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The dialectics of the Abstract & the Concrete in Marx's Capital

Chapter 5 – The Method of Ascent from the Abstract to the Concrete in Marx's Capital

Concrete fullness of Abstraction and Analysis as a Condition of Theoretical Synthesis

We shall now turn to a consideration of the logical structure of *Capital*, comparing it both with the logic of Ricardian thought and the theoretical views of Marx's predecessors in the field of logic; this discussion should reveal Marx's logic in its actual practical application to the analysis of facts, to the analysis of empirical data.

Our task is that of singling out the universal logical elements of Marx's treatment of economic materials, the logical forms that are applicable, due to their universality, to any other theoretical discipline.

Capital, as is well known, begins with a most thorough and detailed analysis of the category of value, i.e., of the real form of economic relations that is the universal and elementary form of the being of capital. In this analysis, Marx's field of vision encompasses a single and, as we have already noted, extremely rare, in developed capitalism, factual relation between men – direct exchange of one commodity for another. At this stage of his inquiry into the capitalist system, Marx intentionally leaves out of account any other forms – money or profit or wages. All of these things are as yet believed to be non-existent.

Nevertheless, analysis of this single form of economic relations yields, as its result, a theoretical expression of the objectively universal form of all phenomena and categories of developed capitalism without exception, an expression of a developed concreteness, a theoretical expression of value as such, of the universal form of value.

The elementary type of the existence of value coincides with value in general, and the real actually traceable development of this form of value into other forms constitutes the objective content of the deduction of the categories of *Capital*. Deduction in this conception, unlike the Ricardian one, loses its formal character: here it directly expresses the real content of some forms of economic interaction from others.

That is precisely the point missing in the systems of Ricardo and of his followers from the bourgeois camp.

The conception of a universal concept underlying the entire system of the categories of science, applied here by Marx, cannot be explained by the specificity of the subject-matter of political economy. It reflects the universal dialectical law of the unfolding of any objective concreteness – natural, socio-historical, or spiritual.

This conception is of great significance for any modern science. To give a concrete theoretical definition of life as the basic category of biology, to answer the question of what is life in general, life as such, one ought to act in the same way as Marx acted with value in general, that is, one should undertake a concrete analysis of the composition and mode of existence of an elementary manifestation of life – the elementary protein body. That is the only way of obtaining a real definition and of revealing the essence of the matter.

Only in this way, and not at all by abstraction of the general features of all phenomena of life without exception, can one attain a really scientific and materialist conception of life, creating the concept of life as such.

The situation is the same in chemistry. The concept of chemical element as such, of chemical element in general, cannot be worked out through abstraction of the general and identical features that helium has in common with uranium or silicon with nitrogen, or the common features of all the elements of the periodic table. The concept of chemical element may be formed by detailed consideration of the simplest element of the system – hydrogen. Hydrogen appears in this case as the elementary structure in the decomposition of which chemical properties of matter disappear in general, whether the analytical decomposition is performed in an actual experiment or only mentally. Hydrogen is therefore a concrete universal element of chemism. The universal necessary laws that emerge and disappear with it, are the simplest laws of the existence of the chemical element in general. As elementary and universal laws they will occur in uranium, gold, silicon, and so on. And any of these more complex elements may in principle be reduced to hydrogen, which, by the way, happens both in nature and in experiments with nuclear processes.

In other words, what takes place here is the same living mutual transformation of the universal and the particular, of the elementary and the complex which we observed in the categories of capital, where profit emerges as developed value, as a developed elementary form of commodity, to which profit is continually reduced in the real movement of the economic system and therefore in thought reproducing this movement. Here as everywhere else, the concrete universal concept registers a real objective elementary form of the existence of the entire system rather than an empty abstraction.

'Value in general' (value as such), 'life in general', 'chemical element' – all these concepts are fully concrete. This means that the reality reflected in them is the reality objectively existing at present (or at any time in the past), existing by itself as an elementary and further indivisible instance of the given concreteness. That is exactly why it can be singled out as a specific object of consideration and may be studied and obtained by experiment.

If one were to conceive value (just as any other universal category) only as a reflection of abstract universal features existing in all developed particular phenomena without exception, it could not be studied as such, all these developed phenomena strictly ignored. Analysis of the universal would in this case be impossible in any other form except that of formal analysis of the concept. In the sensually given world, there can be no 'animal in general' or 'chemical element as such' or 'value' – as reflections of abstract general features they indeed exist only in the head.

Ricardo had not the slightest inkling that value should be studied concretely in its form, that it might in general be studied as such, in strictest abstraction from profit, rent, interest, capital, and competition. His abstraction of value therefore is, as Marx showed, doubly defective: 'On the one hand, he (Ricardo) must be reproached for not going far enough, for not carrying his abstraction to completion, for instance, when he analyses the value of the commodity, he at once allows himself to be influenced by consideration of all kinds of concrete conditions. On the other hand one must reproach him for regarding the phenomenal form as immediate and direct proof or exposition of the general laws, and for failing to interpret it. In regard to the first, his abstraction is too incomplete; in regard to the second, it is formal abstraction which in itself is wrong.'¹

It is not difficult to formulate Marx's own view of the universal category assumed by this evaluation. Abstraction must be, first, *complete*, and second, *meaningful* rather than formal. Only then will it be correct and *objective*.

What does that mean, however?

We have shown already that fullness of abstraction assumes that it directly expresses something quite different from abstract universal features inherent in absolutely all particular phenomena to which this universal abstraction refers; rather it expresses the concrete characteristics of the objectively simplest further indivisible element of a system of interaction, a 'cell' of the analysed whole.

In the capitalist system of interaction between men in social production of material life, this cell turned out to be a commodity the elementary commodity form of interaction. In biology, this cell is apparently the simplest protein structure, in the physiology of the higher nervous activity, the conditioned reflex. etc.

At this point, the question of 'the beginning of science', of the basic universal category underlying the entire system of the concrete categories of science, is closely linked with the question of concreteness of analysis and of the objectively admissible limits of analytical division of the object.

Concrete theoretical analysis means that a thing is divided into internally connected, necessary forms of its existence specific to it rather than into components indifferent to its specific nature.

Marx's analytical method is diametrically opposed in this respect to the so-called one-sided analytical method, as illustrated by the practice of the classical bourgeois political economy. The one-sided analytical method, inherited by the economists of the 17th and 18th centuries from contemporary mechanistic natural science and the philosophy of empiricism (through Locke), fully corresponds to the conception of objective reality as a kind of aggregate of eternal and immutable constituent elements, identical in any object of nature. According to this conception, cognising a thing means analysing it into these eternal and immutable constituents and then comprehending the mode of their interaction within this thing.

'Labour', 'need', 'profit' in the theory of Smith and Ricardo are in this respect just as striking an example of one-sided analytical abstractions, in which the entire concrete historical definiteness of the object is extinguished, as 'the particle' of Cartesian physics, Newton's 'atom' and similar categories of the science of that time. Both Smith and Ricardo endeavoured to understand the capitalist system of interaction as a complex whole whose component parts are eternal realities identical for any stage of the development of mankind: labour, labour implements (capital), needs, surplus product, etc.

This operation of analytical division of the object can always be performed both experimentally and mentally. A living rabbit may be analytically decomposed into chemical elements, into mechanical 'particles', etc. But, having thus obtained an aggregate of analytically singled out elements, we shall not be able to perform a reverse operation, even after a most detailed consideration of these elements – we shall never understand why their combination before the analytical dismemberment existed as a live rabbit.

In this case analysis killed and destroyed exactly that which we intended to understand in this way – the living and concrete interaction specific for the given thing. Analysis made synthesis impossible.

Bourgeois classical economics, the theory of Smith and Ricardo, ran into the same difficulty.

Synthesis, a comprehension of the necessary connection between the abstractly considered constituent elements of the object (labour, capital, profit, etc.), proved to be impossible exactly because analysis that singled out these categories was *one-sided* analysis: it broke up that very concrete historical form of connection of these categories.

The difficulty of the problem of analysis and synthesis was noted already by Aristotle. He saw quite well that one-sided analysis could not by itself solve the problems of cognition. In his *Metaphysics* he comes to the conclusion that the task of cognition is dual: it is not enough to find out of what parts a thing consists – one must also discover why these constituent parts are interconnected in such a way that their combination constitutes the given concrete thing rather than some other one.

A thing given in contemplation is not difficult to analyse into its constituent elements: the chair is black, made of wood, with four legs, heavy, with a round seat, etc., etc. That is an elementary example of empirical analysis and at the same time an example of empirical synthesis of abstract definitions in a judgement about a thing.

It should be noted that a direct coincidence of analysis and synthesis takes place in this case, too. In the proposition 'This chair is black' one can discern both. On the one hand, that is pure synthesis, a combination of two abstractions in a proposition. On the other hand, it is just as pure analysis – a singling out of two different definitions in a sensually given image. Both analysis and synthesis take place *simultaneously* in an utterance of an elementary proposition (judgment) concerning a thing.

In this example, however, the guarantee and basis of correctness of analysis and synthesis is direct contemplation: in it, the features synthesised in the proposition appear as combined and at the same time distinct. Contemplation itself is the basis and criterion of correctness of the analytic singling out of abstractions linked in the proposition.

It is thus easy to understand the coincidence of analysis and synthesis in a proposition concerning an individual fact, in an utterance expressing the actual state of things. It is much more difficult to understand the relation between analysis and synthesis in a *theoretical* proposition that has to be based on better grounds than mere indication of the fact that a thing appears in contemplation in a certain aspect rather than some other one.

The proposition 'All swans are white' does not present any difficulties for comprehension from the point of view of logic precisely because it does not express the necessity of the connection between the two definitions. The proposition 'All objects of nature are extensive' is quite a different matter. A swan may just as well be non-white, whereas the proposition 'All objects of nature are extensive' implements a necessary synthesis of two definitions. Unextended objects of nature are non-existent – and contrariwise, there can be no extension that would not be an attribute of an object of nature.

In other words, a theoretical proposition is a linking of abstractions each of which expresses a definiteness without which the thing ceases to be what it is, it ceases to exist as a given thing.

A swan may be painted any colour other than white – it will not cease to be a swan.

But extension cannot be taken away from an object of nature without destroying that object itself.

A theoretical proposition must therefore contain only those abstractions which express the forms of existence of the given object necessarily inherent in it.

What is to guarantee that a proposition connects precisely these abstract definitions?

Empirical contemplation of a thing cannot answer this question. To separate the necessary form of the being of a thing from one that may or may not exist, without impairing the existence of a thing as the given concrete thing (a swan, a body of nature, labour, etc.), one should proceed from contemplation *to the sensually practical experiment, to man's social practice in its entirety*.

It is only the practice of social mankind, that is, the totality of historically developing forms of actual interaction of social man with nature, that proves to be both the basis and the verification criterion of theoretical analysis and synthesis.

How does this real problem present itself in the development of political economy?

This can be easily traced by considering the category of labour and the category of value connected with it.

Inasmuch as the value category forms the foundation of the entire theory and the theoretical basis of all other generalisations, the conception of labour *as the substance* of value determines the theoretical understanding of all other phenomena of the capitalist system.

Is the proposition 'The substance of value is labour' true? It is not. This theoretical proposition (judgement) is tantamount in its theoretical significance to the proposition 'Man is by nature a private proprietor' – an assertion that being a private proprietor is the same kind of attribute in man's nature, as extension in a body of nature.

In other terms, a consideration of the empirically given situation reveals abstract characteristics none of which is necessarily contained in the nature of labour and value.

Marx gave a lucid explanation of the whole matter. A historically transient property of labour is here taken for a characteristic expressing its absolute inner nature. By far not all labour creates value, not *any* historically concrete form of labour, in the same way that it is not man as such that is an owner of private property but a historically concrete man, man within a definite, historically concrete form of social being.

But how is one to distinguish between that which is inherent in a historically definite form of man's existence, and that which is inherent in man in general?

This can only be done by a detailed analysis of the reality on which a theoretical judgment is passed from the standpoint of the entire practice of mankind. The latter is the only criterion which permits confidently to abstract or analytically reveal a definition that would express the form of being that is the object's attribute.

Both at the time of Smith and Ricardo and in Marx's time man's being as a private proprietor was an empirically universal fact. The ability of labour to create commodities and value rather than merely a product was also an empirically universal fact.

The classic representatives of political economy recorded this empirically universal fact in the proposition 'The substance of value is labour' – labour in general, without further theoretical qualifications expressing its concrete historical definiteness within which it creates commodity rather than product, value rather than use-value.

Insofar as the classics of political economy worked out abstract theoretical definitions with the aid of the one-sided analytical method, they were unable to understand why labour appeared now as capital, now as wages, now as rent.

This logical task that was common both to the natural scientists of the 17th and 18th centuries and to Smith and Ricardo is essentially insoluble. The former attempted to understand why and in what way atoms, particles and monads could form in different combinations now a cosmic system, now the body of an animal; the latter endeavoured to comprehend why and in what way labour in general generated now capital, now rent, now wages.

Neither the, former nor the latter could attain a theoretical synthesis – exactly because their analysis was not concrete but rather divided the object into indifferent parts common to any objective sphere or any historical form of production.

Labour in general is an absolutely necessary condition of the emergence and development of rent, capital, wages, and all the other specifically capitalist categories. But it is also a condition of their non-being, their negation and destruction. Labour in general is just as indifferent to the being of capital as to its non-being. It is a universal necessary condition of its emergence, but it is not an *internally necessary* condition, a condition that is at the same time a *necessary sequence*. The form of inner *reciprocal* action, inner *reciprocal* conditioning is absent here.

Concerning this defect of one-sided analytical abstractions worked out by the classics of bourgeois science, Marx remarked: 'It is just as impossible to pass directly from labour to capital as directly from different human races to a banker or from nature to a steam-engine.' ²

This is an echo of Feuerbach's well-known aphorism, 'You cannot directly deduce even a bureaucrat from nature'; Marx draws the same conclusion from this aspect of the matter, too: all difficulties of theoretical analysis and synthesis are solved in reality on the basis of the category of concrete historical *reciprocal* action, *reciprocal* conditioning of phenomena within a definite historically developed whole, within a concrete historical system of interaction.

