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*Archive: Marx's Economic Manuscript of 1867–68 (Excerpt)*

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# Marx's Economic Manuscript of 1867–68 (Excerpt) Editor's Introduction

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**Abstract**

This is an introduction to an English translation of a 25-page excerpt from Marx's *Manuscript of 1867–68*, which was published for the first time in German in 2012 in the *MEGA*, Volume II/4.3. This excerpt (see pp. 162–92) is Marx's first and only attempt to incorporate unequal turnover times across industries into his theory of the equalisation of the profit rate and prices of production. The introduction attempts to clarify the overall logic of this excerpt as well as to point out Marx's many small errors in this messy first draft. The introduction concludes with the implications of this excerpt for the general interpretation of Marx's theory of prices of production (i.e. the transformation problem).

**Keywords**

Marx – turnover time of capital – prices of production – transformation problem – rate of profit

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The so-called 'transformation problem' has been the most important logical criticism of Marx's economic theory in *Capital* over the last century and the main reason for rejecting Marx's theory. The transformation problem has to do with the apparent contradiction between the labour theory of value and the empirical tendency toward equal rates of profit across industries. According to the labour theory of value, labour is the only source of new value and hence the only source of surplus-value (or profit). Therefore, the theory seems to imply that industries with a higher-than-average proportion of labour to capital (i.e. a lower-than-average composition of capital or ratio of constant capital to variable capital) should have a higher-than-average rate of profit (ratio of surplus-value to total capital). In addition, industries with a shorter-than-average turnover time should have a higher-than-average annual rate of profit, because less capital has to be invested in order to produce a given amount of surplus-value in a year. However, these two apparent predictions of the labour theory of value are contradicted by the tendency toward equal rates of profit across industries, no matter what the composition of capital or the turnover time of individual industries.

As is well known, in Part 2 of Volume 3 of *Capital*, Marx presented his theory of prices of production that attempted to explain this apparent contradiction. Critics ever since Bortkiewicz in 1905 (and Sweezy in the English-speaking world in 1944) have argued that Marx's attempt failed because he 'failed to transform the inputs of constant capital and variable capital' from values to prices of production. There has of course been a long controversy over the transformation problem, with many participants, including some innovative interpretations in recent decades.[1] I have argued elsewhere[2] that Marx did *not* in fact fail to transform the inputs and that Marx's theory of prices of production is logically consistent.

However, in any case, Marx considered only one of the two issues mentioned above – the issue of unequal compositions of capital – and he did not consider the other issue of unequal turnover times. And the long debate over the transformation problem has also ignored the issue of unequal turnover times because Marx did not discuss it. Furthermore, it is more complicated to deal with than unequal compositions of capital.

1 See Moseley 2016, Part 2, for a comprehensive critical review of the literature on the transformation problem in recent decades, including chapters on Shaikh's iterative interpretation, the New Interpretation of Foley and Duménil and others, the Temporal Single-System Interpretation of Kliman and McGlone, the Rethinking Marxism interpretation of Wolff, Roberts, and Callari, and the Organic Composition of Capital interpretation of Fine and Saad-Filho.

2 See Moseley 2016.

Marx noted this second reason why the prices of production of commodities differ from their values (unequal turnover times across individual industries) in the following passages in Part 2 of Volume 3:

> We have now to investigate: (1) differences in the organic composition of capitals; (2) *differences in their turnover time*.[3]
>
> Besides the differing organic composition of capital … there is a further source of inequality between [value] rates of profit: the *variation in the length of capital turnover* in the different spheres of production.[4]
>
> … we shall ignore for the time being the differences that may be produced here by *variation in the turnover times*. This point will be dealt with later.[5]

Unfortunately, Marx did not return later in Volume 3 to this important subject of the effect of unequal turnover times on prices of production.

Fortunately, however, it has been discovered in recent years that Marx did in fact return to this subject in a later manuscript – the *Economic Manuscript of 1867–68*, which was published for the first time in German in 2012 in the *Marx/Engels Gesamtausgabe* (MEGA), Volume II/4.3, and has not yet been translated into English. A section of this manuscript (pp. 254–80) presents Marx's initial attempt to incorporate unequal turnover times into his theory of prices of production. An English translation of these 27 pages is presented below and it is hoped that this publication will stimulate further research efforts to develop Marx's theory of prices of production along these lines. This Introduction and the accompanying Translator's Introduction attempts to clarify the overall logic of this excerpt and some of the technical details.

The starting point of Marx's analysis is the theory of prices of production presented in Part 2 of Volume 3 of *Capital*, according to which the price of production in a given industry (PP) is determined by:

| | | | | |
|---|---|---|---|---|
| price of production | = | cost price | + | average profit |
| PP | = | K | + | pC |

where K is the cost price in a given industry (the capital consumed in production in a year = consumed constant capital + variable capital), C is the total

3 Marx 1981, p. 243.
4 Marx 1981, p. 250.
5 Marx 1981, p. 254; emphasis added in these three passages.

capital advanced in that industry, and p is the general rate of profit.[6] In this equation, C and K are taken as given, and the general rate of profit is determined by the rate of surplus-value, the composition of capital, and the turnover time of the total social capital, as presented in Volumes 1 and 2 of *Capital*, and taken as given in this analysis.[7] In Marx's numerical examples in this excerpt, he generally assumed the following characteristics of the total social capital: rate of surplus-value = 1.0, the composition of capital = 4.0, and the turnover time = once per year, and thus the general rate of profit = 20%, which is taken as given throughout this analysis. The total social capital is then the fixed point of comparison in the determination of prices of production of individual capitals.[8]

Marx decomposed the average profit in a given industry into two components:

$$pC = S + A$$

where S is the surplus-value produced in that industry and A is the profit adjustment that must be made in order to equalise the rate of profit in that industry, which could be positive or negative.[9] So the above equation for the price of production for the given industry can be written as:

$$PP = K + S + A$$

which can be compared with the equation for the value for that industry (W):

$$W = K + S$$

An important distinction in Marx's analysis that was introduced earlier in this volume is between two rates of profit – the usual rate of profit on the total capital *advanced* ($p = S/C$) and the rate of profit on the capital *consumed*, or as Marx usually called it: the rate of profit related to the cost price ($\pi = S/K$). The rate of profit on the cost price relates the surplus-value produced to the

6 Price of production is an annual flow variable. Marx did not use a symbol for price of production in this excerpt, so this symbol is mine. See the end of this Introduction for a complete set of the symbols used.

7 C is always assumed to = 500 for both individual capitals and the total social capital.

8 Individual capitals represent the average of the total capital in individual industries.

9 In Marx's manuscript, he used the symbol M (Mehrwert) for surplus-value and the symbol S (for 'surplus' written in English) for the profit adjustment.

capital functioning in the valorisation process, not including the fixed capital advanced but not yet transferred to the value of the product.[10]

Marx considered both of these rates of profit with respect to both the total social capital and to individual capitals. He usually assumed throughout this excerpt that the average turnover time of the total advanced social capital is one year, so that K = C and thus S/K = S/C for the total capital. For individual capitals, Marx mostly assumed that K ≠ C and thus S/K ≠ S/C. S/K received the most attention, which (unfortunately) he abbreviated in two different ways: as p' on pp. 256–68 and as π in the rest of the section. This introduction will abbreviate S/K for individual capitals as π. S/C for individual capitals was abbreviated only a few times on p. 276 and was abbreviated as p' (not to be confused with S/K on pp. 256–68!).

And it should be clarified that there are two components of the turnover time of capital – the turnover time of fixed capital and the turnover time of circulating capital. The turnover time of fixed capital is more than one year and the turnover time of circulating capital is usually (and in Marx's examples) less than a year. The turnover time of the total advanced capital is a weighted average of these two components (see Chapter 9 of Volume 2 of *Capital*, 'The Overall Turnover of the Capital Advanced'). Marx chose numbers in his base case such that the longer turnover time of fixed capital was exactly offset by the shorter turnover time of circulating capital, so that the overall turnover time of the advanced capital = 1 year (and thus K = C). See the Appendix of this Introduction for an explanation of Marx's numerical example in his base case.

In this excerpt, Marx considered three main cases: unequal turnover times (the main case), unequal compositions of capital, and both inequalities together (rates of surplus-value are generally assumed to be equal, except briefly on pp. 259 and 263–5, which are discussed below).[11]

The first case is unequal turnover times across industries (assuming equal compositions of capital = 4.0 and equal rates of surplus-value = 1.0) (pp. 256–63, 273, and 278–80). Marx usually assumed a second capital II with a *slower* than average turnover time (annual K = 440 and C = 500). Since capital II has a slower than average turnover time, it produces less surplus-value in a year

10 Marx discussed these two rates of profit in some detail in the ten pages prior to the excerpt translated here entitled 'I) Difference between the Rate of Profit on Cost Price and on the Advanced Capital' (pp. 244–53).

11 It should be noted that the composition of capital in this analysis refers to the composition of the *consumed* capital (not the composition of the advanced capital), which is equal to the ratio of consumed constant capital to variable capital (c/v), and which Marx expressed in these pages as 'the composition of the cost price' or 'the composition related to the cost price'.

(88 instead of 100)[12] and thus its rate of profit on capital advanced is less than the general rate of profit (17.6% instead of 20%). Therefore, in order to equalise the rate of profit on capital advanced of capital II with the general rate of profit, a *profit adjustment* ($A_t$) must be added to the surplus-value produced by capital II and the price of production of the commodity produced by capital II will be greater than its value.[13]

$$PP = K + S + A_t$$

Marx expressed the surplus-value as $S = \pi K$ (to emphasise that S depends on the capital turned over in a year, not the capital advanced) and the profit adjustment in this case of unequal turnover time as $A_t = \pi\ (C - K)$. Thus the price of production in this case is:

$$PP = K + \pi_i K + \pi(C - K) = K + \pi K + \pi\,\delta \qquad \text{where } \delta = C - K$$
$$= 440 + .20(440) + .20(500-440)$$
$$= 440 + 88 + 12 = 540 > W = 528$$

Since the composition of the cost price of capital II in this case is equal to the average composition of capital, its rate of profit related to the cost price ($\pi$) is equal to the general rate of profit (p) (= 20%), and Marx also expressed the price of production equation for this case in terms of p not $\pi$ (for this case only):

$$PP = K + pK + p(C - K) = K + pK + p\,\delta$$

The second case is of unequal compositions of capital (of the cost price) (assuming equal turnover times and equal rates of surplus-value) which Marx considered only very briefly (p. 273). In this case, Marx assumed a second capital with a *higher* than average composition of capital. For example,[14] constant capital = 425 (instead of 400) and variable capital = 75 instead of 100, so the composition of capital = 5.67 instead of 4.0. Since the rate of surplus-value = 1.0, the surplus-value produced by capital II = 75 instead of 100 and the rate of profit on the cost price ($\pi$) is 15% instead of 20%. Therefore, again, in order to

12 S = variable capital = 100 (440/500) = 88.

13 If another capital had a faster-than-average turnover time (i.e. K > C), then $A_t$ would be negative and the profit adjustment would be subtraction rather than addition.

14 Marx discussed the second case only in passing (he had already discussed this case at length in Volume 3) and he did not present an explicit numerical example for this case. My example for the second case is the same as Marx's example for unequal composition of capital in the third case.

equalise the rate of profit of capital II with the general rate of profit, a 'profit adjustment' must be added to the surplus-value produced by capital II ($A_c$) and its price of production will be greater than its value.[15] The profit adjustment in this case of unequal composition of capital is: $A_c = (p - \pi)K$. And the equation for price of production for this second case is:

$$\begin{aligned} PP_i &= K + S + A_c \\ &= K + \pi K + (p - \pi)K = K + \pi K + \delta' K \qquad \text{where } \delta' = p - \pi \\ &= 500 + .15(500) + (.20 - .15)(500) \\ &= 500 + 75 + 25 = 600 > W = 575 \end{aligned}$$

The third case is the combined and more complicated case of both unequal turnover times and unequal composition of capital (with equal rates of surplus-value) (pp. 265–76). In this case, the profit-adjustment component of the price of production consists of three sub-components: one for the separate effect of unequal turnover times ($A_t$), one for the separate effect of unequal compositions of capital ($A_c$), and one for the combined effect of both of these two inequalities together ($A_{t,c}$). The profit adjustment for this case of both unequal turnover time and unequal composition of capital is: $A = \pi (C - K) + (p - \pi)K + (p - \pi)(C - K)$. And the equation for price of production for this third case is:

$$\begin{aligned} PP &= K + S + (A_t + A_c + A_{t,c}) \\ &= K + \pi K + \pi (C - K) + (p - \pi)K + (p - \pi)(C - K) = K + \pi K + \pi\delta + \delta' K + \\ &\quad \delta'\delta \\ &= 440 + 60 + .136(500\text{–}440) + (.20 - .136)440 + (.20 - .136)(500\text{–}440) \\ &= 440 + 60 + 8.2 + 28 + 3.8 = 540 > W = 500 \end{aligned}$$

It should be noted that there are many mistakes in Marx's numerical examples and also in some of his algebraic analysis. This is very much a rough first draft about a complicated subject that needed a lot of work. The translator and I have corrected most of the numerical errors (but not all), and have indicated our corrections in footnotes. The two most important mistakes should be mentioned.

