of labour, within the limits of capitalist production, is to shorten that part of the working-day, during which the workman must labour for his own benefit..... How far this result is also attainable, without cheapening commodities, will

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(10) „Capital" Vol 1 p. 386

(11) *ibid.*, p. 304

(12) *ibid.*, p. 302

appear from an examination of the particular modes [the special methods] of producing relative surplus-value, to which examination we now proceed". Indging from the description, what is analysed in the main part of the theory of relative surplus-value (Part IV), namely <sup>(13)</sup> „Co-operation” „Division of Labour and Manufacture” „Machinery and Modern Industry” (Chap. XIII~XV), is understood to be the development of the special method. So, what is developed as the special method? „Capital” gives emphasis to the general method as the representative method of producing relative surplus-value, nevertheless the main part of the theory of relative surplus-value consists of the analysis of the special method, so how can this be resolved? Or, how is the special method related with the general method? Or, how is it related with other methods?

The special method of producing relative surplus-value can be summarized as being the reduction of the extent or quantity of the means of subsistence with the change of the existent form of labour-power→ the fall of the value of labour-power. Concerning this extent or quantity of the means of subsistence, as mentioned above, „Capital” pointed out that it covers (1) the means of subsistence for „natural wants” (2) that for „so called necessary wants” (3) the expenses of education or training of labour-power (4) the costs of maintaining the labourer's family. Concerning points (3) and (4) in particular, it is said that “the expenses of developing that power, which expenses vary with the mode of production” and that the employment of a labourer of „natural diversity”—which makes a great difference in the costs of maintaing the family of the labourer—„is made neces-

(13) In this place it is expressed as „the particular method”, but in the German edition it is called „die besondre Methode”, and in other places „die besondre Methode” is translated into „the special method”. (p. 478)

sary by the mode of production”

(14)

We will next consider the reduction of the extent or quantity of the means of subsistence, taking notice of the existent form of labour-power. As we have already seen, „Capital” analyses the means of subsistence necessary for the reproduction of labour-power at two places, namely in the analysis of „The Buying and Selling of Labour-Power” (Chap. VI) and in „Change of Magnitude in the Price of Labour-Power and in Surplus-Value” (Chap XVII), at the start and end of the theory of surplus-value. Between these two places, there are considerable differences on the extent or quantity of the means of subsistence, especially concerning (3) (4). It is said at the start that „the expenses of this education (excessively small in the case of ordinary labour-power), enter pro tanto into the total value spent in its production”, „the sum of the means of subsistence necessary for the production of labour-power must include the means necessary for the labourer’s substitutes i.s., his children” On the other hand, at the end, it is said of „the expenses of developing that power” and of “the natural diversity” or „the costs of maintaining the family of the labourer” that „both these factors are excluded in the following investigation”. Therefore, at the start the extent or quantity of the means of subsistence covers (1) (2) (3) (4), but at the end it consists of only (1) (2) and excludes (3) (4).

These differences of description undoubtedly originate from their different locations. There are extensive analyses of the capitalist mode of production or the real subjection of labour to capital between both descriptions, but we cannot consider all of them. We will con-

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(14) „Capital” Vol 1 p. 486.

(15) *ibid.*, pp. 168–169.

(16) *ibid.*, p. 486.

sider only the changes of the existent form of the average labourer.<sup>(17)</sup>

Surveying the changes of the existent form of the average labourer, the development of the capitalist mode of production is characterized by the socialization of labour or the social labour-process.

Simple co-operation begins „when each individual capital employs simultaneously a comparatively large number of labourers”, but it “leaves the mode of working by the individual for the most part unchanged”.<sup>(18)</sup> However co-operation lends to individual labour itself the character of social average labour.<sup>(19)</sup> So far as the handicraft continues to be the foundation of the social labour-process, its average labour-power is a skilled labour, who is „labour-power of special kind, [and for whom] a special education or training is requisite”, while the higher labour-power in co-operation is the worker who is involved in „directing, superintending, and adjusting”.<sup>(20)</sup> But this work becomes one of the special functions of capital.<sup>(21)</sup>

Manufacture is „a productive mechanism whose parts are human beings”, and it „thoroughly revolutionies the mode of working by the individual”.<sup>(22)</sup> There are simple and complex functions, high and low functions<sup>(23)</sup> in the organs of a productive mechanism, and its organs, the individual labourers „require different degrees of training”, Manufacture, therefore, develops „a hiararchy of labour-power”, so it also<sup>(24)</sup>

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(17) In „Capital” tough average labour-power is analysed in relation to value-creating labour, it is not an abstract concept, but is the concrete useful labour existing actually. The useful labours of „the normal conditions of production and the average degree of skill and intensity prevalent at the time” (p. 47) have the character of average labour and operate as such.