To put it differently, both analysis/synthesis and deduction/induction cease to be metaphysically polar and therefore helpless logical forms only on the basis of a *conscious historical view* of the analysed reality, on the basis of the conception of any objective reality as a historically emergent and developed system of interacting phenomena.

This view gave Marx a clear criterion which he, proceeding from the entire rationally comprehended history of the practice of mankind, confidently applied to the solution of the difficulties of theoretical analysis and synthesis and theoretical deduction and induction.

The practice of mankind in its historical entirety was used by Marx as a criterion for distinguishing between empirical synthesis and *theoretical synthesis*, of analytical abstractions reflecting the universal empirical state of things and *theoretical abstractions* the interconnection of which reflects the internally necessary connection of phenomena which they express.

In Smith and Ricardo (and even Hegel) purely empirical synthesis is often set up as theoretical one; they continually set up the historically transient form of the phenomenon for its inner structure (for its eternal nature), deducing the justification of the crudest empirical facts from the nature of things, whereas Marx's method raises the most rigorous logical and philosophical barriers in the way of such movement of thought.

Deduction and induction, analysis and synthesis prove to be powerful logical means of processing empirical facts exactly because they are consciously used in the service of an essentially historical approach to research, being based on the dialectical materialist conception of the object as a historically emergent and developing system of phenomena interacting in a specific way.

For this reason, Marx's analytical method, the method of ascent from the whole given – in contemplation to the conditions of its possibility, coincides with the method of *genetic deduction* of theoretical definitions, with logical tracing of the real descent of some phenomena from others (of money from the movement of the commodity market, of capital from the movement of commodity-money circulation in which labour force becomes involved, etc.). This essentially historical view of things and of their theoretical expression enabled Marx to formulate clearly the question of the real substance of the value properties of the labour product, of the universal substance of all the other concrete historical categories of political economy.

It is not labour in general but the concrete historical form of labour that was conceived as the substance of value. In this connection, new light was thrown on theoretical analysis of the form of value: it emerged as the concrete universal category which permits to understand theoretically (to deduce) that real concrete historical necessity with which value is transformed into surplus-value, into capital, wages, rent and all the other developed concrete categories.

In other words, for the first time an analysis was given of the starting-point from which one can really develop the entire system of theoretical definitions of the object, the system that logically reflects the necessity of the real genesis of the capitalist formation.

What did concrete analysis of the form of value consist in, that very analysis which David Ricardo failed to conduct? The answer to this question should give us the key to an understanding of the method of ascent from the abstract to the concrete.

Ascent from a universal theoretical definition of the object to an understanding of the entire complexity of its historically developed structure (concreteness) assumes a concrete and comprehensive analysis of the *basic universal category of the science*. We have seen that insufficient concreteness of Ricardo's analysis of value determined the failure of his intention to develop the whole system of theoretical definitions, to construct the entire building of science on a single solid foundation; it did not permit him to deduce even the proximate category, money, not to mention all the other categories.

Wherein lies the specific quality of Marx's analysis of value, which forms the solid foundation of theoretical synthesis of categories, enabling him to proceed in a most rigorous manner from the consideration of value to the consideration of money, capital, etc.?

Thus formulated, this question compels logic to face the problem of contradiction in the definitions of a thing, a problem which ultimately contains the key to everything else. Contradiction as the unity and coincidence of mutually exclusive theoretical definitions was discovered by Marx to be the solution of the riddle of the concrete and a way to express theoretically the concrete in concepts. We are now passing on to the analysis of this point.

Contradiction as the Condition of Development of Science

Logical contradiction – the existence of mutually exclusive definitions in the theoretical expression of a thing – has long interested philosophy. There has never been one single philosophical or logical doctrine that would not consider this question in one form or another and solve it in its own way. It always interested philosophy exactly because contradiction in definitions is first and foremost a fact independent from any philosophy, a fact that is continually and with fatal necessity reproduced in scientific development, in mankind's thought, including philosophy itself. Moreover, contradiction most unambiguously reveals itself as a form in which thought about things moves, always and everywhere.

Ancient Greeks understood full well that truth was only born in the struggle of opinions. Critique of any theory was always directed at discovering contradictions in it. A new theory always asserted itself through demonstrating a method by which contradictions were solved that had been insoluble within the framework of the principles of the old theory.

However, if this empirical fact is simply described as a fact, it will appear that a contradiction is something intolerable, something that thought always tries to get rid of in one way or another. At the same time, despite all attempts to get rid of it, thought reproduces it again and again.

Inasmuch as philosophy and logic study this fact, not content with simply stating and describing it, the question arises of the causes and sources of its origin in thought, of its real nature. In philosophy, this question arises in the following form: is contradiction admissible or inadmissible in the genuine expression of a thing? Is it something purely subjective, created only by the subject of cognition, or does it necessarily emerge as the outcome of the nature of things expressed in thought?

That is the boundary between dialectics and metaphysics. In the final analysis, dialectics and metaphysics are two fundamentally opposed methods of solving contradictions which inevitably arise in scientific development, in the development of theoretical knowledge.

The difference between them, expressed in a most general form, is that metaphysics interprets contradiction as a mere *subjective* phantom which regrettably recurs in thought due to the imperfections of the latter, while dialectics considers it as the *necessary logical* form of the development of thought, of the transition, from ignorance to knowledge, from an abstract reflection of the object in thought to an ever more concrete reflection of it.

Dialectics regards contradiction as a necessary form of development of knowledge, as a universal logical form. That is the only way to consider contradiction from the point of view of cognition and thought as a natural historical process controlled by laws independent from man's desires. *

The development of knowledge and science compels philosophy to recur to the problem of logical contradiction again and again. The question of contradiction, of its real significance, its source and the cause of its emergence in thought arises in those areas where science approaches the stage of systematic expression of its subject-matter in concepts, where reasoning has to construct a system of theoretical definitions. In cases of unsystematic recounting of phenomena, there is no question of contradiction. An elementary attempt to systematise knowledge immediately leads to the problem of contradiction.

We have already noted the points at which the development of the labour theory of value necessarily ran into this problem: in Ricardo, despite his wishes, a system of theoretical contradictions arises exactly because he attempts to develop all categories out of one principle – that of determining value by the quantity of labour time. He noticed some logical contradictions in his system himself, others were maliciously pointed out by the opponents of the labour theory of value.

The main type of logical contradiction that was the focal point of the struggle for and against the labour theory of value, proved to be the contradiction between universal law and the empirical universal forms of its own realisation.

Attempts to deduce from the universal law theoretical definitions of developed concrete phenomena that regularly recur on the surface of the capitalist production and distribution of commodities resulted in paradoxical conclusions at every step.

A phenomenon (say, profit) is, on the one hand, included in the sphere of action of the law of value, its necessary theoretical definitions are deduced from the law of value; but, on the other hand, its specific distinctive feature proves to be contained in a definition which directly contradicts the formula of the universal law.

This fatal contradiction manifested itself all the more clearly, the more efforts were made to get rid of it.

* It should be borne in mind that here and in the following we mean those contradictions in definitions which arise in the course of movement of thought that is correct from the standpoint of the logic of the object, that is, we mean dialectical contradictions in reasoning. As Lenin pointed out, in any enquiry there must be no logical contradictions in the narrow sense of the word, that is verbal, forced, or subjective contradictions. Rules barring these contradictions must be worked out by formal logic.

Contradictions are by no means a 'privilege' of political economy that studies the antagonistic reality of economic relations between classes.

Contradictions are inherent in any modern science. Suffice it to recall the circumstances of the birth of the theory of relativity. Attempts to explain certain phenomena established in the Michelson experiments in terms of the categories of classical mechanics resulted in the appearance, within the system of concepts of classical mechanics, of absurd, paradoxical contradictions in principle insoluble in these terms, and Einstein's brilliant hypothesis was put forward as a means of solving these contradictions.

The theory of relativity did not, of course, eliminate contradictions from physics. For example, one may point out to the well-known paradox contained in the theoretical definitions of the rotating body. The theory of relativity, linking up the spatial characteristics of bodies with their motion, expressed this connection in a formula according to which the length of a body is reduced in the direction of motion proportionately with the speed of the body's motion. This expression of the universal law of the motion of a body through space became a firmly established theoretical attainment of the mathematical arsenal of modern physics.

However, an attempt to apply it to a theoretical elaboration or assimilation of such an actual physical phenomenon as rotation of a hard disc round its axis results in a paradox: the circumference of a rotating disc diminishes with an increase of the speed of rotation, while the length of the radius, according to the same formula, remains unchanged.

Let us note that this paradox is no mere curiosity but an acute test of the *physical reality* of Einstein's universal formulas. If the universal formula expresses an objective law of objective reality studied in physics, one should assume the existence in the reality itself of an objectively paradoxical relation between the radius and the circumference of a rotating body (even in the case of the spinning top), for the infinitely small decrease in the extent of the circumference changes nothing in the fundamental approach to the problem.

The conviction that physical reality itself cannot contain such a paradoxical correlation, is tantamount to a rejection of the physical reality of the universal law expressed in the Einstein formula. And that is a way to a purely instrumental justification of the universal law. If law serves theory and practice that is all to the good, and one should not bother about the vacuous problem whether it has anything to correspond to it in the 'things in themselves or not.'

One can cite quite a number of other examples showing that objective reality always reveals itself to theoretical thought as contradictory reality. The history of science from Zeno of Elea down to Albert Einstein,

independently from any philosophy shows this circumstance to be an incontestable empirically stated fact.

Let us go back to the reality of capitalist economy and its theoretical expression in political economy. This is a good example because it is extremely typical: it shows graphically the cul-de-sacs in which metaphysical thought inevitably lands itself in trying to solve the prime task of science – that of unfolding a systematic expression of the object in concepts, in a system of theoretical definitions of the object, a system developed from one general theoretical principle. That is the first reason. And the second and probably most important reason is that in Marx's *Capital* we find a rational way out of the difficulties and contradictions, a dialectical materialist solution of the antinomies which destroyed the labour theory of value in its classical Ricardian form.

The Contradictions of the Labour Theory of Value and their Dialectical Resolution in Marx

Let us recall that the logical theoretical contradictions of Ricardo's system are the result of his effort to express all phenomena through the category of value, to understand them from one principle only.

Where this effort is not made, no contradictions arise. The formula of vulgar science (capital – interest, land – rent, labour – wages) does not contradict either itself or the obvious empirical facts. However, precisely because of that it does not contain a single grain of theoretical comprehension of things. There are no contradictions here for the simple reason that this formula does not establish any inner connection at all between capital and interest, between labour and wages, between land and rent, also because vulgar science does not even attempt to deduce definitions of all these categories from a single principle. They are not shown to be necessary distinctions necessarily arising within a certain common substance, they are not understood as modifications of this substance. It is not surprising that there is no inner contradiction here but merely an external contradiction between different internally non-contradictory things. And that is a situation with which a metaphysician will be easily reconciled. They do not contradict each other simply because they do not stand in any internally necessary relation at all. That is why the formula of vulgar science has approximately the same theoretical value as the favourite maxims of the proverbial school teacher from a short story by Chekhov: 'horses eat oats' and 'the Volga flows into the Caspian'.

Unlike vulgar economists, Ricardo tried to develop the entire system of theoretical definitions from the principles of the labour theory of value. And that is exactly why the whole reality, as he describes it, appears as a system of conflicts, antagonisms, antinomical mutually exclusive tendencies, diametrically opposed forces whose opposition creates the whole which he considers.

Logical contradictions which economists and philosophers from the bourgeois camp regarded as an indication of weakness, of lack of development of Ricardo's theory, actually expressed quite the reverse – the strength and objectiveness of his method of theoretical expression of things. What Ricardo aimed at, first and foremost, was correspondence of theoretical propositions and conclusions to the actual state of things, and only in the second place, their correspondence to the metaphysical postulate that an object cannot contradict itself and neither can its separate theoretical definitions contradict one another.

He expressed the actual state of things in a bold (and even, as Marx put it, cynical) manner, and the actually contradictory state of things was reflected in his system as contradictions in definitions. When his pupils and followers made it their principal concern not so much theoretical expression of facts as formal coordination of already available definitions, subject to the principle forbidding contradictions in definitions as the supreme principle, from flat point on the disintegration of the labour theory of value set in.

In his analysis of the views of James Mill, Marx states: 'What he tries to achieve is formal, logical consistency. The *disintegration* of the Ricardian school "therefore" (therefore! – E.I.) begins with him.'³

In itself, the desire for justifying Ricardo's theory in terms of the canons of formal logical sequence does not of course spring from a Platonic love for formal logic. This preoccupation is stimulated by a different motive – a desire to present the capitalist system of commodity production as an everlasting form of production eternally equal to itself, rather than as a historically emergent system that can therefore turn into another, higher system.

If a certain phenomenon, expressed and conceived in terms of the universal law of value, suddenly enters into a relation of theoretical (logical) contradiction with the formula of the universal law (determination of value by the quantity of labour time), to a bourgeois theoretician this appears as evidence of its deviation from the eternal and immutable foundations of economic being. All effort is directed at proving that the phenomenon directly corresponds to the universal law, which in itself is conceived as existing without contradiction, as an eternal and immutable form of economy.

More acutely than anything else, bourgeois economists feel the contradiction between Ricardo's universal law of value and *profit*. An attempt to express the phenomena of profit in terms of the category of value, to apply the labour theory of value to profit, reveals, already in Ricardo, contradictions in the definition. Inasmuch as profit is the holy of holies of the religion of private property, economists direct their theoretical efforts at coordinating the definitions of profit with the universal law of value.

There are two ways of directly coordinating theoretical definitions of value with the theoretical definitions of profit as a specific form, as a specific modification (kind) of value.

