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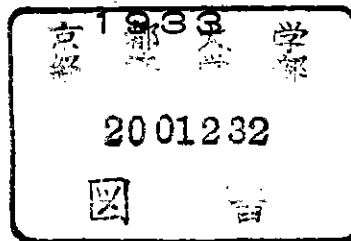
THE MEANING OF THE THEORY OF VALUE IN THEORETICAL ECONOMICS

1. INTRODUCTION.

It is superfluous to say that in theoretical political economy the term "value" has been used to denote many different things and that consequently all theories of value do not necessarily have one and the same object for study. The present article is not intended for the elucidation of the meaning of all these theories of value in theoretical political economy. It is concerned with the study of the meaning which the theory in regard to the value in the sense in which Marx employed the term—as it is conceived to lie behind exchange value—possesses in the system of theoretical economics.

In the state of equilibrium, the exchange ratios of all commodities ought to be at a fixed level. In other words, the certain fixed amounts of all commodities with different use values ought to be considered as exchangeable for one another, a fact which is recognised by all students of theoretical economics. Their mutual exchangeability means that they are socially equivalent. So, it is by no means unreasonable to deduce from this that value exists behind exchange value. The object of the present article can not be, therefore, to discuss the propriety o rotherwise of expecting value behind exchange value. Its aim is to make clear whether the determination of the exchange ratios of all commodities cannot be explained theoratically, unless values are known—in other words, whether the cognition of value is the *sine qua non* for the cognition of the determination of the exchange ratios of all commodities—or whether it is possible to explain, even without the knowledge of the amounts of values, why the exchange ratios of all commodities must settle at a certain definite level.

To know value first and then to explain normal price, or, in other words, productive price, on the basis of this knowledge, is to explain normal price or productive price on the basis of the knowledge of price corresponding to value.

According to Marx capitalistic production is essentially carried on with the extraction of a maximum of surplus value from labour power purchased with variable capital for its objective. In other words, it aims at the acquisition of the highest possible rate of surplus value. If this essential character manifests itself as it is, that is to say, if individual capitalists carry on production with the acquisition of the highest possible rate of surplus value for their direct objective, the prices of all commodities must be determined according to their respective values. As a matter of fact, however, the above-mentioned essential character does not manifest itself as it is. What appears phenomenally is that individual capitalists carry on production with the direct object of securing the highest possible rate of profit. Such being the case, although the prices of all commodities are, in the ultimate, conditioned by their values, they are affected by the action of the average of the rates of profit, with the result that productive price (which is hereunder referred to simply as price, while the price corresponding to value is referred to as value) actually deviate from value.[1]

Marx maintains that as the prices of commodities are, in the ultimate, conditioned by their values, neither the average rate of profit nor prices can be known unless we know values first. He says: "If the limits of value and surplus values are given, it is easy to know why.........

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1) It is not as commodities only that their exchange power is affected by the average of the rates of profit. So is money affected also. If the exchange power which each commodity possesses in the sequel of the average of the rates of profit is to be called productive value, the Marxian productive price of any goods is equal to the quotient obtained by dividing the productive value of that goods by the productive value of money.

competition between various capitalists transforms surplus
value into the average rate of profit (and accordingly why
prices are at definite levels)." "But if these limits are
not given, it is absolutely impossible to know why competi-
tion reduces the general rate of profit (and accordingly
prices) to a certain definite level, and not to any other
level.[2] The aim of the present article is to make clear
whether or no it is impossible to explain productive prices
and the average rate of profit, unless we first know values,
or in other words, the prices of commodities (not productive
prices) which individual capitalists will attain, if they carry
on production with the attainment of the highest possible
rate of surplus value for their direct object.

It was few years ago that "political economy devoid of
the theory of value" was a subject of heated controversy.
The reason why I now propose to take up this problem, is
that I am persuaded that it tends to contribute to the
development of theoretical political economy which embraces
and gives due positions to Marxian economy and the theory
of general equilibrium.

In the present article, I shall analyse this problem in
reference to two very simple cases.

