

The Ideal in Human Activity

Evald Vasilyevich Ilyenkov

with a preface by Mike Cole

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References to Marx and Engels in footnotes have been changed to provide the reference to *MECW* (Lawrence & Wishart, London, and International Publishers, New York, 1975-2005, 50 volumes), but the words given by the Progress Publishers translators in the text have been left as per their translation of Ilyenkov's source.

Table of Contents

Dialectical Logic.....	1
Introduction	1
From the History of Dialectics	
1. Descartes & Leibniz – The Subject Matter of Logic.....	5
2. Spinoza – Thought as an Attribute of Substance	14
3. Kant – Logic and Dialectics.....	42
4. Fichte & Schelling – Dualism or Monism.....	66
5. Hegel – Dialectics as Logic	94
6. Feuerbach – Idealism or Materialism?.....	122
Certain Problems of the Marxist-Leninist Theory of Dialectics	
7: A Critique of Objective Idealism	132
8: Thought as the Subject Matter of Logic	146
9: Dialectics and the Theory of Knowledge	167
10: Contradiction as a Category of Dialectical Logic	185
11: The Problem of the General in Dialectics.....	198
Conclusion.....	213
Activity and Knowledge.....	215
The Universal	225
The Concept of the Ideal.....	253
Reflections on Lenin’s book: “Materialism and Empirio-Criticism”	285
Introduction	285
1. Marxism against Machism	296
2. The Positive Programme of Russian Positivism.....	320
3. Dialectics – Philosophy and natural science.....	349
Conclusion.....	383

Preface

The essays in this volume provide insight into the work of Evald Ilyenkov, a Marxist philosopher who played an important part in the revival of Russian Marxist philosophy following the death of Stalin. He is best known for two lines of work. First he wrote about Marx's dialectical method known as "the method of ascent from the abstract to concrete" which, as David Bakhurst has pointed out, provided a subtle critique of empiricism at the same time that it served as a political critique of the positivism and scientism that was prevalent in Soviet political and intellectual culture during Ilyenkov's lifetime. It also served as a philosophical foundation for research into theoretically guided education made famous in the work of Vasilii Davydov and his followers.

In connection with this work, Ilyenkov was a staunch supporter of the work of a group of psychologists, who, following the inspiration of Vygotsky, sought to conduct basic research on the development of human psychological processes while at the same time providing an existence proof of the humanitarian ideal that with sufficient care and understanding, even children who suffered blind-deafness could become fully functioning members of society.

Ilyenkov's work is also important in helping us to think about the relationship of the material and the ideal in human life. He referred to this issue as "the problem of the ideal" by which he meant the place of the non-material in the natural world. Central to his solution of this age-old philosophical problem was his formulation of the concept of the artefact. Ordinarily when one thinks of an artefact, a material object comes to mind. Something manufactured by a human being. In anthropology, the study of artefacts is sometimes considered part of the study of material culture, which is somehow distinct from the study of human behaviour and knowledge. According to this "artefact as object" interpretation, it is easy to assimilate the concept of artefact into the category of tool, in which case, nothing much is to be gained.

According to Ilyenkov's views, trace their genealogy back to Hegel and Marx and can be found in the writings of philosophers such as John Dewey, an artefact is an aspect of the material world that has been modified over the history of its incorporation in goal directed human activities. By virtue of the changes wrought in the process of their creation and use, artefacts are *simultaneously ideal and material*. They are manufactured in the process of goal directed human actions. They are ideal in that their

material form has been shaped by their participation in the interactions of which they were previously a part and which they mediate in the present.

David Bakhurst, in his influential book on Ilyenkov, puts the matter thusly:

Rather, in being created as an embodiment of purpose and incorporated into life activity in a certain way – being manufactured for a *reason* and put into *use* – the natural object acquires a significance. This significance is the “ideal form” of the object, a form that includes not a single atom of the tangible physical substance that possess it (Bakhurst, 1990, p. 182).

Bakhurst, D., Consciousness and revolution in Soviet philosophy: From the Bolsheviks to Evald Ilyenkov. Cambridge: Cambridge University Press, 1991

Mike Cole
February 2009

Dialectical Logic^{*}

Introduction

The task, bequeathed to us by Lenin, of creating a Logic (with a capital 'L'), i.e. of a systematically developed exposition of dialectics understood as the logic and theory of knowledge of modern materialism, has become particularly acute today. The clearly marked dialectical character of the problems arising in every sphere of social life and scientific knowledge is making it more and more clear that only Marxist-Leninist dialectics has the capacity to be the method of scientific understanding and practical activity, and of actively helping scientists in their theoretical comprehension of experimental and factual data and in solving the problems they meet in the course of research.

In the past ten or fifteen years, quite a few works have been written devoted to separate branches that are part of the whole of which we still only dream; they can justly be regarded as paragraphs, even chapters, of the future *Logic*, as more or less finished blocks of the building being erected. One cannot, of course, cement these 'blocks' mechanically into a whole; but since the task of a systematic exposition of dialectical logic can only be solved by collective efforts, we must at least determine the most general principles of joint work. In the essays presented here we attempt to concretise some of the points of departure of such collective work.

In philosophy, more than in any other science, as Hegel remarked with some regret in his *Phenomenology of Mind*, 'the end or final result seems ... to have absolutely expressed the complete fact itself in its very nature; contrasted with that the mere process of bringing it to light would seem, properly speaking, to have no essential significance'.¹

That is very aptly put. So long as dialectics (dialectical logic) is looked upon as a simple tool for proving a previously accepted thesis (irrespective of whether it was initially advanced as the rules of mediaeval disputes

* Written in 1974; first published in *Dialectical Logic, Essays on its History and Theory*, by Progress Publishers, 1977; Translated: English translation 1977 by H. Campbell Creighton.

¹ Hegel, "The Phenomenology of Mind," tr. J B Baillie, 1931, Preface §2.

required, or only disclosed at the end of the argument, in order to create the illusion of not being preconceived, that is, of saying: “Look, here is what we have obtained although we did not assume it”), it will remain something of ‘no essential significance’. When dialectics is converted into a simple tool for proving a previously accepted (or given) thesis, it becomes a sophistry only outwardly resembling dialectics, but empty of content. And if it is true that real dialectical logic takes on life not in ‘naked results’, and not in the ‘tendency’ of the movement of thought, but only in the form of ‘the result along with the process of arriving at it’,² then during the exposition of dialectics as Logic, we must reckon with this truth. For it is impossible to go to the other extreme, taking the view that we had allegedly not set ourselves any aim determining the means and character of our activity from the very outset in the course of our analysis of the problem, but had set out swimming at random. And we are therefore obliged, in any case, to say clearly, at the very beginning, what the ‘object’ is in which we want to discover the intrinsically necessary division into parts.

Our ‘object’ or ‘subject matter’ in general, and on the whole, is thought, thinking; and dialectical Logic has as its aim the development of a scientific representation of thought in those necessary moments, and moreover in the necessary sequence, that do not in the least depend either on our will or on our consciousness. In other words Logic must show how thought develops if it is scientific, if it reflects, i.e. reproduces in concepts, an object existing outside our consciousness and will and independently of them, in other words, creates a mental reproduction of it, reconstructs its self-development, recreates it in the logic of the movement of concepts so as to recreate it later in fact (in experiment or in practice). Logic then is the theoretical representation of such thinking.

From what we have said it will be clear that we understand thought (thinking) as the ideal component of the real activity of social people transforming both external nature and themselves by their labour.

Dialectical logic is therefore not only a universal scheme of subjective activity creatively transforming nature, but is also at the same time a universal scheme of the changing of any natural or socio-historical material in which this activity is fulfilled and with the objective requirements of which it is always connected. That, in our opinion, is what the real gist

² *Ibid.*, Preface §3.

of Lenin's thesis on the identity (not 'unity' only, but precisely identity, full coincidence) of dialectics, logic and the theory of knowledge of the modern, scientific. i.e. materialist, world outlook consists in. This approach preserves as one of the definitions of dialectics that given by Frederick Engels ('dialectics, however, is nothing more than the science of the general laws of the motion and development of nature, human society, and thought', ³i.e. of natural and socio-historical development, and not 'specifically subjective' laws and forms of thought).

We think that one can unite dialectics and materialism in precisely that way, and show that Logic, being dialectical, is not only the science of 'thinking' but also the science of development of all things, both material and 'spiritual'. Understood in that way Logic can also be the genuine science of the reflection of the movement of the world in the movement of concepts. Otherwise it is inevitably transformed, as has happened to it in the hands of Neopositivists, into a purely technical discipline, a description of systems of manipulations with the terms of language.

The concretisation of the general definition of Logic presented above must obviously consist in disclosing the concepts composing it, above all the concept of thought (thinking). Here again a purely dialectical difficulty arises, namely, that to define this concept fully, i.e. concretely, also means to 'write' Logic, because a full description cannot by any means be given by a 'definition' but only by 'developing the essence of the matter'.

The concept 'concept' itself is also very closely allied with the concept of thought. To give a 'definition' of it here would be easy, but would it be of any use? If we, adhering to a certain tradition in Logic, tend to understand by 'concept' neither 'sign' nor 'term defined through other terms', and not simply a 'reflection of the essential or intrinsic attributes of things' (because here the meaning of the insidious words 'essential' and 'intrinsic' come to the fore), but the gist of the matter, then it would be more correct, it seems to us, to limit ourselves in relation to definition rather to what has been said, and to start to consider 'the gist of the matter', to begin with abstract, simple definitions accepted as far as possible by everyone. In order to arrive at the 'concrete', or in this case at a Marxist-Leninist understanding of the essence of Logic and its concretely developed 'concept'.