The first way is to change the expression of *profit* in such a manner that it might be included without contradiction in the sphere of application of the category of value, of its universal definitions. The second way is to change the expression of *value*, to qualify it in such a way that definitions of profit might be included in it without contradiction.

Both of these ways led to the disintegration of the Ricardian school. Vulgar political economy preferred the second way, that of qualifying definitions of value, for the motto of empiricism has always been, 'Bring the *universal* formula of a law in agreement with the empirically unquestionable state of things, with that which is identical in the facts', in this case, with the empirical form of the existence of profit.

This philosophical position appears at first glance to be the most obvious and sensible. Its realisation, however, is impossible unless the universal theoretical propositions of the labour theory of value, the very *concept* of value, are sacrificed.

Let us consider in detail why and in what way this necessarily comes about.

The paradoxical relation between the theoretical definitions of value and profit is a stumbling-block for Ricardo himself. His law of value says that live labour, man's labour, is the only source of value, while the time spent on the production of an article constitutes the only objective measure of value.

What do we observe, however, if we apply this universal law that cannot be either violated or abolished or altered (expressing as it does the universal intimate nature of any economic phenomenon) to the empirically unquestionable fact of the existence of profit?

Ricardo realised quite well 'that profit could not be explained by the law of value alone and that the entire complexity of the structure of profit was not exhausted by this law. Ricardo took the law of the average rate of profit, the general rate of profit, as the second decisive factor whose interaction with the law of value could explain profit.

The general rate of profit is a purely empirical and therefore unquestionable fact. Its essence is this: the magnitude of profit depends exclusively on the aggregate magnitude of capital and in no way depends on the proportion in which it is divided into fixed and circulating capital, constant and variable capital, etc.

Ricardo applies this empirically universal law to the explanation of the mechanism of profit production, treating it as a factor which modifies and complicates the action of the law of value. Ricardo did not inquire into the nature of this factor, its origin, its inner relation to the universal law. He assumed its existence absolutely uncritically, as an empirically unquestionable fact.

Any more or less close analysis will reveal at once that the law of the average rate of profit directly contradicts the universal law of value, the determination of value in terms of labour time, the two laws being mutually exclusive.

'Instead of postulating this general rate of profit, Ricardo should rather have examined in how far its existence is in fact consistent with the determination of value by labour-time, and he would have found that instead of being consistent with it, *prima facie*, it contradicts it. ...'⁴

The contradiction here is as follows: the law of the average rate of profit establishes the dependence of the magnitude of profit solely on the magnitude of capital as a whole; it stipulates that the magnitude of profit is absolutely independent from the share of capital spent on wages and transformed into the live labour of the wage worker. But the universal law of value states directly that new value can only be the product of live labour, it can by no means be the product of dead labour, for dead labour, (that is, labour earlier materialised in the form of machines, buildings, raw materials, etc.) does not create any new value, merely passively transferring its own value, bit by bit, onto the product.

Ricardo saw the difficulty himself. However, entirely in the spirit of metaphysical thinking, he expressed and interpreted it as an exception from the rule rather than a contradiction in the definitions of the law. Of course, that does not alter the situation, and Malthus points out quite correctly in this connection that, as industry develops, the rule becomes an exception and an exception the rule.⁵

Thus a problem arises that is completely insoluble in metaphysical thought. From the point of view of the metaphysically thinking theoretician, a universal law can only be justified as an empirically universal rule to which all phenomena without exception are subject. In the given case it turns out, however, that something directly opposing the universal law of value, a negation of the law of value, becomes a universal empirical rule.

A theoretically established universal law and an empirical universal rule, the empirically universal element in the facts, come here into an antinomy, an insoluble contradiction. If one continues the attempts to bring into agreement the universal law with the immediately general features abstracted from facts, a problem arises that is 'much more difficult ... to solve than that of squaring the circle.... It is simply an attempt to present that which does not exist as in fact existing'.⁶

The problem of correlation of the universal and the particular, of a universal law and an empirically obvious form of its own manifestation (of the general in the facts), of *theoretical and empirical abstraction*, became one of the stumbling-blocks in the history of political economy that proved insurmountable to bourgeois theory.

Facts are a stubborn thing. Here, too, the fact remains: a universal law (the law of value) stands in the relation of mutually exclusive contradiction to the empirically universal form of its own manifestation, with the law of the average rate of profit. It is impossible to bring them into agreement exactly because such an agreement does not exist in the economic reality itself.

A metaphysically thinking theoretician facing this fact as a surprise or paradox, will inevitably interpret it as a result of mistakes earlier made in reasoning, in the theoretical expression of facts. For a solution of this paradox, he naturally resorts to purely formal analysis of theory, to specification of concepts and correction of expressions. The postulate that objective reality cannot be self-contradictory is for him the supreme and indisputable law for which he is ready to sacrifice anything at all.

Marx denounced the complete lack of the scientific spirit in these attitudes, their absolute incompatibility with a theoretical approach, in these terms:

'Here the contradiction between the general law and further developments in the concrete circumstances is to be resolved not by the discovery of the connecting links but by directly subordinating and immediately adapting the concrete to the abstract. This moreover is to be brought about by a *verbal fiction*, by changing the correct names of things. These are indeed "verbal disputes", they are "verbal", however, because real contradictions which are not resolved in a real way, are to be solved by phrases.)'⁷

The law forbidding contradictions in definition triumphs, but theory perishes, degenerating into verbal disputes, into a system of semantic tricks.

Indicating contradictions in the theoretical definitions of the object does not in itself constitute a privilege of conscious dialectics. Dialectics is not merely a desire for piling up contradictions, antinomies, and paradoxes in theoretical definitions of things. Metaphysical thought is much better at this task (true, contrary to its intentions).

Contrariwise, dialectical thought emerges only at that point where metaphysical thought is hopelessly lost in a maze of contradictions with itself, in the contradictions of some of its conclusions with others.

The desire to get rid of contradictions in definitions through specifying terms and expressions is a metaphysical mode of solving contradictions in theory. As such, it results in disintegration of theory rather than in its development. Since life compels a development of theory all the same, in the end it always turns out that an attempt to construct a theory without contradictions leads to the piling up of new contradictions that are still more absurd and insoluble than those that were apparently got rid of.

To repeat: the task of theory does not consist in merely proving that the objective reality always arises before theoretical thought as a living contradiction demanding a solution, as a system of contradictions. In the 20th century, this fact does not have to be proved, and new examples add nothing. Even the most inveterate and confirmed metaphysician cannot fail to see this obvious fact.

However, the metaphysician of our times, starting, out from his efforts at justifying this fact as resulting from intrinsic defects of man's cognitive ability, from poor development of concepts, definitions, the relative and vague character of terms, expressions, etc. Now, the metaphysician will be reconciled with the existence of contradiction – as with an inevitable subjective evil, not more. Just as in Kant's times, he is still not prepared to admit that this fact expresses inner contradictions of things 'in themselves', of the objective reality itself. That is why agnosticism and subjectivism of the relativist type resort to metaphysics in these days.

Dialectics proceeds from a diametrically opposite view. Its solution of the problem is based first of all on the assumption that the objective world itself, the objective reality is a living system unfolding through emergence and resolutions of its internal contradictions. The dialectical method, dialectical logic demand that, far from fearing contradictions in the theoretical definition of the object, one must search for these contradictions in a goal-directed manner and record them precisely – to find their rational resolution, of course, not to pile up mountains of antimonies and paradoxes in theoretical definitions of things.

The only way of attaining a rational resolution of contradictions in theoretical definition is through tracing the mode in which they are resolved in the movement of *the objective reality, the movement and development of the world* of things 'in themselves'.

Let us go back to political economy, to see how Marx resolves all those antinomies which were recorded by the Ricardian school despite its conscious philosophical intention.

In the first place, Marx gives up any attempts to bring directly into agreement the universal law (the law of value) with the empirical forms of its own manifestation on the surface of events, that is, with the abstract general expression of facts, with the immediately general features that may be inductively established in the facts.

Marx shows that this direct coincidence of the universal law and the empirical forms of its manifestation does not exist in the reality of economic development itself: the two are connected by the relation of mutually exclusive contradiction. The law of value contradicts in actual fact, not only and not so much in Ricardo's head, the law of the average rate of profit.

In an attempt to prove their coincidence, 'crass empiricism turns into false metaphysics, scholasticism, which toils painfully to deduce undeniable empirical phenomena by simple formal abstraction directly from the general law, or to show by cunning argument that they are in accordance with that law'.⁸

Finally realising the impossibility of doing so, the empiricist will in this case draw the conclusion that the formulation of the universal law is incorrect and will 'correct' it. Following this path, bourgeois science emasculate the theoretical meaning of the Ricardian law of value, losing, as Marx pointed out, the concept of value itself.

This loss of the value concept occurred in the following way: to bring the law of value into agreement with that of the average rate of profit and other irrefutable phenomena of economic reality contradicting it, MacCulloch changed the concept of labour as the substance of value. Here is his definition of labour:

'Labour *may properly* be defined to be any sort of action or operation, whether performed my man, the lower animals, machinery, or natural agents, that tends to bring about any desirable result.'⁹

By means of this definition MacCulloch 'gets rid' of the Ricardian contradictions.

Marx has this to say about the argument: 'And yet some persons have had the temerity to say that the miserable Mac has taken Ricardo to extremes, he who ... abandons the very concept of labour itself!' ¹⁰

This 'abandonment of the concept' is inevitable given the desire to construct a system of theoretical definitions without contradictions between a universal law and the empirical form of its own manifestation.

Marx's mode of action is different in principle. In his system, the theoretical definitions do not eliminate the contradictions which horrify the metaphysician who does not know any other logic but the formal one.

If one should take a theoretical proposition from the first volume of *Capital* and confront it with a theoretical proposition from the third volume, it will appear that the two are in logical contradiction with each other.

In the first volume it is shown, for instance, that surplus-value is exclusively the product of that part of capital which is expended on wages, which became the live labour of a wage worker, that is, the product of the variable part of capital and only of that part.

But a proposition from the third volume reads as follows: 'However that may be, the outcome is that surplus-value springs simultaneously from all portions of the invested capital.' ¹¹

The contradiction established by the Ricardian school has not thus disappeared here but is on the contrary shown to be the *necessary* contradiction of the very essence of production of surplus-value. That was precisely why the bourgeois economists, after the publication of the third volume of *Capital*, triumphantly stated that Marx had not been able to resolve the antinomies of the labour theory of value, that he had not made true the promises given in the first volume, and that the entire *Capital* was nothing but a speculative dialectical trickery.

The logical-philosophical basis of these reproaches was again the metaphysical conception that a universal law was proved by facts only when it could be brought into agreement *without contradictions* directly with the general empirical form of the phenomenon, with the general features in facts open to direct contemplation.

That is exactly what we do not find in *Capital*, and the vulgar economist raises a shout that the propositions of the third volume refute those of the first, insofar as they are in relations of mutually exclusive contradiction with them. In the empiricist's eyes that is evidence of the falsity of the law of value, a proof that this law is the 'purest mystification' contradicting reality and having nothing in common with it.

At this point, vulgar empiricism of bourgeois economists was supported by the Kantians. For instance, Conrad Schmidt seemingly agreed with Marx's analysis, with one reservation, however: he 'declares the law of value within the capitalist form of production to be a pure, *although theoretically necessary, fiction*'.¹²

The reason why the Kantians regard this law as a speculative hypothesis or fiction is that it cannot be justified in terms of the immediately general in the empirically unquestionable phenomena.

The general in the phenomena – the law of the average rate of profit – is something diametrically opposed to the law of value, something that contradicts it and excludes it. In the Kantians' view it is therefore no more than an artificially constructed hypothesis, a theoretically necessary fiction – by no means a theoretical expression of the objectively universal law to which all pertinent phenomena are subject.

The concrete thus contradicts the abstract in Marx's *Capital*, and this contradiction does not disappear because of the fact that a whole chain of mediating links is established between the two but rather is proved as the necessary contradiction of economic reality itself, not as the consequence of the theoretical drawbacks of the Ricardian conception of the law of value.

The logical nature of this phenomenon may well be demonstrated by means of an easier example which does not require special knowledge in the field of political economy.

In quantitative mathematical description of certain phenomena self-contradictory systems of equations are very often obtained, in which there are more equations than unknown quantities, e. g.:

$$\begin{aligned}x + x &= 2 \\50x + 50x &= 103.\end{aligned}$$

The logical contradiction is patently obvious here, yet the system of equations is quite real. Its reality will become apparent on condition that x here denotes one kopek, and the addition of kopeks takes place not only and not so much in the head but in the savings bank, too, which puts to an account three per cent interest *per annum*.

Under these concrete, and quite real, conditions, the addition of kopeks is quite precisely expressed by the above 'contradictory' system of equations. Contradiction is here a direct expression of the fact that in reality it is not speculative pure quantities that are added (or subtracted, or divided, or raised to a power, etc.) but *qualitatively definite magnitudes*, and that the purely quantitative addition of these magnitudes produces at some point a qualitative leap disrupting the ideal quantitative process and resulting in a paradox in the theoretical expression.

Any science runs into this problem at every step. Let us take an elementary example. It was established that as the temperature of a gas decreases by one degree, its volume diminishes by $1/273$; within certain limits the behaviour of gases is strictly consistent with this law. At very low temperatures, however, the figures are quite different. The contradiction ('lack of agreement') between the basic law and the mathematical expression of its action at very low temperatures is evidence of the fact that at some point a new factor emerges, caused by the same lowering of the temperature, which effects the proportion; it does not prove at all that the contradictory numerical expressions are wrong. Science has long learnt a way to treat these contradictions properly. Unwillingness or inability consciously to apply dialectics here results, however, in the view of mathematics as a 'theoretically necessary fiction', a purely artificial instrument of the intellect.