2. CASES WHERE THE VALUE COMPOSITION OF CAPITAL IS EQUAL

Now, let it be assumed that for the production of one
unit of money, $\frac{1}{3}$ of an unit of means of production and $\frac{1}{30}$
of an unit of labour power are needed, that for the pro-
duction of one unit of means of consumption, $\frac{1}{3}$ of an unit
of means of production and $\frac{1}{30}$ of an unit of labour power
are required, and that for the production of one unit of
means of production, $\frac{2}{3}$ of an unit of means of production
and $\frac{1}{15}$ of an unit of labour power are necessary. Let it

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2) Marx: Das Kapital III. 1 Teil.

be further assumed that the amounts of means of pro-
duction and labour power required for the production of
each unit of these products are unchanged by the quantity
of the products produced. Next, let us assume that the
necessaries of livelihood for the labourer are constituted
from five units of means of consumption and that con-
sequently the wages are 5P (P means the value of means
of consumption). That is to say, be it assumed that the
capitalist who produces money needs $\frac{1}{3}$ k (k indicates the
value of means of production) amount of constant capital
and $\frac{1}{30} \times 5P$ amount of variable capital, for the production
of one unit of money, that the capitalist who produces
means of consumption requires $\frac{1}{3}$ k amount of constant
capital and $\frac{1}{30} \times 5P$ amount of variable capital for the pro-
duction of one unit of means of consumption, and that the
capitalist who produces means of production needs $\frac{2}{3}$ k
amount of constant capital and $\frac{1}{15} \times 5P$ amount of variable
capital for the production of one unit of means of produc-
tion.

    A. If, in such a case, production is to be carried on
with the object of extracting the largest possible surplus
value from labour power purchased with variable capital,
or, in other words, if production is carried on with the
attainment of the highest possible rate of surplus value
(which is denoted by in) for its objective; the rate of surplus
value being of necessity uniform socially, provided perfect
free competition prevails, the value composition of the means
of consumption will be

$$P = \frac{1}{3}k + \frac{1}{30} \times 5P (1 + m')$$

and the value composition of the means of production will
be

$$k = \frac{2}{3}k + \frac{1}{30} \times 5P (1 + m').$$

From these two equations, we can see that $k=2P$, $m'=100\%$, and that the value composition of each of the products is $\frac{1}{3}k : \frac{1}{30} \times 5P : \frac{1}{30} \times 5P\ m' = \frac{2}{3}k : \frac{1}{15} \times 5P : \frac{1}{15} \times 5P_2\ m' = 4 : 1 : 1$.

Now, as money is produced by the same amounts of means of production and labour power as are required for the production of means of consumption, the value of the means of consumption, P, ought to be 1, and consequently the value of the means of production, k, ought to be 2. The organic composition of capital in the sections of production is, in this case, all the same. Consequently, value accords with price. It therefore follows that the price of the means of consumption is 1, while that of the means of production is 2.

In a society in which money circulates, and accordingly in a society in which capitalistic ways of production rule, it is necessary to produce money yearly in order both to make up the shortage resulting from the hoarding of money and wear and tear of currency and to increase the amount of money in circulation—as, for example, in the case of expansive reproduction—but as the present article is not concerned with the question of money, it is assumed here that there is no actual production of money. This assumption does not imply that money is left entirely out of consideration. It simply means that money circulates, gauging the values of all commodities by the quantity of labour, which will be required if money were produred. At any rate, if, as is laid down here, money is not actually produced, social capital will be devoted to the production of the means of production and consumption exclusively. Since $\frac{2}{3}k$ amount of constant capital and $\frac{1}{15} \times 5P$ amount of variable capital are required, according to the assumption, for the production of one unit of means of production, if the total amount of the means of production to be produced be denoted by S, the total amount of capital required for

producing the means of production will be $\left(\frac{2}{3}k + \frac{1}{15} \times 5P\right)$ S. Again, if the total amount of the means of consumption to be produced be denoted by N, the total amount of capital required for producing the means of consumption will be $\left(\frac{1}{3}k + \frac{1}{30} \times 5P\right)$ N, as it is assumed that $\frac{1}{3}$ k amount of constant capital and $\frac{1}{30} \times 5P$ amount of variable capital are needed for the production of one unit of means of con- sumption. Accordingly, as social capital is devoted to the production of these two things, provided there is no pro- duction of money, if the total amount of social capital be assumed to be 7500,

$$7500 = \left(\frac{2}{3}k + \frac{1}{15} \times 5P\right) S + \left(\frac{1}{3}k + \frac{1}{30} \times 5P\right) N.$$