3 Engels, "Dialectics of Nature," *MECW* vol. 25 p 356.

Everything we have said determines the design and plan of our book. At first glance it may seem that it is, if not wholly, then to a considerable degree, a study in the history of philosophy. But the 'historical' collisions of realising the 'matter of Logic' is not an end-in-itself for us, but only the factual material through which the clear outlines of the 'logic of Matter' gradually show through,⁴ those very general outlines of dialectics as Logic which, critically corrected and materialistically rethought by Marx, Engels and Lenin, also characterise our understanding of this science.

⁴ "Contribution to the Critique of Hegel's Philosophy of Right," Marx, *MECW* vol. 3 p 18.

-- From the History of Dialectics --

1. Descartes & Leibniz – The Problem of the Subject Matter and Sources of Logic

The most promising means of resolving any scientific problem is the historical approach to it. In our case this approach proves a very essential one. The fact is that what are now called logic are doctrines that differ considerably in their understanding of the boundaries of this science. Each of them, of course, lays claim not so much simply to the title as to the right to be considered the sole modern stage in the development of world logical thought. That, therefore, is why we must go into the history of the matter.

The term 'logic' was first introduced for the science of thinking by the Stoics, who distinguished by it only that part of Aristotle's actual teaching that corresponded to their own views on the nature of thinking. The term itself was derived by them from the Greek word *logos* (which literally means 'the word'), and the science so named was very closely related to the subject matter of grammar and rhetoric. The mediaeval scholastics, who finally shaped and canonised the tradition, simply converted logic into a mere instrument (*organon*) for conducting verbal disputes, a tool for interpreting the texts of the Holy Writ, and a purely formal apparatus. As a result not only did the official interpretation of logic become discredited, but also its very name. The emasculated 'Aristotelean logic' therefore also became discredited in the eyes of all leading scientists and philosophers of the new times, which is the reason why most of the philosophers of the sixteenth to eighteenth centuries generally avoided using the term 'logic' as the name for the science of thought intellect, and reason.

Recognition of the uselessness of the official, formal, scholastic version of logic as the *organon* of real thought and of the development of scientific knowledge was the *leitmotif* of all the advanced, progressive philosophers of the time. "The logic now in use serves rather to fix and give stability to the errors which have their foundation in commonly received notions than to help the search after truth. So it does more harm

than good', Francis Bacon said.¹ 'I observed in respect to Logic', said Descartes, 'that the syllogisms and the greater part of the other teaching served better in explaining to others those things that one knows (or like the art of Lully, in enabling one to speak without judgment of those things of which one is ignorant) than in learning what is new'.² John Locke suggested that 'syllogism, at best, is but the Art of fencing with the little knowledge we have, without making any Addition to it ...'.³ On this basis Descartes and Locke considered it necessary to classify all the problems of the old logic in the sphere of rhetoric. And insofar as logic was preserved as a special science, it was unanimously treated not as the science of thinking but as the science of the correct use of words, names, and signs. Hobbes, for example, developed a conception of logic as the calculation of word signs.⁴

In concluding his *Essay Concerning Human Understanding*, Locke defined the subject matter and task of logic as follows: 'The business [of logic] is to consider the nature of signs the mind makes use of for the understanding of things, or conveying its knowledge to others'.⁵ He treated logic as 'the doctrine of signs', i.e. as semiotics.

But philosophy, fortunately, did not jell at that level. The best brains of the period understood very well that it might be all right for logic to be interpreted in that spirit, but not for the science of thinking. True, in general, the representatives of purely mechanistic views of the world and of thinking held such a view of logic. Since they interpreted objective reality in an abstract, geometrical way (i.e. only purely quantitative characteristics were considered objective and scientific), the principles of thinking in mathematical science merged in their eyes with the logical principles of thinking in general, a tendency that took final form in Hobbes.

1 Francis Bacon, "Novum Organum," in *The Works of Francis Bacon*, vol IV New York 1968, pp 48-49.

2 René Descartes, "Discourse on Method," in *Great Books of the Western World*, vol. 31, Chicago 1952, p 46.

3 John Locke, "An Essay Concerning Human Understanding," vol. II London 1710 p 299.

4 See Thomas Hobbes, "Leviathan or the Matter, Form and Power of a Commonwealth," London 1894, p 27.

5 John Locke, *Op. cit.*, p 339.

The approach of Descartes and Leibniz was much more careful. They too took to the idea of creating a 'universal mathematics' in place of the old, ridiculed, and discredited logic; and they dreamed of instituting a universal language, a system of terms strictly and unambiguously defined, and therefore admitting of purely formal operations in it.

Both Descartes and Leibniz, unlike Hobbes, were well aware of the difficulties of principle standing in the way of realising such an idea. Descartes understood that the definition of terms in the universal language could not be arrived at by amicable agreement, but must only be the result of careful analysis of the simple ideas, the bricks, from which the whole intellectual edifice of man was built; and that the exact language of 'universal mathematics' could only be something derived from 'true philosophy'. Only then would one succeed in replacing thinking about the things given in reflection or imagination (i.e. in the terminology of the day, in contemplation) and in general in people's real sense experience by a kind of calculus of terms and statements, and in drawing conclusions and inferences as infallible as the solutions of equations.

In supporting this point of Descartes', Leibniz categorically limited the field of application of the 'universal mathematics' solely to those things that belonged to the sphere of the powers of imagination. The 'universal mathematics' should also, in his view, be only (so to say) a logic of the powers of imagination. But that was precisely why all metaphysics was excluded from its province, and also such things as thought, and action, and the field of ordinary mathematics, commensurate only in reason. A very essential reservation! Thought, in any case, thus remained outside the competence of the 'universal mathematics'.

It is not surprising that Leibniz, with unconcealed irony, classified Locke's treatment of logic, by which it was understood as a special doctrine of signs, as purely nominalist. Leibniz revealed the difficulties associated with such an understanding of logic. Above all, he said, the 'science of reasoning, of judgments and inventions, seems very different from recognition of the etymologies and usage of words, which is something indeterminable and arbitrary. One must, moreover, when one wants to explain words, make an excursion into the sciences themselves as was

seen in dictionaries; and one must not, on the other hand, engage in a science without at the same time giving a definition of the terms'.⁶

Instead of the threefold division of philosophy into different sciences (logic, physics, and ethics) that Locke had taken over from the Stoics, Leibniz therefore suggested speaking of three different aspects, under which the same knowledge, the same truth, would function, namely theoretical (physics), practical (ethics), and terminological (logic). The old logic thus corresponded simply to the *terminological aspect of knowledge*, or, as Leibniz put it, 'arrangement by terms, as in a handbook'.⁷ Such a systematisation, of course, even the best, was not a science of thought, because Leibniz had a more profound appreciation of thinking. And he classed the true doctrine of thought as metaphysics, in this sense following Aristotle's terminology and the essence of his logic, and not the Stoics.

But why should thought be investigated within the framework of 'metaphysics'? It was not a matter, of course, of indicating to which 'department' the theoretical understanding of thought 'belonged', but of a definite way of approaching the solution of an essential philosophical problem. And the difficulty constantly facing every theoretician lies in understanding what it is that links knowledge (the totality of concepts, theoretical constructions, and ideas) and its subject matter together, and whether the one agrees with the other, and whether the concepts on which a person relies correspond to something real, lying outside his consciousness? And can that, in general, be tested? And if so, how?

The problems are really very complicated. An affirmative answer, for all its seeming obviousness, is not quite so simple to prove, and as for a negative answer, it proves possible to back it up with very weighty arguments, such as that, since an object is refracted in the course of its apprehension through the prism of the 'specific nature' of the organs of perception and reason, we know any object only in the form it acquires as a result of this refraction. The 'existence' of things outside consciousness is thus by no means necessarily rejected. One thing 'only' is rejected, the possibility of verifying whether or not such things are 'in reality' as we know and understand them. It is impossible to compare the thing as it is given in consciousness with the thing outside consciousness, because it is

⁶ G. W. Leibniz, "Neue Abhandlung über den menschlichen Verstand," Leipzig 1915, p 640.

⁷ *Ibid.*, pp 644-45.

impossible to compare what I know with what I don't know, what I do not see, what I do not perceive, what I am not aware of. Before I can compare my idea of a thing with the thing, I must also be aware of the thing, i.e. must also transform it into an idea. As a result I am always comparing and contrasting only ideas with ideas, although I may think that I am comparing the idea with the thing.

Only similar objects, naturally, can be compared and contrasted. It is senseless to compare bushels and rods, poles, or perches, or the taste of steak and the diagonal of a square. And if, all the same, we want to compare steaks and squares, then we will no longer be comparing 'steak' and 'square' but two objects both possessing a geometrical, spatial form. The 'specific' property of the one and of the other cannot in general be involved in the comparison.

'What is the distance between the syllable A and a table? The question would be nonsensical. In speaking of the distance of two things, we speak of their difference in space.... Thus we equalise them as being both existences of space, and only after having them equalised *sub specie spatii* [under the aspect of space] we distinguish them as different points of space. To belong to space is their unity'.⁸ In other words, when we wish to establish a relation of some sort between two objects, we always compare not the 'specific' qualities that make one object 'syllable A' and the other a 'table', 'steak', or a 'square', but only those properties that express a 'third' something, different from their existence as the things enumerated. The things compared are regarded as different modifications of this 'third' property common to them all, inherent in them as it were. So if there is no 'third' in the nature of the two things common to them both, the very differences between them become quite senseless.

In what are such objects as 'concept' ('idea') and 'thing' related? In what special 'space' can they be contrasted, compared, and differentiated? Is there, in general, a 'third' thing in which they are 'one and the same', in spite of all their directly visible differences? If there is no such common substance, expressed by different means in an idea and in a thing, it is impossible to establish any intrinsically necessary relationship between them. At best we can 'see' only an external relation in the nature of that which was once established between the position of luminaries in the heavens and events in personal lives, i.e. relations between two orders of

⁸ Marx, "Theories of Surplus Value, Part III" *MECW* vol. 32 p 330.

quite heterogeneous events, each of which proceeds according to its own, particular, specific laws. And then Wittgenstein would be right in proclaiming logical forms to be mystical and inexpressible.