(18) „Capital” Vol 1, p. 305.

(19) *ibid.*, p. 340.

(20) *ibid.*, p. 168.

(21) *ibid.*, p. 313.

(22) *ibid.*, p. 320.

(23) *ibid.*, p. 340.

(24) *ibid.*, p. 330.

develops single sided proficiency at the cost of many sided skillfulness, though its degree is different corresponding to the grade in the hierarchy. So far as mentioned above, average labour-power in manufacture is a skilled labourer who is „labour-power of special kind, [and for whom] a special education or training is requisite”. Further, manufacture isolates „certain simple manipulations which every man is capable of doing”<sup>(25)</sup> and begets so called unskilled labour as the exclusive function of specially appointed labourers, but these manipulations are not an overwhelming majority. On the other hand higher labour-powers in manufacture are understood to be the labourers who are situated at higher grades in the hierarchy than average labourers and labourers who direct or superintend.

Modern industry makes the machinery system „a productive organism that is purely objective” and attaches labourers as „merely conscious organs”<sup>(26)</sup> „mere living appendages” to it. There occurs „a tendency to equalise and reduce to one and the same level”<sup>(27)</sup> in every kind of work, and many sided skillfulness fades away, and machines take the place of single sided proficiency. „Human nature in general” steps so in the place of the special and artificial development of labour-power, the extreme case of which is found in the employment of children who are specially undeveloped. Every human being including women and children comes to be labour-power, and instead of hierarchy of manufacture „natural differences of age and sex”<sup>(28)</sup> step in. Average labour-power comes to be an unskilled labourer, and to the extent that equalised and reduced works become „technical necessity” in every section of modern industry, the average labour-power in each labour-process is also social average labour-power. While higher labour-

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(25) *ibid.*, p. 331.

(27) *ibid.*, p. 395, p. 398.

(26) *ibid.*, p. 364.

(28) *ibid.*, p. 396.

powers in modern industry are understood to be „a superior class of workman, some of them scientifically educated, others brought up to a trade” such as „engineers, mechanics, joiners, etc” and „overlookers”<sup>(28)</sup> „sergeants of an industrial army”<sup>(29)</sup>.

The development of the capitalistic mode of production or social labour-process can be summerized as simplifying labour by dissolving skillfulness and as abstracting labour-power into human nature in general by eliminating its artificial development.

Therefore in the first place with the development of the capitalistic mode of productions the expenses of education or training of labour-power are reduced. „Capital” said on manufacture; For the unskilled labourer, the cost of apprenticeship vanishes; for the skilled labourer, it diminishes, compared with that of artificers, is consequence of the functions being simplified. In both cases the value of labour-power falls”. „Capital” quotes from „Report of the Committee”. „The master’s machinery really plays a far more important part in the business of production than labour and the skill of the operative, which six months education can teach, and a common labourer can learn”<sup>(30)</sup> „The master’s machinery really plays a far more important part in the business of production than labour and the skill of the operative, which six months education can teach, and a common labourer can learn”<sup>(31)</sup>.

In the next place as the labour of women and children becomes technically possible, so all the human beings come to be labour-power, and so the costs of maintaining the labourer’s family are reduced. „Capital” said of this, as follows. „Machinery, by throwing every member of that family on to the labour-market, spreads the value of man’s labour-power over his whole family. It thus depreciates his labour-power”<sup>(32)</sup> „Machinery, by throwing every member of that family on to the labour-market, spreads the value of man’s labour-power over his whole family. It thus depreciates his labour-power”<sup>(33)</sup>.