Of the unknown numbers contained in this equation, the values of k and P are already known by the previous calculation, so the real unknown numbers contained in it are N and S only.

As it is assumed that $\frac{2}{3}$ of an unit of means of pro- duction is required for the production of one unit of means of production, the total amount of means of production necessary for the production of means of production is $\frac{2}{3}$ S. Again, as it is assumed that $\frac{1}{3}$ of an unit of means of production is required for the production of one unit of means of consumption, the total amount of means of production necessary for the production of means of consumption is $\frac{1}{3}$ N. Consequently, if it be supposed that there is no production of money and that there takes place simple reproduction, the total amount of means of produc- tion required socially is:

$$S = \frac{1}{3}N + \frac{2}{3}S.$$

From the above-mentioned two equations, we can see that N=3000, and S=3000. And as the value composition

of each of the products is, as is already known, $4 : 1 : 1$, that of the total output will be

I $4000\,C_1 + 1000\,v_1 + 1000\,m_1 = 6000$

II $2000\,C_2 + 500\ \ v_2 + 500\ \ m_2 = 3000$

The total amount of surplus value is $m = 1000\,m_1 + 500\,m_2 = 1500$. As the total amount of social capital is assumed to be 7500, the rate of profit is $P' = \dfrac{1500}{7500} = 20\%$.

It has so far been assumed that production is carried on in pursuit of the highest possible rate of surplus value, so that value and the rate of susplus value are first determined, and then the rate of profit is worked out concomitantly. The case will, however, be different, if it be assumed from the begenning that production aims at the highest possible rate of profit.

B. Let it be supposed, now, that production is carried on with the attainment of the highest possible rate of profit, not the highest possible rate of surplus value as in the case of A, for its direct object, where all other conditions are the same as in A, then, as the rate of profit ought to be uniform socially, so long as perfect capitalistic free competition prevails, the price composition of the means of consumption must be:

$$P = \left(\frac{1}{3}k + \frac{1}{30} \times 5P \right)(1 + P'),$$

and the price composition of the means of production:

$$k = \left(\frac{2}{3}k + \frac{1}{15} \times 5P \right)(1 + P'),$$

(where, P denotes the price of the means of consumption, and k, that of the means of production).

From these two equations, we can see that $k = 2P$, and $P' = 20\%$. That is to say, where production is carried on in pursuit of the highest possible rate of profit, price can be determined without any knowledge of the amount of value, and the average rate of profit is directly determined without the previous knowledge of the total amount of

surplus value or the rate of surplus value. What will happen when the value composition of capital is different, then?

3. WHERE THE VALUE COMPOSITION OF CAPITAL IS DIFFERENT

Let it now be assumed that $\dfrac{1}{2.87499999935}$ of an unit of means of production and $\dfrac{1}{32.3437499541}$ of an unit of labour power are needed for the production of one unit of money, and $\dfrac{1}{3}$ of an unit of the means of production and $\dfrac{1}{30}$ of an unit of labour power for the production of one unit of means of consumption and $\dfrac{2}{3}$ of an unit of means of production and $\dfrac{1}{18}$ of an unit of labour power for the production of one unit of means of production, and also that the amounts of means of production and labour power required for the production of one unit of each of these products are un-changed by the quantity of goods to be produced. Let it further be assumed that the necessaries of livelihood for the labourer comprise five units of the means of consumption and that accordingly the wages are 5P. That is, be it assumed that the capitalist who produces money requires $\dfrac{1}{2.87499999935}$ k amount of constant capital and $\dfrac{1}{32.3437499541}$ ×5P amount of variable capital for the production of one unit of money, that the capitalist who produces the means of consumption needs $\dfrac{1}{3}$ k amount of constant capital and $\dfrac{1}{30}$ ×5P amount of variable capital for the production of one unit of the means of consumption and that the capitalist who produces the means of production requires $\dfrac{2}{3}$ k amount of constent capital and $\dfrac{1}{18}$ ×5P amount of variable capital for the production of one unit of means of production.