But in the case of the relationship between an idea and reality there is yet another difficulty. We know where the search for some sort of special essence can and does lead, an essence that would at once not be an idea and not material reality, but would constitute their common substance, the ‘third’ that appears one time as an idea and another time as being. For an idea and being are mutually exclusive concepts. That which is an idea is not being, and vice versa. How, then, in general, can they be compared? In what, in general, can the basis of their interaction be, what is that in which they are ‘one and the same’?

This difficulty was sharply expressed in its naked logical form by Descartes. In its general form it is the central problem of any philosophy whatsoever, the problem of the relationship of ‘thought’ to the reality existing outside it and independently of it, to the world of things in space and time, the problem of the coincidence of the forms of thought and reality, i.e. the problem of truth or, to put it in traditional philosophical language, the ‘problem of the identity of thought and being’.

It is clear to everyone that ‘thought’ and ‘things outside thought’ are far from being one and the same. It is not necessary to be a philosopher to understand that. Everyone knows that it is one thing to have a hundred roubles (or pounds, or dollars) in one’s pocket, and another to have them only in one’s dreams, only in one’s *thoughts*. The *concept* obviously is only a state of the special substance that fills the brain box (we could go on, furthermore, explaining this substance as brain tissue or even as the very thin ether of the soul keeping house there, as the *structure of the brain tissue*, or even as the *formal structure of inner speech*, in the form of which thinking takes place *inside the head*); but the subject is outside the head, in the space beyond the head, and is something quite other than the *internal state of thought, ideas, the brain, speech*, etc.

In order to understand such self-evident things clearly, and to take them into consideration, it is not generally necessary to have Descartes’ mind; but it is necessary to have its analytical rigour in order to define the fact that *thought* and the *world of things in space* are not only and not simply *different* phenomena, but are also directly *opposite*.

Descartes’ clear, consistent intellect is especially needed in order to grasp the problem arising from this difficulty, namely, in what way do

these two worlds (i.e. the world of concepts, of the *inner states of thought*, on the one hand, and the world of things in external space, on the other hand) nevertheless agree with one another?

Descartes expressed the difficulty as follows. If the existence of things is determined through their extension and if the spatial, geometric forms of things are the sole objective forms of their existence outside the subject, then thinking is not disclosed simply through its description in forms of space. The *spatial* characteristic of thinking in general has no relation to its specific nature. The nature of thinking is disclosed through concepts that have nothing in common with the expression of any kind of spatial, geometric image. He also expressed this view in the following way: thought and extension are really two different substances, and a substance is that which exists and is defined only through itself and not through *something else*. There is nothing *common* between thought and extension that could be expressed in a special definition. In other words, in a series of definitions of thought there is not a single attribute that could be part of the definition of extension, and vice versa. But if there is no such common attribute it is also impossible to deduce being rationally from thought, and vice versa, because deduction requires a 'mean term', i.e. a term such as might be included in the series of definitions of the idea and of the existence of things outside consciousness, outside thought. Thought and being cannot in general *come into contact* with one another, since their boundary (the line or even the point of contact) would then also be exactly that which simultaneously both divides them and unites them.

In view of the absence of such a boundary, thought cannot limit the extended thing, nor the thing the mental expression. They are free, as it were, to penetrate and permeate each other, nowhere encountering a boundary. Thought as such cannot interact with the extended thing, nor the thing with thought; each revolves within itself.

Immediately a problem arises: how then are thought and bodily functions united in the human individual? That they are linked is an obvious fact. Man can consciously control his spatially determined body among other such bodies, his mental impulses are transformed into spatial movements, and the movements of bodies, causing alterations in the human organism (sensations) are transformed into mental images. That means that thought and the extended body interact in some way after all. But how? What is the nature of the interaction? How do they *determine*, i.e. *delimit*, each other?

How does it come about that a trajectory, drawn by thought in the plane of the imagination, for example a curve described in its equation, proves to be congruent with the geometrical contours of the same curve in real space? It means that the form of the curve in thought (i.e. in the form of the ‘magnitude’ of the algebraic signs of the equation) is identical with a corresponding curve in real space, i.e. a curve drawn on paper in a space outside the head. It is surely *one and the same* curve, only the one is in thought and the other in real space; therefore, acting in accordance with thought (understood as the sense of words or signs), I simultaneously act in the strictest accord with the shape (in this case the geometrical contour) of a thing outside thought.

How can that be, if ‘the thing in thought’ and ‘the thing outside thought’ are not only ‘different’ but are also absolutely opposite? For absolutely opposite means exactly this: not having anything in ‘common’ between them, nothing identical, not one attribute that could at once be a criterion of the concept ‘thing outside thought’ and of the concept ‘thing in thought’, or ‘imagined thing’. How then can the two worlds conform with one another? And, moreover, not accidentally, but systematically and regularly, these two worlds that have absolutely nothing in *common*, nothing *identical*? That is the problem around which all Cartesians spin, Descartes himself, and Geulincx, and Malebranche, and the mass of their followers.

Malebranche expressed the principal difficulty arising here in his own witty way, as follows: during the siege of Vienna, the defenders of the city undoubtedly saw the Turkish army as ‘transcendental Turks’, but those killed were very real Turks. The difficulty here is clear; and from the Cartesian point of view on thought it is absolutely insoluble, because the defenders of Vienna acted, i.e. aimed and fired their cannonballs in accordance with the image of Turks that they had in their brains, in accordance with ‘imagined’, ‘transcendental Turks’, and with trajectories calculated in their brains; and the shots fell among real Turks in a space that was not only outside their skulls, but also outside the walls of the fortress.

How does it come about that two worlds having absolutely nothing in common between them are in agreement, namely the world ‘thought of’, the world in thought, and the real world, the world in space? And why? God knows, answered Descartes, and Malebranche, and Geulincx; from our point of view it is inexplicable. Only God can explain this fact. He makes the two opposing worlds agree. The concept ‘God’ comes in

here as a 'theoretical' construction by which to express the obvious but quite inconceivable fact of the unity, congruence, and identity perhaps, of phenomena that are absolutely contrary by definition. God is the 'third' which, as the 'connecting link', unites and brings into agreement thought and being, 'soul' and 'body', 'concept' and 'object', action in the plane of signs and words and action in the plane of real, geometrically defined bodies outside the head.

Having come directly up against the naked dialectical fact that 'thought' and 'being outside thought' are in absolute opposition, yet are nevertheless in agreement with one another, in unity, in inseparable and necessary interconnection and interaction (and thus subordinated to some higher law – and moreover, one and the same law), the Cartesian school capitulated before theology and put the inexplicable (from their point of view) fact down to God, and explained it by a 'miracle', i.e. by the direct intervention of supernatural powers in the causal chain of natural events.

Descartes, the founder of analytical geometry, could therefore not explain in any rational way whatever the reason for the algebraic expression of a curve by means of an equation 'corresponding' to the spatial image of this curve in a drawing. They could not, indeed, manage without God, because according to Descartes, actions with signs and on the basis of signs, in accordance only with signs (with their mathematical sense), i.e. actions in the ether of 'pure thought', had nothing in common with real bodily actions in the sphere of spatially determined things, in accordance with their real contours. The first were pure actions of the soul (or thinking as such), the second – actions of the body repeating the contours (spatially geometric outlines) of external bodies, and therefore wholly governed by the laws of the 'external', spatially material world.

(This problem is posed no less sharply today by the 'philosophy of mathematics'. If mathematical constructions are treated as constructions of the creative intellect of mathematicians, 'free' of any external determination and worked out exclusively by 'logical' rules – and the mathematicians themselves, following Descartes, are quite often apt to interpret them precisely so – it becomes quite enigmatic and inexplicable why on earth the empirical facts, the facts of 'external experience', keep on agreeing and coinciding in their mathematical, numerical expressions with the results obtained by purely logical calculations and by the 'pure' actions of the intellect. It is absolutely unclear. Only 'God' can help.)

In other words the identity of these absolute opposites ('thought', 'spirit', and 'extension', 'body') was also recognised by Descartes as a factual principle – without it even his idea of an analytical geometry would have been impossible (and not only inexplicable) – but it was explained by an act of God, by his intervention in the interrelations of 'thought and being', 'soul and body'. God, moreover, in Cartesian philosophy, and especially for Malebranche and Geulincx, could be understood as the purely traditional Catholic, orthodox God, ruling both the 'bodies' and the 'souls' of men from outside, from the heights of his heavenly throne, and co-ordinating the actions of the 'soul' with those of the 'body'.

Such is the essence of the famous psychophysical problem, in which it is not difficult to see the specifically concrete and therefore historically limited formulation of the central problem of philosophy. The problem of the theoretical understanding of thought (logic), consequently, and hence not of the rules of operating with words or other signs, comes down to solving the cardinal problems of philosophy, or of metaphysics, to put it in a rather old-fashioned way. And that assumes mastering the culture of the genuinely theoretical thinking represented by the classical philosophers, who not only knew how to pose problems with maximum clarity, but also knew how to solve them.

2. Spinoza – Thought as an Attribute of Substance

An immense role in the development of logic, and in preparing the ground for modern views on its subject matter, a role far from fully appreciated, was played by Spinoza. Like Leibniz, Spinoza rose high above the mechanistic limitations of the natural science of his time. Any tendency directly to universalise partial forms and methods of thinking only useful within the bounds of mechanistic, mathematical natural science was also foreign to him.

