

## **Karl Marx and the Average Rate of Profit\***

by  
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The solution to the problem of the so-called average rate of profit, which, as is known, constitutes the cornerstone of the classical theory of labour value, is still awaited by the public opinion of the world of economic science. Against this background, a person has come to the fore who claims to have the correct solution to the problem, namely Karl Marx, who on the basis of his scientific background has the greatest possibility of successfully dealing with the problem, and it has now become the most apropos duty of each economic scientist to submit Marx's analyses to detailed examination. But if one wishes to avoid restricting oneself to old objections<sup>1\*</sup>, one must evaluate the aforesaid solution by starting within the framework of the classical theory of labour value and asking oneself whether –on the assumption that the view that labour creates value is correct in all its details, as put forward by the classical school– Marx's solution is correct or, respectively, a solution is possible in general. Thus, the basic importance of Marx for the classical theory of labour value in general will at the same time become clear. From this point of view, the author of this article considered it necessary, before dealing with Marx, to refer to the respective suppositions of the aforementioned [theoretical – G.S.] approach [he means the classical school – G.S.].

In its interpretation of price in general, the classical school of political economy drew the following final conclusions. One must distinguish between two types of prices: market price –which results from supply and demand– and natural price, as the price to which the market price tends. The cause of the latter [i.e. the natural price – G.S.] lies in the difficulty of acquiring the

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\* Original title: Dr. Mühlfort, "Karl Marx und die Durchschnittsprofitrate", *Jahrbücher für Nationalökonomie und Statistik*, Bd. 65 (1895), S. 92-99.

<sup>1\*</sup> He obviously means the well-known view of Böhm-Bawerk, that there is a contradiction between volumes I and III of *Kapital* – G.S.

respective good. This difficulty consists, depending on the type of good, in its rarity or, correspondingly, in the necessary labour for its production. This essential dependence of price, the content of price as it were, has been characterised as the labour value [of the good – G.S.].

The labour necessary for the production of a good was considered, according to the above, to be its value in the case in which it could increase limitlessly and was produced and sold in conditions of free competition. In this case, the labour value consists, according to the classical theory, of the labour contained in the [used-up constant and expended variable – G.S.] capital for the production of the respective good and the labour that was expended in using the said capital. According to the classical theory, all labour creates equal values in the same period of time; consequently, labour time must without distinctions be considered as a measure of expended labour.

Initially, it was accepted as correct that in the case in which the market price coincides with the natural price, the price determined in this way corresponds exactly to the labour value of the exchanged goods. However, it was soon accepted that this was impossible, because this acceptance conflicted with the fact that, in conditions in which the price coincides with the labour value, the capital yields a profit, the size of which is analogous to the size of the capital. For, since the using up of large amounts of capital in no way always demands labour times analogous to the size of that capital, it is not possible for the profit in the respective products to be analogous to the used capital, if the price of the goods is not to deviate from the labour times contained in those goods. Thus, the problem of the so-called average rate of profit was created.

A problem means an unanswered question; so what was the question that had to be answered? Of course no one seriously believed that the proof of the coincidence of price and labour value could be adduced by means of some mysterious reduction. Anyone who does believe it has certainly not yet found his Messiah and will probably have to abandon even the hope of doing so, as soon as it is shown that prices must deviate from the corresponding labour values if both suppositions are to hold, i.e. the suppositions of the uniformly created value of labour power and the analogous [to the used capital – G.S.] profit. According to the above, the ultimate question underlying the problem can be none other than the following: To what extent must prices deviate each time from the corresponding labour values, if both the aforementioned suppositions are to continue to hold? If the possibility of determining these

deviations was shown or their determination was shown, then the problem would undoubtedly have been solved in lesser or greater detail.

So, this duty remained neglected for a very long time, until the well-known provocative announcement by Friedrich Engels<sup>2\*</sup>, that Karl Marx would provide the answer to the question in volume III of his work *Das Kapital*, drew greater attention to the problem. Since then, many have begun to deal with the issue, but no one has gained the recognition of the scientific world for conclusively answering the question. As a consequence, expectations turned with even greater intensity to the last volume of Marx's principal work. This volume has since circulated<sup>3\*</sup> and this writer, who is among those, albeit unknown, who are tackling the problem of the average rate of profit, wishes to try and submit the solution provided by Marx to examination.