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(29) *ibid.*, p. 399.

(30) *ibid.*, p. 331.

(31) „The Master Spinners and Manufacturers Defence Fond. Report of the Committee” Manchester, 1854.

(32) „Capital” vol 1 p. 399.

(33) *ibid.*, p. 373.



From consideration of the above, we may say that the exclusion of the expenses of education or training of labour-power and the costs of maintaining the labourer's from the extent or quantity of the means of subsistence is based on the existence of the average labourer who is abstracted to a mere generalized human being. We may also say that the theory of relative surplus-value in "Capital" pieced through by the analysis of the special method, namely the analysis of the reduction of the extent or quantity of the means of subsistence with the change of the existent form of average labour-power.

Now, by the special method of relative surplus-value, the average labour-power is abstracted, and the extent or quantity of the means of subsistence converges to (1) (2) above, and comes to be constant. But at the same time the special method can not be pursued further and reaches its bounds, at least for average labour-power. Though for the higher or complex labour-powers working with average labour-power, the special method operates continuously. „As a special method of producing relative surplus-value, it [the capitalistic mode of production] remains effective only, first, in so far as it is propagandist; secondly, in so far as the industries that have been taken over by it, continue to be revolutionised by changes in the methods of production”.

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Supposing the thus abstracted average labour-power, then the extent or quantity of the means of subsistence comes to be constant, so that the leading method of producing relative surplus-value shifts to the method which is mediated through the fall of a unit value of the means of subsistence. Thus the general method comes to be important. Accordingly, though the general method of producing relative surplus-

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(34) *ibid.*, p. 478.

value is general in every step of the development of the capitalistic mode of production, it can actually be said to have become a leading method when labour-power is thoroughly abstracted and its existent form becomes suitable for commodity labour-power or wage-labour. Perhaps it is reason why „Capital” emphasizes the general method.

Also, in the case of the individual method of producing relative surplus-value or the method of extra surplus-value, if exceptional productivity is due not to the skill and intensity of labour-power, but to the objective conditions of production, then the extent or quantity of the means of subsistence accordingly the value of labour-power remains constant, and the value creation of intensified labour is greater than of average labour. This case is actually found when the labour-power is thoroughly abstracted. Though the individual method of producing relative surplus-value operates as a passing event in every step of the development of the capitalistic mode of production, it can also be said to become a separate method when labour-power is completely abstracted.

#### **4. Variation of the special method**

A plot of analysis piecing through the theory of relative surplus-value in „Capital” can be understood, as considered above, that the development of the special method, namely the method of the abstraction of labour-power → the reduction of the extent or quantity of the means of subsistence necessary for reproducing labour-power → the fall of the value of labour-power. From this view point, however, the special method can not be pursued further when labour-power is thoroughly abstracted and the extent or quantity of the means of subsistence becomes constant. We may say that it finishes so to speak its

historical role.

Now, after the consideration of the development of the special method, „Capital” pointed out the fourth method of producing relative surplus-value, on the assumption of abstracted labour-power being actual. It is discussed in the analysis of „Changes of Magnitude in the Price of Labour-Power and in Surplus-Value” (Chap. XVII), and we can understand that these changes are determined by working-day, intensity and productiveness of labour. In the case of „working-day constant, productiveness of labour constant, intensity of labour variable” (Section II), it is said that „the value created varies with the extent to which the intensity of labour deviates from its normal intensity in the society”, and that „it is clear that, if the value created by a day’s labour increases……, then two parts into which this value is divided, viz., price of labour-power and surplus-value, may both of them increase simultaneously, and either equally or unequally”. That is to say, supposing the increasing rate of the value-<sup>(35)</sup>production of a working-day  $>$  the increasing rate of the value of labour-power, necessary labour-time comes to curtail and the rate of surplus-value rises. But supposing the increasing rate of the value-<sup>(36)</sup>production of a working-day  $<$  the increasing rate of the value of labour-power, the rate of surplus-value falls, however, in this case its rate also can rise through the depreciation of the price of labour-power under its value.

This fourth method originates from increased expenditure of labour-power by increased intensity of labour, and it has already been mentioned in the theory of „Intensification of Labour” in modern industry (Chap. XV, Section 3), on which we will come back to consider.