A′. If it, in such a case, be supposed that production

is carried on with the extraction of the highest possible surplus value from the labour power to be purchased with variable capital for its direct objective, the rate of surplus value being of necessity uniform socially, so long as perfect free competition prevails, the value composition of the means of consumption is:

$$P = \frac{1}{3} k + \frac{1}{30} \times 5P(1+m').$$

The value composition of the means of production is:

$$k = \frac{2}{3} k + \frac{1}{18} \times 5P(1+m').$$

And the value composition of money is:

$$1 = \frac{1}{2.87499999935} k + \frac{1}{32.3437499541} \times 5P(1+m').$$

From these three equations[3] we can see that $p = 1$, $k = 1.875$, $m' = 125\%$, and that the value composition of the means of consumption is $\frac{1}{3} k : \frac{1}{30} \times 5P : \frac{1}{30} \times 5P \, m' = 0.625 : 0.166666667 : 0.20833333$, and that of the means of production $\frac{2}{3} k : \frac{1}{18} \times 5P : \frac{1}{18} \times 5P_2 m' = 0.666666667 : 0.148148148 : 0.185185185$.

If it be supposed that money is not actually produced, social capital will be devoted to the production of the means of production and consumption. As it is assumed that the $\frac{2}{3} k$ amount of constant capital and the $\frac{1}{18} \times 5P$ amount of variable capital are required for the production of one unit

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3) It is because the technical formation of capital is different in respect of each section of production that, in this case, even the section of production of money plays a part in the calculation of m'. But, so long as money does not enter into the cost of production either directly (as a factor of production, because of its wear and tear, and so forth) or indirectly (as a necessity of life for the labourer), the participation of the section of production of money in the calculation of m' is merely a matter of technique of calculation, and it does not affect the size of m'. This is so in the case of B' also, though in that case it is P'.

of the means of production, the total amount of capital needed for the production of the means of production is $\left(\frac{2}{3}k+\frac{1}{18}\times 5P\right)$S. Again, as it is assumed that the $\frac{1}{3}$ k amount of constant capital and the $\frac{1}{30}\times 5P$ amount of variable capital are required for the production of one unit of the means of consumption, the total amount of capital necessary for the production of the means of consumption is $\left(\frac{1}{3}k+\frac{1}{30}\times 5P\right)$N. As social capital will be devoted to the production of these two things in case there is no pro-duction of money, if the total amount of social capital is assumed to be 7500,

$$7500=\left(\frac{2}{3}k+\frac{1}{18}\times 5P\right)S+\left(\frac{1}{3}k+\frac{1}{30}\times 5P\right)N.$$

Of the unknown numbers contained in this equation, the values of k and P are already known by the previous calculation, so the real unknown numbers contained therein are N and S only.

As it is assumed that $\frac{2}{3}$ of an unit of the means of production is needed for the production of one unit of the means of production, the total amount of means of production required for the production of the means of production is $\frac{2}{3}$ S. Again, as $\frac{1}{3}$ of an unit of the means of production is assumed to be necessary for the production of one unit of the means of consumption, the total amount of the means of production necessary for the production of the means of consumption is $\frac{1}{3}$ N. Consequently, if there is no production of money and if simple reproduction takes place, the total amount of the means of production required socially is :

$$S=\frac{1}{3}N+\frac{2}{3}S.$$

From these two equations we can see that N=3233.53293,

and $S=3233.53293$. And the value composition of each of
the means of production is, as is already known,
$0.666666667\,C_1 : 0.148148148\,v_1 : 0.185185185\,m_1$, and that of the
means of consumption, $0.625\,C_2 : 0.166666667\,v_2 : 0.20833333\,m_2$,
that of the total output will be