Modern positivists speak of mathematics, which runs into these paradoxes at every step, exactly in the same manner in which Conrad Schmidt discussed value. They justify pure mathematics also in an entirely pragmatic, instrumentalist way – only as an artificially invented mode of the subject's spiritual activity which for some (unknown) reason yields the desired result. The grounds for this attitude to mathematics are the real circumstance that direct application of mathematical formulas to the real quantitative-qualitative development of phenomena, to real concreteness, invariably and inevitably leads to a paradox, to a logical contradiction in mathematical expression.

In this case, however (just as in political economy), the contradiction is not at all a result of errors made by thought in the theoretical expression of the phenomenon. It is a direct expression of the dialectics of the phenomena themselves. A real resolution of this contradiction may only consist in further analysis of all the concrete conditions and circumstances in which the phenomenon is realised, and in revealing the qualitative parameters which disrupt the purely quantitative series at a certain point. The contradiction does not in this case demonstrate falsity of the mathematical expression or its erroneousness but something quite different: the falsity of the view that the given expression defines the phenomenon in an exhaustive manner.

The equations $x + x = 2$, $50x + 50x = 103$ express quite precisely the quantitative aspect of the underlying fact, and seem absurd only until the concrete objective meaning of the unknown quantity is established and the concrete conditions are specified in which addition of these unknown quantities takes place.

One can certainly envisage a case where contradiction in equations of the illustrated type will be an indication and a form of manifestation of imprecision or errors made by the subject. Assume that the real value of x , for instance, equals 1.0286 – objectively, independently of the subject performing the measurement, of the scale of measurement and of the resolution of the measuring device; assume also that no qualitative change occurs as a result of addition of the x 's. In this case the logical contradiction in the mathematical expression will be quite different from the above in origin and objective meaning: it will merely be evidence of error or imprecision in measurement, of insufficient resolution power of the measuring device, crude scale, etc. The contradiction is here to be blamed on the subject and only on the subject who, in measuring the sum of two x 's, was unable to notice and express the difference between 2 and 2.056, and in measuring the sum of a hundred such x 's obtained a result in which the difference manifested itself quite clearly. This logical contradiction is naturally solved in quite a different manner from the first case.

However, it is quite impossible to conclude from the formal mathematical structure of the equations alone with which particular case we are dealing and in what way the contradiction must be resolved. Both cases require additional concrete analysis of the reality in the expression of which the contradiction was manifested.

The difference between dialectics and metaphysics on this score does not at all lie in the fact that metaphysics immediately declares any contradiction in the definitions of the object an intolerable evil while dialectics regards it as virtue and truth. That is only true of metaphysical logic, but dialectics does not at all consist in asserting the opposite. That would not be dialectics but merely inverted metaphysics, that is, sophistry.

Dialectics does not at all negate the fact that purely subjective contradictions may and very often do figure in cognition, contradictions that have to be got rid of as soon as possible. However, it is quite impossible to conclude from the external (formal mathematical or verbal syntactical) form of an equation or proposition with what contradiction we are dealing in each particular case. Since metaphysical logic in any case regards contradiction in definitions as a purely subjective evil, as a result of errors and inaccuracies made earlier by thought, contradictions in the way of movement of thought become insurmountable difficulties for it. If a contradiction arises in this framework, metaphysical logic forbids further development of thought, recommending to go back and to find at any cost the mistake in previous reasoning which resulted in contradiction. Until contradiction is shown to be the subject's error, there is a ban on the advance of thought.

Dialectics does not at all negate a certain usefulness of checking and double-checking the previous course of reasoning, neither does it negate that in some cases the checks may reveal the contradiction to be a result of error or inaccuracy.

What dialectics does reject is something different, namely the assumption that a formula may be worked out that would permit to recognise logical (that is, subjective) contradictions resulting from inaccuracy or carelessness without recourse to analysis of knowledge in its real objective content. That is the underlying claim of both classical formulations of 'exclusion of contradictions' – the Aristotelian and the Leibniz-Kantian. According to the first, *any* proposition is forbidden which expresses a contradiction of the object to itself 'at one and the same time and in one and the same relation'. According to the second, any proposition or utterance is forbidden which ascribes to a concept a predicate (or attribute) contradicting it.

The ban in its Aristotelian formulation applies, as has long been established, to the proposition expressing the famous paradox of Zeno concerning the flying arrow. That is why all logicians endeavouring to raise the Aristotelian ban to an absolute, have for two thousand years made attempts, as persistent as they have been unsuccessful, to present this paradox as the result of errors in the expression of facts. They run the risk of spending another two thousand years of vain effort, for Zeno expressed in the only possible (and therefore the only correct) form an extremely typical case of the dialectical contradiction contained in any fact of transition, motion, change, or transformation.

On the other hand, the Leibniz-Kantian formula will absolutely forbid a proposition like this: *the ideal is the material* transplanted into the human head and transformed in it. This proposition also expresses a transition of the opposites into each other. It therefore naturally defines the subject, through a predicate that cannot be immediately connected with it. *The ideal* as such is not material, it is non-material, and vice versa.

Any utterance expressing the very moment, the very act of transition (and not the *result* of this transition only)’ inevitably contains an explicit or implicit contradiction, and a contradiction ‘at one and the same time’ (that is, during transition, at the moment of transition) and ‘in one and the same relation’ (precisely with regard to the transition of the opposites into each other).

That is exactly why any attempt to formulate the ban on contradiction as an absolutely unquestionable formal rule (that is, a rule formulated irrespective of the concrete content of the utterances) is doomed to failure. This rule will either forbid, along with ‘logical contradictory’ propositions, all propositions expressing the contradictions of real change, of real transition of opposites, or else it will permit the former along with the latter. That is quite inevitable, for the two cannot in general be distinguished in the form of expression in speech, in the utterance. As often as not, objective reality contains an internal contradiction ‘at one and the same time and in one and the same relation’, and the utterance expressing this situation is regarded in dialectical logic as quite correct, despite the loud protestations of metaphysicians.

Thus, if a contradiction in definitions of a thing necessarily emerged as a result of the movement of thought by the logic of facts characterising the movement, change of development of the thing, the transition of its different elements into each other, that is not a logical contradiction, though it might have all the formal indications of such, but a quite correct expression of an objective dialectical contradiction.

Contradiction is not in this case an insurmountable barrier in the way of the movement of the investigating thought but, on the contrary, a springboard for a decisive leap forward in a concrete investigation, in further processing of empirical data into concepts.

But this leap, characteristic of the dialectical development of concepts, only becomes possible because contradiction appears in reasoning always as a real problem, the solution of which is attained through further concrete analysis of concrete facts, through finding those real mediating links through which the contradiction is resolved in reality. The really serious problems in science have always been solved in this way.

For instance, the philosophy of dialectical materialism, for the first time in history, was able to formulate and solve the problem of consciousness exactly because it approached this problem with a dialectical conception of contradiction. The old metaphysical materialism ran at this point into an obvious contradiction. On the one hand, the proposition advocated by any kind of materialism asserts that matter (objective reality) is primary, whereas consciousness is a reflection of this reality, that is, it is secondary. But, if one takes abstractly a single isolated fact of man's goal-directed activity, the relation between consciousness and objectiveness is the reverse. The architect first builds a house in his consciousness and then brings objective reality (with the workers' hands) in agreement with the ideal plan he has worked out. If one were to express this situation in philosophical categories, it would apparently contradict the general proposition of materialism, be in 'logical contradiction' to it. What is primary here is consciousness, the ideal plan of activity, while the sensual objective implementation of this plan is something secondary or derivative.

Materialists of the pre-Marxian epoch in philosophy could not, as we know, cope with this contradiction. As far as theoretical consciousness was concerned, they advocated the point of view of reflection, the proposition that being is primary and consciousness secondary. But, as soon as the debate switched to man's goal-directed activity, metaphysical materialism was unable to make head or tail of the situation. It is not accidental that all materialists before Marx were pure idealists in the conception of the history of society. Here they accepted the diametrically opposed principle of explanation in no way connected with the principle of reflection. In the theories of the French Enlighteners, two unreconciled antinomic principles of explanation of human cognition and activity coexisted peacefully.

Marx and Engels showed that metaphysical materialism continually lapsed into this contradiction because it failed to see the real mediating link between objective reality and consciousness – it failed to grasp the role of practice. By discovering this mediating link between thing and consciousness, dialectical materialism solved the problem concretely, explaining the subject's very activity from a single universal principle and thereby fully implementing the principle of materialism in the conception of history. The contradiction was in this way removed, concretely resolved, and explained as necessarily appearing.

This contradiction is eliminated in metaphysical materialism through abstract reduction of definitions of consciousness to definitions of matter. This 'solution', however, leaves the real problem untouched. The facts that were not included directly and abstractly into the sphere of application of the proposition on the primacy of matter (facts of man's conscious activity) were not, of course, thereby eliminated from reality. They were merely eliminated from the consciousness of the materialist. As a result, materialism could not put an end to idealism even within its own theory.

For this reason, metaphysical materialism did not liquidate the real grounds on which, again and again, idealist conceptions of the relationship between matter and spirit emerged.

Only the dialectical materialism of Marx, Engels, and Lenin proved capable of solving this contradiction, retaining the basic promise of any materialism but implementing this premise concretely in the understanding of the birth of consciousness from the practical sensual activity changing things.

In this way, contradiction was shown to be a necessary expression of a real fact in its origin, rather than eliminated or declared to be false and invented. Idealism was thereby dislodged from its most solid shelter – speculation on facts concerning the subject's activity in practice and cognition.

Such is in general the way for solving theoretical contradictions in dialectics. They are not rejected or eliminated but concretely resolved in a new and more profound conception of these facts, in tracing out the entire chain of mediating links which connects the mutually exclusive abstract propositions.

The metaphysician always tries to choose one of the two abstract theses, leaving it as abstract as it was before the choice: that is the meaning of the 'either ... or' formula.

Dialectics imposes the requirement of reasoning according to the 'both ... and' formula, yet it does not at all orientate thought at eclectic reconciliation of two mutually exclusive propositions, as metaphysicians often impute in the heat of the debate. It orientates' thought at a more concrete study of the facts in the expression of which the contradiction arose. That is where dialectics seeks a solution of the contradiction – in a concrete study of facts, in tracing out the entire chain of mediating links between the actually contradictory aspects of reality.

In the process, each of the previously abstract propositions is transformed into a moment in a concrete understanding of facts and is explained as a one-sided expression of the real contradictory concreteness of the object, and moreover a concreteness in its development. In development, there is always a point where new reality appears which, though evolving on the basis of previous forms, nevertheless rejects these forms and possesses characteristics contradicting the characteristics of the less developed reality.

Contradiction as a Principle of Development of Theory

Let us further analyse the fundamental difference between deduction of categories in *Capital* and formal-logical deduction, that is, the concrete essence of the method of ascent from the abstract to the concrete.

We have established that the Ricardian concept of value, that is, a universal category of the system of a science, is an abstraction, an incomplete and formal one, and therefore also incorrect. Ricardo regarded value as a concept expressing the abstract general features inherent in each of the developed categories, each of the concrete phenomena to which it applies, and he therefore does not study value specially, in the strictest abstraction from all the other categories.

Thus the theoretical definitions of the basic universal category and the methods of its definition contain already, as in an embryo, the whole difference between the deduction of categories by the metaphysician Ricardo and the method of ascent from the abstract to the concrete used by the dialectician Marx.

Quite consciously, Marx constructs the theoretical definitions of value by a most thoroughgoing concrete analysis of simple commodity exchange, leaving aside, as irrelevant, a host of phenomena that developed on this basis and the categories that express these phenomena. That is, on the one hand, really complete abstraction, and on the other, really meaningful rather than formal ('generic') abstraction.

Only this conception, assuming a concrete historical approach to things, makes possible special analysis of the form of value, special inquiry into the concrete content of the universal category-analysis of value as a *concrete sensually given reality, as an elementary economic concreteness*, and not as a concept.

Value is not analysed as a mental abstraction of the general but rather as a fully specific economic reality actually unfolding before the observer and therefore capable of being specially studied, as reality possessing its own concrete historical content, the theoretical description of which is identical with elaboration of definitions of the *concept* of value.

Marx shows that the real content of the form of value is not, as Ricardo believed, simply abstract quantitative identity of portions of labour but rather dialectical contradictory *identity of the opposites* of relative and equivalent forms of expression of the value of each commodity entering the relation of exchange. The point where Marx's dialectics opposes Ricardo's metaphysical mode of reasoning is the fact that Marx revealed the inner *contradiction* of the simple commodity form.

To put the matter differently, the content of the universal category, of the concrete concept of value is not elaborated by Marx on the basis of the abstract identity principle but rather on the basis of the dialectical principle of the identity of mutually assuming poles, of mutually exclusive definitions.

That means that the content of the value category is revealed through establishing the inner contradictions of the elementary form of value realised as exchange of a commodity for another commodity. Marx presents commodity as a living contradiction of the reality denoted by that term, as a living unresolved antagonism within that reality. A commodity contains a contradiction within itself, in its immanent economic definitions.

Let us note that the inner dichotomy into mutually exclusive and at the same time mutually presupposing moments is characteristic, as Marx shows, of *each* of the two commodities participating in an act of exchange.

Each of them comprises in itself the economic form of value as its immanent economic definiteness. In an exchange, in the act of substitution of one commodity for another, this inner economic definiteness of each of the commodities is merely *manifested* or *expressed* and in no way *created*.

That is the central point, the understanding of which determines not only the problem of value but also the logical problem of the concrete concept as a unity of mutually exclusive and at the same time mutually presupposing definitions.

The phenomenon of actual exchange presents the following picture: one commodity is replaced in the hands of the commodity owner by another, and this replacement is reciprocal. The replacement can only take place when both mutually substitutable commodities are equated as values. ['lie question therefore arises in this form: what is value?]

What is the economic reality the nature of which is revealed in an exchange? How is it to be expressed in a concept? The actual exchange shows that each of the commodities is, vis-à-vis its owner, exchange value only, and in no way use-value. In the hands of the other owner each of the participants in the exchange sees use-value only, that is, a thing that can satisfy his needs. That is the reason why he endeavours to possess it. And this relation is absolutely identical on both sides.