I believe that I can provide the Marxian presentation of the problem, as clearly and briefly as possible, as follows: If one characterises the capital consisting of means of labour as constant capital =  $c$ , the capital appearing as wages as variable capital =  $v$ , the amount of expenditure in labour terms after the replacement of (used-up) capital as surplus product [he probably means: surplus-value – G.S.] =  $m$ , then the labour value  $w$  of a commodity is equal to  $c+v+m$ ,  $w = c+v+m$ . The ratio  $m/v = m'$  is the rate of surplus-value, the ratio  $m : (v+c) = p'$  is the rate of profit. The rate of surplus-value and the rate of profit can be and, as far as capitalists are concerned, are completely different<sup>4\*</sup>, because, irrespective of the ratio  $m/v$ , the ratio of  $c$  to  $v$  can be and is different for each capitalist. So, while the price of capital,  $c+v$ , is characterised as the cost-price of the respective commodity, “the prices which are obtained from the formation of the average of the various rates of profit of the different

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2\* In his foreword to the first edition of volume II of *Kapital* which circulated in 1885. See Karl Marx, “*Das Kapital*”, Bd. II, MEW, Bd. 24, S. 26 – G.S.

3\* Volume III of *Kapital* circulated in 1894 – G.S.

4\* However, according to Marx the rate of surplus value is the same for all commodities. This, in Marx, is the consequence of his assumption that there is a uniform nominal wage rate, and the fact that he sets this uniform nominal wage rate in labour values and not in production prices (because he sets the cost-price in labour values and not in production prices) and consequently equal to the labour value of one unit of labour power. However, if in Marx the value of one unit of labour power, i.e. the ratio  $v : (v + m)$ , is the same for all commodities, then clearly the ratio  $m/v$ , i.e. the rate of surplus-value, is the same for all commodities – G.S.

spheres of production and the addition of this average (?)<sup>5\*</sup> to the cost-prices of the different spheres of production, constitute the *prices of production*<sup>6\*</sup>. Provided one overlooks the analyses of separate points, this in principle ends the Marxian solution to the problem of the average rate of profit. In order to show what Marx means by the formation of this average rate of profit – which is essential for its solution – we shall present here in detail the example that he gives: “Let us take five different spheres of production, and let the capital in each have a different organic composition as follows<sup>7\*</sup>”:

Capitals	Rate of Surplus-Value	Surplus Value	Rate of Profit	Used-up c	Value of Commodities	Cost-Price
I. 80c+20v	100%	20	20%	50	90	70
II. 70c+30v	100%	30	30%	51	111	81
III. 60c+40v	100%	40	40%	51	131	91
IV. 85c+15v	100%	15	15%	40	70	55
V. 95c+5v	100%	5	5%	10	20	15
Total: 390c+110v		100	100% <sup>8*</sup>			
Average						
78c+22v		22	22%			

If one considers capitals I to V as a single total capital, then one sees that the organic composition of the aggregates of the five capitals = 500 = 390c + 110v, i.e. that the average organic composition of the capital = 78c + 22v, and similarly the average surplus-value = 22%<sup>9\*</sup>. If this surplus-value is equally distributed in spheres I to V, then the following prices of products emerge:

5\* The question mark was inserted by Mühlport. His query is easily solved if one clarifies that here, Marx clearly means not the addition of the average rate of profit, but the addition of the product of the average rate of profit and of the used capital, i.e. the average profit, to the cost-price – G.S.

6\* Karl Marx, “Das Kapital”, Bd. III, MEW, Bd 25, S. 167 – G.S.

7\* At this point, Mühlport omits, without stating so, the first table and the text by Marx which follows up to the second table (See Marx, “Das Kapital”, Bd. III, MEW, Bd. 25, S. 164-6) – G.S.

8\* This number (which is of course meaningless) does not appear in Marx’s table (See Karl Marx, “Das Kapital”, Bd. III, MEW, Bd. 25, S. 166) – G.S.

9\* Obviously he means “=22”. This is a printing error in the first edition which is corrected by the MEW edition. See Karl Marx, “Das Kapital”, Bd. III, MEW, Bd. 25, S. 166, footnote 1\* – G.S.