Insofar as logic was preserved alongside the doctrine of substance, Spinoza treated it as an applied discipline by analogy with medicine, since its concern proved not to be the invention of artificial rules but the co-ordination of human intellect with the laws of thought understood as an 'attribute' of the natural whole, only as 'modes of expression' of the universal order and connection of things. He also tried to work out logical problems on the basis of this conception.

Spinoza understood thought much more profoundly and, in essence, dialectically, which is why his figure presents special interest in the history of dialectics; he was probably the only one of the great thinkers of the pre-Marxian era who knew how to unite brilliant models of acutely dialectical thought with a consistently held materialist principle (rigorously applied throughout his system) of understanding thought and its relations to the external world lying in the space outside the human head. The influence of Spinoza's ideas on the subsequent development of dialectical thought can hardly be exaggerated. 'It is therefore worthy of note that thought must begin by placing itself at the standpoint of Spinozism; to be a follower of Spinoza is the essential commencement of all Philosophy'.⁹

But orthodox religious scholasticism, in alliance with subjective idealist philosophy, has not ceased to flog Spinoza as a 'dead dog', treating him as a living and dangerous opponent. Elementary analysis reveals that the main principles of Spinoza's thought directly contradict the conception of 'thought' developed by modern positivism all along the line. The most modern systems of the twentieth century still clash in sharp antagonism in Spinoza; and that obliges us to analyse the theoretical foundation of his conception very carefully, and to bring out the principles in it that, in rather different forms of expression perhaps, remain the most precious principles of any scientific thinking to this day, and as such are very heatedly disputed by our contemporary opponents of dialectical thought.

Hegel once noted that Spinoza's philosophy was very simple and easy to understand. And in fact the principles of his thinking, which constitute the essential commencement of all Philosophy, i.e. the real foundation on which alone it is possible to erect the edifice of philosophy as a science, are brilliant precisely in their crystal clarity, free of all reservations and ambiguities.

It is not so easy, however, to bring these brilliant principles out because they are decked out in the solid armour of the constructions of formal logic and deductive mathematics that constitute the 'shell' of Spinoza's system, its (so to say) defensive coat of mail. In other words, the real logic of Spinoza's thinking by no means coincides with the formal logic of the movement of his 'axioms', 'theorems', 'scholia', and their proofs.

⁹ Hegel, "Lectures on the History of Philosophy," Volume III p 257.

‘Even with philosophers who gave their work a systematic form, e.g. Spinoza, the real inner structure of their system is quite distinct from the form in which they consciously presented it’, Karl Marx wrote to Ferdinand Lassalle.¹⁰

Our job then cannot be once more to paraphrase the theoretical foundations on which Spinoza built his main work, the *Ethics*, and the conclusions that he drew from them by means of his famous ‘geometric modus’. In that case it would be more proper simply to copy out the text of the *Ethics* itself once again. Our job is to help the reader to understand the ‘real inner structure’ of his system, which far from coincides with its formal exposition, i.e. to see the real ‘cornerstone’ of his reflections and to show what real conclusions were drawn from them, or could be drawn from them, that still preserve their full topicality.

That can only be done in one way, and one way only, which is to show the real problem that Spinoza’s thought came up against quite independently of how he himself realised it and in what terms he expressed it for himself and for others (i.e. to set the problem out in the language of our century), and then to trace what were the real principles (once more independently of Spinoza’s own formulation of them) on which he based the solution of the problem. Then it will become clear that Spinoza succeeded in finding the only formulation exact for his time of a real problem that remains the great problem of our day, only formulated in another form.

We formulated this problem in the preceding essay. Spinoza found a very simple solution to it, brilliant in its simplicity for our day as well as his: the problem is insoluble only because it has been wrongly posed. There is no need to rack one’s brains over how the Lord God ‘unites’ ‘soul’ (thought) and ‘body’ in one complex, represented initially (and by definition) as *different* and even *contrary* principles allegedly existing separately from each other before the ‘act’ of this ‘uniting’ (and thus, also being able to exist after their ‘separation’; which is only another formula-

¹⁰ Marx to Ferdinand Lassalle 31 May 1858, *MECW* vol. 40 p 316. Marx repeated this idea eleven years later in a letter to M. M. Kovalevsky: ‘... It is necessary ... to distinguish between that which the author in fact offers and that which he gives only in his representation. This is justifiable even for philosophical systems: thus what Spinoza considered the keystone of his system, and what in fact constitutes this keystone, are two quite different things’. This letter was known only from an oral translation by Kovalevsky.

tion of the thesis of the immortality of the soul, one of the cornerstones of Christian theology and ethics). In fact, there simply is no such situation; and therefore there is also no problem of 'uniting' or 'coordination'.

There are not two different and originally contrary objects of investigation body and thought, but only *one single* object, which is the *thinking body* of living, real man (or other analogous being, if such exists anywhere in the Universe), only considered from two different and even opposing aspects or points of view. Living, real thinking man, the sole thinking body with which we are acquainted, does not consist of two Cartesian halves 'thought lacking a body' and a 'body lacking thought'. In relation to real man both the one and the other are equally fallacious abstractions, and one cannot in the end model a real thinking man from two equally fallacious abstractions.

That is what constitutes the real 'keystone' of the whole system, a very simple truth that is easy, on the whole, to understand.

It is not a special 'soul', installed by God in the human body as in a temporary residence, that thinks, but the *body of man* itself. *Thought* is a property, a mode of existence, of the body, the same as its extension, i.e. as its spatial configuration and position among other bodies.

This simple and profoundly true idea was expressed this way by Spinoza in the language of his time: thought and extension are not two special substances as Descartes taught, but only two attributes of one and the same organ; not two special objects, capable of existing separately and quite independently of each other, but only two different and even opposite aspects under which *one and the same* thing appears, two different modes of existence, two forms of the manifestation of some third thing.

What is this third thing? Real infinite Nature, Spinoza answered. It is Nature that extends in space and 'thinks'. The whole difficulty of the Cartesian metaphysics arose because the specific difference of the real world from the world as only imagined or thought of was considered to be extension, a spatial, geometric determinateness. But extension as such just existed in imagination, only in thought. For *as such* it can generally only be thought of in the form of emptiness, i.e. purely negatively, as the complete absence of any definite geometric shape. Ascribing only spatial, geometric properties to Nature is, as Spinoza said, to think of it in an imperfect way, i.e. to deny it in advance one of its perfections. And then

it is asked how the perfection removed from Nature can be restored to her again.

The same argumentation applies to thought. Thought as such is the same kind of fallacious abstraction as emptiness. In fact it is only a property, a predicate, an attribute of that very body which has spatial attributes. In other words one can say very little about thought as such; it is not a reality existing separately from, and independently of, bodies but only a mode of existence of Nature's bodies. Thought and space do not really exist by themselves, but only as Nature's bodies linked by chains of interaction into a measureless and limitless whole embracing both the one and the other.

By a simple turn of thought Spinoza cut the Gordian knot of the 'psychophysical problem', the mystic insolubility of which still torments the mass of theoreticians and schools of philosophy, psychology, physiology of the higher nervous system, and other related sciences that are forced one way or another to deal with the delicate theme of the relation of 'thought' to 'body', of 'spiritual' to 'material', of 'ideal' to 'real', and such like topics.

Spinoza showed that it is only impossible to solve the problem because it is absolutely wrongly posed; and that such posing of it is nothing but the fruit of imagination.

It is *in man* that Nature really performs, in a self-evident way, that very activity that we are accustomed to call 'thinking'. In man, in the form of man, in his person, *Nature itself* thinks, and not at all some special substance, source, or principle instilled into it from outside. In man, therefore, Nature thinks *of itself*. becomes aware of *itself*, senses *itself*, acts on *itself*. And the 'reasoning', 'consciousness', 'idea', 'sensation', 'will', and all the other special actions that Descartes described as *modi of thought*, are simply different modes of revealing a property inalienable from Nature as a whole, one of its own attributes.

But if thinking is always an action performed by a natural and so by a spatially determined body, it itself, too, is an action that is also expressed spatially, which is why there is not and cannot be the *cause and effect* relation between thinking and bodily action for which the Cartesians were looking. They did not find it for the simple reason that no such relation exists in Nature, and cannot, simply because thinking and the body are not two different things at all, existing separately and therefore capable of

interacting, but *one and the same thing*, only expressed by two different modes or considered in two different aspects.

Between body and thought there is no relation of cause and effect, but the relation of an organ (i.e. of a spatially determinate body) to the mode of its own action. The thinking body cannot cause changes in thought, cannot act on thought, because its existence as 'thinking' is *thought*. If a thinking body does nothing, it is no longer a thinking body but simply a body. But when it does act, it does not do so *on* thought, because its very activity is thought.

Thought as a spatially expressed activity therefore cannot also be secreted from the body performing it as a special 'substance' distinct from the body, in the way that bile is secreted from the liver or sweat from sweat glands. Thinking is not the *product* of an action but the *action itself*, considered at the moment of its performance, just as walking, for example, is the mode of action of the legs, the 'product' of which, it transpires, is the space walked. And that is that. The product or result of thinking may be an exclusively spatially expressed, or exclusively geometrically stated, change in some body or another, or else in its position relative to other bodies. It is absurd then to say that the one gives rise to (or 'causes') the other. Thinking does not evoke a spatially expressed change in a body but exists through it (or within it), and vice versa; any change, however fine, within that body, induced by the effect on it of other bodies, is directly expressed for it as a certain change in its mode of activity, i.e. in thinking.

The position set out here is extremely important also because it immediately excludes any possibility of treating it in a vulgar materialist, mechanistic key, i.e. of identifying thought with immaterial processes that take place *within* the thinking body (head, brain tissue), while nevertheless understanding that thought takes place precisely through these processes.