From the point of view of one commodity owner each of the commodities appears in different, and namely in directly opposed forms: the commodity he owns (linen) is *only exchange* value and by no means use-value – otherwise he would not alienate, that is, exchange it. The other commodity (the coat) is, on the contrary, only a use-value for him, with regard to him, *only an equivalent* of his own commodity.

The meaning of actual exchange lies in mutual substitution of the exchange- and use-values, of the relative and equivalent forms.

This mutual substitution, mutual transformation of polar, mutually exclusive and opposed economic forms of the product of labour is a true and factual transformation taking place outside the theoretician's head and completely independent from it.

Value is realised and implemented in this mutual transformation of opposites. Exchange emerges as the only possible form in which the value nature of *each of the commodities* is manifested or expressed in a phenomenon.

It is factually obvious that this mysterious nature can only be *manifested or revealed* through mutual conversion of the opposites – exchange- and use-values, through mutual substitution of the relative and equivalent forms. In other words, the only way is this: one commodity (linen) appears as exchange value, while another (coat), as use-value; one of them assumes the relative form of expression of value, and the other, the opposite, the equivalent form. Both of these forms cannot be combined in one commodity, for in this case the need for exchange disappears. Only that is alienated through exchange which does not constitute a direct use-value but only an exchange value.

Marx gives theoretical expression to this actual state of things: 'A single commodity cannot, therefore, simultaneously assume, in the same expression of value, both forms. The very polarity of these forms makes them mutually exclusive.'¹³

The metaphysician will undoubtedly be overjoyed at reading this proposition. Two mutually exclusive definitions cannot in reality be combined in one commodity! A commodity can only assume one of the mutually exclusive economic forms and by no means both of them simultaneously!

Does that mean that the dialectician Marx rejects the possibility of combining polar definitions in a *concept*? It may appear to be so, at first glance.

However, a closer analysis of the movement of Marx's thought shows that the matter is not so simple as that. The point here is that the passage quoted here crowns an analysis of the empirical form of manifestation of value and merely leads up to the problem of value as immanent content of each of the commodities. The task of working out a concept expressing this latter still lies ahead. Reasoning, which so far registers the mere form of empirical manifestation of value rather than the inner content of this category, indicates the fact that each of the commodities may assume, in this manifestation of value, only one of its polar forms and not both of them simultaneously.

But the form assumed by each of the commodities confronting each other *is not value* at all but merely an abstract one-sided manifestation of the latter. *Value in itself*, the concept of which is yet to be established, is a third quantity, something that does not coincide with either of the polar forms taken separately or with their mechanical combination.

A closer consideration of exchange shows that the abovementioned impossibility of coincidence in one commodity of two polar mutually exclusive economic characteristics is nothing but a necessary *form of manifestation* of value on the surface of phenomena.

'The opposition or contrast existing internally in each commodity between use-value and value, is, therefore, made evident externally by two commodities being placed in such relation to each other, that the commodity whose value it is sought to express, figures directly as a mere use-value, while the commodity in which that value is to be expressed, figures directly as mere exchange-value. Hence the elementary form of value of a commodity is the elementary form in which the contrast contained in that commodity, between use-value and value, becomes apparent.'¹⁴

The matter looks quite different, however, when we are not dealing with the external form of manifestation of value but with value as such, as an objective economic reality concealed in each of the commodities confronting each other in an exchange and constituting the hidden, inner nature of each of them.

The principle forbidding direct coincidence of mutually exclusive forms of being in one and the same thing and at one and the same time (and consequently in the theoretical expression of this thing) applies, it appears, to the external empirical form of manifestation of analysed reality (value, in this case) but is directly rejected with respect to the inner content of this reality, to the theoretical definitions of value as such.

The inner nature of value is theoretically expressed only in the *concept* of value. The distinctive feature of the Marxian *concept* of value is that it is revealed through identity of mutually exclusive theoretical definitions.

The value concept expresses the inner relation of the commodity form rather than the external relation of one commodity to another (in the latter the inner contradiction is not directly manifested but split into contradictions 'in different, relations': in one relation, in relation to the owner, the commodity appears as exchange value only; in another, in relation to the owner of the other commodity, it appears, is use-value, although objectively there is one, not two relations. To put it differently, a commodity is here considered *not in relation to another commodity but in relation to itself reflected through the relation to another commodity*.

This point contains the mystery of Marxian dialectics, and it is impossible to understand anything either in *Capital* or in its logic unless this point, this kernel of the logic of *Capital*, is properly understood.

Value, the inner essence of each commodity, is only manifested or revealed (reflected) in the relation to another commodity. This value, this objective economic reality, is not created or born in the exchange but only manifested in it, being one-sidedly reflected in the other commodity as in a mirror that is only capable of reflecting that side that is turned to it. In the same way the real mirror reflects only man's face, although he also has the back of the head.

Being reflected outside, value appears in the form of external opposites that do not coincide in one commodity – as exchange- and use-values, the relative and the equivalent forms of expression.

However, each of the commodities, inasmuch as it is a value, is a direct *unity* of mutually exclusive and at the same time mutually assuming economic forms. In the phenomenon (in the exchange act) and in its theoretical expression this concrete dual economic nature always appears divided, as it were, into its two abstract moments confronting each other, each of which mutually excludes the other and at the same time assumes it as a necessary condition of its existence, a condition that is not within but outside it.

In the *concept* of value these opposites, abstractly confronting each other in the phenomenon, are united again, though not in a mechanical way but exactly in the way they are united in the economic reality of the commodity itself – as living mutually exclusive and at the same time mutually assuming economic forms of the existence of *each commodity*, of its immanent content – value.

To phrase it differently, the concept of value registers the inner unrest of the commodity form, the inner stimulus of its movement, its self-development – the economic content that is inherent in a commodity prior to any exchange and in no relation to other commodities.

Proceeding from the established concept of value as a living dialectically contradictory coincidence of opposites within each separate commodity, Marx confidently and clearly reveals the evolution from the elementary commodity form to the money form, the process of generating money by the movement of the elementary commodity market.

What is the crux of the matter here, where does Marx see the necessity for the transition from the simple, direct, exchange of one commodity for another without money to exchange mediated by money?

The need for such a transition is deduced directly from the impossibility to resolve the contradiction of the elementary form of value while remaining within the framework of this elementary form.

The point is that each of the commodities entering an exchange relation is a living antinomy. Commodity A can only be in one form of value and not simultaneously in two. But if the exchange is performed in reality, that means that each of the two commodities assumes in the other the very form which the latter cannot take because it already has the opposite form. After all, the other commodity owner did not bring his commodity to the market for someone to measure by it the value of his commodity. He himself must, and wants to, measure the value of his own commodity by the other commodity, that is, he must regard the opposing commodity as an equivalent. But it cannot be an equivalent because it already has the relative form.

This relation is absolutely identical on both sides. The owner of linen regards the commodity – the coat – only as an equivalent, and his own commodity only as a relative form. But the coat owner reasons in precisely the opposite way: for him linen is an equivalent, and the coat only an exchange value, only the relative form. And if the exchange does take place, that means (to express the fact of the exchange theoretically) that both commodities mutually *measure their value* and just as mutually serve as the material in which value is measured. In other words, both coat and linen posit each other as that very form of expression of value which they cannot assume for precisely the reason that they have already assumed the other form.

Linen measures its value in the coat (that is, makes it an equivalent), while the coat measures its value in linen (that is, makes it an equivalent, too). However, as both linen and coat have already assumed the relative form of value, as both measure their value in the other, they cannot assume the role of the equivalent. But, if the exchange actually did take place, that means that both commodities mutually measured their value in each other, they mutually recognised each other to be equivalent values, despite the fact that both of them had been before that in the relative form, which excludes the possibility of assuming the opposite, the equivalent form. Thus real exchange is a real, actually occurring coincidence of two polar and mutually exclusive forms of expression of value in each of the commodities.

But this cannot be, the metaphysician will say: it appears that Marx contradicts himself! Now he says that a commodity cannot assume both polar forms of value, and then again lie says that in actual exchange it is compelled to be in both at the same time!

Marx answers that this may and actually does take place. That is a theoretical expression of the fact that direct commodity exchange cannot serve as a form of the social exchange of matter that would proceed smoothly, without friction, obstacles, conflicts or contradictions. That is nothing but the theoretical expression of the real impossibility against which the movement itself of the commodity market runs – impossibility of precise establishment of the proportions in which the socially necessary work is spent in diverse branches of the socially divided labour connected only through the commodity market, that is, the impossibility of precise expression of value.

Direct exchange of commodity for commodity cannot express the socially necessary measure of the expenditure of labour in various spheres of the social production. The antinomy of value in the framework of the elementary commodity form therefore remains unresolved and unresolvable. Here commodity both must and cannot assume both mutually exclusive economic forms. Otherwise exchange *according to value* is impossible. But it cannot be simultaneously in two forms. That is a hopeless antinomy that cannot be resolved in the framework of the elementary form of value.

Marx's dialectical genius showed itself in the fact that he grasped this antinomy and expressed it as such.

But, inasmuch as exchange according to value still has to take place somehow, the antinomy of value has to be somehow resolved in a relative way.

The solution is found by the movement itself of the simple commodity market, generating money, the money form of expression of value. Money in Marx's analysis emerges as the natural form in which the movement of the market itself finds a means for the solution of the contradiction of the elementary form of value, of direct exchange of one commodity for another commodity.

This is a point where the fundamental difference is most graphically demonstrated between dialectic materialist mode of solving contradictions and all those methods that are known to metaphysical thought.

What is the metaphysician's procedure when a contradiction arises in the definition of a theoretical expression of a certain reality? He always endeavours to solve it by making concepts more precise, by setting stricter limits upon terms, etc.' he will always attempt to construe it as an external rather than an internal contradiction, as a contradiction in different relations, with which metaphysics is well reconciled. In other words, all he does is change the expression of the reality in which the contradiction has arisen.

Marx acts quite differently in a case like this. He proceeds from the assumption that in the framework of the elementary form of value the established antinomy in definitions is not resolved and cannot *objectively* be resolved. One therefore need not search for its solution in the consideration of the elementary form of value. This antinomy is insoluble in direct exchange of commodity for commodity either objectively (that is, by the movement of the commodity market itself) or subjectively (that is, in theory). Its solution must not therefore be looked for in further reflection on the elementary form of value, 1) in tracing out the objective spontaneous necessity with which commodity market itself finds, creates, or works out the real means of its relative resolution.

The dialectical materialist method of resolution of contradictions in theoretical definitions thus consists in tracing the process by which the movement of reality itself resolves them in a new form of expression. Expressed objectively, the goal lies in tracing, through analysis of new empirical materials, the emergence of reality in which an earlier established contradiction finds its relative resolution in a new objective form of its realisation.

That is Marx's procedure in the analysis of money. Money is the natural means by which use-value begins to transform itself into exchange value, and vice versa.

Before, money appeared, each, of the commodities coming together in an exchange had to perform simultaneously, within one and the same individual relation, both of the mutually exclusive metamorphoses (from use-value into exchange value and at the same moment, within the same act, to perform the reverse transfiguration). Now it all looks different. Now the dual transformation is not realised as direct coincidence of the two mutually exclusive forms but as a mediated act through transformation into money, the universal equivalent.

The transformation of use-value into value no longer directly coincides with the opposite transformation of value into use-value. Exchange of commodity for another commodity breaks up into two different and opposite acts of transformation no longer coinciding in one point of space and time. Commodity is transformed into money, not another commodity. A use-value becomes an exchange value, no more, and somewhere at another point of the market, possibly at a different time, money becomes a commodity, value becomes use-value, is replaced by it.

The coincidence of two transformations in two diametrically opposed directions now falls, in the reality of exchange itself, into two different transformations no longer coinciding in time or place – the act of selling (transformation of use-value into value) and the act of buying (transformation of value into use-value).

Money fully monopolises the economic form of equivalent, becoming a pure embodiment of value as such, while all the other commodities assume the form of relative value. They confront money as use-values only.

The antinomy in the theoretical expression of commodity exchange was apparently resolved: the contradiction (as direct coincidence of two polar mutually exclusive opposites of economic form) now merged split, as it were, between two different things, between commodity and money.

In actual fact, with the emergence of the money form of value, the contradiction of value did not disappear or evaporate at all – it merely assumed a new form of expression. It continues to be (though only implicitly) an *inner* contradiction permeating both money and commodity and, consequently, their theoretical definitions.

Indeed, a commodity confronting money has apparently become a use-value only, and money, a pure expression of exchange value. But, on the other hand, each commodity appears only as exchange value in relation to money. It is sold for money precisely for the reason that it is no use-value for its owner. And money plays the role of an equivalent precisely because it confronts any commodity as the universal image of use-value. The entire import of the equivalent form lies in that it expresses the exchange value of another commodity as use-value.

The originally established antinomy of the elementary commodity exchange has thus been retained both in money and in commodities, it still constitutes the elementary essence of the one and of the other, although on the surface of events this inner contradiction of both money and commodity forms proved to be extinguished.

'We saw [says Marx] ... that the exchange of commodities implies contradictory and mutually exclusive conditions. The differentiation of commodities into commodities and money does not sweep away these inconsistencies, but develops a *modus vivendi*, a form in which they can exist side by side. This is generally the way in which real contradictions are reconciled. For instance, it is a contradiction to depict one body as constantly falling towards another, and as, at the same time, constantly flying away from it. The ellipse is a form of motion which, while allowing this contradiction to go on, at the same time reconciles it.'¹⁵

From the *external* contradiction of use-value and exchange value Marx proceeds to the fixing of the *internal* contradiction contained in *each* of the two commodities. The fact that the contradiction first arises as contradiction in different relations (exchange value in relation to one of the commodity owners and use-value in relation to the other) is for him an indication of abstractness, of insufficient completeness and concreteness of knowledge. The concreteness of knowledge is manifested in comprehending this external contradiction as a *superficial* mode of revelation of something quite different, namely, an internal contradiction, a coincidence of mutually exclusive theoretical definitions in the concrete concept of value.