For	cost-price	price of commodities	deviations of price from value
I	70	92	+2
II	81	103	-8
III	91	113	-18
IV	55	77	+ 7
V	15	37	+17

” 10\*

If I may be permitted to proceed to a critical assessment of the Marxian solution presented, then first of all I must criticise the arithmetical form of the example. A precise researcher should know that a more general algebraic form is more expedient and often even necessary. However, irrespective of this, the result of the Marxian investigations is, with respect to its content, far from satisfactory. For, although we accept that the average rate of profit and thus the distribution of total surplus-value among single entrepreneurs as profit on the basis of cost-prices is dealt with correctly by Marx, the following question must nevertheless be put: Doesn't the price of capital, the cost-price deviate from the value of capital just as the price of a commodity deviates [from its value – G.S.]? The question must be answered in the affirmative. Moreover, this former deviation will also be due to the need [for there to be – G.S.] an average rate of profit. However, in order to make perfectly clear the deficiency of the Marxian example, let us go back to his own example. From our reasoning as set out above, the following emerges: Capitals I to V cannot represent the labour values that are actually contained therein, consequently the capitals in the column 'used-up c' also deviate from these values, and therefore the cost-prices too cannot coincide with the corresponding values. Furthermore, it becomes clear that the magnitudes of the column 'value of commodities' do not

10\* Karl Marx, "Das Kapital", Bd. III, MEW, Bd. 25, S. 164-166 – G.S. The inverted commas that close the insertion do not appear in Mühlfort. In addition, Mühlfort has removed from Marx's last table, which he presents, four columns, the columns "Capitals", "Surplus-value", "Value of Commodities" and "Rate of Profit". Apparently because the first three appear in the first of the two tables presented by Mühlfort and the last column contains for each sphere of production the general rate of profit equal to 22% - G.S.

correspond to the values<sup>11\*</sup> and also that the recorded ‘deviations of price from value’ are not correct. Moreover, a further question remains unanswered for the reader, namely: from where<sup>12\*</sup> are the magnitudes of the various surplus-values known? For even though the various surplus-values represent real and fixed magnitudes, it is not permissible for them to be considered without any conditions as given<sup>13\*</sup>.

However, our main objection did not escape the attention of Marx himself, namely the deviation of prices of capital from the labour values contained therein. Marx writes in this respect: The calculation of prices that we presented above “seems to conflict with the fact that under capitalist production the elements of productive capital are, as a rule, bought on the market, and that for this reason their prices include profit which has already been realised, hence, include the price of production of the respective branch of industry together with the profit contained in it, so that the profit of one branch of industry goes into the cost-price of another. But if we place the sum of the cost-prices of the commodities of an entire country on one side, and the sum of its surplus-values, or profits, on the other, the calculation must evidently be right”<sup>14\*</sup>. “In the total calculation, the surplus-value” of a capitalist “cannot be entered twice. But the difference is this: Aside from the fact that the price of a particular product, let us say that of capital B, differs from its value because the surplus-value realised in<sup>15\*</sup> B may be greater or smaller than the profit added to the price of the products of B, the same circumstance applies also to those commodities which form the constant part of capital B, and indirectly also its variable part, as the labourers’ necessities of life. So far as the constant portion is concerned, it is itself equal to the cost-price plus the surplus-value, i.e. now [he means after passing from values to prices of production – G.S.] equal to cost-price plus profit, and this profit may again be greater or smaller than the

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11\* Clearly a mistake. He obviously means: “of the column ‘Price of commodities’ do not correspond to the prices” – G.S.

12\* “welcher’ (who) in the original article, instead of the correct “woher” (from where, how).

13\* This query of Mühlport is incomprehensible. For the magnitudes of the surplus-values are supposed by Marx to be exogenously given, since his problem is not to calculate the values and surplus-values of commodities, but rather the prices of production for given values and surplus-values. The fact that values and surplus-values are exogenously given in no way affects the solution to the problem of transforming values into prices of production.

14\* Karl Marx, “Das Kapital”, Bd. III, MEW, Bd 25, S. 169 – G.S.