I $4041.91617\,C_1 + 898.20359\,v_1 + 1122.75449\,m_1 = 6062.87425$

II $2020.95808\,C_2 + 538.92216\,v_2 + 673.65269\,m_2 = 3233.53293$

The rate of profit in the section of production goods
is, therefore, $\dfrac{1122.75449\,m_1}{4041.91617\,C_1 + 898.20359\,v_1} = 22.7272773\ \%$,
and that in the section of consumption goods is
$\dfrac{673.65269\,m_2}{2020.95808\,C_2 + 538.92216\,v_2} = 26.315789\%$.

How, then, does this enable price and the average rate
of profit to be explained? Marx says that the average rate
of profit means the average of the various different rates
of profit in the different phases of production.[1] Con-
sequently, he also says that the general rate of profit pre-
supposes that the rates of profit in all peculiar sections of
production, as viewed individually, exist to the number of
the sections of production.[2] Again, he contends that the
general rate of profit can be obtained by dividing the total
amount of surplus value by the total social capital[3] and
that consequently, surplus value or profit (which accrues to
individual capitalists) represents the amount to be appor-
tioned to each capitalist, when the total surplus value or
the total profit, which is produced in a certain fixed period
with the total social capital in all sections of production, is
equally distributed among all capitalists. If the former
method of calculation is adopted, and if it is applied to our
case, the average rate of profit is $\left(\dfrac{22.727273\% + 26.315789\%}{2}\right)$
$=24.521531\%$, but if calculated on the basis of this average
rate of profit—that is, if the average profit in this sense is

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1), 2) Marx: Das Kapital III, I, Teils. 128.
3) Marx: Das Mehrwert II, s. 160.

added to the total amount of capital—the total value of social products is 9339, while the actual total value of social products is only 9297. That is to say, if this method of calculation be adopted, value will be shown to be created outside of production. This not only defeats the theory of labour value, but is inconsistent with the facts. Such an irrational result arises because, as the simple arithmetical method of averaging has been adopted in working out the average rate of profit, " weight " in all sections of production has been ignored. In order to remove this irrationality, the latter method, that is, the method of dividing the total amount of surplus value by the total amount of capital value, must be resorted to. If this method be adopted and if it be applied to our case, the average rate of profit is $\dfrac{1122.75449 \, m_1 + 673.65269 \, m_2}{7500} = 23.95208\%$. This average rate of profit obviates the irrationality which attends the former method of average-taking. In this sense, it is quite proper that in the study of the Marxian thoery, the method of dividing the total surplus value by the total value of social capital has so far been adopted in working out the average rate of profit. But can the adoption of this method settle everything?

Supposing that this method of averaging the rates of profit be adopted, the result of average-taking of the first degree is as follows :

	Constant capital.	Variable capital.	Surplus value.	Commodity value.
I	4041.91617	898.20359	1122.75449	6062.87425
II	2020.95808	538.92216	673.65269	3233.53293
Total or average	6062.87425	1437.12575	1796.40718	9296.40718

	Rate of profit.	Productive price.	Rate of deviation.
I	22.727273	6123.38197	1.00998004
II	26.315789	3173.02520	0.98128743
Total or average	23.952095	9296.40717	1.00000000

The fact that the prices of products deviate from values means that the cost of production can no longer be considered in terms of value and that it must be considered in terms of productive price. Variations in the cost of production resulting from the first average-taking of the rates of profit are:

	Constant capital.	Variable capital.	Surplus value.	First productive price.	Rate of profit %.
I	4082.25465	881.39589	1159.73143	6123.38197	23.364486
II	2041.12732	528.83754	603.06034	3173.02520	23.465704
Total or average	6123.38197	1410.23343	1762.79177	9296.40717	23.399015

It will be seen from the above that the rate of profit in the section of production of the means of production does not yet agree with that in the section of production of the means of consumption. This necessitates the process of averaging the rates of profit a second and a third time. By going through these processes successively, the following figures are obtained (see Page 61-2).