Spinoza was well aware that what is expressed and performed in the form of structural, spatial changes within the thinking body is not at all some kind of thinking taking place outside of and independently of them, and vice versa (shifts of thinking by no means express immanent movements of the body within which they arise). It is therefore impossible either to understand thought through examination, however exact and thorough, of the spatially geometric changes in the form of which it is expressed within the body of the brain, or, on the contrary, to understand the spatial, geometric changes in the brain tissue from the most detailed

consideration of the composition of the ideas existing in the brain. It is impossible, Spinoza constantly repeated, because they are *one and the same*, only expressed by two different means.

To try to explain the one by the other simply means to double the description of one and the same fact, not yet understood and incomprehensible. And although we have two full, quite adequate descriptions of *one and the same event*, equivalent to one another, the event itself falls outside both descriptions, as the ‘third thing’, the very ‘one and the same’ that was not yet understood or explained. Because the event twice described (once in the language of the ‘physics of the brain’ and once in the language of the ‘logic of ideas’) can be explained and correspondingly understood only after bringing out the *cause* evoking the event described but not understood.

Bishop Berkeley ascribed the cause to God. And so did Descartes, Malebranche, and Geulincx. The shallow, vulgar materialist tries to explain everything by the purely mechanical actions of external things on the sense organs and brain tissue, and takes for the cause the concrete thing, the sole object, that is affecting our bodily organisation at a given moment and causing corresponding changes in our body, which we feel within ourselves and experience as our thinking.

While rejecting the first explanation as the capitulation of philosophy before religious theological twaddle, Spinoza took a very critical attitude as well toward the superficially materialist-mechanistic explanation of the cause of thought. He very well understood that it was only a ‘bit’ of an explanation, leaving in the dark the very difficulty that Descartes was forced to bring in God to explain.

For to explain the event we call ‘thinking’, to disclose its effective *cause*, it is necessary to include it in the chain of events *within which it arises of necessity and not fortuitously*. The ‘beginnings’ and the ‘ends’ of this chain are clearly not located within the thinking body at all, but far outside it.

To explain a separate, single, sensuously perceived fact passing momentarily before our eye, and even the whole mass of such facts, as the cause of thought means to explain precisely nothing. For this very fact exerts its effect (mechanical, say, or light) on stone as well, but no action of any kind that we describe as ‘thinking’ is evoked in the stone. The explanation must consequently also include those relations of cause and effect that of necessity generate our own physical organisation capable (unlike a stone) of thinking, i.e. of so refracting the external influences

and so transforming them within itself that they are experienced by the thinking body not at all only as changes arising within itself, but as external things, as the shapes of things outside the thinking body.

For the action produced on the retina of our eye by a ray of light reflected from the Moon is perceived by the thinking being not simply as a mechanical irritation within the eye but *as the shape of the thing itself*, as the lunar disc hanging in space outside the eye, which means that the Ego, the thinking substance or creature, directly feels not the effect produced on it by the external thing but something quite different, viz. the shape or form (i.e. the spatial, geometric configuration) and position of this external body, which has been evoked within us as a result of the mechanical or light effect. In that lies both the enigma and the whole essence of thinking as the mode of activity of a thinking body in distinction to one that does not think. It will readily be understood that one body evokes a change by its action in another body; that is fully explained by the concepts of physics. It is difficult, and from the angle of purely physical concepts (and in Spinoza's time of even 'purely' mechanical, geometric concepts) even impossible, to explain just why and how the thinking body feels and perceives the effect caused by an external body within itself *as an external body*, as *its*, and not as its own shape, configuration, and position in space.

Such was the enigma, in general, that Leibniz and Fichte came up against later; but Spinoza had already found a fully rational, though only general, theoretical solution. He clearly understood that the problem could only be fully and finally solved by quite concrete investigation (including anatomical and physiological) of the material mechanism by which the thinking body (brain) managed to do the trick, truly mystically incomprehensible (from the angle of purely geometric concepts). But that it did the trick – that it saw the *thing* and not the changes in the particles of the retina and brain that this body caused by its light effect within the brain was an undoubted fact; and a fact calling for fundamental explanation and in a general way outlining paths for more concrete study in the future.

What can the philosopher say here categorically, who remains a philosopher and does not become a physiologist, or an anatomist, or a physicist? Or rather, what can he say, without plunging into a game of the imagination, without trying to construct hypothetical mechanisms in the fancy by which the trick mentioned 'might', in general, be performed? What can he say while remaining on the ground of firmly established

facts known before and independently of any concrete, physiological investigation of the inner mechanisms of the thinking body, and not capable either of being refuted or made doubtful by any further probing within the eye and the skull?

In the given, partial, though very characteristic case, there is another, more general problem, namely that of the relation of philosophy as a special science to the concrete research of the natural sciences. Spinoza's position on this point cannot in principle be explained if we start from the positivist idea that philosophy has made all its outstanding achievements (and makes them) only by purely empirical 'generalisation of the progress of its contemporary natural sciences'. Because natural science did not find the answers to the problem before us either in the seventeenth century, in Spinoza's time, or even in our day, three hundred years later. Furthermore, the natural science of his day did not even suspect the existence of such a problem; and when it did, knew it only in a theological formulation. As for the 'soul' or 'spirit', and in general everything connected one way or another with 'spiritual', psychic life, the natural scientists of the time (even the great ones like Isaac Newton) found themselves prisoners of the prevailing (i.e. religious, theological) illusions. Spiritual life they gladly left to the Church, and humbly acknowledged its authority, interesting themselves exclusively in the mechanical characteristics of the surrounding world. And everything that was inexplicable on purely mechanical grounds was not subjected to scientific study at all but was left to the competence of religion.

If Spinoza had in fact tried to construct his philosophical system by the method that our contemporary positivism would have recommended to him, it is not difficult to imagine what he would have produced as a 'system'. He would only have brought together the purely mechanical and religious, mystical 'general ideas' that were guiding all (or almost all) naturalists in his day. Spinoza understood very clearly that religious, theological mysticism was the inevitable complement of a purely mechanistic (geometrical, mathematical) world outlook, i.e. the point of view that considers the sole 'objective' properties of the real world to be only the spatial, geometrical forms and relations of bodies. His greatness was that he did not plod along behind contemporaneous natural science, i.e. behind the one-sided, mechanistic thinking of the coryphaei of the science of the day, but subjected this way of thinking to well substantiated criticism from the angle of the specific concepts of philosophy as a special science. This feature of Spinoza's thinking was brought out clearly

and explicitly by Frederick Engels: 'It is to the highest credit of the philosophy of the time that it did not let itself be led astray by the restricted state of contemporary natural knowledge, and that from Spinoza right to the great French materialists it insisted on explaining the world from the world itself and left the justification in detail to the natural science of the future'.¹¹

That is why Spinoza has come down in the history of science as an equal contributor to its progress with Galileo and Newton, and not as their epigone, repeating after them the general ideas that could be drawn from their work. He investigated reality himself from the special, philosophical angle, and did not generalise the results and ready-made findings of other people's investigation, did not bring together the general ideas of the science of his day and the methods of investigation characteristic of it, or the methodology and logic of his contemporary science. He understood that that way led philosophy up a blind alley, and condemned it to the role of the wagon train bringing up in the rear of the attacking army the latter's own 'general ideas and methods', including all the illusions and prejudices incorporated in them.

That is why he also developed 'general ideas and methods of thought' to which the natural science of the day had not yet risen, and armed future science with them, which recognised his greatness three centuries later through the pen of Albert Einstein, who wrote that he would have liked 'old Spinoza' as the umpire in his dispute with Niels Bohr on the fundamental problems of quantum mechanics rather than Carnap or Bertrand Russell, who were contending for the role of the 'philosopher of modern science' and spoke disdainfully of Spinoza's philosophy as an 'outmoded' point of view 'which neither science nor philosophy can nowadays accept'.¹² Spinoza's understanding of thinking as the activity of that same nature to which extension also belonged is an axiom of the true modern philosophy of our century, to which true science is turning more and more confidently and consciously in our day (despite all the attempts to discredit it) as the point of view of true materialism.

The brilliance of the solution of the problem of the relation of thinking to the world of bodies in space outside thought (i.e. outside the head of man), which Spinoza formulated in the form of the thesis that thought

11 Engels, "Dialectics of Nature," *MECW* vol. 25 p 323.

12 Bertrand Russell, "History of Western Philosophy," London 1946, p 601.

and extension are not two substances, but only two attributes of one and the same substance, can hardly be exaggerated. This solution immediately rejected every possible kind of interpretation and investigation of thought by the logic of spiritualist and dualist constructions, so making it possible to find a real way out both from the blind alley of the dualism of mind and body and from the specific blind alley of Hegelianism. It is not fortuitous that Spinoza's profound idea only first found true appreciation by the dialectical materialists Marx and Engels. Even Hegel found it a hard nut to crack. In fact, on the decisive point, he returned again to the position of Descartes, to the thesis that pure thought is the *active cause* of all the changes occurring in the 'thinking body of man', i.e. in the matter of the brain and sense organs, in language, in actions and their results, including in that the instruments of labour and historical events.

From Spinoza's standpoint *thought before and outside of its spatial expression in the matter proper* to it simply does not exist. All talk about an idea that first arises and then tries to find material suitable for its incarnation, selecting the body of man and his brain as the most suitable and malleable material, all talk of thought first arising and then 'being embodied in words', in 'terms' and 'statements', and later in actions, in deeds and their results, all such talk, therefore, from Spinoza's point of view, is simply senseless or, what is the same thing, simply the atavism of religious theological ideas about the 'incorporeal soul' as the active cause of the human body's actions. In other words, the sole alternative to Spinoza's understanding proves to be the conception that an idea can ostensibly exist first somewhere and somehow *outside the body of the thought* and independently of it, and can then 'express itself' in that body's actions.