On the third page of this excerpt (p. 256), in a discussion of the case of capital II with a slower-than-average turnover time, Marx started a numerical example in which he assumed incorrectly that the price of production = 600 (it should be 540), without explaining how he got the number 600. Since the

15 If another capital had a lower-than-average composition of capital, then $\pi$ would be greater than p and $A_c$ would be negative rather than positive.

value of capital II is 528, the profit adjustment A is mistakenly calculated as 72, rather than 12. A few pages later (p. 260), Marx recognised his mistake and started over with the correct numbers and the correct equation for prices of production = K + pC. But many numbers on pp. 256–59 are wrong, and they have not been corrected in our translation.

The second important error is on pp. 273–4. On p. 265, Marx began to analyse for the first time the more complicated case of both unequal turnover times and unequal compositions of capital. He used a numerical example to calculate the three sub-components of the profit adjustment A (the two separate effects plus the combined effect). And he comes to the correct equation for this complicated case on pp. 268–9:

$$PP = K + \pi K + \pi(C - K) + (p - \pi)K + (p - \pi)(C - K)$$

However, on pp. 273–4, Marx first briefly reviewed the case of unequal turnover times separately ($A_t = \pi(C - K)$), and then the case of unequal compositions of capital separately ($A_c = (p - \pi)K$), and then he discussed the case of the two differences together, and simply added together these two sub-components of the profit adjustment, without taking into account their combined effect: $A_{t,c} = (p - \pi)(C - K)$. Marx appears to have momentarily forgotten the combined effect that he derived from a numerical example a few pages before. But he returned to the correct equation on p. 276 and the last few pages.

However, this mistake on pp. 273–4 requires a modification of the main point of these pages – that when the two separate adjustments ($A_t$ and $A_c$) are in opposite directions (one positive and the other negative), then the net profit adjustment depends on the relative absolute magnitudes of the two separate adjustments. But the correct conclusion is that the net profit adjustment also depends on the missing combined effect ($A_{t,c}$), which in the cases of opposite signs of the separate effects will always be negative (and will usually be small).

Another difficulty with Marx's analysis is that he is not consistent in his definitions of the two key 'differences' in his calculations of the profit adjustments: $\delta = C - K$ and $\delta' = p - \pi$. This difficulty is discussed in the Translator's Introduction.

This beginning of a more fully developed theory of prices of production in this manuscript of 1867–8 has the following important implications for the long-standing controversy over Marx's theory of prices of production presented in the earlier Volume 3 manuscript (*Manuscript of 1864–65*), and I think provides additional textual evidence to support the 'macro-monetary' interpretation of Marx's theory that I have presented in my recent book.

1. In the theory of prices of production presented in this manuscript and summarised above, the *general rate of profit is taken as given*, as determined by the prior theory of the total surplus-value in Volumes 1 and 2 of *Capital*. This logical sequence (from the macro general rate of profit to the micro prices of production) is highlighted in the title of this section of the manuscript:

> *General rate of profit given*. How does the equalisation of values to prices of production take place, with respect to unequal turnover of capitals in different spheres of production? (emphasis added)

2. The turnover time of capital is defined as the length time between the advance of money capital to purchase means of production and labour-power and the recovery of money capital through the sale of commodities. This definition of turnover time clearly indicates that Marx's theory is a monetary theory and that the circuit of money capital is the analytical framework of Marx's theory.

3. The *cost price K and the capital advanced C are taken as given* throughout this excerpt (along with their two components, constant capital and variable capital). These given quantities of money-capital inputs together with the predetermined general rate of profit determine the prices of production of the outputs (PP = K + pC).

4. *The cost price is the same* in the determination of both values and prices of production, and is symbolised throughout by the same letter, K:

> value = K + S
> price of production = K + pC = K + S + A

Since the cost price = constant capital + variable capital, this excerpt provides further important textual evidence that these inputs to capitalist production are *supposed to be the same* in the determination of both values and prices of production in Marx's theory, and are equal to the actual quantities of money capital advanced to purchase mean of production and labour-power in the beginning of the circulation of money capital. The inputs are *not supposed to be transformed*, contrary to the long-standing criticism of Marx's theory of prices of production. Nothing is said in this excerpt about the necessity to transform the inputs. In addition, one of the two rates of profit that is analysed throughout this excerpt (and in the ten pages prior, pp. 244–53) is the 'rate of profit on the cost price', which is a single rate of profit and is a determinant of both values and prices of production. This concept of a single rate of profit on the cost price makes no sense unless there is only one cost price.

With respect to the New Interpretation of Marx's theory (Foley, Duménil, etc.), I have criticised the NI for its inconsistent treatment of constant capital and variable capital – variable capital is taken as given and invariant (i.e. not transformed, as in my interpretation) but constant capital is derived from given quantities of means of production, first as their value and then as their prices of production, and thus constant capital must be transformed (and Marx failed to do so), as in the standard interpretation. This manuscript provides further textual evidence against this aspect of the New Interpretation and in favour of my interpretation. Both C and V are taken as given and remain invariant; this is especially obvious in the variable cost price which is the sum of C and V and is taken as given, which means that C and V are both taken as given together.

It should also be mentioned that in this excerpt Marx twice relaxed his usual simplifying assumption of equal rates of surplus-value across industries (on pp. 259 and 263–5; the latter pages were a separate Section B, with the title 'Different Rates of Surplus-Value'). On p. 259, the point is that a higher-than-average rate of surplus-value may compensate for a slower-than-average turnover time. On pp. 263–5, the point is that, for a given amount of labour, a higher (or lower) than average rate of surplus-value will be accompanied by a higher (or lower) than average composition of capital, because variable capital will be smaller (or larger). This relaxation of the assumption of equal rates of surplus-value provides textual evidence that Marx regarded his usual assumption of equal rates of surplus-value as a *simplifying assumption*, not a necessary tendency of capitalist production, as some have argued. Marx also relaxed the simplifying assumption of equal rates of surplus-value for a few pages in the *Manuscript of 1875* (MEGA II/14, pp. 135–41).

All in all, I think this section of the *Manuscript of 1867–68* which presents the beginning of a more complete theory of prices of production including unequal turnover times is very interesting and important, despite its messiness, and it is hoped that its publication will stimulate further research on this important subject. The top priority should be to translate the entire manuscript (MEGA II/4.3). It is a combination of Parts 1 and 2 of Volume 2 and Parts 1 and 2 of Volume 3, with an emphasis on incorporating the key variable of the turnover time of capital into his theory of the circuit of capital. This volume makes it clear that there is a third variable in Marx's theory of the rate of profit besides the rate of surplus-value and the composition of capital – the turnover time of capital, both the turnover time of the total social capital (which affects the general rate of profit and its changes over time) and the turnover times of individual capitals (which affects the individual value rates of profit and their differences across industries and thus affects prices of production). Since this key variable has been largely neglected in the Marxian literature (Duncan Foley is a notable exception) further research along these lines should be very welcome.

Finally, I want to express my deep gratitude to the translator Herbert Panzer, a systems analyst by profession, for taking on the very difficult task of translating this very messy and mathematical manuscript – for free! It has been a pleasure and enlightening to work with him. (For Panzer's Translator's Introduction, see pp. 157–61.)

## Notation

| | |
|---|---|
| C | total capital advanced |
| c | constant capital consumed |
| v | variable capital consumed |
| K | cost price (capital consumed in a year = c + v) |
| S | surplus-value (= variable capital because rate of surplus-value = 1) |
| W | value (= K + S) |
| PP | price of production (= K + S + A) |
| p | general rate of profit on capital advanced of the total social capital (= S/C) |
| $\pi$ | rate of profit related to the cost price (= S/K) |
| $\delta$ | C – K usually (but sometimes K – C) |
| $\delta'$ | p – $\pi$ usually (but sometimes $\pi$ – p) |
| A | total profit adjustment to equalise the rate of profit: $A_t + A_c + A_{t,c}$ |
| $A_t$ | profit adjustment due to unequal turnover time: $\pi(C - K) = \pi\delta$ |
| $A_c$ | profit adjustment due to unequal composition of capitalist: $(p - \pi)K = \delta' K$ |
| $A_{t,c}$ | combined profit adjustment due to both unequal turnover time and unequal composition of capital: $(p - \pi)(K - C) = \delta'\delta$ |

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## Appendix: Turnover Time in Marx's Base Case

Marx used the following numerical example as the base case in his theory of the effect of different turnover times on prices of production in the excerpt translated. Marx had already explained this numerical example in a previous section of this manuscript (pp. 210–11).

1. Assume the total advanced capital (C) = 500, which consists of:

advanced fixed capital = 400
advanced circulating capital = 100

2. Assume that the advanced fixed capital turns over in 10 years, so that the annual depreciation as a component of the cost price = 40.

3. Thus, in order for the total cost price (K) to equal C = 500 (and thus the total advanced capital turns over in one year), the annual flow of the circulating-capital component of the cost price

must = 500–40 = 460.

4. Thus the advanced circulating capital turns over 460 / 100 = $4\frac{3}{5}$ times a year.

5. Assume that the annual flow of circulating capital consists of 360 constant capital and 100 variable capital.

6. Therefore, the advanced circulating capital consists of:

constant capital = $360 / 4\frac{3}{5} = 78\frac{6}{23}$

variable capital = $100 / 4\frac{3}{5} = 21\frac{17}{23}$

These odd numbers for the advanced circulating capital are not important in Marx's analysis; they do not change throughout the analysis. What changes in this analysis is the number of turnovers per year of the circulating capital; typically to a slower turnover of circulating capital, e.g. from $4\frac{3}{5}$ to 4 turnovers a year (and thus K < C). So 'different turnover times' in this analysis means different turnovers of *circulating* capital; the turnover of the fixed capital remains the same (10 years) for all capitals considered.

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# Marx's Economic Manuscript of 1867–68 (Excerpt) Translator's Introduction

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## Abstract

This Introduction describes the approach and rules applied when translating a 25-page excerpt from Marx's *Manuscript of 1867–68*, as published in the MEGA, Volume II/4.3. The draft status and terseness of the text required that the translation (see pp. 162–92) proceed along with a working-out of its mathematical content. The translation's main guideline was to translate the draft such as it stood, while correcting figures and formulas wherever possible. Remaining major deficiencies and inconsistencies are discussed in depth, showing also what an outstanding level of acuity Marx had already achieved in a manuscript at first-draft stage.

## Keywords

Marx – turnover time of capital – organic composition of capital – rate of profit – Marx's analytical method – WLOG proof methodology

When taking on the task of translating this MEGA text, it quickly became clear that this manuscript was not meant by Marx for immediate publication. Rather it stands as internal documentation of analytical results, but also of alternative approaches for the analyst Marx himself. This appears in different aspects and has consequences for the translation. One aspect is the terseness of the text. For example, instead of writing 'bezogen auf' (related to), Marx simply writes the preposition 'auf'. Unfortunately, this is not the only textual context where this preposition is of relevance. On page 257 there is the sentence: 'Nun müßte der Zuschlag … von $\frac{36}{25}$ auf $\frac{220}{25}$.' This sentence is missing a verb. There is one

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textual context in German where the pattern ‘von x auf y’ matches: in combination with the verb ‘steigen’ (to rise). So, the transcriber adds this verb to the MEGA text. The translation would then be: ‘Now the supplement would be required to rise from $\frac{36}{25}$ to $\frac{220}{25}$.’[1] That this does not make sense can only be recognised when Marx’s numerical and algebraic material is understood. And here the pattern ‘x auf y’ is typically used to express the numerical relationship ‘x related to y’. In addition, from a more macroscopic standpoint, the manuscript is about comparing a capital of a certain composition and turnover with some reference capital. Both capitals are quantitatively fixed. There is nowhere a ‘rise’.

So, the translation had to proceed along with a working-out of the numerical and mathematical content. This came as no surprise, as another aspect of the draft status of the manuscript were defects on different levels that were detected (and subsequently corrected), starting from simple typos. For the purpose of checking all numerical figures related to formulas, a spreadsheet was applied using accurate fraction numbers (as Marx does) rather than approximate decimal fractions. Also, the algebra was checked (and corrected).

Such changes require some guidelines. The intention was to translate the manuscript in the state in which it currently exists in the MEGA text, rather than raising it to a scientifically completed level. This does justice to it by providing insight not only into Marx’s way of working and analytical (including mathematical) capabilities, but also into what an outstanding level of scientific acuity is already achieved in a text at draft stage (see last paragraph). On the other side, readers are saved from repeatedly wasting time with deficiencies that have already been solved. Thus, obvious typos have been silently corrected. Missing words have been added using square brackets. For corrections in the formulas and algebraic expressions, footnotes are given. *Cursive* formatting is widely used in the manuscript, and the underlying logic for this could not always be discerned; this could also relate to a transcription issue when creating the MEGA text. Therefore, an attempt was made to maintain the *cursive* formatting as it was found there.