(35) *ibid.*, p. 491.

(36) confer H. Satake „On the Intensity of labour” (*op. cit.*)

„So soon as the gradually surging revolt of the working-class compelled Parliament to shorten compulsorily the hours of labour, and to begin by imposing a normal working-day on factories proper, so soon consequently as an increased production of surplus-value by the prolongation of the working-day was once for all put a stop to, from that moment capital threw itself with all its might into the production of relative surplus-value, by hastening on the further improvement of machinery. At the same time a change took place in the nature of relative surplus-value. . . . The immense impetus it gives the development of productive power, and to economy in the means of production, imposes on the workman increased expenditure of labour in a given time, heightened tension of labour-power, and closer filling up of the pores of the working-day, or condensation of labour to a degree that is attainable only within the limits of the shortened working-day. This condensation of a greater mass of labour into a given period thenceforward counts for what it really is, a greater quantity of labour. In addition to a measure of its extension, i. e., duration, labour now acquires a measure of its intensity or of the degree of its condensation or density”.

(37)

We may put in order this description as follows.

In this description, first, an average labour-power in the labourer-class is assumed, and the normal intensity of labour and the normal working-day are conditioned. Then the total quantity of the expenditure of labour-power in a day is limited. The increased intensity of labour always results in increased expenditure of labour-power, exactly that of a unit hour, while a working-day shows the continuous hours of expenditure of labour-power in a day. Therefore we may

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(37) „Capital” Vol 1 p. 386.

understand the total quantity of the expenditure of labour-power in a day = the intensity of labour  $\times$  working-day  $\leq$  the limit of the total quantity of the expenditure of labour-power.

Next, in the case of the intensity of labour  $\times$  working-day  $<$  the limit of the total quantity of the expenditure of labour-power, the intensity of labour and working-day can increase and lengthen independently one another. While in the case of the intensity of labour  $\times$  working-day  $\leq$  the limit of the total quantity of the expenditure of labour-power, the increasing intensity of labour is compatible only with the shortening of working-day, on the assumption that the limit of the total quantity of the expenditure of labour-power is constant. „Capital” said before the description quoted above, „in England, during half a century, lengthening of the working-day went hand in hand with increasing intensity of factory labour. Nevertheless the reader will clearly see, that where we have labour, not carried on by fits and starts, but repeated day after day with unvarying uniformity, a point must inevitably be reached, where extension of the working-day and intensity of the labour mutually exclude one another, in such a way that lengthening of the working-day becomes compatible only with a lower degree of intensity, and a higher degree of intensity, only with a shortening of the working-day”. We may understand that this limit of the total quantity <sup>(38)</sup> undergoes social and historical changes, but is constant at any given epoch of a given society.

Further, „Capital” grasps that, in the case of the intensity of labour  $\times$  working-day  $<$  the limit of the total quantity of the expenditure of labour-power, the increasing intensity of labour is equal to the development of productiveness of labour, so the intensity of labour is analysed

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(38) *ibid.*, p. 386.

only in relation with value-production. While in the case of the intensity of labour  $\times$  working-day  $\geq$  the limit of the total quantity of the expenditure of labour-power, the increasing intensity of labour is distinguished from the development of productiveness of labour, and it is analysed in relation not only with value-production, but also with the expenditure of labour-power or the reproduction of it.

According to this understanding arranged above, we may say that, in the case of the intensity of labour  $\times$  working-day  $\geq$  the limit of the total quantity of the expenditure of labour-power, the increasing intensity of labour forces either to shorten working-day or to increase the expenditure of labour-power over the limit. Supposing the increased intensity of labour  $\times$  shortened working-day = the limit of the total quantity of the expenditure of labour-power, intensiver an hour of this working-day is counted as a greater labour-quantity. „This condensation of a greater mass of labour into a given period thenceforward counts for what it really is, a greater quantity of labour. In addition to a measure of its extension, i. e., duration, labour now acquires a measure of its intensity or of the degree of its condensation or density”.