What is thought then? How are we to find the true answer to this question, i.e. to give a scientific definition of this concept, and not simply to list all the actions that we habitually subsume under this term (reasoning, will, fantasy, etc.), as Descartes did? One quite clear recommendation follows from Spinoza's position, namely: if thought is *the mode of action of the thinking body*, then, in order to define it, we are bound to investigate the mode of action of the thinking body very thoroughly, in contrast to the mode of action (mode of existence and movement) of the non-thinking body; and in no case whatsoever to investigate the structure or spatial composition of this body in an inactive state. Because the thinking body, when it is inactive, is no longer a thinking body but simply a 'body'.

Investigation of all the material (i.e. spatially defined) mechanisms by which thought is effected within the human body, i.e. anatomical, physio-

logical study of the brain, of course, is a most interesting scientific question; but even the fullest answers to it have no direct bearing on the answer to the question 'What is thought?'. Because that is another question. One does not ask how legs capable of walking are constructed, but in what walking consists. What is thinking as the action of, albeit inseparable from, the material mechanisms by which it is effected, yet not in any way identical with mechanisms themselves? In the one case the question is about the structure of an organ, in the other about the function the organ performs. The structures, of course, must be such that it can carry out the appropriate function; legs are built so that they can walk and not so that they can think. The fullest description of the *structure of an organ*, i.e. a description of it in an *inactive* state, however, has no right to present itself as a description, however approximate, of the *function* that the organ performs, as a description of the *real thing* that it does.

In order to understand the mode of action of the thinking body it is necessary to consider the mode of its active, causal interaction with other bodies both 'thinking' and 'non-thinking', and not its inner structure, not the spatial geometric relations that exist between the cells of its body and between the organs located within its body.

The cardinal distinction between the mode of action of a thinking body and that of any other body, quite clearly noted by Descartes and the Cartesians, but not understood by them, is that the former actively builds (constructs) the shape (trajectory) of its own movement in space in conformity with the shape (configuration and position) *of the other body*, coordinating the shape of its own movement (its own activity) with the shape of the other body, *whatever it is*. The proper, specific form of the activity of a thinking body consists consequently in *universality*, in that very property that Descartes actually noted as the chief distinction between human activity and the activity of an automaton copying its appearance, i.e. of a device structurally adapted to some one limited range of action even better than a human, but for that very reason unable to do 'everything else'.

Thus the human hand can perform movements in the form of a circle, or a square, or any other intricate geometrical figure you fancy, so revealing that it was not designed *structurally* and *anatomically* in advance for any one of these 'actions', and *for that very reason* is capable of performing *any action*. In this it differs, say, from a pair of compasses, which describe circles much more accurately than the hand but cannot draw the outlines of triangles or squares. In other words, the action of a body that

‘does not think’ (if only in the form of spatial movement, in the form of the simplest and most obvious case) is determined by its *own inner construction* by its ‘nature’, and is quite uncoordinated with the shape of the other bodies among which it moves. It therefore either disturbs the shapes of the other bodies or is itself broken in colliding with insuperable obstacles.

Man, however, the thinking body, builds his movement on the shape of any other body. He does not wait until the insurmountable resistance of other bodies forces him to turn off from his path; the thinking body goes freely round any obstacle of the most complicated form. *The capacity of a thinking body to mould its own action actively to the shape of any other body*, to coordinate the shape of its movement in space with the shape and distribution of all other bodies, Spinoza considered to be its distinguishing sign and the specific feature of that activity that we call ‘thinking’ or ‘reason’.

This capacity, as such, has its own gradations and levels of ‘perfection’, and manifests itself to the maximum in man, in any case much more so than in any other creature known to us. But man is not divided from the lower creatures at all by that impassable boundary that Descartes drew between them by his concept of ‘soul’ or ‘spirit’. The actions of animals, especially of the higher animals, are also subsumed, though to a limited degree, under Spinoza’s definition of thinking.

This is a very important point, which presents very real interest. For Descartes the animal was only an automaton, i.e. all its actions were determined in advance by ready-made structures, internally inherent to it, and by the distribution of the organs located within its body. These actions, therefore, could and had to be completely explained by the following scheme: external effect → movement of the inner parts of the body → external reaction. The last represents the response (action, movement) of the body evoked by the external effect, which in essence is only transformed by the working of the inner parts of the body, following the scheme rigidly programmed in its construction. There is a full analogy with the working of a self-activating mechanism (pressure on a button → working of the parts inside the mechanism → movement of its external parts). This explanation excluded the need for any kind of ‘incorporeal soul’; everything was beautifully explained without its intervention. Such in general, and on the whole, is the theoretical scheme of a reflex that was developed two hundred years later in natural science in the work of Sechenov and Pavlov.

But this scheme is not applicable to man because in him, as Descartes himself so well understood, there is a supplementary link in the chain of events (i.e. in the chain of external effect → working of the inner bodily organs according to a ready-made scheme structurally embodied in them → external reaction) that powerfully interferes with it, forces its way into it, breaking the ready-made chain and then joining its disconnected ends together in a new way, each time in a different way, each time in accordance with new conditions and circumstances in the external action not previously foreseen by any prepared scheme and this supplementary link is ‘reflection’ or ‘consideration’. But a ‘reflection’ is that activity (in no way outwardly expressed) which directs *reconstruction of the very schemes of the transformation* of the initial effect into response. Here *the body itself is the object of its own activity*.

Man’s ‘response’ mechanisms are by no means switched on just as soon as ‘the appropriate button is pressed’, as soon as he experiences an effect from outside. Before he responds he contemplates, i.e. he does not act immediately according to any one prepared scheme, like an automaton or an animal, but considers the scheme of the forthcoming action critically, elucidating each time how far it corresponds to the needs of the new conditions, and actively correcting, even designing all over again, the whole set-up and scheme of the future actions in accordance with the external circumstances and the forms of things.

And since the forms of things and the circumstances of actions are in principle infinite in number, the ‘soul’ (i.e. ‘contemplation’) must be capable of an infinite number of actions. But that is impossible to provide for in advance in the form of ready-made, bodily programmed schemes. Thinking is the capacity of actively building and reconstructing schemes of external action in accordance with any new circumstances, and does not operate according to a prepared scheme as an automaton or any inanimate body does.

‘For while reason is a universal instrument which can serve for all contingencies, these [‘bodily’ – *EVT*] organs have need of some special adaptation for every particular action’, Descartes wrote.¹³ For that reason he was unable to conceive of the organ of thought *bodily*, as structurally organised in space. Because, in that case, as many ready-made, structurally programmed patterns of action would have to be postulated in it as there

¹³ Descartes, *Op. cit.*, p 59.

were external bodies and combinations of external bodies and contingencies that the thinking body would generally encounter in its path, that is, in principle, an infinite number. 'From this it follows', Descartes said, that it is morally impossible that there should be sufficient diversity in any machine to allow it to act in all the events of life in the same way as our reason causes us to act',¹⁴ i.e. each time taking account again of any of the infinite conditions and circumstances of the external action. (The adverb 'morally' in Descartes' statement, of course, does not mean impossible 'from the aspect of morals' or of 'moral principles', etc., *morelement* in French meaning 'mentally' or 'intellectually' in general.)

Spinoza counted the considerations that drove Descartes to adopt the concept of 'soul' to be quite reasonable. But why not suppose that the organ of thought, while remaining wholly corporeal and therefore incapable of having schemes of its present and future actions *readymade* and *innate within it* together with its bodily-organised structure, was capable of actively building them anew each time in accordance with the forms and arrangement of the 'external things'? Why not suppose that the thinking thing was designed in a special way; that not having any ready-made schemes of action within it, it acted for that very reason in accordance with whatever scheme was dictated to it at a given moment by the forms and combinations of other bodies located outside it? For that was the real role or function of the thinking thing, the only functional definition of thinking corresponding to the facts that it was impossible to deduce from structural analysis of the organ in which and by means of which it (thinking) was performed. Even more so, a functional definition of thinking as action according to the shape of any *other* thing also puts structural, spatial study of the thinking thing on the right track, i.e. study in particular of the body of the brain. It is necessary to elucidate and discover in the thinking thing those very structural features that enable it to perform its specific function, i.e. to act according to the scheme of its own structure but according to the scheme and location of all other things, including its own body.

In that form the materialist approach to the investigation of thought comes out clearly. Such is the truly materialist, functional definition of thought, or its definition as the active function of a natural body organised in a special way, which prompts both logic (the system of functional

¹⁴ Descartes, *Op. cit.*, p 59.

definitions of thought) and brain physiology (a system of concepts reflecting the material structure of the organ in and by which this function is performed) to make a really scientific investigation of the problem of thought, and which excludes any possibility of interpreting thinking and the matter of its relation to the brain by the logic of either spiritualist and dualist constructions or of vulgar mechanistic ones.

In order to understand thought as a function, i.e. as the mode of action of thinking things in the world of all other things, it is necessary to go beyond the bounds of considering what goes on inside the thinking body, and how (whether it is the human brain or the human being as a whole who possesses this brain is a matter of indifference), and to examine the real system within which this function is performed, i.e. the system of relations '*thinking body and its object*'. What we have in mind here, moreover, is not any single object or other in accordance with whose form the thinking body's activity is built in any one specific case, but *any object* in general, and correspondingly any possible 'meaningful act' or action in accordance with the form of its object.

Thought can therefore only be understood through investigation of its mode of action in the system thinking body – nature as a whole (with Spinoza it is 'substance', 'God'). But if we examine a system of smaller volume and scale, i.e. the relations of the thinking body with as wide a sphere of 'things' and their forms as you like, but still limited, then we shall not arrive at what thought is *in general* (thought in the whole fullness of its possibilities associated with its nature), but only at that limited mode of thinking that happens in a given case; and we shall therefore be taking only definitions of a *partial case* of thinking, only its *modus* (in Spinoza's parlance) as scientific definitions of *thought in general*.