1 Based on the knowledge that in the context ‘x auf y’ Marx actually means ‘x related to y’, the literal translation of the MEGA text becomes ‘Now, the supplement of the surplus value would be required of [being] $\frac{44}{25}$ [related] to $\frac{220}{25}$ (44 to 220 = $\frac{1}{5}$) 20%, and the supplement of $\frac{36}{25}$ to $\frac{220}{25}$ (or 36 : 220 = 9 : 55) 16 $\frac{4}{11}$ %.’ The missing verb is ‘being’. In the translation we have used a more easily readable version. However, with this alone, readers of the German MEGA text would not find the link back to the MEGA text and the translation would appear to be wrong.

In the end, two deficiencies remain where this approach of local explanations and corrections is not appropriate. Tackling this requires instead a more top-down view of the manuscript. Following its given structure, the following partitions can be identified:

Section A)

  Partition A1: pages 254–9

  Partition A2: pages 260–3

Section B)

Section C)

  Partition C1: pages 264–71

  Partition C2: pages 272–5

  Partition C3: pages 275–7

  Partition C4: pages 277–80

Partition A2 begins with Marx stating that Partition A1 is erroneous (for explanation of this error, see the Editor's Introduction), and then he restarts the argumentation with corrected figures. This clearly indicates that the manuscript is a first draft, as otherwise an erroneous part would not have been kept. It would have been left aside, or corrected, or amalgamated with the 'good' part.

Chapter C) is the core part of the manuscript, as here the impacts are analysed when *both* turnover *and* organic composition are diverging. In Partition C1, when analysing how both of them contribute to the price of production, he comes up with the formula (page 270)

$$K(1 + \pi) + \pi\delta + (p - \pi)(K + \delta) \qquad (1)$$

With Marx's definition $p - \pi = \delta'$, this can also be written as

$$K(1 + \pi) + \pi\delta + \delta'(K + \delta) \qquad \text{or} \qquad (1a)$$
$$K(1 + \pi) + \pi\delta + \delta'K + \delta'\delta \qquad (1b)$$

In Partition C2 Marx takes into account the fact that, in his example, so far only positive deviations of $\delta$ and $\delta'$ are considered. For a general solution, a complete case distinction needs to be done. As a result, Marx obtains as general formula for the price of production (page 270)

$$K(1 + \pi) \pm \delta\pi \pm \delta'K \qquad (2)$$

In Partition C3 Marx, based on an additional example with negative deviation, finds the price of production formula (page 277)

$$K \pm \pi(K \pm \delta) \pm \delta'(K \pm \delta) \qquad (3)$$

Taking into account that the first '±' should, correctly speaking, be a '+' only, this can be written as

$$K(1 + \pi) \pm \pi\delta \pm \delta'(K \pm \delta) \qquad (3a)$$

The different grouping of the variables in (1), (2) and (3) indicate that Partitions C1, C2 and C3 are different threads in the manuscript that have never been reviewed from a joint perspective. (1) is a special case of the general formula (3) (visible through (1a) and (3a)). However, there is another general formula (2) that is not consistent with (3), as the term $\delta'\delta$ is missing (see (1b)). So, which one is correct? A good approach for deciding this is finding where the error lies. It is not a matter of a simple typo, as the inconsistency is carried through into the entire respective text areas.

The error is in formula (2). It has to do with the way Marx derives this formula from two special cases. And then believing that he can come up with the general formula by simply combining the special cases – on page 272 he assumes the same organic composition and derives the turnover formula for this special case:

$$K(1 + \pi) \pm \delta\pi. \qquad [4]$$

Then, on page 273, he assumes the same turnover and derives the organic-composition formula for this special case:

$$K(1 + \pi) \pm \delta' K \text{ or} \qquad [5]$$

And then he derives the general formula by simply adding up the two terms $\delta\pi$ and $\delta'K$

$$K(1 + \pi) \pm \delta\pi \pm \delta' K \qquad [6]$$

There is nothing in this combined formula that reflects the case where *both* turnover *and* organic composition are deviating. This would be covered by the term $\delta'\delta$ that is missing in this formula. Such following of different threads and the errors coming alongside them is normal for any analytical work in progress, and in this case would have been easily detected by following the obvious inconsistency.

The second remaining deficiency has to do with Marx's emphasis on a complete case distinction. Both, $\delta$ and $\delta'$ can independently deviate into the negative and positive direction. For the purpose of defining them, there are two options. Option 1: one can define them as having positive and negative values. Options 2: one can define them as having positive values only and use '+' and '–' to express positive and negative deviations. Now the problem is that Marx mixes and confuses both definitions. Consider for example page 273. In the case C > K he defines $\delta = C - K$. In the case K > C he defines $\delta = K - C$. With this definition, under all circumstances, $\delta$ is positive. However, when expressing C through K and $\delta$, in the first case he gets $C = K + \delta$ and in the second case $C = K - \delta$, and identifies this with 'so $\delta$ is negative'. This would be true, if also in the second case he had defined $\delta$ by writing $C = K + \delta$. Either the '–' goes into the formula or it goes into the value, but not a mixture of both. Here, we have decided to translate the *MEGA* text as is, as it should not be too complicated to keep track of this issue.

Partition C4 elaborates the point that the difference between C and K depends on the turnover time. Marx expressed this relation algebraically by the equation $K = 1/(1+n)C$, where n is not explicitly defined and seems to be oddly defined as the number of years that the turnover time differs from 1 year. But then 1 is added to n in the denominator, so it would have been clearer to define n as the number of years of the turnover time and the equation would have been simpler and more intuitive: $K = (1/n)C$.

Now, when abstracting from these parallel threads in the manuscript, what does structurally remain? There are many variables in this subject leading to a huge number of possible combinations and variants. How can the number of combinations be limited and the presentation be linked to concrete examples without losing generality? The analysis compares a particular capital with a reference social capital. Both may have all types of variations. In A) Marx develops the mathematical toolbox to describe the impacts of varying turnover and shows that it is sufficient to use as a reference a normalised social capital turning over once per year – without losing generality. This technique is known in mathematical / logical proof methodology as a *without loss of generality* (WLOG) approach. In B) he shows that diverging rates of surplus-value in the context of the subject can be mapped onto diverging organic-composition domains. So once this topic is covered, considering all turnover and organic composition variants is sufficient to still preserve full generality. This has the consequence that in C) only this remains to be considered. And this Marx does by applying a fool-proof complete-case distinction. In conclusion, it should be noted that this is an excellent and fascinating piece of scientific work, all the more so in view of its status as a draft manuscript.

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# Marx's Economic Manuscript of 1867–68 (Excerpt)

*Karl Marx*

## Abstract

This archive manuscript is an English translation of a 25-page excerpt from Marx's *Manuscript of 1867–68*, which was published for the first time in German in 2012 in the MEGA, Volume II/4.3. This excerpt is Marx's first and only attempt to incorporate unequal turnover times across industries into his theory of the equalisation of the profit rate and prices of production. The excerpt considers three cases: unequal turnover times across industries, unequal compositions of capital across industries, and both of these inequalities together. It also emphasises two concepts of the rate of profit: rate of profit on capital advanced and rate of profit on the cost price (capital consumed).

## Keywords

Marx – turnover time of capital – prices of production – transformation problem – rate of profit

[254][1]

|11|[2] II)[3]

General rate of profit given. How does the equalisation of values to prices of production take place, with respect to unequal turnover of capitals in different spheres of production?

A.) Rate of surplus-value equal. Composition of the cost price equal, i.e. composition of the capital functioning within the process of valorisation equal. Turnover unequal.

1 The numbers within [ ] refer to page numbers of the MEGA volume.
2 The numbers within | | refer to pages numbers in Marx's manuscript.
3 Section I of this manuscript was the previous 10 pages (pp. 244–53), entitled 'Difference between the Profit Rate related to the Cost Price and to the Advanced Capital'. This difference is discussed in the Editor's Introduction. (See pp. 145–56.)

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Given the same organic composition and same rate of surplus-value, the *rate of profit* related to the cost price is *the same* although the *profit mass varies with the size of the functioning capitals*. So, for the analysis, capitals of same size can be considered as being advanced, as their composition as a percentage is the same and the diversity of their absolute size does not influence the *rate of profit related to the cost price*, but on the other side the difference between the rate of profit related to the cost price and the annual rate of profit is only generated through the diversity of the turnover.

During a definite period of the production process, e.g. one week, for the whole period the total of the capital advanced is functioning in the labour process, but only a part of it in the process of valorisation, because only a part of the fixed capital advanced is involved in the process of valorisation. Now, for brevity, let us call the part that is involved in the periodic process of valorisation the *consumed part of capital*. Here the expression 'consumed' refers to the use-value wherein the capital value is advanced with respect to wear and tear and the circulating fixed capital – as here the value is not consumed, but transferred from the means of production consumed to the product – and the value of labour-power, as this value by itself is alienated to the labourer and consumed by him, but reproduced in the product.

[255]

The fixed point of comparison for the turnovers of the different capital investments is the average social turnover, i.e. the turnover of the social capital. This happens either once per year, less than once or more than once.

1) *The social capital turns over once per year*. On the given assumption in which all capitals have the same composition of capital and the rate of surplus-value is equal, every capital e.g. of 500 that turns over once per year has the same annual rate of profit as the social capital. Regarding the profit rate it thus can be considered as social capital in opposition to capitals of different velocity of turnover.

|12| Within this capital of 500 the composition is $80_c + 20_v \mid + 20_s$ or p' = 20%.

If the product is sold at its value then the cost price of the annual product = 500 and the surplus-value = 100; it is assumed here that the circulating part of the capital turns over $4 + {}^3/_5$ times per year and ${}^1/_{10}$ of the fixed capital.

What holds for the annual product holds for every part of it or the product produced in a definite part of the year. The composition of the functioning capital is always = $80_c + 20_v \mid + 20_s$ and the value of each part of the annual product k = 20% of K or = $\frac{K}{5}$. Since the value of the annual product = K + S = K + P. But K + S = nk + ns, and s = $\frac{K}{5}$.

It is already proven that the rate of profit related to the cost price of the annual product or a part of it equals the annual rate of profit. The [product] value e.g. of [a cost price of] 100 = 100 + $\frac{1}{5}$100 = 100 + 20% of 100, and, ditto, regarding [a cost price of] = $\frac{1}{5}$500 = 500 + 20% of 500.

Though the capital advanced of 500 has the composition of $400_{fc} + 78\frac{6}{23}{}_{cc}$ $+ 21\frac{17}{23}{}_{v}$ or of $478\frac{6}{23}{}_{c} + 21\frac{17}{23}{}_{v}$,[4] the same value of capital, functioning, and consequently the cost price of the annual product has the composition of $40_{fc}$ + $360_{cc} + 100_{v}$

*or* $400_{c} + 100_{v}$.

With this, let's now compare the cases treated among I), B) and C), where the capitals turn over slower or more rapidly than the social capital, respectively. [256][5]

In B) the number of turnovers = 4 or the turnover time = 12½ weeks. Though the composition of the functioning capital is always = $80_{c} + 20_{v}$ and the value part produced in every period = $80_{c} + 20_{v} \mid + 20_{s}$, whereby p' = 20%, here the annual rate of profit is less[6] than the rate of profit related to the cost price. The former[7] is not 20% but only $17^{3}/_{5}$%; a difference of $2^{2}/_{5}$%.

If we would only consider the composition of the capital value in its function during the process of valorisation, no difference related to the social capital would be perceivable, as the composition and the rate of surplus-value, so, also the rate of profit related the cost price would be the same. But the difference appears when we compare the annual rate of profit and the annually produced value.

Let's call the social capital Capital I and the capital from B) Capital II.

4 78 is corrected from 76, and 478 is corrected from 476. These odd numbers are chosen by Marx in order to make the average turnover time of the total advanced capital = 1 year. In this excerpt, these numbers seem to come out of nowhere, but Marx had already explained the derivation of these numbers earlier in this manuscript (pp. 210–11). See the Editor's Introduction and the associated Appendix for a more detailed discussion of these numbers.

5 The next 4 pages (pp. 256–9) discuss a numerical example in which there are crucial errors. Marx realised his errors on p. 260 and corrected his analysis. We will point out below what the crucial errors are, and these errors are discussed more fully in the Editor's Introduction.

6 'Less' corrected from 'greater'.