15\* The correct word is obviously “by” – G.S.

surplus-value for which it stands. As for the variable capital, the average daily wage is indeed always equal to the value product [i.e. to the value of the net product – G.S.] of the number of hours the labourer must work to produce the necessities of life [for the labourer himself – G.S.]. But this number of hours is in its turn obscured by the deviation of the prices of production of the necessities of life from their values. However, this always resolves itself to one commodity receiving too little of the surplus-value while another receives too much, so that the deviations from the value which are embodied in the prices of production compensate one another. Under capitalist production, the general law acts as the prevailing tendency only in a very complicated and approximate manner, as a never ascertainable average of ceaseless fluctuations”<sup>16\*</sup>.

We see from this inserted passage that Marx himself has already to a great extent foreseen our objection<sup>17\*</sup>.

But what is the answer that Marx is able to give to this objection? His answer contains nothing more than the assertion that the differences between the prices of commodities and their values contain also the differences between the prices of capitals and their values. According to Marx, the latter cancel each other out. We can only describe this as an unproven assertion of no substance. This assertion, to the extent it means that eventually, the sum of all the prices is equal to the sum of all the total quantities of labour expended [i.e.

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16\* Karl Marx, “Das Kapital”, Bd. III, MEW, Bd 25, S. 170-171 – G.S.

17\* At another point, Marx expresses himself in even clearer terms: “However... a modification appears [in the method of calculating prices of production – G.S.] concerning the determination of the cost-price of commodities. We had originally assumed that the cost-price of a commodity equalled the *value* of the commodities consumed in its production. But for the buyer the price of production of a specific commodity is its cost-price, and may thus pass as cost-price into the prices of other commodities. Since the price of production may differ from the value of a commodity, it follows that the cost-price of a commodity containing this price of production of another commodity may also stand above or below that portion of its total value derived from the value of the means of production [and wage commodities – G.S.] consumed by it. It is necessary to remember this modified significance of the cost-price, and to bear in mind that *there is always the possibility of an error if the cost-price of a commodity in any particular sphere is identified with the value of the means of production* [in which we also include wage commodities – G.S.] *consumed by it*. Our present analysis does not necessitate a closer examination of this point”. Karl Marx, “Das Kapital”, Bd. III, MEW, Bd 25, S. 174. In reality therefore, it is an ‘objection’ by Marx himself and not an ‘objection’ by Mühlfort which Marx himself had supposedly to a great extent foreseen – G.S.

to the sum of all the values – G.S.] simply reiterates the supposition on which all of Marx’s analyses are based from the outset. It should have been shown though, through indirect proof, that this supposition is compatible with the average rate of profit, i.e. that because of the average rate of profit, prices, which are in their totality equal to total expended labour, deviate in the single case from the labour expenditures of the corresponding single enterprises<sup>18\*</sup>. So, with respect to the evaluation of the Marxian solution, we must firmly stand by our previously stated objection. If one accepts that the prices of the capitals are given, then Marx has provided the proof of possibility of prices of commodities deviating from their values, without stating however the extent of this deviation in each case. The possibility of the prices of capitals deviating from the corresponding values is also unproven, while one cannot even speak of the effective calculation of this deviation. With respect to this latter point, not even the last sentence of the passage inserted above can delude us. This sentence is from every point of view so loosely worded that no precise investigation in general can take it into consideration. Particularly so, when the author [of this article – G.S.] believes that he can calculate the aforementioned multiple deviations reliably, with great accuracy and in an extremely simple way.

As we already know, the price of a commodity, the quantity of which can increase at will, must deviate from the value of the same commodity by a certain percentage, which is determined by the law of the equalisation of the rate of profit. According to this, the price of a commodity  $\Pi(W)$  is equal to labour time  $a$ , which is contained in that commodity, multiplied by a coefficient  $x$ <sup>19\*</sup>:

$$\Pi(W) = ax \quad 20^*$$

or, according to the composition of the price,

$\Pi(W)$  = price of capital  $\Pi(C)$  plus the price of the surplus product  $\Pi(M)$  representing profit, i.e.

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18\* In the original article “Untersuchungen” (investigations), instead of the correct “Unternehmungen” (enterprises) – G.S.

19\* In the original article “XI”, instead of the correct “x” – G.S.