Thus, it will be seen that the disparity in the rate of profit between the two sections of production is gradually reduced, and the rate of deviation of the productive price of any degree from that of the forgoing degree diminishes by degrees. If this process is continued, it is conceivable that it will settle at a certain point in the end.

What is noteworthy is: (1) When the first amendment was effected in the cost of production by the first average-taking of the rates of profit, surplus value (price) already departed from surplus value (value) and

$$\frac{\text{Surplus value (price)}}{\text{variable capital (price)} + \text{constant capital (price)}} \quad \text{from}$$

$$\frac{\text{Surplus value (value)}}{\text{variable capital (value)} + \text{constant capital (value)}}. \quad \text{The reason}$$

why surplus value (price) is here lower than surplus value

(value) or $\dfrac{\text{Surplus value (price)}}{\text{variable capital (price)} + \text{constant capital (price)}}$ is

		Constant Capital according to the price of the 1st. degree	Variable Capital according to the price of the 1st. degree	Surplus Value according to the price of the 1st. degree
2nd. Degree	I	4082.25465	881.39589	1159.73143
	II	2041.12732	528.83754	603.06034
	Total or average	6123.38197	1410.23343	1762.79177
		according to the price of the 2nd. degree	according to the price of the 2nd. degree	according to the price of the 2nd. degree
3rd. Degree	I	4983.39724	880.91981	1160.77881
	II	2041.69862	528.55189	601.06080
	Total or average	6125.09586	1409.47170	1761.83961
		according to the price of the 3rd. degree	according to the price of the 3rd. degree	according to the price of the 3rd. degree
4th. Degree	I	4083.42945	880.90639	1160.80834
	II	2041.71472	528.54384	601.00443
	Total or average	6125.14417	1409.45023	1761.81277
		according to the price of the 4th. degree	according to the price of the 4th. degree	according to the price of the 4th. degree
5th. Degree	I	4083.43036	880.90601	1160.80917
	II	2041.71517	528.54361	601.00285
	Total or average	6125.14553	1409.44962	1761.81202

lower than $\dfrac{\text{Surplus value (value)}}{\text{variable capital (value)} + \text{constant capital (value)}}$ is that the value composition of capital in the section of production of the products to be purchased with surplus value is of an order lower than the average value compostion of capital in the sections of production of other products. In the opposite case, the result will be opposite. Supposing, for instance, that expansive reproduction takes place in this case and that a part of surplus value is to be employed for the purchase of the means of production, which is the produce of capital with value composition of

Rate of Proft (%) according to the price of the 1st. degree	Price of the 2nd degree	Rate of the Deviation of the price of the 2nd. degree from that of the 1st. degree	Rate of the Deviation of the price of the 2nd. degree from value
23.364486	6125.09586	1.00027989	1.01026272
23.465704	3171.31131	0.99945986	0.98075739
23.399015	9296.40717	1.00000000	1.00000000
according to the price of the 2nd. degree	of the 3rd. degree	of the price of the 3rd. degree from that of the 2nd. degree	of the price of the 3rd. degree from value
23.382447	6125.14418	1.00000789	1.01027069
23.385300	3171.26299	0.99998476	0.98074244
23.383420	9295.40717	1.00000000	1.00009000
according to the price of the 3rd. degree	of the 4th. degree	of the price of the 4th. degree from that of the 3rd. degree	of the price of the 4th. degree from value
23.382953	6125.14554	1.00000022	1.01027092
23.383034	3171.26163	0.99999958	0.98074202
23.382981	9296.40717	1.00000000	1.00000000
according to the price of the 4th. degree	of the 5th. degree	of the price of the 5th. degree from that of the 4th. degree	of the price of the 5th. degree from value
23.382968	6125.14560	1.00000001	1.01027093
23.382970	3171.26158	0.99999999	0.98074201
23.382969	9296.40718	1.00000000	1.00000000

a higher order than that of the means of consumption hitherto purchased with it, the disparity between the average value composition of capital which produces the goods to be purchased with surplus value and the average value composition of capital which produces other goods will be reduced, and consequently the difference both between surplus value (price) and surplus value (value), and between

$$\frac{\text{Surplus value (price)}}{\text{variable capital (price)} + \text{constant capital (price)}} \text{ and}$$

$$\frac{\text{Surplus value (value)}}{\text{variable capital (value)} + \text{constant capital (value)}} \text{ will also}$$

diminish. (2) In this case, $\dfrac{\text{Surplus value (price)}}{\text{variable capital (price)}}$ is equal to