7 'Former' corrected from 'latter'.

| | | | |
|---|---|---|---|
| Capital I of 500 | the annual profit = 100 | and the annual rate of profit $= {}^{100}/_{500}$. | value = 600 |
| Capital II of 500 | the annual profit = 88 | and the annual rate of profit $= {}^{88}/_{500}$. | value = 528, as cost price = *440*. |

|13| I.e., when the product of Capital II is sold for 600,[8] then it is 72 *above its value* (as 528 + 72 = 600). Or in percentage 13 $^7/_{11}$% will be added on [or $^3/_{22}$, which in fact is the ratio of the difference of $\frac{S}{K}$ and $\frac{S}{C}$ (or $2\frac{2}{5}$%) to $\frac{S}{C}$ or $17\frac{3}{5}$%].

Accordingly the annual *price of production* of the product of Capital II is composed as follows:

440 K + 88 S + 72a[9] (profit adjustment)[10]

or *528 W + 13$^7/_{11}$% supplement related W*.

The value of the product of the onetime turnover (in 12½ weeks) of Capital II is:

$$10_{fc} + 78_{cc} + 22_v \mid +22_s.$$

Or $88_c + 22_v \mid +22_s$. On top $^1/_4$ of 72 has to be added on = 18. Therefore, the production price of the 12½-weeks product becomes:

$$88_c + 22_v \mid + 22_s \mid + 18_a.$$

Or = 110k $\mid + 22_s \mid + 18_a$.
Or = 132 W + $18_a$. 18 : 132 = 3 : 22. Also supplement of 13$^7/_{11}$% related to 132 W.

8 'When the product is sold' refers to price of production. But the price of production of capital II should be 540, not 600, as is clear on p. 260 when Marx corrected this mistake.

9 Since the price of production is mistaken, so also is the profit adjustment or supplement (the difference between the price of production and value of capital II). It should be 12, not 72. This makes many of the numbers on pp. 257–9 erroneous until Marx corrected this mistake on p. 260.

10 Marx used the word 'surplus' here for the extra profit that is added to the price of production of capital II. We will use the symbol 'a' for this variable to stand for 'adjusted profit'.

[257]

*Value of the weekly product of Capital II:*

$$\frac{4}{5}\text{fc} + 6\frac{6}{25}\text{cc} \qquad + 1\frac{19}{25}\text{v} \mid + 1\frac{19}{25}\text{s}.$$

$$\text{Or } \frac{176}{25}\text{c} \qquad + \frac{44}{25}\text{v} \mid + \frac{44}{25}\text{s}.$$

$$\textit{Value} = \frac{264}{25} = 10\frac{14}{25}.$$

Production price of the weekly product:

$$\frac{220}{25}\text{K} + \frac{44}{25}\text{s} \mid + \frac{36}{25}\text{a}. \ (\text{or } 1\frac{11}{25})$$

*Or*: $10\frac{14}{25}W + 1\frac{11}{25}a$. But: $\frac{36}{25} : \frac{264}{25} = 36 : 264 = 18 : 132 = 3 : 22$. Therefore supplement of 13 $^7/_{11}$% of 132 W.

|14| If the product of Capital II is sold at its value, then as a percentage of K (its cost price) + $^1/_5$ of this cost price or 20% supplement to the cost price.

= *K +* $^1/_5$*(K) or K + 20% on top of K*, whereby it is quite immaterial whether k[11] is the cost price of the weekly product or the annual product. Of course, $\frac{1}{5}$k grows as k grows.

In order to get an annual rate of profit of 20%, or $\frac{S}{C}$ = 20%, for Capital II, instead of 20%, 36$^4/_{11}$% has to be added on the cost price; while for the social capital that turns over once per year the commodity's cost price add-on is only 20% (i.e. the surplus-value corresponding to its value makes up this 20%) in order to get the annual rate of profit = 20%.

Because the price of production is now:

$$\frac{220}{25}\text{K} + \frac{44}{25}\text{s} \mid + \frac{36}{25}\text{a}$$

So the surplus-value added to the cost price $\frac{220}{25}$ is $\frac{44}{25}$ (44 to 220 = $\frac{1}{5}$) 20%, and a further supplement is required of $\frac{36}{25}$ to $\frac{220}{25}$ (or 36 : 220 = 9 : 55)

11 K and k seem to be used synonymously.

$16\frac{4}{11}\%$. So, the total supplement related to the cost price = $\frac{80}{220} = \frac{8}{22} = \frac{4}{11} = 36\frac{4}{11}\% = 20 + 16\frac{4}{11}\%$.[12]

If, on the other hand, we calculate the supplement not related to K, but related to W, then [we get] $\frac{36}{264} = \frac{9}{66} = \frac{3}{22} = 13\frac{7}{11}\%$.

[258]

This supplement, not related to the cost price, but related to the *value* of the commodity produced with Capital II, this supplement of $13^7/_{11}\%$ is, however, = the difference between *the rate of profit related to the cost price* and the *annual rate of profit*, calculated in relation to the *rate of profit related to the cost price*.

The *annual rate of profit* of the social capital = 20%. The annual rate of profit related to the cost price of Capital II = $17^3/_5\%$. *Difference* = $2^2/_5\%$. However, this difference of $2^2/_5\%$ relates to the rate of profit of $17^3/_5\%$ as $\frac{12}{5}\% : \frac{88}{5}\% = \frac{12}{88} = \frac{3}{22} = 13\frac{7}{11}\%$.

Hence, the supplement related to the value of the mass of commodity produced by Capital II is =

$$\frac{\text{difference of rate of profit related to cost price and annual rate of profit of Capital II}}{\text{annual rate of profit of Capital II}}$$

Or, as the rate of profit related to the cost price [=] the annual rate of profit of the social capital, we get:

$$\frac{\text{difference of general annual rate of profit and annual rate of profit of Capital II}}{\text{annual rate of profit of Capital II}}$$

= supplement related to the value of Capital II.

|15| That *difference*, however, = $\frac{S}{K}\left(\frac{\delta}{K+\delta}\right)$.[13]

The annual profit rate of Capital II $\left(\frac{S}{K+\delta}\right)$.

The relation of that difference to the annual rate of profit of Capital II [is] therefore

12 See Translator's Introduction.
13 The + in the denominator is missing in the *MEGA* text, but follows from subsequent lines.

$$= \frac{\frac{S}{K}\left(\frac{\delta}{K+\delta}\right)}{\left(\frac{S}{K+\delta}\right)} = \frac{\frac{\delta}{K(K+\delta)}}{\frac{1}{K+\delta}} = \frac{\frac{\delta}{K(K+\delta)}}{\frac{K}{K(K+\delta)}} = \frac{\delta}{K} = \frac{60}{440}^{14} = \frac{3}{22} = 13\frac{7}{11}\%.$$

But δ or 60 = the difference between the *advanced Capital II* and *the part of it that functions* within the *annual* turnover, or, the advanced Capital of 500 and the *cost price of the annually produced commodity of 440*.

This quantity of $\frac{\delta}{K} = 13\frac{7}{11}\%$ is the supplement related to the value of the product of Capital I, in percentage.

The value of the annual product of Capital II = 528. $13^{7}/_{11}\%$ of 528 is: $^{150}/_{11}\%$ of 528.

[259]

So: $\frac{150}{11} : 100 = x : 528$; ∴ $150 : 1000 = x : 528$; $15 : 110 = x : 528$; $3 : 22 = x : 528$; $x = \frac{3 \times 528}{22} = 3 \times \frac{264}{11} = 72$ and in fact 528 + 72 = 600 and when the commodity product of 500 is sold at 600, then the rate of profit $\frac{100}{500} = 20\%$.

*By the by*: If Capital II of 500 would apply the same mass of living labour as well as all the other conditions would stay the same, but the rate of surplus-value, instead of being 100% would be $131\ ^{11}/_{19}\%$, i.e. instead of $^{88}/_{88}$ rather $^{100}/_{76}$ (the variable value + surplus-value = 88 + 88 = 176). So, when surplus-value 100, variable value 76, and rate of surplus-value = $^{100}/_{76}$).

In this case: *product value* still = 528, but differently distributed, viz.:

Instead of: $352_c + 88_v \mid + 88_s$ p' = 20%.
$352_c + 76_v \mid + 88_s$ p' = $23^{39}/_{107}\%$.[15] These $23^{39}/_{107}\%$[16] of 428 yield $100_s$ and $100_s$ related to the advanced Capital of 500 give an annual rate of profit of 20%.

It therefore follows that an increased rate of surplus-value may *compensate* the lesser turnover, as in the case above. *Approximately* compensate. So, when in the case above s < 100 and v > 76. More than compensate, so, when in the case above |16| s > 100 and v < 76. In this case it follows as well by *comparison of*

14 60 is corrected from 66.
15 $23^{39}/_{107}\%$ is corrected from $23^{51}/_{107}$.
16 Same correction.

*Capital I* of 500 that turns over once per year,[17] so more often than Capital II of ditto 500 – that a higher velocity of turnover completely, partially or more can be offset through a lower rate of surplus-value.

The higher rate of surplus-value assumes always a different composition of capital or goes along with is once the rate of surplus-value increases. Either the technological relationship remains the same, as in the case above. Still the same mass of labour-power is applied, only differently distributed in paid and unpaid labour. But in this case v decreases as much as s increases. So, also the ratio $\frac{v}{c}$ and therefore $\frac{v}{c+v}$ or $\frac{v}{C}$ decreases.

$\frac{88_v}{440\ C} = \frac{1}{5}$; but $\frac{76_v}{428\ C} = \frac{1}{5+\frac{12}{19}}$. Or[18] the increase of the rate of surplus-value is generated through an increased intensity of extension of labour. Then also changes in the absolute amount of constant capital have to take place. (and also in the relative or variable one.)

[260]

There are errors in the preceding.[19]

Capital II turns over of 500, 440 K. s=88.[20]

So value of the annual product = 440 + 88 = 528. The mass of the capital advanced that goes into the *value* is completely immaterial for the capitalist. If he makes 100 related to 500, i.e. sells the commodity at 100 above its cost price, at K + $100_s$, then his rate of profit is $\frac{100_s}{500\ C}$ = 20% related to the *advanced capital of 500*.

So, as K = 440, when the annual commodity product is sold at 440 K + $100_s$ (for him this is the same as if he were to have sold at $352_c + 76_v$ | + $100_s$, i.e. rate of surplus-value increased from 20% to etc.).[21] then the annual rate of profit = $^{100}/_{500}$ = 20%.

So, the selling price increases to 540.[22] $\frac{100}{440} = \frac{10}{44} = \frac{5}{22} = 22\frac{8}{11}$% of the cost price of the commodities.

The annual selling price, when δ = C – K or K + δ = C, is K + Kp + δp [which = K + p(K + δ) = K + pC], whereby p [denotes] the rate of profit related to the

17 Marx used the word 'ditto' here.

18 Belongs to the 'Either' four lines above.

19 This is where Marx corrected his mistakes on the previous pages. The price of production of capital II is now 540 and the profit adjustment is 12 (since the value is 528).

20 Sentence is incomplete as it is in German.

21 Ditto.

22 540 is corrected from 550.

cost price for Capital II, and likewise related to C for Capital I. = $K(1 + p) + \delta p$.[23] (= $440(1 + {}^1/_5) + 60 \times {}^1/_5$.) Or = $440 + {}^1/_5 500$.

The ratio of the profit mark-up δp related to the *profit* contained in the *value* (= surplus-value) is $\frac{\delta p}{Kp} = \frac{\delta}{K}$. ($= \frac{60}{440} = \frac{3}{22} = 13\frac{7}{11}\%$.)

This is the difference between the *annual rate of profit* of C and the *annual rate of profit of Capital II*. Viz. $20\% - 17^3/_5 = 2^2/_5\%$. This, calculated related to $17^3/_5 = 13^7/_{11}$.

|17| The mark-up in relation to the value $\frac{\delta p}{K(1+p)}$.

Finally the profit mark-up calculated related to the cost price is $\frac{\delta p}{K}$. $\frac{\frac{1}{5}(60)}{440} = \frac{12}{440} = \frac{6}{220} = \frac{3}{110} = 2\frac{8}{11}\%$.

•••

For a correspondence between the annual rate of profit of C and the annual average rate of profit, the selling price of the commodity has to be K + pC = 440 + 100. So, the rate of profit related to the cost price = $^{100}/_{440} = {}^{10}/_{44} = {}^5/_{22}$. The profit mark-up related to the cost price = $2^8/_{11}\%$,[24] therefore the annual rate of profit related to the capital advanced 20%.

So, after the average turnover in the sphere of production of Capital II, the price of the annual commodity product is calculated that = K + pC, and when pC = n, then $\frac{n}{K}$ is the rate of profit that is added on every part of the annual product or on every product of a definite part of the year.

[261]

2)[25] *The social capital turns over less than once per year.* Here the previous case has only to be reverted.

Let the social capital of 500 with the previous composition turn over 4 times per year, against this let a different capital of 500 with the same composition turn over $4^3/_5$ times (and having the same rate of surplus-value].