20\* In the original article “ $\alpha x$ ”, instead of the correct “ $ax$ ” – G.S.



$$\Pi(W) = \Pi(C) + \Pi(M)^{21*}$$

Furthermore:

$$\Pi(M) = p\Pi(C),$$

where  $p$  means the average rate of profit. Consequently

$$\Pi(W) = \Pi(C) (1 + p)$$

or

$$\Pi(C) = \frac{1}{1 + p} \Pi(W) = x_0 \Pi(W)^{22*}.$$

The capital that is used by an entrepreneur in his enterprise appears however in two ways, once as representing the means of labour and the wages, which are necessary for his business activity, and subsequently as representing the commodities produced by him, which he must sell in order to purchase means of labour and labour power<sup>23\*</sup>. Capital appears in this latter form in the above equation

$$\Pi(C) = x_0 \Pi(W)$$

or, as we may also write,

$$\Pi(C) = x_0 x_a^{24*}$$

or, with reference to the specific enterprise [ $p - G.S.$ ],

$$\Pi(C_p) = x_0 x_p a_p^{25*}.$$

The capital then appears as the sum of used-up means of production and wages in the following form:

$$\Pi(C_p) = \alpha_{p1} \Pi(W_1) + \alpha_{p2} \Pi(W_2) + \dots +^{26*},$$

21\* In the original article “(M)”, instead of the correct “ $\Pi(M)$ ” – G.S.

22\* Where of course  $x_0 = 1/(1 + p)$  – G.S.

23\* In what follows, I do not take into consideration the effect of the differences on the turnover times of the capitals, in order to simplify the issue. Even though these differences are of fundamental importance for the problem of the average rate of profit, they nevertheless entail only one modification of the size of capital, as anyone knows who is familiar with trading accounts. [Footnote by Mühlport on p. 97 – G.S.].

24\* In the original article, “ $x_0 x_a$ ” was incorrectly used. – G.S.

25\* In the original article, “ $x_0 x_p a_p$ ”. – G.S.

26\* In the original article, “=” is missing – G.S.

where  $\alpha_{p1}, \alpha_{p2}, \dots$  are the percentages of the various quantities of commodities  $W_1, W_2, \dots$ , which are necessary for the production of the total quantity of the commodity  $W_p$ <sup>27\*</sup>. According to this, for all the enterprises in a certain period of production, one gets the following equations:

$$\begin{aligned} x_0 \Pi(W_1) &= \alpha_{11} \Pi(W_1) + \alpha_{12} \Pi(W_2) + \dots \\ x_0 \Pi(W_2) &= \alpha_{21} \Pi(W_1) + \alpha_{22} \Pi(W_2) + \dots \\ &\dots \\ &\dots \\ x_0 \Pi(W_n) &= \alpha_{n1} \Pi(W_1) + \alpha_{n2} \Pi(W_n) + \dots \quad 28^* \end{aligned}$$

or

$$\begin{aligned} x_0 a_1 x_1 &= \alpha_{11} a_1 x_1 + \alpha_{12} a_2 x_2 + \dots \\ x_0 a_2 x_2 &= \alpha_{21} a_1 x_1 + \alpha_{22} a_2 x_2 + \dots \\ &\dots \\ &\dots \\ x_0 a_n x_n &= \alpha_{n1} a_1 x_1 + \alpha_{n2} a_2 x_2 + \dots \quad 29^* \end{aligned}$$

Furthermore, the sum of all the labour times contained in the above-mentioned commodities  $W_1$  to  $W_n$  is by assumption equal to the sum of all the corresponding prices. The first sum is undoubtedly the labour times expended in all the enterprises. In correlation with the order of enterprises we name [=symbolise] these labour times, in correlation with the symbols that we have already introduced above [with],  $a_1, a_2$ ,<sup>30\*</sup> etc. In order to avoid any misconceptions, we should observe that these symbols [i.e. the symbols  $\alpha_1, \alpha_2, \dots$ ,

27\* The symbols  $W_1, W_2, \dots, W_p \dots$  represent the produced quantities of commodities 1, 2, ..., p ...  
From Mühlport's overall analysis, it emerges that each of these quantities is equal to unit – G.S.

28\* It emerges from this system of equations that n commodities are produced in total – G.S.

29\* In the original article, " $\alpha_1, \alpha_2$ " appears in all three equations instead of the correct " $a_1, a_2$ " – G.S.