Its significance may be explained, e.g., by comparing Marx's analysis of value with a discourse on value in a work by the English empiricist Bailey.

The latter took the external form of manifestation of value in exchange for its genuine and only economic reality, believing all talk about value as such abstract dialectical scholastics; he declared: 'Value is nothing intrinsic and absolute'. His substantiation of this assertion was this: 'It is impossible to *designate*, or *express the value* of a commodity, except by a *quantity of some other commodity*'.

To this, Marx answered: 'As impossible as it is to "*designate*" or "*express*" a thought except by a quantity of syllables. Hence Bailey concludes that a thought is – syllables.' ¹⁶

In this case Bailey aimed at presenting value as a relation of one commodity to another, as an external form of a thing posited by its relation to another thing, whereas Ricardo and Marx endeavoured to find an expression of value as an *inner content* of each exchanged thing, of each thing entering the relation of exchange. The proper immanent value of a thing is only manifested, by no means created, in the form of a *relation* of one thing to another.

Bailey, being an empiricist, tries to present the inner relation of a thing within itself as an external relation of one thing to another.

Ricardo and Marx endeavour (and therein lies the *theoretical* nature of their approach) to see through the relation of one thing to another the *inner* relation of a thing *to itself* – value as the essence of a commodity, which is only manifested in an exchange through an external relation of this commodity to another one.

The metaphysician always attempts to reduce an inner contradiction of a thing to an external contradiction of this thing to another thing, to a contradiction in different relations, that is, to a form of expression in which this contradiction is eliminated from the concept of a thing. Marx, on the contrary, always endeavours to discern in the external contradiction only a superficial manifestation of an inner contradiction immanently inherent in each thing confronting its counterpart in the relation of external contradiction. Therein lies the difference between a genuinely theoretical approach and an empirical description of phenomena.

Dialectics consists exactly in the ability to discern the inner contradiction of a thing, the stimulus of its self-development, where, the metaphysician sees only an external contradiction resulting from a more or less accidental collision of two internally non-contradictory things.

Dialectics requires in this case that external contradiction of two things be interpreted as a mutually necessary manifestation of the inner contradiction of each of them. The external contradiction emerges as an inner identity of mutually exclusive moments mediated through a relation to something else and reflected through something else, as an internally contradictory relation of a thing to itself, that is, as a contradiction in one relation and at one and the same moment in time. Marx proceeds from an external manifestation of a contradiction to establishing the inner basis of this contradiction, *from the appearance to the essence* of this contradiction, whereas the metaphysician always tries to act in a precisely reverse manner, refuting the theoretical expression of the essence of a thing from the standpoint of external appearance, which he believes to be the only reality.

That is Bailey's mode of reasoning in the above. That is the mode of reasoning of a metaphysician, who always assumes that the true interpretation of a contradiction is its interpretation as a contradiction in different relations. And it always leads to a destruction of the elementary theoretical approach to things.

Marx regards value as the *relation of a commodity to itself*, rather than to another commodity, and that is why it emerges as a living, unsolved and insoluble inner contradiction. This contradiction is not resolved because on the surface of phenomena it appears as a contradiction in two different relations, as two different transformations – as buying and selling. The entire significance of Marx's analysis consists in showing that the contradiction of value is insoluble in principle within the framework of elementary commodity exchange, and that value inevitably appears here as a living antinomy in itself, no matter how much one specifies concepts, or how deeply one examines, or reflects upon value.

A commodity as an embodiment of value cannot simultaneously assume both of the mutually exclusive forms of value; yet it actually does assume both these forms simultaneously when the exchange according to value is performed.

This theoretical antinomy expresses nothing but the real impossibility which the movement of the simple commodity market continually encounters. An impossibility is an impossibility. It does not disappear if it is present in theory as a possibility, as something uncontradictory.

The movement of the real market leaves behind the form of direct exchange of a commodity for another commodity. In considering extensive empirical data expressing this movement, Marx proceeds to the theoretical analysis of those more complex forms by which the market realises and at the same time resolves this contradiction. Therein lies the necessity of the transition to money.

Looking at this matter from the philosophical viewpoint, we shall see that that is an expression of the *materialist* nature of Marx's method of resolving contradictions in the theoretical expression of objective reality. In this method, the contradiction is not resolved by its elimination from the theory. On the contrary, this method is based on the assumption that contradiction in the object itself cannot be and is never resolved in any other way than by the development of the reality fraught with this contradiction into another, higher and more advanced reality.

The antinomy of value finds its relative resolution in money. But then again, money does not eliminate the antinomy of value – it merely creates a form in which this antinomy is realised and expressed as before. This mode of theoretical presentation of a real process, is the only adequate logical form in which the dialectical development of the object, *its self-development through contradictions*, may be expressed in theory.

The *materialist* nature of the method by which Marx resolved theoretical contradictions in the definition of the object, was well expressed by Engels in his review.

'With this method we begin with the first and simplest, relation which is historically, actually available ... Contradictions will emerge demanding a solution. But since we are not examining an abstract mental process that takes place solely in our mind, but an actual event which really took place at some time or other, or which is still taking place, these contradictions will have arisen in practice and have, probably been solved. We shall trace the mode of this solution and find that it has been effected by establishing a new relation, whose two contradictory aspects we shall then have to set forth, and so on.'¹⁷

It is the objective impossibility of solving the contradiction between the social nature of labour and the private form of appropriating its product through direct exchange of one commodity for another without money that is theoretically expressed as an antinomy, as an insoluble contradiction of the elementary form of value, as an insoluble contradiction of its theoretical definitions. That is why Marx did not even try to get rid of the contradiction in the definition of value. Value remains an antinomy, an unresolved and insoluble contradiction, a direct coincidence of mutually exclusive theoretical definitions. The only real method of the resolution of this antinomy is a socialist revolution eliminating the private nature of the appropriation of the product of social labour, appropriation through the commodity market.

The objective impossibility of resolving the contradiction between the social nature of labour and the private form of appropriation of its products, given the daily need for realising the social exchange of matter through the commodity market, stimulates the search for natural means and methods of doing so. It is this factor that ultimately leads to the emergence of money.

In the same way as money emerges in the real movement of the commodity market as a natural means of resolving the contradictions of direct commodity exchange, the theoretical definitions of money in *Capital* are worked out as a means of resolving the contradiction in the definition of value. Here we are dealing with the most important element of Marx's dialectical method of ascent from the abstract to the concrete, with the dialectical materialist deduction of categories. The stimulus of theoretical development, the motive force behind the unfolding of a system of theoretical definitions of a thing, is the theory's *inner contradiction*. It performs this function precisely because and precisely in those cases when it *directly* reflects the contradiction of the object that is the inner stimulus of its development, of the growth of its complexity and development of its forms of existence. The theoretical expression of this stimulus in the concept is naturally preceded by extensive and thorough work on the selection and analysis of empirical data characterising the development of these forms.

From this viewpoint, the entire logical structure of *Capital* emerges in a new light that is of fundamental interest: else entire movement of theoretical thought in *Capital* proves to be locked in between two originally established poles of the expression of value.

The first concrete category following value, money, emerges as a real method of mutual transformation of the poles of expression of value, as that metamorphosis through which the two poles of value, gravitating towards each other and at the same time mutually excluding each other, must pass in the process of their mutual transformation.

This approach objectively orientates reasoning, when it faces the task of establishing the universal and necessary theoretical definitions of money: in considering the entire totality of the empirical, concrete sensual data, only those characteristics are singled out and registered which are necessarily posited by the transformation of value into use-value and vice versa, whereas all the empirical features of the money form which do not necessarily follow from this mutual conversion or cannot be deduced from it, are left aside.

The fundamental difference between dialectical materialist deduction of categories and abstract intellectual deduction comes to light here.

The latter is based on abstract general or generic concept. A particular phenomenon is subsumed under it, and in considering this phenomenon, the traits are discerned that constitute the distinctive features of the given species. The result is mere appearance of deduction. For instance, the Orlov trotter breed is included in the abstraction 'horse in general'. The definition of this particular breed includes those features which permit to distinguish an Orlov trotter from any other breed of horses. It is quite clear, however, that the specific features of an Orlov trotter are by no means included in the abstraction 'horse in general', and they therefore can in no way be deduced from it. They are tacked on to the definitions of the 'horse in general' in a purely mechanical way. Because of this, formal deduction offers no guarantees that these specific differences are discerned correctly, that they *necessarily* belong to the breed in question. It may well be that these specific traits of an Orlov trotter are found in something that it has in common with a trotter from the state of Oklahoma.

The same is the case, as we have seen, with Ricardo's theoretical definitions of money. In his conception the specific differences of the money form are in no way deduced from value. It is for this reason that he cannot distinguish between the really necessary economic characteristics of money as such and those properties that the empirically observed money possesses because of the fact that it embodies the movement of capital. And it is for this reason that lie sees the specific definitions of money in the characteristics of quite a different phenomenon – the process of circulation of capital.

Marx's approach was quite different. The fact that in his theory value was understood in the movement of opposites, and that theoretical definition of value in general contains a contradiction, allowed him to discern in the empirically observed phenomena of money circulation *exactly those and only those* features which are necessarily inherent in money as money and *exhaustively* define money as a specific form of the movement of value.

Marx includes in the theoretical definition of money only those features of money circulation which are necessarily deduced from the contradictions of value, being necessarily generated by the movement of elementary commodity exchange.

That is what Marx calls *deduction*. It is easy to state here that this kind of deduction becomes possible only if its major premise is not an abstract general concept but a *concrete universal* one interpreted as unity or identity of mutually transforming opposites, as a concept reflecting the real contradiction in the object.

It should be stressed again and again that this theoretical deduction is based on a most detailed and all-sided consideration of a system of empirical facts and phenomena constituting the economic reality that is the object of theory.

That was the only way in which genuinely complete and *meaningful* rather than formal abstractions could be obtained which reveal the specific essence of the money form. Marx obtained theoretical definitions of money by considering the process of circulation *abstractedly*, 'that is, *apart from circumstances not immediately flowing from the laws* of the simple circulation of commodities'. ¹⁸

The circumstances flowing from the immanent laws of simple commodity circulation are precisely the products of the inner contradiction of value as such, of the simple form of value.

The dialectics of the abstract and the concrete is here manifested in a most apparent and graphic form: precisely because money is considered in the abstract, *concrete* theoretical definitions are obtained expressing the concrete historical nature of money as a particular phenomenon.

A football, the planet Mars or a ball-bearing can all easily be included in the abstract general concept of the spherical, but no effort of logical thought will deduce from the concept of the spherical in general, for none of these forms *originate* in the reality reflected in the concept of the spherical in general, that is, in the actual similarity or identity of all spherical bodies.

But the economic form of money is deduced, in a most rigorous manner, from the concept of value (in its Marxian interpretation), exactly because the objective economic reality reflected in the category of value in general contains a real objective necessity of generating money.

This necessity is nothing but the inner contradiction of value insoluble in the framework of the simple exchange of one commodity for another.

Marx's category of value is a concrete universal category exactly because it comprises in its definitions an inner contradiction, being a unity, an identity of mutually exclusive and at the same time mutually assuming theoretical definitions.

The concreteness of the universal concept is in Marx's approach intimately linked with the contradiction in its definition. Concreteness is in general *identity of opposites*, whereas the abstract general is obtained according to the principle of bare identity, identity without contradiction.

If one considers closely the movement of Marx's thought from commodity and value in general to money, comparing it to the similar movement of Ricardo's thought, the result will be a clear picture of the difference between dialectics and metaphysics on the question of the motive forces of the unfolding of a system of categories.

Ricardo is stimulated in his progress by the contradiction between the incompleteness, poverty, and one-sidedness of the universal abstraction (value in general) and the richness, fullness, and variety of aspects of the phenomena of money circulation. Including money (just as all the other categories) in the sphere of application of the universal formula of the law of value, Ricardo sees that money is, on the one hand, included in this sphere (money is also a commodity) but, on the other, it possesses many other properties that are not expressed in the abstraction of value in general. In short, he sees that money, apart from the general features registered in the category of value, possesses specific distinctions which he proceeds to establish. In this way he handles all of the developed categories. We have already seen what that entails: empirical data are assimilated in a theoretically undigested form.

Marx's results are different. In *Capital*, the progress of thought towards new definitions is not stimulated by any contradiction between 'incomplete abstraction' and 'fullness of the sensually concrete image' of reality. Such a conception of the motivating contradiction of theory would not take us a single step beyond the Lockean comprehension of theoretical interpretation of reality, fully identifying the methods of Marx and of Ricardo. The theoretical development of categories in *Capital* is based on a more concrete understanding of the contradiction stimulating the progress of thought. Reasoning is here guided by the following principle: *an objective contradiction is reflected as a subjective, theoretical or logical task for reasoning, which may only be solved through further study of empirical facts, of sensual data.*

This further consideration of empirical facts is not done blindly, but in the light of a rigorously and *concretely formulated* theoretical task or problem, the latter being formulated each time as a *logical*, that is, formally insoluble, *contradiction*.

We have already analysed the transition from the consideration of value to the consideration of money, establishing that in the real empirically given phenomena of developed money circulation Marx singles out only those and exactly those definitions which make money understandable as a means of relative resolution of the inner contradiction of commodity exchange. Then thought faces a new theoretical contradiction, a new *theoretical problem*: analysis of commodity-money circulation shows that this sphere does not comprise in itself any conditions under which circulation of value could generate new value, surplus-value.