Then 440 K | + $88_m$ = 20%. And $\frac{s}{C}$ or $\frac{88}{500} = 17\ ^3/_5\%$. This is the *general annual rate of profit*. In this case K + δ = C, or C – δ = K.

The 2nd Capital of 500 [yields a] value = *500 K* | + $100_m$. And the rate of profit = 20%. So $2^2/_5\%$ above the general rate of profit. In order to have the annual rate of profit of the 2nd capital be equalised with the general rate of profit,

23 Calculation of the selling price by further transforming [K + Kp + δp].

24 $2^8/_{11}\%$ is corrected from $22^8/_{11}$.

25 For 1) see [255, line 5].

the annual product has to sold at 500 K + p(K – δ) = 500 + $^1/_5$(500–60) = 500 + 88 = 588. So, 12 below its value.

So, price of production[26] = K + pK – pδ = K(1 + p)[27] – pδ. The ratio of the profit reduction – pδ in relation to the value contained in the profit = $\frac{p\delta}{pK}$ = $\frac{\delta}{K} = \frac{60}{500} = \frac{6}{50} = \frac{3}{25}$ = 12%.

Finally the total profit supplement related to the cost price = $\frac{pK\text{-}p\delta}{K} = \frac{p(K-\delta)}{K} = \frac{\frac{1}{5}(440)}{500} = \frac{88}{500} = 17\frac{3}{5}$%. The commodity [is] sold $2^3/_5$% below its value or at [a profit supplement of] $17^3/_5$% in order to come out with the general rate of profit.

This case in addition contains the case where the turnover of the social capital is once a year and a third Capital C turns over more than once a year.

3) When the *annual capital turns over more than once a year*, it acts towards capitals that turn over less often as in case 1, towards capitals that turn over more often as in case 2.

|18| The proportional *supplement* to the real *rate of profit related to the cost price* can in this one case always only be = $\left\{+\frac{\delta}{K}\right.$.

The *proportional supplement* related to the cost price always only = $\left\{+\frac{\delta p}{K}\right.$ [28]

And the *annual profit mass* that is added on the cost price after equalisation = {pC = $p(K+\delta)$.

*Selling price of the annual product* = $\{k(1+p)+\delta p$.

Conversely, if Capital II turns over more often
[262]
than the social capital: then the *proportional supplement* to *the rate of profit related to the cost price* can only be = $\left\{-\frac{\delta}{K}\right.$

*related to the cost price* itself = $\left\{-\frac{\delta p}{K}\right.$

The *annual profit mass* added on the cost price = {pC. p(K – δ)

*Finally the selling price of the annual product* = $K(1+p)-\delta p$.

26 'price of production' is corrected from 'value'.
27 p is corrected from δ.
28 δp is corrected from δ.

It is to be kept in mind that here p is always of same size, only calculated in relation to different values; as *same composition* and *same rate of surplus-value* is assumed. The mass of profit that is [added on] the cost price here always = mass of surplus-value created within the production of the commodity itself.

The sizes of δ, be it + or – here is always determined through the deviation of the turnover of the capital of a particular sphere of production from the average social turnover.

E.g., the social number of turnovers above = 1, (4 + $^3/_5$ times the circulating capital) and the one of Capital II = $^{22}/_{25}$ (4 times the circulating capital).

The difference between the social turnover $^{25}/_{25}$ and the one of Capital II $^{22}/_{25}$ = $^3/_{25}$. This less turnover of $^3/_{25} \times 500 = 60$ and this is the size of the part of capital that does *not turn over within the year* = δ.

The main thing is this: for the social capital (so also for capitals that have same turnover together with the social capital or whose turnover is the average social one), assuming a given composition of capital and a given rate of surplus-value, the *annual rate of profit is determined* through the *rate of profit related to the cost price*. This one is given and is $\frac{s}{K}$ that equals the ratio of the value of the surplus-value contained in the commodity and the cost price. The deviation of the annual rate of profit, i.e. $\frac{s}{C}$ from $\frac{S}{K}$, the rate of profit related to the cost price, here is the result of the number of turnovers, |19| in consequence of which K = < > C. E.g., in the example B, when this is the turnover of the social capital, the rate of profit related to the cost price = 20%, but only yields an annual rate of profit of $17^3/_5$%. The annual rate of profit here is $17^3/_5$% because the one related to the cost price = 20%. The difference is only caused by the turnover, in the sequence of which the capital value advanced turns over less than once, so not completely, within the year. (The producer would consider $17^3/_5$% as the given *general rate of profit* and believe that he adds 20% onto the cost price in order to get these annual $17^3/_5$% out from his capital advanced. [263]

However, the situation is different with capitals whose velocity of turnover deviates from the average, social one. For these it is not the rate of profit related to the cost price that corresponds to the value of commodities produced by them that determines the annual rate of profit, but conversely, it is the general annual rate of profit that determines the rate of profit they add on the cost price. Depending on whether their velocity of turnover is slower or faster than the average one, there will be an addition to or a deduction from the rate of profit related to the cost price that corresponds to their values.

Now, whether the social capital turns over once a year, more than once, or less than once, i.e. only partially per year, this circumstance changes absolutely nothing with respect to the laws developed. The only one that is changed in all these different cases is – for the capitals whose velocity of turnover deviates from the average social one – the size of $\mathfrak{d}$, i.e. difference between C and K, the one between the capital advanced and the one turned over.

So, it does not change anything with respect to these laws, if we base the analysis on the assumption that the *social capital turns over once per year*. This assumption simplifies the calculation. In this way side operations are avoided, not being required for the analysis, as then for the social capital the composition of the whole *capital value* – considered in its function within the process of valorisation – is the same as the one for the value of the annual product or every part of it.

### *B.) Rate of surplus-value different*

It was already seen that deviations in the rate of surplus can compensate for deviations in the velocity of turnover, completely or in part; so far as rate of surplus-value and velocity of turnover deviate in opposite direction. If they deviate in the same direction, however, the differences will only be increased correspondingly.

What we want to analyse here is only, how the diversity of the rate of surplus-value *is offset* in the case of C), i.e. *different organic composition of the capital.*

Let the composition of capital value annually functioning be = $80_c + 20_v \mid + 20_s$.

$20_v + 20_s$ or 40 is the money expression wherein the whole applied mass of labour presents itself. Let this mass of labour |20| that is
[264]
embodied in a value of £40 be required to put $80_c$ in motion, both in the social capital and in the capital investment deviating from it.

Let the social rate of surplus-value be 100%.

For the deviating capital let it be either 50% or 200%.

In the 1st case this capital has to be composed as:

a) $80_c + 26^2/_{3v} \mid + 13^1/_{3s}$. Here r = 50%. And the mass of applied labour on $80_c$ is represented through 40.

In the 2nd case:

b) $80_c + 13^1/_{3v} \mid + 26^2/_{3s}$. Here r = 200%. And the mass of applied labour on $80_c$ is still represented through 40.

But in both cases there is a modified composition of the capital.

In the 1st case the composition of the capital *as a percentage*:

| | | | |
|---|---|---|---|
| a) The composition: | $80_c$ | $+ 26^2/_{3v} \mid$ | $+ 13^1/_{3s}$ is in percentage: |
| | $70^{10}/_{17c}$ | $+ 23^9/_{17v} \mid$ | $+ 11^{13}/_{17s}$. |
| So, compared with | $80_c$ | $+ 20_v$ | $+ 20_s$ |

the variable capital has grown in proportion to the constant one and in fact this change is generated through absolute growth of the variable capital. The mass of labour spent on the constant capital in percentage has remained the same.

The total mass of applied labour = $23^{9}/_{17} + 11^{13}/_{17} = 35^{5}/_{17}$ that multiplied by 2 yields $70^{10}/_{17}$ that equals the constant capital value, whereby in the original example $20_v + 20_s = 40$ that multiplied by 2 equals $80_c$.

| | | | | |
|---|---|---|---|---|
| b) The composition | $80_c$ | $+ 13^1/_{3v}$ \| | $+ 26^2/_{3s}$ yields in percentage: |
| | $85^5/_{7c}$ | $+14^2/_{7v}$ \| | $+ 28^4/_{7s}$. |
| Compared with | $80_c$ | $+ 20_v$ \| | $+20_s$, |

the variable capital has fallen in proportion to the constant capital, although always the same proportional mass of labour has been applied on the proportionally same amount of constant capital.

|21| So, let's assume that a constant capital having a value of $80_c$ absorbs a mass of labour that expresses itself in the value of 40, then the value of the product is = $80_c + 40$. The paid part of the labour, or the variable-capital value is 20, so the composition of the capital advanced is $80_c + 20_v$ | and the [value] of the product is $80_c + 20_v$ | $+ 20_s$. The *rate of surplus-value* = $^{100}/_{100}$. If it shall be greater, then the surplus-value has to be > 20, thus the variable capital has to be < 20, and shall it be smaller, then the surplus-value has to be < 20, thus the variable capital has to be > 20. So, *difference in the rate of surplus-value* here assumes a *difference in the organic composition of the capital* in the proportion of $\frac{v}{c}$ and thus also $\frac{v}{C}$.

[265]

If we assume, however, that in different spheres of production a *mass of means of production of 80, i.e. $80_c$ sucks out different masses of labour* – which can be the case for different reasons, e.g. because the mass of means of production that the same value $80_c$ represents is different, or because one work object requires more mass of labour than another etc., then the *organic composition of the capitals* can be *the same*, at a different rate of surplus-value.

E.g., if in one sphere of production $80_c$ sucks out a mass of labour of = 40 £, in another = 30, in a third one = 50, and the product [value] would be

in the one case $80_c + 20_v$ | $+ 20_s$
in the other case $80_c + 20_v$ | $+ 10_s$
in the 3rd case $80_c + 20_v$ | $+ 30_s$,

so, the rate of surplus-value respectively $^{100}/_{100}$, 50%, and 150%, but the organic composition of the capital would be the same.

In case equalisation would take place, then s = 60 and the general amount[29] of surplus-value = 20 for every capitalist.

With respect to equalisation this would be the same as if the capitals and products, respectively, would be composed – at an *equal rate of surplus-value* – as follows:

$80_c + 20_v \mid + 20_s$
$90_c + 10_v \mid + 10_s$
$70_c + 30_v \mid + 30_s$.

I say 'with respect to the *equalisation of the rate of profit*'. For the commodity values it would be the same. Only in the one case more constant, in the other, more variable capital would enter.

With respect to turnover, however, it would be the same as if *capitals of different composition* would turn over.

## |22| C) Different Organic Composition. Equal Rate of Surplus-value.

It is clear that at a given equal organic composition of the capital (i.e. of the functioning Capital C) it is only the diversity of the turnover that can generate a difference in the proportional mass of the annually created surplus-value and thus the rate of profit.

It is also clear that at a given equal velocity of turnover only the diversity of the organic composition can generate this difference.
[266]

In case the *velocity of turnover* is different as well as the *organic composition* of the capital, these can compensate one another, totally or partially.

It was seen that the *advanced* Capital I of 500, viz. $476^6/_{34c}$ ($400_{fc} + 76^6/_{23cc}$) + $21^{17}/_{23v}$ – from what $400_f$ turns over once in 10 years and the circulating component 100 4 + $^3/_5$ per year – is functioning in the valorisation process with respect to all its *value* like an *advanced Capital II of 500*, viz. $400_c$ ($40_{fc} + 360_{cc}$) + $100_v$, from which $40_f$ turns over once a year and ditto the circulating component of 460 once a year. For both of these functioning capitals, there exists no difference with respect to the *organic composition*, and its identity becomes clear as soon as *Capital I* is converted *from the form wherein it is advanced* into the form wherein it is *functioning in the valorisation process*.

The annual *velocity of turnover of the social capital* is nothing but the *midsize or average velocity of turnover* of the different parts of capital *it is composed of*. It is likewise easily comprehensible as the average velocity of turnover of

29 'amount' is corrected from 'rate'.

a capital of 500 whose parts turn over at unequal times. However, what appears here as parts of the individual Capital A (500) or as well as extra capital B) of 500, being invested in a particular sphere of production, now appears as a part of the social Capital C) that is distributed firstly) on a massive scale in the particular sphere of production and secondly) the mass in every particular sphere of production is decomposed into many self-dependent capitals being independent from each other.

For capitals of an annually equal velocity of turnover the difference of the annual rate of profit can only originate from their *different organic composition.* When the annual turnover velocity of the social capital is given, then the annual rates of profit of the capitals whose annual turnover = the one the social capital can only originate from an unequal organic composition.

|23| In order to clarify the matter, let's take our previous 3 cases, but modified, so that to the different turnover time a different organic composition is added; finally a 4th case, where on an equal velocity of turnover, like the one of the social capital, now the organic composition is different.

Let Capital 1 be the social capital or a piece of capital being congruent to it with respect to turnover and composition. In all cases the rate of surplus-value is assumed = 100%.