30\* In the original article, " $\alpha_1, \alpha_2$ " was incorrectly used instead of the correct " $a_1, a_2$ " – G.S.  
After this sentence, another sentence should probably have followed, which was omitted by mistake, with roughly the following content: "Instead of this however, we prefer to set the profits of all the enterprises equal to the surplus-values  $\alpha_1, \alpha_2$  of all the enterprises." Without such a sentence, all that follows is in conflict with the foregoing – G.S.

of the most likely omitted sentence of footnote 30 – G.S.] which are expended for the using up of the capitals, not the sum of them [of the labour times – G.S.] and of [the labour times – G.S.] contained in the capitals, which is represented by the values  $a_1, a_2,^{31*}$  etc. According to this, we first of all get the formula:

$$\Sigma\alpha = \alpha_1 + \alpha_2 + \dots + \alpha_n .$$

Secondly, the sum of all the prices [read: profits – G.S.] is equal to the sum of the prices of all the commodities minus the parts of those prices which have already been calculated as capital in the prices of other commodities. According to this, we get the following formula:

$$\begin{aligned} \Sigma\Pi^{32*} &= a_1x_1 - \alpha_{11}a_1x_1 - \alpha_{21}a_1x_1 - \alpha_{31}a_1x_1 - \dots\dots\dots \\ &\dots\dots\dots \\ &+ a_2x_2 - \alpha_{12}a_2x_2 - \alpha_{22}a_2x_2 - \alpha_{32}a_2x_2 - \dots\dots\dots \\ &\dots\dots\dots \\ &\dots\dots\dots \\ &+ a_nx_n - \alpha_{1n}a_nx_n - \alpha_{2n}a_nx_n - \alpha_{3n}a_nx_n - \dots\dots\dots^{33*} \end{aligned}$$

or, because

$$\Sigma\alpha = \Sigma\Pi,$$

the following hold

$$\begin{aligned} \alpha_1 + \alpha_2 + \alpha_3 + \dots + \alpha_n &= a_1x_1 - \alpha_{11}a_1x_1 - \alpha_{21}a_1x_1 - \dots\dots\dots \\ &+ a_2x_2 - \alpha_{12}a_2x_2 - \alpha_{22}a_2x_2 - \dots\dots\dots \\ &+ \dots \\ &+ \dots \\ &+ a_nx_n - \alpha_{1n}a_nx_n - \alpha_{2n}a_nx_n - \dots\dots\dots \end{aligned}$$

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31\* In the original article, “ $\alpha_1, \alpha_2$ ” was incorrectly used instead of the correct “ $a_1, a_2$ ”. According to the above,  $\alpha_1, \alpha_2, \dots$  symbolise not the values of one unit of the commodities  $W_1, W_2, \dots$ , but the surplus-values that are contained in the values of one unit of those commodities – G.S.

32\*  $\Pi$  obviously symbolises the surplus-value that is contained in the value of a commodity – G.S.

33\* In the original article, “ $\alpha_1$ ”, “ $\alpha_2$ ” and “ $\alpha_n$ ” were incorrectly used instead of the correct “ $a_1$ ”, “ $a_2$ ” and “ $a_n$ ”. Also, in the original article, at the end of the second part of the identity, “ $x$ ” was used instead of the correct “ $x_n$ ” – G.S.

Thus we found  $n+1$  equations, in which we ascertain  $n+1$  unknowns, namely  $x_1, x_2, \dots, x_n$  and  $x_0$ .

The magnitudes  $\alpha_{11}, \alpha_{12}, \dots, \alpha_{1n}, \alpha_{21}, \alpha_{22}, \dots, \alpha_{2n}, \dots, \alpha_{n1}, \alpha_{n2}, \dots, \alpha_{nn}$  as well as the magnitudes  $\alpha_1, \alpha_2, \dots, \alpha_n$  are, without fail, known from the technique of the respective enterprise, and the same is true for magnitudes  $a_1, a_2, \dots, a_n$ <sup>34\*</sup>, based on the reasoning that the following holds:

$$\begin{aligned} a_1 - \alpha_{11}a_1 - \alpha_{12}a_2 - \dots - \alpha_{1n}a_n &= \alpha_1 \\ a_2 - \alpha_{21}a_1 - \alpha_{22}a_2 - \dots - \alpha_{2n}a_n &= \alpha_2 \\ \dots & \\ \dots & \\ a_n - \alpha_{n1}a_1 - \alpha_{n2}a_2 - \dots - \alpha_{nn}a_n &= \alpha_n \end{aligned} \quad 35^*$$

Thus, the above unknowns are determined by the  $n+1$  equations, i.e. put differently, the deviations of prices from values and the size of the average rate of profit are determined.