"Turn and twist then as we may, the fact remains unaltered. If equivalents are exchanged, no surplus-value results, and if non-equivalents are exchanged, still no surplus-value." ¹⁹

This generalisation, however, is in the relation of mutually exclusive contradiction with another not less obvious fact – namely, that money put into circulation fetches profit. This also remains a fact, 'turn and twist as we may', and a very ancient fact, the same age as money-lending, and the latter is as old as money itself. In other words, analysis of the commodity-money sphere has resulted in the conclusion that usurious capital is impossible. But, far from being impossible, it remains a pervading fact not only under capitalism but in all the earlier systems, too – under the slave-owning system and feudalism.

This new antinomy, the contradiction of the theoretical thought to itself, contained a *formulation of the problem*, of the theoretical task which Marx was capable of solving, for the first time in the history of economic thought, exactly because he was the first to formulate the problem correctly.

He who has formulated the problem correctly has half the answer to it. Old logic, as is well known, did not in general study the question as a logical form, as the necessary form of the logical process. Idealism skilfully speculated on this drawback of old logic. Thus Kant stated that nature answers only those questions that we ask it, making this an argument in favour of his a priori conception of theoretical cognition: the answer to a question essentially depends on the manner of formulating it, and the formulation is done by the subject.

The ability to ask the right question and to formulate the problem correctly is one of the most important tasks of dialectical materialist logic. Marx concretely showed in *Capital* what it meant to formulate a *concrete* question and how to find a concrete answer to it.

Marx's logic is brought into relief in the way he formulated and answered the question of the origin of surplus-value. The question is formulated here not arbitrarily but on the basis of an objective analysis of the laws of commodity-money circulation, and in a form that brings the study of the immanent laws of commodity-money circulation to a *theoretical contradiction*.

'It is therefore impossible for capital to be produced by circulation, and it is equally impossible for it to originate apart from circulation. It must have its origin both in circulation and yet not in circulation.... These are the conditions of the problem. *Hic Rhodus, hic salta!*'²⁰

This formulation of the problem by Marx is not accidental and is by no means only an external rhetorical device. It is linked with the very essence of dialectics as a method of concrete analysis, as a method that follows the analysed reality as it develops through contradictions.

As the development of the reality occurs through the emergence of contradictions and their resolution, so does thought occur as it reproduces this development. This feature of the dialectical method makes it possible not only to ask the right question but also to find its theoretical solution.

An objective inquiry into the commodity-money circulation has shown that this sphere does not contain in it any conditions under which an obvious, unquestionable, and omnipresent economic fact is possible, nay necessary: the spontaneous growth of value. Thought is thus directed at defining that real economically necessary condition in the presence of which commodity-money circulation becomes capitalistic circulation of commodities.

This result that we need must satisfy a number of rigorous conditions, it must be correlated with them. These conditions of the theoretical task are established by the study of the commodity-money circulation as the universal foundation of the capitalistic commodity system. In this respect, thought moves deductively in the full sense of the term – from the universal to the particular, from the abstract to the concrete, which makes it goal-directed.

Marx formulates the task in the following way: the only condition on which surplus-value is possible without violating the law of value is 'to find, within the sphere of circulation, in the market, a commodity, whose use-value possesses the peculiar property of being a source of value, whose actual consumption, therefore, is itself an embodiment of labour, and, consequently, a creation of value'. ²¹

This point sharply marks the fundamental opposition between the dialectics of Marx, that is, materialist dialectics, and the speculative idealist dialectics of Hegel, his method of constructing reality out of a concept.

The axiomatic and unquestionable principle of Hegelian dialectics is that the entire system of categories must be developed from the immanent contradictions of the basic concept. If the development of commodity-money circulation into capitalistic commodity circulation had been presented by an orthodox follower of Hegelian logic, he would have had to prove, in the spirit of this logic, that the immanent contradictions of the commodity sphere generate by themselves all the conditions under which value becomes spontaneously growing value.

Marx adopts the reverse procedure: he shows that commodity-money however a long it may go on within itself, cannot increase the overall value of commodities being exchanged, it cannot create by its movement any conditions under which money put into circulation would necessarily fetch new money.

At this decisive point in the analysis, thought goes back again to the *empirics* of the capitalistic commodity market. It is in the *empirics* that the economic reality is found which transforms the movement of the commodity-money market into production and accumulation of surplus-value. Labour-power is the only commodity which, at one and the same time, is included in the sphere of application of the law of value and, without any violation of this law, makes surplus-value, which directly contradicts the law of value, both possible and necessary.

Here we again see the enormous theoretical importance of the fact that commodity was revealed by Marx to be a direct unity, an identity of the opposites of value and use-value.

The essence of labour-power as commodity is also revealed in *Capital* as a direct identity of mutually exclusive definitions of value and use-value: the use-value of labour-power, its specific property, consists only in the fact that in the course of its consumption it is transformed into its counterpart – value.

The economic definitions of labour-power within the capitalistic commodity system of conditions of production derive from this unity of mutually excluding opposites, from their antinomical combination in one and the same commodity, the use-value of which exclusively consists in its ability to be transformed into value in the act of consumption itself.

When labour-power figures as use-value (the act of its consumption by the capitalist), it emerges at the same time as value materialised in the product of labour. That is again a contradiction in one and the same relation – in relation to the process of production and accumulation of surplus-value, an inner contradiction of the capitalist process.

From the logical point of view, one most significant circumstance must be noted here: any concrete category of *Capital* emerges as one of the forms of mutual *transformation* of value and use-value, that is, of those two mutually exclusive poles that were established at the beginning of the research, in the analysis of the 'cell' of the organism under study, of those two poles which in their antagonistic unity constitute the content of the basic universal category underlying the entire subsequent deduction of categories. The whole deduction of categories emerges from this angle as a complication of the chain of mediating links through which both poles of value must pass in their transformation into each other.

The formation of the capitalist organism emerges as the process of growing tension between the two poles of the original category. The transformation of the opposites of value and use-value into each other becomes ever more complicated. In simple exchange of one commodity for another, the mutual transformation of value and use-value is performed as a direct act, whereas with the emergence of money each of the poles must first become money and only later its own counterpart. Labour-power emerges as a new mediating link of the mutual transformation of forms of value, as a new form of its realisation.

The poles of value gravitating towards each other remain two extreme points between which ever new economic forms emerge. Any new economic reality assumes a meaning and significance only if it serves the mutual transformation of value and use-value, if it becomes a form of realisation of value as a living antagonistic unity of its inner opposites.

Value becomes the supreme judge of all the economic destinies, the highest criterion of the economic necessity of any phenomenon involved in its movement. Man himself, the subject of the production process, becomes a passive plaything, an 'object' of value, the latter assuming 'an automatically active character ... being the active factor in such a process'. ²²

'In simple circulation, $C - M - C$, the value of commodities attained at the most a form independent of their use-values, i.e., the form of money; but that same value now in the circulation $M - C - M$, or the circulation of capital, suddenly presents itself as an independent substance, endowed with a motion of its own, passing through a life-process of its own, in which money and commodities are mere forms which it assumes and casts off in turn' ²³ – that is what Marx says of the role of value in the capitalistic commodity mode of production.

It is not difficult to discern here a concealed polemics with the very essence of Hegelian philosophy, its fundamental substantiation in *The Phenomenology of the Spirit*. In this work, containing the whole secret of Hegelian philosophy, the idealist dialectician propounded this requirement to be imposed on science: 'to conceive and to express the truth not as substance but in the same degree as a subject.' ²⁴

For Hegel, the subject is tantamount to reality developing through contradictions, to the self-developing reality. The whole point is, however, that Hegel did not recognise this as a property of the objective reality existing outside the spirit and independently from it. For him, the only self-developing substance is the logical idea, and it is therefore assumed and substantiated that the requirement to conceive and express the truth not as substance but in the same degree as a subject can only be realised in the science of thought, only in philosophy and in objective idealist philosophy at that.

Using Hegel's terminology in *Capital*, Marx emphasises thereby the fundamental opposition of his philosophical standpoint to that of Hegelianism, demonstrating a model of *materialist dialectics* as the science of development through inner contradictions.

The essence of the Marxian upheaval in political economy may be expressed in philosophical terms in the following manner: in Marx's theory, *not only the substance* of value, labour, was understood (Ricardo also attained this understanding), but, for the first time, value was simultaneously understood as the subject of the entire development, that is, as a reality developing through its inner contradictions into a whole system of economic forms. Ricardo failed to understand this latter point. To attain such an understanding, one had to take the standpoint of *conscious materialist dialectics*.

Only on the basis of this conception of the objective laws of development through contradictions can one understand the essence of the logic of inquiry applied in *Capital*, the essence of the method of ascent from the abstract to the concrete.

At first sight, viewed from the external form, that is pure deduction, movement from a universal category (value) to particular ones (money, surplus-value, profit, wages, etc.). The external movement of thought resembles very much traditional deduction – money (and subsequently surplus-value and other categories) appears as a more concrete image of value in general, as specific being of value. At first glance, value may seem to be the generic concept, the abstract general, while money and the rest, species of value.

Analysis reveals, however, that there is no genus-to-species relation here. Indeed, the content of 'value in general' is revealed as a directly contradictory unity of value and use-value. As for money and particularly paper money, it does not have use-value, realising in its economic function only one of the two definitions of value in general – that of the universal equivalent. Value in general proves to be richer in content than its own species, money. The universal category has a feature that is not present in the particular category. Money thus realises the two-fold nature of value only in a one-sided (abstract) way. Nevertheless money is a more concrete, more complex, historically derivative economic phenomenon than value. From the standpoint of the traditional conception of deduction that is a paradox, not deduction but something else.

Indeed, that is not deduction in the sense of old logic, but rather movement of thought which combines in an integral manner both the transition from the universal to the particular and vice versa, from the particular to the universal, the movement from the abstract to the concrete and from the concrete to the abstract.

All economic realities reflected in the categories of *Capital* (commodity, money, labour-power, surplus-value, rent) represent both the concrete and the abstract – objectively, independently from their theoretical interpretation. Each of these categories reflects quite a concrete economic formation or phenomenon, and at the same time each of them reflects a reality which is merely a one-sided (abstract) implementation of that whole of which it is an integral part, being a disappearing moment in the movement of this whole, its abstract manifestation.

Deduction reproduces the real process of the formation of each of these categories (that is, of each real economic formation) as well as of their entire system as a whole, disclosing real genetic links, genetic unity, where on the surface there appear a number of seemingly unconnected phenomena and even those which contradict each other.

Hence the fundamental difference between formal-logical, syllogistic deduction and the method of ascent from the abstract to the concrete.

The basis or the major premise of the former is an abstract general, generic concept, the least meaningful in content and the broadest in extent. This concept applies only to those particular phenomena which do not contain a feature contradicting the properties of the universal concept. Apart from that, this concept does not apply to phenomena in which at least one feature included in the definition of the content of the universal concept is *absent*. This phenomenon will be evaluated from the standpoint of old logic as belonging to some other system, to another genus of phenomena.

The axiom of old deduction reads: each of the particular phenomena to which an abstract general concept may apply must possess *all* the features contained in the definition of the universal concept, and must not possess any features contradicting the features of the universal concept. Only phenomena consistent with this requirement are recognised in old deduction as belonging to the genus of phenomena defined by the universal concept. The universal concept here functions as a criterion for selecting phenomena which should be taken into account in considering a certain type of phenomena and, in logical parlance, predetermines from the outset the plane of abstraction, the angle from which things are viewed. But, as soon as we apply this axiom to the categories of political economy, we clearly see its artificial and subjective nature.

Thus, money does not possess an attribute of value in general – use-value. Capitalistic commodity circulation comprises in itself a feature that directly contradicts the law of value, the law of exchange of equivalents – the ability to create *surplus*-value, to which the category of value cannot apply without a contradiction. Surplus-value therefore begins to seem a phenomenon of some other world, not the sphere of the movement of value.

Paradoxes like this confused the bourgeois economists who did not recognise any logic other than formal logic or any deduction other than syllogistic one.

The theoretical task posed by the development of pre-Marxian political economy was this – to show that phenomena directly contradicting the labour theory of value become not only possible but also necessary on the basis of the law of value and without any violations of it.

We have already shown in sufficient detail that this task is absolutely insoluble as long as value is understood as an *abstract general, generic concept*, and that it can be solved rationally if value is interpreted as a *concrete universal category* reflecting quite a concrete economic reality (direct exchange of one commodity for another) containing a contradiction.

This conception of value gave Marx a key to the solution of all those theoretical difficulties that always present an obstacle to theoretical analysis of living reality developing through contradictions.

Marx's analysis discovers in value itself, in the basic category of theoretical development, the possibility of those contradictions which emerge in an explicit form on the surface of developed capitalism as destructive crises of overproduction, as a most acute antagonism between excess of riches at one pole of society and unbearable poverty, at the other, as direct class struggle ultimately resolved only through revolution.

Theoretically presented, this emerges as the inevitable result of the development of that very contradiction which is contained in simple commodity exchange, in the 'cell' of the whole system – value, as in an embryo or kernel.

It now becomes clear why value in the course of theoretical development of the categories of capitalist economy proves to be a rigorous guideline permitting to single out abstractly only those features of analysed reality which are linked with it as its attributes, being universal and necessary forms of the existence of the capitalist system. The theoretical presentation of this system incorporates only those generalisations to which the definitions of value can apply. However, this inclusion of the categories in the sphere of value, as it is performed in *Capital*, is essentially alien to the formal subsumption of concepts under other concepts. Labour-power, for instance, is included in the category of value, but that directly reflects the actual formation of the capitalist system of relations.

Analysis of this system has shown that commodity-money circulation forms the universal basis, the elementary universal and necessary condition without which capitalism cannot emerge, exist, or develop. The theoretical definitions of commodity-money circulation are thus shown to be reflections of those objective universal conditions that must be satisfied by any phenomenon to be included at any time in the movement of the capitalistic commodity organism.

If a phenomenon does not satisfy the conditions dictated by the laws of commodity-money circulation, that means that it could not and in general cannot be included in this process, it cannot become a form of the capitalistic commodity metabolism in society.