[267]

I) *Capital advanced 500.* ($400_{fc} + 76^6/_{23cc} + 21^{17}/_{23v}$). Its total value turns over once per year, namely in the organic *composition* $= \begin{cases} 400_c \quad +100_v \text{ or} \\ 40_{fc} + 360_{cc} + 100_v \text{ or} \\ 80_c + 20_v \end{cases}$

and the organic composition of the annual product = $80_c + 20_v \mid + 20_s$, p' = $^{20}/_{100}$ = 20%.

II.) *Capital advanced 500.*

Composition of the *advanced capital* $400_{fc} + 100_{cc}$. f turns over once in 10 years, the circulating capital of 100 turns over 4 × per year. But this circulating capital is to be advanced in the composition: $85_{cc} + 15_v \mid$, so that v is not $^1/_4$c, or $^1/_5$C, as with I, but = $^3/_{17}$c and = 15% of C or $^3/_{20}$C.

As the circulating capital of 100 turns over 4 × per year (based on 50 weeks), it turns over once in 12½ weeks. As from the fixed capital per year only 40 turns over, so per week $^4/_5$, and for 12½ weeks *10*.

So, in *one turnover of 12½ weeks*: $10_{fc} + 85_{cc} \mid + 15_v$.

And the product value of this turnover = $95_c + 15_v \mid + 15_s = 125$.

p' = $^{15}/_{110} = ^3/_{22} = 13^7/_{11}$%.

And for the year consisting of *50 weeks*: $40_f + 340_{cc} + 60_v \mid + 60_s$

$= 440\ K \mid + 60_S,\ \frac{S}{K} = \frac{60}{440}$

$= ^3/_{22} = 13^7/_{11}\%$

In order to deliver a commodity product of 20% related to the capital of 500, it has to be sold at 540.

The supplement to the cost price is the same as before; as K is the same as before (p. 5),[30] because K is the same, as Capital II of 500 has the same annual turnover; and the same deviation of turnover from Capital I. But the supplement to the profit related to the cost price is |24| $6^4/_{11}$ ($20–13^7/_{11} = 6^4/_{11}$). Before it was only $2^2/_5$ ($20–17^3/_5$).

The supplement related to the profit that is contained in the value of the annual product was (see p. 17)[31] $= \frac{\delta}{K} = \frac{60}{440}$[32] $= \frac{3}{22} = 13^7/_{11}\%$.

This is the case, when Capital II has the same organic composition, but only different turnover from Capital I.

The product value at *equal composition* and *only unequal turnover* of Capital II was 440 K | + $88_s$. $\frac{s}{K} = 20\%$.

The price of production = 440 K + $88_s$ | + $12_a$ (*add-on profit*).

In this case 12 has to be added onto the 88.

[268]

In contrast the value is now = 440 K | + $60_s$. $\frac{s}{K} = \frac{6}{44} = \frac{3}{22} = 13\frac{7}{11}\%$[33]

The price of production = 440 K + $60_s$ | +$40_a$.

And a supplement related to the cost price of $\frac{40}{440} = \frac{2}{22} = \frac{1}{11} = 9\frac{1}{11}\%$

In the other case a supplement related to the cost price of $\frac{12}{440} = \frac{6}{220} = \frac{3}{110} = 2\frac{8}{11}\%$

This difference of the supplement of $6^4/_{11}$,[34] is due to the different organic composition and the supplement of $2^8/_{11}$ to the difference of the turnover.

So, following the establishment of the price of production through the equalisation of the turnover, an additional equalisation has to be carried out, one with respect to the organic composition.

In the first case is $\frac{S}{K} = 20\% = P'$ (the annual rate of profit or also the rate of profit related to the cost price of Capital I.)

30 This refers to a page number in a part of Marx's manuscript not included in this excerpt.

31 This refers to a page number of Marx's manuscript included in this excerpt (pp. 260–1 of the *MEGA* volume).

32 $\frac{60}{440} = \frac{3}{22} = 13^7/_{11}\%$ is corrected from $\frac{60}{500} = \frac{3}{25} = 12\%$.

33 $13\frac{7}{11}\%$ is corrected from $9^6/_{11}\%$.

34 $6^4/_{11}$ is corrected from $7^3/_{11}$.

So, in order to obtain a rate of profit of 20% for Capital II, in this case $\frac{S}{K}$ = p' = 20% has to be added up by the profit rate of 20% [applied] to 60 – the difference of K and C, as K = 440 and C = 500. Or, to S p'δ = 12 has to be added.

But in the other case $\frac{S}{K} = 13\frac{7}{11}$%, a rate of profit related to the cost price of Capital II that diverges from the annual rate of profit (Capital I). The upfront difference here is 60, as K = 440 and C = 500.

|25| $\frac{S}{K}$ here is $13\frac{7}{11}$%, let's call this = π,[35] π = $13\frac{7}{11}$%. So, if I add only πδ to S, then I get [an addition] of π × 60 = $8^2/_{11}$. And then the price of production would be:

$$440\ K + 60_S \mid + 8\ ^2/_{11a}.$$

But, this yields only an annual rate of profit of $\frac{68\,^2/_{11}}{500} = 13\frac{7}{11}$%.

So, up to now, as far as it is about the equalisation of the turnover, we get:

$$440\ K + \pi K \mid + \pi\delta.$$

In order to get a rate of profit = 20%, there is to be added: 100–$68^2/_{11}$ = $31^9/_{11}$.

Then the price of production becomes = (440 K + πK + πδ) + $31^9/_{11}$.

This supplement of $31^9/_{11}$ is not owed to the difference of the turnover, but to the different organic composition. So, it has to be analysed more closely to see what the $31^9/_{11}$[36] depends on.

[269]

*Price of production after equalisation of the turnover* = K + π(K+ δ).

p is the rate of profit related to the cost price of *Capital* I and thus also the one related to the cost price of *Capital II* that had the same organic composition as Capital I. Only owing to the different turnover, the same 20% related to the cost price did not yield 20% related to the capital advanced.

The difference between p and π is = p – π = 20% - $13^7/_{11}$% = $6^4/_{11}$%.[37]

Let's call p – π, the difference between p and π, δ'.

The $31^9/_{11}$ that are still to be added on, are, however, equal to $6^4/_{11}$% of 500 (or K(440) + δ(60)), thus δ'(K + δ). So after equalisation of the [*organic*] *composition, the price of production* = *K* + *π*(*K* + *δ*) + (*p* – *π*)[38] (*K* + *δ*). (p – π = δ').

35 Marx switched here the notation for S/K from p' to π.
36 $31^9/_{11}$ is corrected from $39^9/_{11}$.
37 $6^4/_{11}$% is corrected from $^4/_{11}$%.
38 Parentheses around 'p – π' are added.

Or $= K + \pi K + \pi\delta + (p - \pi)K + (p - \pi)(\delta)$

Or $= K + \cancel{\pi K} + \cancel{\pi\delta} + pK - \cancel{\pi K} + p\delta - \cancel{\pi\delta} = K + p(K + \delta)$.

In fact $K + p(K + \delta) = K + (\pi + \delta')(K + \delta) = K + \pi(K + \delta) + \delta'(K + \delta)$

If p is the annual rate of profit of Capital I and likewise the rate of profit related to its cost price, then the rate of profit related to Capital II shall be = $\pi + \delta'$.

In case $\delta' = 0$, then $\pi = p$. So, then $K + \pi(K + \delta) = K + p(K + \delta)$ and $\frac{p}{K+\delta} = \frac{p}{C}$. If, however, as |26| here, $\delta' > 0$, then $\pi(K + \delta) < p(K + \delta)$, namely by the amount of $\delta'(K + \delta)$.

So, it can be seen that in the case considered the *price of production* [equals]: $K + p(K + \delta)$ [=] $K + \pi(K^{1)} + \delta) + \delta'(K^{2)} + \delta)$.

The 1st component '1)' of this formula is the price of production of the equalised turnover = $K + \pi(K + \delta)$ that is too small by the amount of the 2nd component '2)' $\delta'(K + \delta)$.

This 2nd supplement is owed to the difference between the profit rates p and $\pi$, so that $p - \delta'$[39] $= \pi$.

Related to the *value* $K + \pi K$ the supplement appears in this way:

$K(1 + \pi) + \delta\pi + \delta' K + \delta'\delta$ or:

$K(1 + \pi) + \delta' K + \delta(\pi + \delta')$ or:

$K(1 + \pi + \delta') + \delta(\pi + \delta')$. [$pC = (\pi + \delta')(K + \delta)$]

So, if the turnover-originated deviation between the size of the *capital annually turned over* and the *size of the capital advanced* is = $\delta$; and if the organic-*composition-originated* difference of the *rate of profit related to the cost price* and the *general annual rate of profit* is = $\delta'$ ($\pi$ is the rate of profit related to the cost price, p the general rate of profit, then the equalisation is given, in terms of *value* by $K + (\delta' + \pi)(K + \delta)$. I.e. the supplement $(K + \delta)(\delta' + \pi)$ = (the sum of the cost price and the difference between the capital advanced
[270]
and the cost price) multiplied by the sum of the rate of profit related to the cost price and the differential rate between the annual rate of profit and this rate of profit related to the cost price.

When, therefore, e.g. it is always assumed that the social capital turns over once a year, with having an annual rate of profit of 20%, on the other hand Capital II of 500 e.g. only once in $^5/_4$ years, while as a result of its composition

39 $\delta'$ is corrected from $\delta$.

the profit rate related to the cost price of the commodity produced by it = 10%, then we get:

500 turns over once in $^5/_4$ years
2000 ------------------- in 5
$^{2000}/_5$ ------------------- in 1 year

So, 400 turns over in 1 year. I.e. K = 400. C – K or δ = 100.

The difference of the rates of profit or p – π = 10%, δ' = 10%.

So, the equalised price is:

400 + (400 + 100)(10% + 10%), The supplement πδ |27| is only owed to the *inequality of the turnover*. In case π = p, then no further adding-on takes place. But if, as assumed, π < p, so that π + δ' = p, then a further adding-on of (δ' + π)(K+ δ) takes place and this supplement is only owed to the difference between π and p, so that πK and pK are different, a difference that only results from the difference of the *organic composition*.

It follows generally: First *equalisation of the turnovers*; i.e. of the rate of profit as far as it varies as a result of the turnover. Once this having happened, a further variation can only originate from the *difference in the organic composition*.

E.g. in our example we have:

I.) Social *capital. Turnover once a year. Organic composition of the functioning value* = $80_c + 20_v$. *Value of product* = $80_c + 20_v \mid + 20_s$. *Rate of profit* = 20%.

II.) *Capital of 500*. Turnover once in $^{25}/_{22}$ years (1 + $^3/_{22}$ year). Per year, only 440 turns over, or *only* $^{22}/_{25}$ *of the capital.* Further, as a result of the different organic composition of the capital value functioning [in the valorisation process] the rate of profit related to the cost price and related to the capital turned over is only 10%.

So, price of production = $(440 + {}^1/_{10} \cdot 440) + {}^1/_{10} \cdot 60 + {}^1/_{10}(500) = 440 + 44 + 6 + 50 = 540$.

$$\text{Or price of production} \quad = K + p(K + \delta) = K + \pi K + \pi\delta + (p - \pi)(K + \delta)$$
$$= K(1 + \pi) + \pi\delta + (p - \pi)(K + \delta)$$

For the same Capital II of 500 we had, at the same time of turnover:

1) $352_c + 88_v \mid + 88_{s1}$. $\frac{s}{K}$ or π = 20%. *Rate of profit* $\frac{s}{C}$ or p = $17\frac{3}{5}$%.

[271]

2) $380_c + 60_v \mid + 60_{s2}$. $\frac{s}{K}$ or $\pi' = 13\frac{7}{11}\%$. *Rate of profit* $\frac{s}{C}$ or $p = 12\%$.

Here, the turnover is the same. In order to equalise the rate of profit of 2) with the one of 1), onto 2) has to be added $(\pi - \pi')K$,[40] i.e. $20\% - 13^7/_{11}\%$, thus $6\,^4/_{11}\%$[41] of 440 = 28.

This formula is then $= K + \pi'K + (\pi - \pi')K = K(1 + \pi') + K(\pi - \pi')$.

|28| Let the difference of the rates of profit $\pi$ and $\pi'$ be $= \delta'$,

Then on the value $K(1 + \pi')$ is to be added $\delta'K$;

so, the *price of production* $= K(1 + \pi') + \delta'K$.

The rate of profit of 1) $= \frac{s_1}{K} = \frac{88}{440}$,

The rate of profit of 2) $= \frac{s_2}{K} = \frac{60}{440}$.

As here the capitals have the same turnover, K is the same in both cases and the difference of their rates of profit originates only from the difference of their masses of profit $s_1$ and $s_2$, as being the result of their unequal organic composition.

$(\pi - \pi')K$ that is to be added onto 2) or $\delta'K$ thus must be equal to $s_1 - s_2$.

In fact: $\left(\frac{s_1}{K} - \frac{s_2}{K}\right)K = \left(\frac{s_1 - s_2}{K}\right)K = s_1 - s_2$.