$\dfrac{\text{Surplus value (value)}}{\text{variable capital (value)}}$. This is because, in this study, the case is assumed where the average value composition of capital which produces goods to be purchased with surplus value is equal to the average value composition of capital which produces the necessaries of life for the requisite · labourers. If, on the contrary, the average value composition of capital which produces goods to be purchased· with surplus value is of a higher order than that of capital which produces the necessaries of life for the requisite labourers—for instance, if it be assumed that, in the above-mentioned case, expansive reproduction takes place $\dfrac{\text{Surplus value (price)}}{\text{variable capital (price)}}$ will be higher than

$\dfrac{\text{Surplus value (value)}}{\text{variable capital (value)}}$, while, in the contrary case, the result will be the opposite. (3) The circumstances which bring about the difference between

$$\dfrac{\text{Surplus value (price)}}{\text{variable capital (price)} + \text{constant cepital (price)}} \text{ and}$$

$$\dfrac{\text{Surplus value (valve)}}{\text{variable capital (value)} + \text{constant capital (value)}} \text{ are different}$$

from those which are responsible for the disparity between $\dfrac{\text{Surplus value (price)}}{\text{variable capital (price)}}$ and $\dfrac{\text{Surplus ualue (value)}}{\text{variable capital (value)}}$. The former embodies the relations of the average value composition of capital which produces goods to be purchased with surplus value with that of capital which produces other goods (requisite means of production and the necessaries of life for the labourer), while the latter represents the relations of the average value composition of capital which produces goods to be purchased with surplus value with that of that capital only which produces the necessaries of life for the requisite labourers.

The failure of Marx to make clear these circumstances was due solely to the fact that he did not consider thoro-

ughly the result of the average of the rates of profit (the fact that cost value itself is caused to deviate from value by the average of the rates of profit). Marx says: the productive price of the commodity is the cost price for the purchaser of the commodity and that it can enter into the value formation of other commodities as cost price. Since it is possible that the productive price of the commodity does not agree with its value, the cost price of one commodity which includes such productive price of another commodity can also be either bigger or smaller than that portion of the total price of this commodity which is represented by the value of the organ of production which entered into this commodity.[4] " It is important to keep in mind," he says, " that the meaning of cost price has undergone such changes and that an error is always possible when it is assumed that the cost price of the commodity in one special section of production is equal to the value of productive organs (and labour power)."[5] consumed in the production of this commodity. While taking note of this fact, he, in his study of the relations of the theory evolved to apply to cases where production is carried on in pursuit of the highest possible rate of surplus value with capitalistic production which aims at the highest possible rate of profit, keeps clear of the central issue by saying that " in the present study there is no need to expatiate further on this point." Marx presumably thought that even if the values of individual commodities might depart from their productive prices, these deviations were neutralised in regard to the social products as a whole, so that value agreed with price (of course, as money can also deviate from value, the whole value will then be expressed in different price, but this point may be left out of consideration, as it does not affect the problem of what portion of the whole value represents surplus value).

It is true that in regard to social products as a whole,

4). 5) Marx: Das Kapital III, 1. Teil s. 135.

value and price are in accord, provided the value com-
position of money is equal to that of the other social pro-
ducts as a whole, but this is not the point at issue. Even
if value and price accord with each other in reference to
social products as a whole, productive price deviates from
value, when social products are considered in sections.
And, the means of production and the necessaries of life
for the labourer being only a part of the social products,
the total price of the means of production and the neces-
saries of life for labour may deviate from their total value.
If so, the sum of the prices of the means of production
and the necessaries of life for labour necessary for the
production of the social product as a whole the price of
which is regarded as equal to its value, ought to depart
from the sum of their values. Accordingly, the surplus
value and therefore the rate of profit in this case must be
different from the surplus value and therefore the rate of
profit which emerge where the effects of the average of the
rates of profit are not thoroughly examined.