The whole business consists in this, that the thinking body (in accordance with its nature) is not linked at all by its structural, anatomical organisation with any partial mode of action whatsoever (with any partial form of the external bodies). It is linked with them, but only currently, at the given moment, and by no means originally or forever. Its mode of action has a clearly expressed universal character, i.e. is constantly being extended, embracing ever newer and newer things and forms of things, and actively and plastically adapting itself to them.

That is why Spinoza also defined thought as an *attribute of substance*, and not as its *modus*, not as a partial case. Thus he affirmed, in the language of his day, that the single system, within which thought was found

of necessity and not fortuitously (which it may or may not be), was not a single body or even as wide a range of bodies as you wished, but only and solely *nature as a whole*. The individual body possessed thought only by virtue of chance or coincidence. The crossing and combination of masses of chains of cause and effect could lead in one case to the appearance of a thinking body and in another case simply to a body, a stone, a tree, etc. So that the individual body, even the human body, did not possess thought one whit of necessity. Only nature as a whole was that system which possessed all its perfections, including thought, of absolute necessity, although it did not realise this perfection in any single body and at any moment of time, or in any of its ‘modi’.

In defining thought as an attribute Spinoza towered above any representative of mechanistic materialism and was at least two centuries in advance of his time in putting forward a thesis that Engels expressed in rather different words: ‘The point is, however, that mechanism (and also the materialism of the eighteenth century) does not get away from abstract necessity, and hence not from chance either. That matter evolves out of itself the thinking human brain is for him [Haeckel] a pure accident, although necessarily determined, step by step, where it happens. But the truth is that it is in the nature of matter to advance to the evolution of thinking beings, hence, too, this always necessarily occurs wherever the conditions for it (not necessarily identical at all places and times) are present’.¹⁵

That is what distinguishes materialism, sensible and dialectical, from mechanistic materialism that knows and recognises only one variety of ‘necessity’, namely that which is described in the language of mechanistically interpreted physics and mathematics. Yes, only Nature as a whole, understood as an infinite whole in space and time, *generating* its own partial forms from itself, possesses at any moment of time, though not at any point of space, *all the wealth of its attributes*, i.e. those properties that are reproduced in its makeup of necessity and not by a chance, miraculous coincidence that might just as well not have happened.

Hence it inevitably follows logically, as Engels said, ‘that matter remains eternally the same in all its transformations, that none of its attributes can ever be lost, and therefore, also, that with the same iron neces-

15 Engels, “Dialectics of Nature,” *MECW* vol. 25 p 490.

sity that it will exterminate on the earth its highest creation, the thinking mind, it must somewhere else and at another time again produce it'.¹⁶

That was Spinoza's standpoint, a circumstance that seemingly gave Engels grounds for replying categorically and unambiguously to Plekhanov when he asked: 'So *in your opinion old Spinoza was right in saying that thought and extension were nothing but two attributes of one and the same substance?*' "Of course," answered Engels, "*old Spinoza was quite right.*"¹⁷

Spinoza's definition means the following: in man, as in any other possible thinking creature, the same matter thinks as in other cases (other modi) only 'extends' in the form of stones or any other 'unthinking body'; that thought in fact cannot be separated from world matter and counterposed to it itself as a special, incorporeal 'soul', and it (thought) is matter's own perfection. That is how Herder and Goethe, La Mettrie and Diderot, Marx and Plekhanov (all great 'Spinozists') and even the young Schelling, understood Spinoza .

Such, let us emphasise once more, is the general, methodological position that later allowed Lenin to declare that it was reasonable to assume, as the very foundation of matter, a property akin to sensation though not identical with it, the property of reflection. Thought, too, according to Lenin, is the highest form of development of this universal property or attribute, extremely vital for matter. And if we deny matter this most important of its attributes, we shall be thinking of matter itself 'imperfectly', as Spinoza put it, or simply, as Engels and Lenin wrote, incorrectly, one-sidedly, and mechanistically. And then, as a result, we should continually be falling into the most real Berkeleianism, into interpreting nature as a complex of our sensations, as the bricks or elements absolutely specific to the animated being from which the whole world of ideas is built (i.e. the world as and how we know it). Because Berkeleianism too is the absolutely inevitable complement making good of a one-sided, mechanistic understanding of nature. That is why Spinoza too said that substance, i.e. the universal world matter, did not possess just the single attribute of 'being extended' but also possessed many other properties and attributes as inalienable from it (inseparable from it though separable from any 'finite' body).

16 Engels, "Dialectics of Nature," *MECW* vol. 25 p 335.

17 G V Plekhanov, "Bernstein and Materialism," *Sochineniya* vol. XI, Moscow 1923 p 22.

Spinoza said more than once that it was impermissible to represent *thought as attribute* in the image and likeness of *human thought*; it was only the universal property of substance that was the basis of any 'finite thought', including human thought, but in no case was it identical with it. To represent thought in general in the image and likeness of existing human thought, of its modus, or 'particular case', meant simply to represent it incorrectly, in 'an incomplete way', by a 'model', so to say, of its far from most perfected image (although the most perfected known to us).

With that Spinoza also linked his profound theory of truth and error, developed in detail in the *Ethica ordine geometrico demonstrata (Ethics)*, *Tractatus de intellectus ernendatione*, *Tractatus theologico-politicus*, and in numerous letters.

If the mode of action of the thinking body as a whole is determined in the form of an 'other', and not of the immanent structure of 'this' body, the problem arises, how ever are we to recognise error? The question was posed then with special sharpness because it appeared in ethics and theology as the problem of 'sin' and 'evil'. The criticism of Spinozism from the angle of theology was invariably directed at this point; Spinoza's teaching took all the sense out of the very distinguishing of 'good and evil', 'sin and righteousness', 'truth and error'. In fact, in what then did they differ?

Spinoza's answer again was simple, like any fundamentally true answer. Error (and hence 'evil' and 'sin') was not a characteristic of ideas and actions as regards their own composition, and was not a positive attribute of them. The erring man also acted in strict accordance with a thing's form, but the question was what the thing was. If it were 'trivial', 'imperfect' in itself, i.e. fortuitous, the mode of action adapted to it would also be imperfect. And if a person transferred this mode of action to another thing, he would slip up.

Error, consequently, only began when a mode of action that was limitedly true was given universal significance, when the relative was taken for the absolute. It is understandable why Spinoza put so low a value on acting by abstract, formal analogy, formal deduction based on an abstract universal. What was fixed in the abstract 'idea' was what most often struck the eye. But it, of course, could be a quite accidental property and form of the thing; and that meant that the narrower the sphere of the natural whole with which the person was concerned, the greater was the measure of error and the smaller the measure of truth. For that very

reason the *activity* of the thinking body was in direct proportion to the *adequateness of its ideas*. The more passive the person, the greater was the power of the nearest, purely external circumstances over him, and the more his mode of action was determined by the chance form of things; conversely, the more actively he extended the sphere of nature determining his activity, the more adequate were his ideas. The complacent position of the philistine was therefore the greatest sin.

Man's thinking could achieve 'maximum perfection' (and then it would be identical with thought as the attribute of substance) only in one case, when his actions conformed with all the conditions that the infinite aggregate of interacting things, and of their forms and combinations, imposed on them, i.e. if they were built in accordance with the absolutely universal necessity of the natural whole and not simply with some one of its limited forms. Real earthly man was, of course, still very, very far from that, and the attribute of thought was therefore only realised in him in a very limited and 'imperfect' (finite) form; and it would be fallacious to build oneself an idea of thinking as an attribute of substance in the image and likeness of finite human thought. On the contrary one's finite thought must be built in the image and likeness of *thought in general*. For finite thought the philosophical, theoretical definition of thinking as an attribute of substance poses some sort of ideal model, to which man can and must endlessly approximate, though never having the power to bring himself up to it in level of 'perfection'.

That is why the idea of substance and its all-embracing necessity functioned as the principle of the constant *perfecting* or *improvement of intellect*. As such it had immense significance. Every 'finite' thing was correctly understood only as a 'fading moment' in the bosom of infinite substance; and not one of its 'partial forms', however often encountered, should be given universal significance.

In order to disclose the really general, truly universal forms of things in accordance with which the 'perfected' thinking body should act, another criterion and another mode of knowledge than formal abstraction was required. The idea of substance was not formed by abstracting the attribute that belonged equally to extension and thought. The abstract and general in them was only that they *existed*, existence in general, i.e. an absolutely empty determination in no way disclosing the nature of the one or the other. The really general (infinite, universal) relation between thought and spatial, geometric reality could only be understood, i.e. the idea of substance arrived at, through real understanding of their mode of

interaction within nature. Spinoza's whole doctrine was just the disclosure of this 'infinite' relation.

Substance thus proved to be an absolutely necessary condition, without assuming which it was impossible in principle to understand the mode of the interaction between the thinking body and the world within which it operated as a thinking body. This is a profoundly dialectical point. Only by proceeding from the idea of substance could the thinking body understand both itself and the reality with and within which it operated and about which it thought; any other way it could not understand either the one or the other and was forced to resort to the idea of an outside power, to a theologically interpreted 'God', to a miracle. But, having once understood the mode of its actions (i.e. thought), the thinking body just so comprehended substance as the absolutely necessary condition of interaction with the external world.

Spinoza called the mode of knowledge or cognition described here 'intuitive'. In creating an adequate idea of itself, i.e. of the form of its own movement along the contours of external objects, the thinking body thus also created an adequate idea of the forms and contours of the objects themselves. Because *it was one and the same form, one and the same contour*. In this understanding of the intuitive there was nothing resembling subjective introspection. Rather the contrary. On Spinoza's lips intuitive knowledge was a synonym of rational understanding by the thinking body of the laws of its own actions within nature. In giving itself a rational account of what and how it did in fact operate, the thinking body at the same time formed a true idea of the object of its activity.