In other words, „Capital” has analysed the average labour namely the labour producing value, thus far assuming the average degree of intensity. But now concerning the average labour, the degree of intensity comes to be questions to analyse, assuming normal working-day, and the measure of the intensity of labour may count on the standard of its normal degree. On this event, „Capital” said that „at the same time a change took place in the nature of relative surplus-value”.

„A change in the nature of relative surplus-value” is illustrated as follows ;

Rereading Marxian Theory of Relative Surplus-Value (Satake)

	labour-time	value-production per hour	labour-time per value-production	value of labour-power
A <sub>1</sub>	t <sub>1</sub> =12 hours	v <sub>1</sub> =1 shilling	t <sub>1</sub> = 1 h	v <sub>1</sub> =8 s
A <sub>2</sub>	t <sub>2</sub> =10 h	v <sub>2</sub> ≥ 1 1/3 s	t <sub>2</sub> ≤ 5/8 h	v <sub>2</sub> =8 s
A <sub>3</sub>	t <sub>3</sub> =12 h	v <sub>3</sub> ≥ 1 1/3 s	t <sub>3</sub> ≤ 5/8 h	v <sub>3</sub> =9 2/3 s

	necessary labour-time	surplus labour-time	surplus-value	value-production of a working-day
A <sub>1</sub>	t <sub>1</sub> = 8 h	t <sub>1</sub> = 4 h	v <sub>1</sub> = 4 s	v <sub>1</sub> = 12 s
A <sub>2</sub>	t <sub>2</sub> ≤ 6 2/3 h	t <sub>2</sub> ≥ 3 1/3 h	v <sub>2</sub> ≥ 4 s	v <sub>2</sub> ≥ 12 s
A <sub>3</sub>	t <sub>3</sub> ≤ 8 h	t <sub>3</sub> ≥ 4 h	v <sub>3</sub> ≥ 4 2/3 s	v <sub>3</sub> ≥ 14 2/3 s

Note. A<sub>1</sub>; more porous 12 hours' working-day, A<sub>2</sub>; denser 10 hours' working-day, A<sub>3</sub>; denser 12 hours' working-day, from „Capital” vol 1 Part IV Chap. XV Sec. 3 (P. 387), Part V Chap. XVII (P. 491).

From this illustration (comparing A<sub>2</sub> with A<sub>1</sub>), a unit hour of shortened working-day expends greater labour-quantity, so a shortened working-day creates equal or greater value. Therefore, supposing the value of labour-power being constant, the necessary labour-time is shortened and the rate of surplus-value rises. This is the same event as the individual method of producing surplus value or the production of extra surplus-value. In other words, we may say that the production of extra surplus-value is generalised or socialised to come about on average labour-power.

However, as the intensity of labour × working-day = the limit of the total quantity of the expenditure of labour power, so the working-day = the limit of the total quantity of the expenditure of labour-power / the intensity of labour. That is to say, the increasing intensity of

labour can be covered by the shortening of working-day up to a certain limit. But, if the working-day cannot be shortened enough, the total quantity of the expenditure of labour-power goes over its limit. Further, even if working-day is shortened, it is under a certain limit that the formular mentioned above has its veridity. Going over this limit, by how much shortening of working-day cannot be covered the increased intensity of labour. „Factory Inspectors admit that the shortening of the hours of labour has already called forth such an intensification of the labour as is injurious to the health of the workman and to his capacity for work”.

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And yet, there is no necessary for the increased intensity of labour to be covered by the enough shortening of working-day, in reality the total quantity of the expenditure of labour-power increases over its limit. The analysis of „Changes of Magnitude in the Price of Labour-<sup>(39)</sup>Power and in Surplus-Value ”(Chap. XVII) takes up this event as its theme to consider. From the illustration mentioned above (comparing  $A_3$  with  $A_1$ ), intensiver average labour expends greater labour-quantity in the equal working-day, so they create greater value, but this greater expenditure of labour-power must be compensated by the enlarged extent or quantity of the means of subsistence, therefore the value of labour-power increases. In this case, even though the value

(38) *ibid.*, p. 393.