The defects of the Marxian theory in this regard have
hitherto been pointed out by many economists, as, for
example, Tugan Baranowsky, Bortkiewicz, Moskowska, and
Prof. Takata, and the right path of development have been
indicated by Bortkiewicz. I have, as described, reached the
same conclusions as those of Bortkiewicz by methods of my
own, independently of the lines which Bortkiewicz pursued
in his research. As already explained, if the action of the
average of the rates of profit is thought out, it is possible
to explain price from value without hindrance, but, if price
cannot be explained by any other means, cognition of value
will remain an indispensable premise for cognition of price.
Is it, however, impossible to explain price except from the
premise of value?

B'. Now, supposing that, all other conditions being
the same as in the case of A', production is carried on
with the highest possible rate of profit for its direct object,
instead of the highest possible rate of surplus value as in

the case of A'. Then, as the rates of profit ought to be uniform socially, provided perfect capitalistic competition prevails, the price composition of the means of consumption is:

$$P=\left(\frac{1}{3}k+\frac{1}{30}5P\right)(1+P'),$$

and the price composition of the means of production is: ·

$$k=\left(\frac{2}{3}k+\frac{1}{18}\times 5P\right)(1+P'),$$

and the price composition of money is:

$$1=\left(\frac{1}{2.87499999935}k+\frac{1}{32.3437499541}\times 5P\right)(1+P').$$

From these three equations, we can see $P=0.98074201$, $k=1.894257988$, $P'=23.38296816\%$, and that the price composition of the means of production is $\frac{2}{3}k:\frac{4}{18}\times 5P:\left(\frac{2}{3}k+\frac{1}{18}\times 5P\right)P'=0.666666667:0.14381797:0.18951536$, and that of the means of consumption is $\frac{1}{3}k_1:\frac{1}{30}\times 5P:\left(\frac{1}{3}k_1+\frac{1}{30}\times 5P\right)P'=0.64381795:0.16666667:0.18951538$. It will thus be seen that the factors decisive of both price and the average rate of profit can be explained, independently of value.

It is worthy of note in this connection that the results thus obtained are just equal to those which were obtained when we took value as the starting point of our study.

Let it be assumed that in this case also, as in the case of A', (1) money is not produced and (2) the amount of product of the means of productions is 3233.53293.

Further, assuming that simple reproduction takes place, as in the case of A', we can obtain the following equation in regard to the formation of social demand for the means of production, for the reasons stated in the case of A':

$$S=\frac{1}{3}N+\frac{2}{3}S.$$

From these two equations, it is seen that $N=3233.53293$.

And as the price composition of each of the means of production, as is already known, is $0.66666667C_1 : 0.14381797v_1 : 0.18951536m_1$, and that of each of the means of consumption is $0.64381795C_2 : 0.16666667v_2 : 0.18951538m_2$, that of the total output will be:

   I $4083.43049C_1 + 880.90601v_1 \times 1160.80917m_1$.

   II $2041.71517C_2 + 528.54361v_2 + 601.00285m_2$.

Thus we see, that the results obtained without reference to value are equal to those obtained by starting from value, in these respects, also.

It will thus be seen that, if the given conditions are equal, we reach exactly the same results by two different methods—one to find value first and then proceed to explain price on that basis, and the other to proceed to analyse price from the outset without reference to value at all.

CONCLUSION

In the present article, I have demonstrated that the conclusion to be reached by the theory of general equilibrium so rewritten as to facilitate the analysis of the organisation of capitalistic production—the conclusion arrived at without reference to value—is the same as that reached by thinking out the action of the average of the rates of profit, while at the same time taking value into consideration. Thus, we shall be able to conclude that the determination of the ratios of exchange of various commodities and the various phenomena based on it can be adequately explained theoretically without the knowledge of value and also that the cognition of value is a matter of colouring them from a specific point of view of the world.

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