In this way, I believe that the problem of the average rate of profit should definitely be considered as having been resolved in accordance with the classical theory of value. As to whether I am correct, I hope that the scientific community will have the friendliness to confirm it or confute it. In particular I should like to hear the view of the well known interpreters of Marx, such as Bernstein, Engels, Kautsky and others in a more objective way<sup>1</sup>. In the

34\* In the original article " $\alpha_1, \alpha_2, \dots, \alpha_n$ ", instead of the correct " $a_1, a_2, \dots, a_n$ " – G.S.

35\* In the original article " $\alpha_1$ ", " $\alpha_2$ " and " $\alpha_n$ ", instead of the correct " $a_1$ ", " $a_2$ " and " $a_n$ ". Here, we see that Mühlport who, in his treatment of the transformation problem criticised Marx for considering surplus-values exogenously given, himself considers them exogenously given, considering not only the production technique but also the values of commodities as exogenously given. (Even though he could calculate the latter on the basis of the given technique, which here presupposes also a real wage rate) – G.S.

1. I added the phrase "in a more objective way" because my doctoral thesis "Price and income in the privately capitalistic society" [School of Philosophy of the University of Königsberg (1893), published by Hartingsche Buchdruckerei, Königsberg 1893 – G.S.] was judged in a far from objective way in the review of Mr. Kautsky [he means the review of the Social Democrat Party of Germany, *Die Neue Zeit* – G.S.]. However, I believe that Mr. Kautsky is not responsible for the aforesaid scandalous book review [in the original article "unqualifizierbare (n) (=not capable of being characterised) Rezension (=book review)"]. Clearly it should have been "unqualifizierte (n) (=lacking the necessary prerequisites, knowledge or skills and therefore unqualified)" – G.S.], because as editor of a review myself,

meantime, I further wish to briefly characterise the significance of Marx for the completion –not for the further use– of the classical theory of value.

The classical theory of value left us, as noted previously, with two kinds of prices: the market price and the natural price. As for the latter, the problem of the average rate of profit should, leaving aside the question of rarity, be resolved. Marx certainly set forth this problem better than anyone else and in part developed its solution. Unfortunately, Marx's treatment of the problem is to a large extent longwinded, unjustifiably complicated and, as already mentioned, incomplete. In addition, it is not as original as some economists would have, given that other scientists too, such as Lexis, treat the problem in the same manner. As far as the issue of the market price is concerned, the question to be answered was: why do buyers offer more for less quantities of a commodity and less for more quantities and how much less or more? A question which is also based on the influence of rarity on natural price. In classical Political Economy, this phenomenon was interpreted chiefly in a mechanical way, through the relationship between quantities. But this phenomenon, as has now been generally acknowledged, could be understood only on a psychological level. And this was undoubtedly achieved in the most impeccable way to date by the Austrian school. Its mistake however was that it wanted to apply this type of interpretation also to the natural prices of commodities, the quantity of which may increase at will in conditions of all-out competition. I am of the opinion that between the classical and the Austrian school, there is no insurmountable contradiction, and that the systems of both schools can become compatible in the way that I have intimated.

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I know how easy it is for one to be compromised by an incompetent colleague. The fact that I did not reply to the book review –by the way– is because, on the one hand, reviews of the aforesaid type have no influence on readers who are capable of making their own judgement and, on the other, because I expected my now completed book review of Marx [he means the present article – G.S.] to provide the best confutation of these attacks with respect to their politico-economic content. I therefore added the phrase “in a more objective way” only to urge the competent persons [he means the editorial staff of *Die Neue Zeit* – G.S.] not to leave a possible response to my analyses to deis inferiorum gentium [= gods of a lesser kind – G.S.] [Footnote by Mühlport on page 98 – G.S.].