(39) The limit of the total quantity of the expenditure of labour-power changes socially and historically. Even if the intensity of labour increases, in case that the limit of the total quantity of its expenditure is also enlarged and the increased intensity of labour  $\times$  working-day comes to be  $\leq$  the limit of the total quantity of its expenditure, this increasing intensity is the increase of its normal degree, so means increasing productiveness of labour. Such increase of its normal degree does not appear as the increasing value-production, though it increases the expenditure of labour-power.



of labour-power increases, if the increasing rate of labour-quantity or value-production is higher than that of the value of labour-power, the necessary labour-time of the average labour-power as such comes to curtail. This is the case of the increasing rate of the value-production of a working-day  $>$  the increasing rate of the value of labour-power that we have already pointed out, and „Capital” guides out, in this way, to the fourth method of producing relative surplus-value.

However it is under a certain limit that the increased intensity of labour can be compensated by the enlarged extent or quantity of the means of subsistence. If the intensity of labour increases over this limit, it becomes injurious to the reproduction of labour-power. And the wear and tear of labour-power through the increasing expenditure of it, is not proportional, but progressive to the increasing intensity of labour. „Capital” said therefore ; „Here, the rise in the price of labour-power does not necessarily imply that the price has risen above the value of labour-power. On the contrary, the rise in the price of labour-power does not accompanied by a fall in value. This occurs whenever the rise in the price of labour-power does not compensate for its increased wear and tear”.

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The fourth method of producing relative surplus-value comes to be analysed in this context in „Capital”. So thus, this fourth method is characterised, in relation to the general, the special and the individual method, as follows.

The fourth method is, first, quite a different matter from the general method, because the intensity of labour on the former is distinguished from the productiveness of labour on the latter, and because the fourth method is not „indirect” method which is mediated by the fall

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(40) „Capital” Vol 1 p. 491.

of the value of the means of subsistence.

Next, this fourth method arises „directly” from the labour-power whose intensity is increased. A change in the productiveness of labour does not cause any change in the rate of surplus-value, unless the products of the industries affected are articles habitually consumed by the labourers. „In the present case this condition no longer applies. For when the variation is either in the duration or in the intensity of labour, there is always a corresponding change in the magnitude of the value created, independently of the nature of the article in which that value is embodied”. So far as this feature, we may say that this fourth method has a common character with the special and the individual method.<sup>(41)</sup>

Between these two methods, the individual method arises only temporarily on the labour which has exceptional productiveness more than that of average labour. The individual method has no effect upon the reproduction of labour-power, but the fourth method arises with the increasing expenditure of labour-power and the enlarging extent or quantity of the necessary means of subsistence. While the special method arises, as we have already formulated,, with the reduction of the extent or quantity of the means of subsistence by the change of the existent form of labour-power. That is to say, the special and the fourth method arises with the change of the extent or quantity of the means of subsistence by the change of labour-power. Therefore we may understand from this characteristic that the fourth method is a variation of the special of producing relative surplus-value.

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(41) *ibid.*, pp. 491—492.

### 5. The historical development of the methods of relative surplus-value

We may confirm from our consideration shown above that a plot of analysis piecing through the theory of relative surplus-value in „Capital” is the development of the special method and its variation, namely the abstraction of labour-power which is mainly due to the dissolution of skillfulness and the increased expenditure of labour-power which is mainly caused by the intensification of labour, and that it is, from historical view point, the development of the capitalistic mode of production in England, the Industrial Revolution as its middle. Therefore the concept of surplus-value is neither an abstract concept being contracted with concrete concepts such as profit, interest and rent, nor an imaginary logic in order to analyse these transformed concepts. We have to understand that it is a concrete concept and a real logic too which has the corresponding actuality in the development of the capitalistic mode of production.

Then, how are the methods of relative surplus-value shown above located in the developing epochs of capitalistic mode of production? How far does „Capital” analyse consciously the historical order of these methods? I will consider this question in the end, and will present a testing interpretation over this problem, though I cannot explain this question completely, logically and historically, which is in relation to the grasp of contemporary capitalism.

It is of course clear that the productions of absolute and relative surplus-value are operating side by side in a developed capitalistic national economy. It was in the modern industry after the Industrial Revolution that the lengthening of working-day was regularly taken place. So, we find the following description in „Capital”; „..... We

have seen, how the methods of producing relative surplus-value, are, at the same time, methods of producing absolute surplus-value. Nay, more, the excessive prolongation of the working-day turned out to be the peculiar product of Modern Industry". We have also seen that machinery raised the general, the special and the individual methods simultaneously.