So, $\delta'K = s_1 - s_2$.

So, what is to be added onto value $K(1 + \pi')$ is $s_1 - s_2$.

Thus, the price of production $= K(1 + \pi') + s_1 - s_2$.

$$= 400\left(1 + \frac{13\frac{7}{11}}{100}\right) + 88 - 60.$$

$$= 440\left(1 + \frac{13\frac{7}{11}}{100}\right) + 28.$$

$$= 440 + 60_{s2} + 28.$$

40 Parentheses added around $\pi - \pi'$. In this case, $\pi$ refers to s/K for capital II 1) (= 20%), and $\pi'$ refers to s/K for capital II 2) (= 13 7/11), and $\delta' = \pi - \pi'$.

41 $6^4/_{11}\%$ is corrected from $6^5/_{11}$.

Value = 500. To be added on 28. |

So, 440 K + $60_S$ | + 28.

60 + 28 = 88p. So, rate of profit $^{88}/_{440}$, as in case 1)

*So, if the turnovers are equal and the rates of profit related to the cost prices are different – as result of a different organic composition of the capitals –,* then – *in case the capital that represents the social capital is the bigger one* – onto *the product value of the capital* having the smaller rate of profit is to be added $s_1$–$s_2$, i.e. a number that = the *difference of the masses* |29| *of surplus-value of profit generated from both capitals.*

The formula of the supplement on the value, when [this is] $K(1 + \pi')$, is then the value $s_1$–$s_2$.

[272]

Price of production: K(1 + π') + δ'K (whereby δ' is the difference of the rates of profit)

Or $K(1 + \pi') + s_1 - s_2$.

• • •

Finally, [let's] in addition [consider] the case, where a third capital has a *faster turnover than the social capital* and at the same time a different organic composition, e.g. a lower one (i.e. a *higher rate of profit*, as the component is bigger).

((All differences that result from the *turnover velocity*, – the deviations from the average turnover velocity or the one of the social capital, are expressed in the difference C – K, i.e. δ – the difference between the size of capital advanced and the one turning over. (In fact it expresses the deviations from the turnover of the capital in *one* year which we suppose is social turnover after having proven that an opposite assumption would not alter anything.)) If K < C then[42] C – K = δ. Is K > C, so (as then C + δ = K) C – K is then = C – (C+ δ) = C – C – δ = – δ.

So, when C = K, δ = 0.
C > K, + δ.
C < K, – δ.

• • •

If the *organic composition is the same* and ditto *the rate of surplus-value*, and K < C, i.e. C > K, we have for the formula for the *price of production* of the

42 'then' replaces '='.

commodity (provided that with respect to the social capital K = C, thus $\frac{s}{K} = \frac{s}{C}$, or π = p, so, that the social capital turns over once per year),

Price of production of the commodity = K(1 + π) + ẟπ.

So, if K > C or C < K, then the price of production *K(1 + π) – ẟπ.*

So, for all cases the general formula for the price of production, as far determined by the *turnover, K(1 + π) ± ẟπ.*

*K(1 + π) ± ẟπ* is the general, turnover determined formula of the price of production.

If ẟ = 0, i.e. K = C, then ± ẟπ = 0. So, price of production of the commodity = K(1 + π) = W, its value.

If ẟ = + ẟ, i.e. K + ẟ = C, or C > K, then the price of production of the commodity K(1 + π) + ẟπ[43] = W + ẟπ,[44] >W.

|30| Finally, if K > C, i.e. K – C = ẟ so K – ẟ = C, so ẟ negative = – ẟ, then the price of production K(1 + π[45]) – ẟπ.

[273]

So, the general formula *of the price of production, as far as determined by the deviations of the turnover*, [*is*] *that*:

1) K(1 + π) ± ẟπ

If ẟ = 0, ± ẟπ = 0. Then the price of production = K(1 + π) = *value of the commodity.*

If ẟ > 0, + ẟ = K(1 + π) + ẟπ. > *value of the commodity.*

If ẟ < 0, – ẟ. = K(1 + π) – ẟπ. < value of the commodity.

• • •

Further, if the turnover is the same, then the difference of the annual rate of profit and the rate of profit being contained in the value of the commodity [is] caused by the different composition and thus by the generated masses of surplus-value. So, [it is determined] by the difference of p – π, ẟ' when we call p the general rate of profit and π the rate of profit related to the cost price in every particular capital. For the social capital, at an annual turnover, [it follows:] *πK = pK.*

43 ẟπ is corrected from ẟp.

44 Ditto.

45 π is corrected from ẟπ.

If, as result of a *different organic composition* $\pi K < pK$ (so, $\pi < p$, i.e. $\pi + \delta' = p$), then the *price of production of the commodity* = $K(1 + \pi) + (p - \pi)K$.

If $\pi K < pK$, so, $\pi < p$, i.e. $\pi + \delta' = p$, then the price of production of the commodity = $K(1 + \pi) + \delta' K$.

If $\pi K > pK$, so, $\pi - p = \delta'$[46] and $p - \pi = - \delta'$, then the price of production of the commodity = $K(1 + \pi) - \delta' K$.

*So, the general formula for the deviations of the rate of profit related to the cost price from the general rate of profit originating from the difference in the organic composition at equal turnover* [*is*]:

2) $K(1 + \pi) \pm \delta' K$ or $K(1 + \pi) \pm (p - \pi)K$.

If $p = \pi$, then $p - \pi$ or $\delta' = 0$. In this case the production price of the commodity = $K(1 + \pi)$ = *value of the commodity*.

If $p > \pi$, then $p - \pi > 0$, $\delta' > 0$, $= + \delta'$. In this case the production price of the commodity = $K(1 + \pi) + \delta' K >$ *value of the commodity*.

If $p < \pi$, then $p - \pi < 0$, $\delta' < 0$, $= - \delta'$. In this case the production price of the commodity $K(1 + \pi) - \delta' K <$ value of the commodity.

|31|Thus, the *general formula* for *all prices of production* is:

$$K(1 + \pi) \pm \delta\pi \pm (p - \pi)K, \text{ or, when } p - \pi = \delta',$$
$$K(1 + \pi) \pm \delta\pi \pm \delta' K.$$

For the social capital, when for reasons of simplicity it is assumed that it turns over *once* per year,

1) the *value* becomes $K(1 + \pi)$. And this is then the formula that determines the *price of production* of all commodities.

[274]

Therein it is assumed that $\delta = 0$, and $\delta' = 0$. For the social capital $\pi K$ can never deviate from pC except through the turnover, so $\delta' K = 0$. If its turnover > < than annually, then its formula is reduced from $K(1 + \pi)$ to $K(1 + \pi) \pm \delta\pi$. But $\delta' K$ here is always = 0.

2) If a capital of the *same composition* deviates with respect to the turnover, then $\delta' = 0$ and the formula of the *price of production* = $K(1 + \pi) \pm \delta\pi$.

If a capital of the *same turnover* deviates with respect to the composition, then $\delta = 0$ and the formula of the *price of production* = $K(1 + \pi) \pm K\delta'$.

If a capital deviates in turnover and composition, the price of production = $K(1 + \pi) \pm \delta\pi$[47] $\pm \delta' K$.

Here now very different cases are possible. *But generally*:

46 $\delta'$ is corrected from $\delta$ and also further to the right on the same line.

47 $\delta\pi$ is corrected from $\pi$.

a) *Turnover* and *composition deviate in the same direction*, i.e. concurrently into the *negative or positive* direction,
if into the *positive*, the price of production = $K(1 + \pi) + \delta\pi + \delta' K$
if into the *negative* ------------------------------- = $K(1 + \pi) - \delta\pi - \delta' K$.
b) Turnover and *composition deviate in the opposite direction*,
Then concurrently δ *positive* and δ' *negative, so:* = $K(1 + \pi) + \delta\pi$[48] $- K\delta'$.

δ *negative* and δ' *positive, so:* = $K(1 + \pi) - \delta\pi + K\delta'$.

The general formula for the last-mentioned [cases], coming under sub b):

= $K(1 + \pi) \pm \delta\pi \pm \delta' K$.

•••

|32| For the cases sub 2), b) $\pi\delta = < > K\delta'$ [i.e. =, or <, or >]
For [case 2b)] 1) $(1 + \pi) + \pi\delta - K\delta'$.;
If $\pi\delta = K\delta'$ the *formula* [becomes] $K(1 + \pi)$:

> i.e. the *price of production* = the *value of the commodity* in that the opposite deviations of turnover and composition are compensating, *cancelling* each other,

if $\pi\delta < K\delta'$ the formula [becomes] $K(1 + \pi) - x$:

> the price of production of the commodity < than *its value*, though it is of a lower *composition than the average capital*; therefore the *surplus-value* contained in it is *bigger*.

if $\pi\delta > K\delta'$ the formula [becomes] $K(1 + \pi) + x$:

> the *price of production of the commodity > than its value*, although *its turnover velocity > than the average social one*.

For [case 2b)] 2) $K(1 + \pi) - \pi\delta + K\delta'$,

48 $\delta\pi$ is corrected from $\pi$.

if $\pi\delta = K\delta'$, the formula $K(1+\pi) :=$ *value of the commodity.*
If $\pi\delta < K\delta'$, so $K(1+\pi)+x$ > *value of the commodity.*
If $\pi\delta > K\delta'$, so $K(1+\pi)-x$ < *value of the commodity.*

• • •

[275]

The formulas sub 2) a) p. 31 resolve into:

α) *Price of production*

$= K(1+\pi) + \delta\pi + \delta' K$
$= K(1+\pi) + \delta\pi + K(p-\pi)$
$= K + \cancel{K\pi} + \delta\pi + Kp - \cancel{K\pi}$ $\quad = K(1+p) + \delta\pi$
$= K + \pi(K+\delta) + K\delta'$ $\quad = K(1+\pi+\delta') + \delta\pi$
$= K(1+\pi+\delta') + \delta\pi.$ $\quad = K + \pi K + K\delta' + \delta\pi$
---------------------- $\quad = K + \pi(K+\delta) + K\delta'.$
$\quad = K(1+\pi+\delta') + \delta\pi.$

β) *[Price of production]*

$= K(1+\pi) - \delta\pi - \delta' K$
$= K(1+\pi-\delta') - \delta\pi$ $\quad = K(1+\pi-\delta') - \delta\pi.$

|33| Let's assume, in *Capital III* of 500 the circulating part of 100 turns over 5 × per year, concurrently the rate of profit related to the cost price = 25%. The fixed part of capital of 400 still once in 10 years, so 40 in 1 year.

Then the *product value* produced from Capital III =
for one *turnover of 10 weeks:* $8_{fc} + 73_{cc} + 27_{v} \mid + 27_{s}.$
So: $81_{c} + 27_{v} \mid + 27_{s}.$
*The composition of the capital* $= 75_{c} + 25_{v}. \mid$
*The composition of the product* $= 75_{c} + 25_{v} \mid + 27_{s}.$
So $\pi = {}^{25}/_{100} = 25\%.$

And the turnover mass of *50 weeks*
or one year: $40_{fc} + 365_{cc} + 135_{v} \mid + 135_{s}.$
Or: $405_{c} + 135_{v} \mid + 135_{s}.$
Or: $540\ K \mid + 135_{s}.$
$W = 675.\ \pi = {}^{135}/_{540} = 25\%.$

To begin with, let's consider the turnover, so K = 540, and C = 500, thus K – C = 40, δ = 40. (Earlier, calculated in regard to C – K this would then be 500–540 = –40. So, -δ. It is, however, better to write it in reverse K – C, as it is taken in the fraction $\frac{K}{C}$.)

As far the *price of production* is modified by the turnover, we would therefore have:

> (K + s) – πδ. [It is to be remembered that, if we calculate δ by K-C instead of C-K, then δ is to be subtracted, therefore becomes –δ; and when δ is negative, e.g. 500 K – 540 C, so δ = –40, then it is to be added, namely –(–40) = 40.][49]

Or

> $(540 + \pi 540) - \pi 40 = (540 + {}^{1}/_{4}540) - {}^{1}/_{4}40$ . So, 675–10 = *665.*

[276]

Through equalisation of the turnover, thus:

> *W* is reduced to $K(1 + \pi) - \pi\delta = 665. = 540\ K + 125\ W.$[50]

Further: as π = 25%, p', the annual profit, is $\frac{\pi \cdot K}{C}$ = 27%. However, by deduction of πδ = 10, the profit is reduced from 135 to 125. $^{125}/_{500}$ = 25%.

So, the annual rate of profit of Capital III is equated to the rate of profit related to its cost price.

|34| Since the *value* of $K(1 + \pi)$ is reduced to $K(1 + \pi) - \pi\delta$, it is, *with respect to the rate of profit*, as if Capital I and Capital III would turn over in the *same time*, and therefore the *difference of the rate of profit* would only result from the *difference of the organic composition.*

Now the case stands like this:

> *Value product* of *Capital I* 500 $K + 100_s = K(1 + \pi)$. Annual rate of profit = 20% or $\frac{\pi_1}{K}$, as for this capital $\frac{p}{C} = \frac{\pi_1}{K}$.