Definitions of value thus become for theoretical thought a rigorous criterion of discerning and selecting those phenomena and economic forms that are inherent in capitalism.

Only that which actually, independently of thought, satisfies the conditions dictated by the immanent laws of the commodity-money sphere, only that which may be assimilated by this sphere and may assume the economic form of value, may become a form of movement of the *capitalist* system. Therefore reasoning, which abstracts from the boundless ocean of empirical facts only that concrete historical definiteness of these facts which they owe to capitalism as an economic system, is justified in abstracting only those features of the analysed reality which are included in the definitions of value.

If a certain fact does not satisfy these definitions and requirements established in the analysis of the commodity-money sphere and theoretically expressed in the category of value, that is a clear and categorical indication that, objectively, it does not belong to the kind of facts the generalisation of which must serve as the basis for constructing a theory, a system of concrete historical definitions of capital. Everything that cannot assume the form of value, cannot become capital either.

The entire significance of the category of value in Marx's theory is contained in the fact that it reflects the universal and necessary element, a 'cell' of capital, constituting the universal and most abstract expression of the specific nature of capital, and simultaneously quite a concrete economic fact – direct exchange of a commodity for another commodity.

Extremely indicative in this light is the theoretical transition from the consideration of the commodity-money sphere to the analysis of the production of surplus-value.

What is the basis for the strictest logical necessity of this transition?

It is founded, first of all, on the fact that the analysis of production of surplus-value is approached from the definitions established by the analysis of the commodity-money sphere. Second, what is *analytically studied here is a real fact* – the fact that money put in *capitalist circulation*, passing through all of its metamorphoses, brings a return – surplus-value. Then one has to go back to establish the conditions which make this fact possible. One of the conditions of this possibility, and an absolutely necessary one, is already established by the analysis of the commodity-money form. It is the law of value, with regard to which it has been shown that, on the one hand, it is an absolutely universal law of the analysed whole and, on the other, that it does not contain all the necessary conditions under which surplus-value is objectively necessary.

A certain necessary condition of the analytically studied economic fact is still missing. Thought is then *purposefully* directed at finding this missing condition, the necessary condition of the possibility of surplus-value.

The task is formulated in this form: the unknown quantity must be found not by logical construction but among *a number of real economic facts, in the empirical reality of developed capitalism*. We do not yet know what that fact is. At the same time we know something very important about it. It must in any case be a commodity, that is, an economic reality entirely subject to the law of value, to its indisputable requirements. This commodity, however, must possess one specific feature: its use-value must consist exactly in its ability to be transformed into value in the act of consumption itself. This second requirement imposed on the unknown quantity is, as is easy to see, an analytically established condition of the possibility of *surplus-value*, of capital.

Empirical consideration of developed capitalistic commodity circulation shows that only one economic reality satisfies these conditions, namely, labour-power. The logically correctly formulated question here yields the only possible solution: the unknown quantity satisfying the theoretically established conditions is labour-power.

This conclusion, this theoretical generalisation of *actual facts* has all the merits of the most perfect induction, if the latter is to be interpreted as generalisation proceeding from actual facts. This generalisation, however, simultaneously satisfies the most stringent demands of the adherents of the deductive character of scientific theoretical knowledge.

The mode of ascent from the abstract to the concrete permits to establish strictly and to express abstractedly only the absolutely necessary conditions of the possibility of the object given in contemplation. *Capital* shows in detail the necessity with which surplus-value is realised, given developed commodity-money circulation and free labour-power.

The totality of all the necessary conditions appears in this method of analysis as a real and *concrete* possibility, while developed commodity-money circulation is shown as an *abstract* possibility of surplus-value. For logical reasoning, however, this abstract possibility appears as *impossibility*: analysis of the commodity-money sphere shows that its immanent laws are in *mutually exclusive contradiction* to surplus-value. In the same way, the study of the nature of labour-power as such reveals that it cannot be considered as a source of surplus-value. Labour in general creates a product, a use-value, and by no means value.

The scientific theoretical conception of surplus-value is in this methodological framework focused on discovering the necessary conditions which make it possible only in their *concrete historical interaction*. Each of them, considered abstractedly, outside concrete interactions with others, rules out in principle the very possibility of surplus-value. In thought, this appears as a mutually exclusive contradiction between the law of value (as an abstract possibility of a fact) and the fact itself – surplus-value.

Only *concrete* possibility is *real*, only the totality of all the necessary conditions of the being of a thing in their concrete historical mutual conditioning. A real solution of the contradiction between the universal law and the empirical form of its realisation, between abstraction and concrete fact, can only be found through revealing this concrete totality of conditions. The abstractly expressed universal law inevitably stands in relations of mutually exclusive contradiction to the fact under study. From the standpoint of dialectical logic, there is nothing to be afraid of here. On the contrary, logical contradiction is in this case only an indication and feature of the fact that the analysed object is understood abstractedly and not concretely, that not all the necessary conditions of its being are as yet discovered. The logical contradictions necessarily arising in cognition are thus solved in the unfolding of the concrete system of categories reproducing the object in the entire fullness of its necessary characteristics, of the objective conditions of its being.

But concrete understanding does not completely eliminate all contradictions. On the contrary, it shows in detail that these contradictions are logically correct forms of reflection of the objective reality developing through contradictions. Concrete theoretical knowledge shows the necessity of the fact that phenomena directly contradicting the universal law emerge on its basis without violating, changing, or transforming it in any way.

In this cognitive process, all the necessary conditions of the possibility of the analysed phenomenon are not simply listed or juxtaposed but conceived in their concrete historical interaction, in the genetic links between them.

The mere mechanical sum of the conditions of surplus-value (developed commodity-money circulation and labour-power) does not yet constitute its real, concrete nature. Surplus-value is the product of organic interaction between the two, a qualitatively new economic reality, and its concrete understanding is not simply made up of the characteristics that could be obtained from the consideration of commodity-money circulation and labour-power. Labour-power becomes a factor in the production of surplus-value only on condition that it commences to function in that social form which was developed by the movement of the commodity-money market – in the form of a commodity. But the economic form of commodity also becomes a form of the movement of capital only if it dominates the movement of labour-power. The interaction of the laws of commodity-money circulation and of labour-power gives birth to a certain new economic reality not contained in either of them taken separately, outside their concrete interaction.

Therefore the movement of logical reasoning reproducing the necessary moments of the development of surplus-value cannot consist in the formal combination or synthesis of the theoretical definitions obtained in the analysis of its constituents, that is, of the definitions of the commodity-money sphere, on the one hand, and labour-power as a commodity, on the other. Further movement of thought in which a conception of surplus-value is formed can only proceed through *new* analysis of *new* facts – those of the movement of surplus-value as a specific economic phenomenon that cannot in principle be reduced to its constituents.

On the other hand, this further *theoretical* consideration of the movement of surplus-value could not have taken place in the absence of categories developed in the study of the laws of the movement of the commodity-money market and or the specific, features of labour-power as commodity. Unless these categories are previously developed, theoretical analysis of the empirical facts of the movement of surplus-value is impossible. In this case, only abstract characteristics of the production of surplus-value will be obtained, reflecting merely the external appearance of this process rather than concrete theoretical definitions.

Theoretical analysis directly coinciding with the theoretical synthesis of the abstract definitions of surplus-value established earlier does not express the abstract superficial forms of its movement but rather the necessary changes that take place in the movement of the commodity-money market when this movement involves such an unusual commodity as labour-power. This commodity introduces in the movement of commodity-money circulation precisely those changes which transform the commodity-money circulation into the sphere of production of surplus-value.

Labour-power itself is not here regarded as an eternal characteristic identical for all formations but in its concrete historical definiteness *as commodity*. That means that the first thing that is discovered in it (and recorded in a concept) is the *historically definite* form which it assumes only in the sphere of commodity-money circulation.

That is what distinguishes *scientific theoretical reproduction* of the creation of surplus-value from an *abstract description* of this process, from a mere abstract expression of its superficial phenomena.

To understand and *express in concepts* the essence of capitalist production, of labour producing surplus-value, one must first establish the entire totality of the necessary conditions on the basis of which *such* labour becomes possible in general, and further trace the changes it introduces into the very conditions of its realisation.

Analysis of changes introduced by labour-power in commodity-money circulation, in the production of value, therefore assumes preliminary analysis of the conditions that undergo these changes, that is, analysis of the production of value – the process which *wage* labour finds in existence. Without this, the *origin* of surplus-value is in principle impossible to understand.

This method of interpreting phenomena permits more than a more description of the aspect in which they emerge before direct contemplation on the surface of the developed stage in their existence – it permits to *reproduce*, in the full sense of the term, their origination, to trace their emergence and development into the present state through the strictly necessary stages.

The method of ascent from the abstract to the concrete is founded at this point on the real circumstance that the actually necessary and universal conditions of the *origin and development* of the object are retained at each given moment as forms of its *existence*. That is why thought can discern, in the analysis of a developed object, its sublated history. A historical approach to the study of an object cannot be realised other than by the method of ascent from the abstract to the concrete.

Therefore the picture presented in the most abstract parts of the theory (e.g., the first chapter of *Capital*) differs most radically from the picture as it appears in the direct contemplation and in the notions of the developed stage of the process. Contrariwise, the greater the number of law-governed influences, tendencies, and stimuli taken into account in the ascent from the abstract to the concrete and the more concrete the picture, the closer it comes to complete coincidence with the picture given in direct contemplation and notion.

As a result, Marx's *Capital* shows more than the 'economic skeleton' of the social organism, more than its inner structure. Lenin believed it to be a great advantage of Marx's method that, in 'explaining the structure and development of the given formation of society exclusively through production relations, he nevertheless everywhere and incessantly scrutinised the superstructure corresponding to these production relations and clothed the skeleton in flesh and blood'. *Capital*, as Lenin pointed out, 'showed the whole capitalist social formation to the reader as a living thing – with its everyday aspects, with the actual social manifestation of the class antagonism inherent in production relations, with the bourgeois political superstructure that protects the rule of the capitalist class, with the bourgeois ideas of liberty, equality and so forth, with the bourgeois family relationships'. ²⁵

Capital also shows that these actual relations cannot be other than they are, as long as the entire social life is based on privately owned capitalistic commodity economy, just as a person with a curvature of the spine cannot be graceful. It is only the grave that can correct these actual relations. As long as the law of surplus-value works, both crises and unemployment are inevitable, for they are merely the external forms of manifestation of the deepest essence of the capitalistic commodity organism – the contradictions of the accumulation of surplus-value. These contradictions are inherent in capitalism in the same way as protein metabolism is inherent in a living body. They are not spots on the surface but an expression of its very essence. That is exactly what *Capital* shows, and that is what its method is used for – the method of attaining a comprehension of phenomena from their universal essence, the method of ascent from the abstract to the concrete.

Having accepted Marx's method, it is impossible not to accept all the conclusions of *Capital*. That is why it is so hated by the apologists of modern capitalism. It proves that the crises of overproduction, the existence of a reserve army of the unemployed and all the other similar forms of bourgeois 'wealth' are universal and absolute forms of production and accumulation of surplus-value, its integral forms, not only the consequences but also the necessary conditions of this process.

For this reason, bourgeois philosophers and logicians have long tried to discredit Marx's method, calling it 'speculative construction', 'the Hegelian form of reasoning', allegedly adopted by Marx without due criticism, etc., although, as we have taken pains to show, the resemblance to the Hegelian method is purely external and formal. The deduction performed by Marx is merely a synonym of the materialist method, a method of explaining the spiritual-ideological, political, legal, moral, and other relations from the material relations, from the relations of production.

In Capital, Marx indicated this fact quite unequivocally: 'It is, in reality, much easier to discover by analysis the earthly core of the misty creation of religion, than, conversely, it is, to develop from the actual relations of life the corresponding celestial forms of those relations. The latter method is the only materialistic, and therefore the only scientific one.'²⁶

That is the method which insists that the task of scientific cognition of money does not lie in grasping the fact that money is also a commodity, but in tracing the reasons and the manner in which commodity becomes money. That is a much more difficult but also a surer way. This method shows the relations of real life which are reflected in the well-known ideological forms and, moreover, it explains why the given, rather than some other, ideological, political, legal, and scientific forms have developed. All of these forms are literally 'deduced' from the relations of real life, from its contradictions. Herein lies the profound difference between the Marxian and the Feuerbachian critique of the forms of religious consciousness. Therein consists the principal advantage of the dialectical method of Marx, Engels, and Lenin, and at the same time, its materialistic nature, in application to any field of inquiry – from political economy to epistemology and aesthetics.

Marx's *Capital*, is indeed the highest type of school for theoretical thinking. A scientist specialising in any field of knowledge can use it as a source of most valuable ideas with regard to the theoretical method of research. Philosophers and logicians must make this treasury more accessible. Of course, a single author and a single book can solve this task to a very limited extent only. In view of the complexity and the amount of work involved, this task will require a whole series of studies.

References

¹ Theories of Surplus-value, II

² Karl Marx *Grundrisse*, s. 170

³ Theories of Surplus Value III

⁴ Theories of Surplus Value II

⁵ *ibid.*

⁶ Theories of Surplus Value III

⁷ *ibid.*

⁸ Theories of Surplus Value I

⁹ *ibid.*

¹⁰ *ibid.*

¹¹ Capital Vol. III

¹² *ibid.*

¹³ Capital Vol I p 56

¹⁴ Capital Vol I p 67

¹⁵ Capital Vol I p 106

¹⁶ Theories of Surplus Value III

¹⁷ Contribution to the Critique of Political Economy

¹⁸ Capital Vol I p 156

¹⁹ Capital Vol I p 160

²⁰ Capital Vol I p 163

²¹ Capital Vol I p 164

²² Capital Vol I p 152

²³ Capital Vol I p 152-3

²⁴ Hegel Phenomenology of Spirit, §§ 12-13

²⁵ Lenin, What the 'Friends of the People are' and How they fight the Social-Democrats, LCW Vol 1, pp141-2

²⁶ Capital Vol I p 352