However if we consider these methods historically as the socially leading method, assuming average labour-power, we may understand that they have operated one after another. F. Engels said over this point, in „Preface" of „Capital" vol II, as follows; „Marx analysed surplus-value further and found its two forms, absolute and relative surplus-value. And he showed that they had played a different, and each time a decisive role, in the historical development of capitalist production". So can we also say over the methods of producing relative surplus-value.

From this point of view, first, it was under the formal subjection of labour to capital that the production of absolute surplus-value operated as an only method of producing surplus-value. „Capital" pointed out as a case of this formal subjection that, e. g., „handicraftsmen who previously worked on their own account, or as apprentices of a master, should become wage-labourers under the direct control of a capitalist". In the manuscript (in about 1864) „Results of direct Production-process", the formal subjection was detailed as the case that serfs, independent farmers, handicraftsmen on their own account or

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(42) *ibid.*, p. 478

(43) „Capital" vol II p. 17

(44) „Capital" vol I p. 478

(45) K. Marx „Resultate des unmittelbaren Produktionsprozesses"; Archiv sozialistischer Literatur 17; Verlag Neukritik, Frankfurt,

apprentices of a master went into the capitalistic relation as wage-labourers. We can understand from these descriptions that the capitalistic relation started with the formal subjection of labour to capital, but, that under this formal subjection, the form of labour-process was yet as it had been from old times, and that the specifically capitalist mode of production or socialization of labour had not yet taken place. We may also say that, in the historical development of capitalism in England, the production of absolute surplus-value as this, namely the formal subjection, had been operating in the interstice of feudal government from the end of the 14th till the middle of the 16th century.

On the foundation afforded by the formal subjection as above, next, the real subjection of labour to capital or specifically capitalist mode of production arose and developed, and the socialization of labour grew up. This is the event, as we have considered, that the theory of relative surplus-value (Part IV) in „Capital” analyses logically and historically through co-operation, manufacture and modern industry. It is, in a word, the development of the special method of relative surplus-value. We may say that, in the historical process of capitalism in England, this special method had been operating as the leading method in the manufacture period properly from the middle of the 16th till the last third of the 18th century and so called in the Industrial Revolution period from the second half of the 18th till the first half of the 19th century.

While thoroughly abstracted labour-powers became an overwhelming majority with the Industrial Revolution and the full growth of modern industry, so the special method reached its bounds, and could not be pursued further. When thus abstracted average labour-power who was suitable for the concept of commodity, labour-power, came into actual existence, the general method of relative surplus-value can be

understood to have become the chief method. We may say that, in the historical process of capitalism in England, it was from the Industrial Revolution of the light industry in the first half of the 19th century till that of heavy industry in the second half of the 19th century and after this period.

Now, under thus developed capitalistic mode of production, after the abstracted average labour-power coming into actual existence, the special method of relative surplus-value varied into the fourth method. It is the event that „Capital” considers in the theory of „Changes of Magnitude in the Price of Labour-Power and in Surplus-Value” (Chap XVII). However Marx could not analyse this fourth method or the variation of special method completely, logically and historically, because his theory was based on the actuality of the 1860's if so late. We may understand that, in the historical process of capitalism in England, it was in and after the second half of the 19th century that this fourth method began operating on a social scale.<sup>(46)</sup>

If we understand the fourth method as considered above, we can say that the logical analysis on this method by Marx went ahead of the historical fact, and that here is a historical restriction of „Capital”. Therefore one of the most important themes of the economic research based on „Capital”, is to consider the variation of the special method of relative surplus-value completely, logically and historically, taking a view of the actuality after the second half of the 19th century. But it is beyond the theme of this paper.

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(46) Between 1850 and 1900, the average real wages of labourers in England is said to have risen 70~80 per cent, through the rise of nominal wages or the fall in prices, and the extent or quantity of the means of subsistence have enlarged so much. (G. D. H. Cole „A short History of the British Working-Class Movement 1789—1947”. p. 266)

Here, I will consider merely an example how „Capital” explained this fourth method, under the historical restriction as mentioned above.