> Composition: $40_{fc} + 360_{cc} + 100_v \mid + 100_s. = 80_c + 20_v \mid + 20_s$. p' = 20%.

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49 Brackets in the *MEGA* text.

50 W is a mistake. 125 is not the value of the capital, but the profit that is added to the cost price after the surplus-value (135) has been adjusted for unequal turnover times (-10).

*Value product of Capital III.*
*after equalisation of the turnover.* $(540\ \mathrm{K} + 135_{\mathrm{s}}) - 10.$ or $540\ \mathrm{K} + 135 - 10_{\mathrm{s}}.$
$= 540\ K + 125.$
$= K(1 + \pi_2) - \pi_2 \delta.$

125 is calculated related to Capital III = 500, thus the *annual rate of profit* is now $^{125}/_{500} = {}^{1}/_{4} = 25\%$.

And 100 is calculated related to Capital I = 500, thus the *average annual rate of profit* $p$[51] $= {}^{100}/_{500} = 20\%$.

The *difference between both of these rates of profit* $p = 20\%$ and $\pi = 25\% = 5\% = {}^{1}/_{20} = -5\% = -\delta'$.

So: $K(1 + \pi) - \pi\delta - \delta'(K - \delta)$ $\delta' = p - \pi$. Hence:

$$K(1 + \pi) - \pi\delta - (p - \pi)(K - \delta)$$

If K > C,[52] then $C - K = -\delta$, so,

$$K(1 + \pi) + \pi\delta + \delta'(K + \delta) \qquad K(1 + \pi) + \pi\delta + (p - \pi)(K + \delta)$$

|35| $p - \pi = 20 - 25 = -5$
$\mathrm{K}(1 + \pi) - \pi\delta - \delta'(\mathrm{K} - \delta)$ $= 1)\ \mathrm{K} + \mathrm{K}\pi - \pi\delta - \delta'\mathrm{K} + \delta'\delta$
$\mathrm{K}(1 + \pi) + \pi\delta + \delta'(\mathrm{K} + \delta)$ $= 2)\ \mathrm{K} + \mathrm{K}\pi + \pi\delta + \delta'\mathrm{K} + \delta'\delta.$
*I*) $K + \pi(K - \delta) - \delta'(K - \delta)$
*II*) $K + \pi(K + \delta) + \delta'(K + \delta).$

So, *I*) $K + \pi(K - \delta) - \delta'(K - \delta)$. If $p - \pi = -\delta'$, then $\delta' = \pi - p$
and $-\delta' = -(\pi - p)$
*II*) $K + \pi(K + \delta) + \delta'(K + \delta)$. If $p - \pi = \delta'$, then $\delta' = (p - \pi)$

• • •

[277]
The equation I) $= \mathrm{K} + \pi(K - \delta) - (\pi - p)(K - \delta)$

$$= K + \cancel{\pi K} - \pi\delta - \cancel{\pi K} + \pi\delta + pK - p\delta = K + p(K - \delta).$$

51 p is corrected from $\delta$.
52 > is corrected from <.

This is the *general rate of profit.*

The *equation II*) = K + $\pi(K + \delta) + (p - \pi)(K + \delta)$

$$= K + \cancel{\pi K} + \pi\delta + pK + p\delta - \cancel{\pi K} + \pi\delta = K + p(K + \delta).$$

If the turnover of Capital III of 500 would be the same as the one of Capital I, = 500, then δ = 0.

|36| If δ = 0, so that both capitals have the same turnover and only the rates of profit p and π are different;

Then I): = K + $\pi(K - \delta) - \delta'(K - \delta)$, ... becomes $K + \pi K - \delta' K = K(1 + \pi) - \delta' K.$

And II) = K + $\pi(K + \delta) + \delta'(K + \delta)$ becomes $= K + \pi K + \delta' K = K(1 + \pi) + \delta' K.$

So, the general formula is: K ± $\pi(K \pm \delta) \pm \delta'(K \pm \delta)$. *If turnover and rate of profit deviate in the same direction.*

And: K ± $\pi(K \pm \delta) \pm \delta'(K \pm \delta)$.[53] *If they deviate in the opposite direction.*

1) In case the *turnover is the same.* and only the *rates of profit are different* (annual π and p), so that the difference of the rates of profit =δ, [if p > π, then δ' +, if p < π, then δ' -.][54] then again = 1) $K(1 + \pi) - \delta' K$ , as δ = 0

Or 2) $K(1 + \pi) + \delta' K.$

2) In case the *rates of profit* π and p are the same, and only the *turnover* is different, then δ' = 0, and one gets: 1) $K(1 + \pi) - \delta\pi.$
2) $K(1 + \pi) + \delta\pi.$

3) How it is if turnover and rates of profit are different, but in opposite direction, was discussed earlier.

π' is the *rate of profit calculated in relation to the cost price* of the capital that is compared with the social capital.

P' is the *annual general* rate of profit, or the *annual rate of profit* of the social capital for which onetime turnover per year is assumed, hence $\frac{S}{K} = \frac{s}{C}$ or π being the same ratio as p. If within the social capital itself p would deviate from π, the profit of the advanced capital from the profit of the capital turned over, then P' is to be calculated first: it is then π ± δ.[55] And with this, then, the annual rate of profit of Capital II is to be compared.

53 See Translators' Introduction.

54 Brackets in the *MEGA* text.

55 Here and three lines below δ should be δ'.

p’ is the annual rate of profit that corresponds to the π of Capital II. P’ – p’ = δ; i.e. after the *turnovers* are equalised.

|37| The first thing that is to be done is to analyse with respect to an arbitrary capital (be it the social one or another) how at a different turnover of it [the] *rate of profit related to the cost price* and *annual rate of profit* are different. [278]

Let’s call π the rate of profit of the annual *cost price* K, and *p the annual rate of profit*, viz. the relationship of the annually created surplus-value to the capital C. Among all circumstances it holds that S = πK. As $\frac{S}{K} = \pi$. So, $S = \pi K$.

The annual rate of profit is = $\frac{S}{C}$ or $\frac{\pi K}{C}$.

Among all circumstances it holds that $p = \frac{\pi K}{C}$.

However, the size of K depends on the turnover velocity.

a) In case the capital value turns over once a year, then K = C; the difference between the *capital value turned over* and the *capital value advanced*, or K – C = 0, as K = C.

So, in this case $\frac{\pi K}{C} = \frac{\pi K}{K} = \pi$. $\therefore p = \pi$.

b) In case the capital value turns over in *more than one year*, then only a *part of it in one year*. K < C and C – K = δ, the difference between these figures; so then $K + \delta = C$.

So, in this case $p = \frac{\pi K}{K+\delta}$ and $\frac{p}{\pi} = \frac{K}{K+\delta}$. As, K + δ > K, hence π > p or $p < \pi \therefore p < \pi$.

|38| As $p = \frac{\pi K}{K+\delta}$

$$p = \frac{S}{K+\delta} \text{ and } \pi = \frac{S}{K}.$$

$$\text{So } \pi - p = \frac{S}{K} - \frac{S}{K+\delta}$$

$$= \frac{S(K+\delta)-SK}{K(K+\delta)} = \frac{SK+S\delta-SK}{K(K+\delta)} = \frac{\frac{S}{K}}{\frac{\delta}{K+\delta}}\,56 = \frac{\pi\delta}{C}.$$

So, $\pi - p = \frac{\pi\delta}{C}$

And $\frac{\pi - p}{\pi} = \frac{\delta}{C}$

56 This should be $\frac{S}{K}\frac{\delta}{K+\delta}$.

c) In case the capital value turns over more than once in a year, then K > C or K – δ = C or K = C + δ.

In this case $p = \frac{\pi K}{K-\delta}$; $\frac{p}{\pi} = \frac{K}{K-\delta} \therefore p > \pi$.

•••

[279]

|39| If the *capital C turns over once a year, then its K = C*, and *π = p*.

1) Its product value = *K(1 + π) = C + pC*. The profit produced by it = pC (=πK).

If it turns over in *more than one year*, thus only a part of it in the same year, so that C – δ = K, or K + δ = C, then its product value

2) = K + πK = K + π(C – δ) = K + πC – πδ. The profit produced by it = πC – πδ

If on πC – πδ we add + πδ, then profit 2) = profit 1). The difference of the profit mass in consequence of the lower turnover is thus – πδ. It is by πδ smaller than 1)

3) If K > C, so that or C + δ = K, or K – δ = C,

then the product value = K + πK = K + π(C + δ) = K + πC – πδ. If we subtract πδ from this, then = K + πC. So, it is by πδ bigger than 1), The *difference with respect to the profit mass in consequence of the higher turnover is thus* = πδ.

If we compare 2) with 1), then it differs from 1) by – δp, i.e. it is by πδ smaller;
3) with 1), then it differs from 1) by + δp, i.e. it is by πδ bigger.

The relationship *of this differential profit* δp *to the real profit mass* πK is $\frac{\pi\delta}{\pi K}$, *so* $\frac{\delta}{K}$.

*δ = K – C*. δ = 0, if K = C,
if K < C, then K = C – δ; δ *is negative*.
if K > C, then K = C + δ; δ *is positive*.

So, δ is the difference between the annual *cost price of the product*, i.e. the mass *of the capital value annually turned over*, and the *advanced capital value.*

The mass of the *capital value turned over*, however, is C × the *inverse of the turnover time*.

If the turnover time equals 1 year, then the mass *of the capital value turned over* = C × 1. Or, in terms of $\frac{K}{C}$ >, K = C = K – C = 0.

If the turnover time is more than 1 year, then the mass of the *capital value turned over* = $C \times \frac{1}{1+n}$, whereby n[57] can be an integer, i.e. the multiple of a year, or a fraction. *So, the mass of the capital value turned over* = $\frac{C}{1+n}$ and $\frac{K}{C} = \frac{\frac{C}{1+n}}{C}$.

57 Marx does not specify what n is. It seems to be the additional turnover time beyond one year, measured in years.

[280]

|40| K < C. Namely, as $K = \frac{1}{1+n}C$, the difference $K - C = \frac{1}{1+n}C - C = \frac{C-C(1+n)}{1+n} = \frac{C-C-Cn}{1+n}$[58] $= \frac{-Cn}{1+n}$.[59] So, then $K + \frac{Cn}{1+n} = C$. This difference $\frac{Cn}{1+n}$ I call $\delta$.

So, here $K + \delta = C$ or $K = C - \delta$.

E.g., if the capital turns over $^5/_4$ per year,[60] then $\frac{1}{1+\frac{1}{4}} = \frac{1}{\frac{5}{4}} = \frac{4}{5}$.

And the part of capital that turns over $= {}^4/_5C. = K$. The difference between K and C is then

$$\frac{Cn}{1+n} =. \frac{C\frac{1}{4}}{\frac{5}{4}} = \frac{\frac{C}{4}}{\frac{5}{4}} = \frac{C}{5} = \frac{1}{5}C.\ \delta = \frac{1}{5}C.$$

If the C turns over 5 × per year,[61] then the *mass of the capital turned over*

$$K = \frac{C \times 1}{1+3} = C \times \frac{1}{4} = \frac{1}{4}C.\ \frac{1}{4}C = K. \text{ and the difference } \delta = \frac{C \times 3}{4} = \frac{3}{4}C.$$

•••

If C turns over several times a year, so

in $1 - \frac{1}{n}$,[62] in $\frac{n-1}{n}$ years, then the *mass of capital turned over* $= \frac{n}{n-1}C$.

So $\frac{K}{C} = \frac{\frac{nC}{n-1}}{C}$. and K > C, as $\frac{nC}{n-1} > C$ whilst $\frac{nC}{n} = C$.

The difference of K – C i.e. $\delta = \frac{nC}{n-1} - C = \frac{nC - C(n-1)}{n-1} = nC - nC + \frac{C}{n-1} = + \frac{C}{n-1}$.[63]

E.g., set n = 4, then the turnover time $= 1 - \frac{1}{4} = \frac{4-1}{4} = \frac{3}{4}$. And the capital mass turned over $= \frac{4}{3}C$ and the difference $\frac{C}{3} = \frac{1}{3}C$.

$K = C + {}^1/_3C.$
$C = K - {}^1/_3C.$

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58 – Cn is corrected from + Cn.

59 Ditto.

60 This is wrong; it should read '4/5 per year' or 'every 5/4 years'.

61 Here again the figure is wrong; it should read '1/4 per year' or 'every 4 years'.

62 Here again Marx does not specify what n is. It seems to be the *inverse* of how much the turnover time differs from a turnover time of one year. Thus if n = 4, its inverse is ¼, and the turnover time is (1 – ¼) = ¾ year.

63 + is corrected from –.