After the analysis of the theory of „Changes of Magnitude in the Price of Labour-Power and in Surplus-Value” (Chap XVII), „Capital” considers the relation between the differences of the intensity and productiveness of national labours and the differences of the value of national labour-powers, in the theory of „National Differences of Wages” (Chap XXII). The question is concerned in „the modification of the law of value” in the world-market, but here I will show only the point at issue.

„Capital” said at the beginning of the theory of „national differences of wages” as follows; „In the 17th chapter we were occupied with the manifold combinations which may bring about a change in magnitude of the value of labour-power—this magnitude being considered either absolutely or relatively, i. e., as compared with surplus-value, ... As has been already said, the simple translation of the value, or respectively of the price, of labour-power into the exoteric form of wages transforms all these laws into laws of the fluctuations of wages. That which appears in these fluctuations of wages within a single country as a series of varying combinations, may appear in different countries as contemporaneous difference of national wages<sup>(47)</sup>. That is to say, the normal intensity and productiveness of labour in a single country determines the labour-time necessary for producing a commodity, so determines the value-production. But the normal degree of the intensity and productiveness of labour is different among that of different nations, and corresponding to these differences of intensity and productiveness the application of the law of value to

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(47) confer „Capital” vol I Part IV Chap XXII p. 524~p. 530

(48) *ibid.*, p. 524

different national labours on the world-market ought to be modified twice.

First, we will consider the first modification of the law of value by the difference of the intensity of labour. The average intensities of national labours form, on the world-market,, a scale, whose unit of measure is the average unit of universal labour". On the standard of this unit of measure, equal labour-time of the nations expresses unequal value-production. In this case, we name the nation who has more intense national labour as the first nation, and the nation less intense as the second. The labour-time necessary for producing the same commodity counts shorter in the first nation than in the second, and value-production per labour-time is greater in the first nation than in the second. Nevertheless, at the same time, „it will be found, frequently, that the daily or weekly, etc., wage in the first nation is higher than in the second, whilst the relative price of labour, i. e., the price of labour as compared both with surplus-value and with the value of the product, stands higher in the second than in the first". In other words, if the extent or quantity of the means of subsistence of the first nation is greater than that of the second, the value of labour-power of the first is absolutely higher than that of the second, but at the same time, if the increasing rate of the value-production is higher than that of the value of labour-power, the relative value of labour-power, namely that as compared with surplus-value, in the first stands lower than that in the second.

Next, we will consider the second modification of the law of value by the difference of the productiveness of labour. Though the normal intensity of labour forms a factor of the productiveness of labour, the

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(49) *ibid.*, p. 525

(50) *ibid.*, p. 525



productiveness of labour is not formed only of the intensity of labour. If more productive national labour is not followed with the greater expenditure of labour-power, there is no necessary for the extent or quantity of the means of subsistence to be greater. However, so long as the differences of the productiveness of labours are followed with the corresponding differences of wages, namely „so long as the more productive nation is not compelled by competition to lower the selling price of its commodities to the level of their value” and hence to lower the wage to the value of labour-power, “the law of value in its international application is yet more modified by this, that on the world-market the more productive national labour reckons also as the more intense”. As we have seen above, that which appeared, in the analysis of „Changes of Magnitude in the Price of Labour-Power and Surplus-Value”, as the simultaneous increasing of the value of labour-power and surplus-value in a single country, appears here, in the theory of „national differences of wages”, as the contemporaneous difference in the national labours which is on different levels of capitalist mode of production.

We may say, from consideration above, that the fourth method of relative surplus-value which „Capital” points out in spite of its historical restriction, is given an interesting example in the theory of „national differences of wages”, but is left an important theme to analyse extensively taking the development up to contemporary capitalism in a field of view.

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(51) *ibid.*, p. 525

(52) With the theory of „national differences of wages”, another example can be found in the theory of „misery”. While the former comes about from the contemporaneous difference of the intensity and productiveness in the national labours, the latter arise from the historical development of the intensity and productiveness in a national labour.