From that followed the consistent materialist conclusion that 'the true definition of any one thing neither involves nor expresses anything except the nature of the thing defined'.¹⁸ That is why there can only be one correct definition (idea) in contrast and in opposition to the plurality and variety of the individual bodies of the same nature. These bodies are as real as the unity (identity) of their 'nature' expressed by the definition in the 'attribute of thought' and by real diversity in the 'attribute of extension'. *Variety and plurality* are clearly understood here as *modes of realisation* of their own opposition i.e. of the *identity and unity of their 'nature'*. That is a distinctly dialectical understanding of the relation between them, in contrast to the feeble eclectic formula (often fobbed off dialectics) that

¹⁸ Spinoza, "Ethics," in *Great Books of the Western World*, vol. 31 p 357.

'both unity and plurality', 'both identity and difference' equally really exist. Because eclectic pseudodialectics, when it comes down to solving the problem of knowledge and of 'definition' or 'determination', arrives safely at exactly the contrary (compared with Spinoza's solution), at the idea that 'the definition of a concept' is a verbally fixed form of expression in consciousness, in the idea of a real, sensuously given variety.

Talk of the objective identity, existing outside the head, of the nature of a given range of various and opposing single phenomena thus safely boils down to talk about the purely formal unity (i.e. similarity, purely external identity) of sensuously contemplated, empirically given things, of isolated facts, formally subsumed under 'concept'. And it then generally becomes impossible to consider the 'definition of the concept' as the determination of the *nature of the defined thing*. The starting point then proves to be not the 'identity and unity' of the phenomena but in fact the 'variety and plurality' of isolated facts allegedly existing originally quite 'independently' of one another, and later only formally united, tied together as it were with string, by the 'unity of the concept' and the 'identity of the name'. So the sole result proves to be the identity in consciousness (or rather in name) of the initially heterogeneous facts, and their purely verbal 'unity'.

Hence it is not difficult to understand why Neopositivists are dissatisfied with Spinoza and attack the logical principle of his thinking. 'Spinoza's metaphysic is the best example of what may be called "logic monism" – the doctrine, namely, that the world as a whole is a single substance, none of whose parts are logically capable of existing alone. The ultimate basis for this view is the belief that every proposition has a single subject and a single predicate, which leads us to the conclusion that relations and plurality must be illusory'.¹⁹

The alternative to Spinoza's view, in fact, is the affirmation that any 'part' of the world is not only 'capable' of 'existing' independently of all other parts, but must do so. As another authority of this trend postulated it, 'the world is the totality of facts not of things', by virtue of which 'the world divides into facts', and so 'any one can either be the case or not be the case, and everything else remain the same'.²⁰

¹⁹ Russell, *Op. cit.*, pp 600-01.

²⁰ Wittgenstein, "Tractatus Logico-Philosophicus," London 1955, p 31.

Thus, according to the ‘metaphysic of Neopositivism’, the external world must be considered some kind of immeasurable *accumulation*, a simple *conglomeration*, of ‘atomic facts’ absolutely independent of each other, the ‘proper determination’ of each of which is bound to be absolutely independent of the determination of any other fact. The determination (definition, description) remains ‘correct’ even given the condition that there are no other facts in general. In other words, ‘a scientific consideration of the world’ consists in a purely formal, verbal uniting of a handful of odd facts by subsuming them under one and the same term, under one and the same ‘general’. The ‘general’, interpreted only as the ‘meaning of the term or sign’, always turns out to be something quite arbitrary or ‘previously agreed upon’, i.e. ‘conventional’. The ‘general’ (unity and identity) – as the sole result of the ‘scientific logical’ treatment of the ‘atomic facts’, is consequently not the result at all, but a previously established, conventional *meaning of the term*, and nothing more.

Spinoza’s position, of course, had no connection with this principle of ‘logical analysis’ of the phenomena given in contemplation and imagination. For him the ‘general’, ‘identical’, ‘united’ were by no means illusions created only by our speech (language), by its subject-predicate structure (as Russell put it), but primarily the real, general nature things. And that nature must find its verbal expression in a correct definition of the concept. It is not true, moreover, that ‘relations and plurality must be illusory’ for Spinoza, as Russell said. That is not at all like Spinoza, and the affirmation of it is on Russell’s conscience, that he should have stooped so low to discredit the ‘concept of substance’ in the eyes of ‘modern science’ as ‘incompatible with modern logic and with scientific method’.²¹

One thing, however, is beyond doubt here: what Russell called ‘modern logic and scientific method’ really is incompatible with the logic of Spinoza’s thinking, with his principles of the development of scientific definitions, with his understanding of ‘correct definitions’. For Spinoza ‘relations and plurality’ were not ‘illusory’ (as Russell described them) and ‘identity and unity’ were not illusions created solely by the ‘subject-predicate structure’ (as Russell himself thought). Both the one and the other were wholly real, and both existed in ‘God’, i.e. *in the very nature of*

²¹ Russell, *Op. cit.*, p 601.

things, quite irrespective of whatever the verbal structures of the so-called 'language of science' were.

But for Bertrand Russell, both the one and the other were equally illusions. 'Identity' (i.e. the principle of substance, of the general nature of things), was an illusion created by language and 'relations and plurality' were illusions created by our own sensuality. But what, in fact, is independent of our illusions? I do not know and I don't want to know; I don't want to know because I cannot, Russell answered. I know only what is the 'world' given to me in my sensations and perceptions (where it is something 'plural') and in my language (where it is something 'identical' and related). But what is there besides this 'world'? God only knows, answered Russell, word for word repeating Bishop Berkeley's thesis, though not risking to affirm categorically after him that 'God' in fact 'knew' it, because it was still not known if God himself existed.

There we have the polar contrast of the positions of Spinoza and of Berkeley and Hume (whom the Neopositivists are now trying to galvanise back to life). Berkeley and Hume also primarily attacked the whole concept of substance, trying to explain it as the product of an 'impious mind'. Because there is a really unpersuasive alternative here, namely two polar and mutually exclusive solutions of one and the same problem – the problem of the relation of 'the world in consciousness' (in particular in 'correct definition') to the 'world outside consciousness' (outside 'verbal definition'). For here a choice must be made: either nature, including man as part of it, must be understood through the logic of the 'concept of substance', or it must be interpreted as a complex of one's sensations.

But let us return to consideration of Spinoza's conception. Spinoza well understood all the sceptical arguments against the possibility of finding a single one correct definition of the thing that we are justified in taking as a definition of the nature of the thing itself and not of the specific state and arrangement of the organs within ourselves, in the form of which this thing is represented 'within us'. In considering different variants of the interpretation of one and the same thing, Spinoza drew the following direct conclusion: 'All these things sufficiently show that every one judges things by the constitution of his brain, or rather accepts the affections of his imagination in the place of things'.²² In other words,

²² Spinoza, *Op. cit.*, p 372.

we have within us, in the form of ideas, not the thing itself and its proper form, but only the inner state that the effect of the external things evoked in our body (in the corpus of the brain).

Therefore, in the ideas we directly have of the external world, two quite dissimilar things are muddled and mixed up: the form of our own body and the form of the bodies outside it. The naive person immediately and uncritically takes this hybrid for an external thing, and therefore judges things in conformity with the specific state evoked in his brain and sense organs by an external effect in no way resembling that state. Spinoza gave full consideration to the Cartesians' argument (later taken up by Bishop Berkeley), that toothache was not at all identical in geometric form to a dentist's drill and even to the geometric form of the changes the drill produced in the tooth and the brain. The brain of every person, moreover, was built and tuned differently, from which we get the sceptical conclusion of the plurality of truths and of the absence of a truth one and the same for all thinking beings. 'For every one has heard the expressions: So many heads, so many ways of thinking; Each is wise in his own manner; Differences of brains are not less common than differences of taste;— all which maxims show that men decide upon matters according to the constitution of their brains, and imagine rather than understand things'.²³

The point is this, to understand and correctly determine the thing itself, its proper form, and not the means by which it is represented inside ourselves, i.e. in the form of geometric changes in the body of our brain and its microstructures. But how is that to be done? Perhaps, in order to obtain the pure form of the thing, it is simply necessary to 'subtract' from the idea all its elements that introduce the arrangement (disposition) and means of action of our own body, of its sense organs and brain into the pure form of the thing:

But (1) we know as little of how our brain is constructed and what exactly it introduces into the composition of the idea of a thing as we know of the external body itself; and (2) the thing in general cannot be given to us in any other way than through the specific changes that it has evoked in our body. If we 'subtract' everything received from the thing in the course of its refraction through the prism of our body, sense organs,

²³ Spinoza, *Op. cit.*, p 372.

and brain, we get pure nothing. 'Within us' there remains nothing, no idea of any kind. So it is impossible to proceed that way.

However differently from any other thing man's body and brain are built they all have something in common with one another, and it is to the finding of this something common that the activity of reason is in fact directed, i.e. the real activity of our body that we call 'thinking'.

In other words an adequate idea is only the conscious state of our body *identical in form with the thing, outside the body*. This can be represented quite clearly. When I describe a circle with my hand on a piece of paper (in real space), my body, according to Spinoza, comes into a state fully identical with the form of the circle outside my body, into a state of real *action* in the form of a circle. My body (my hand) really describes a circle, and the awareness of this state (i.e. of the form of my own action in the form of the thing) is also the idea, which is, moreover, 'adequate'.

And since 'the human body needs for its preservation many other bodies by which it is, as it were, continually regenerated',²⁴ and since it 'can move and arrange external bodies in many ways',²⁵ it is in the activity of the human body in the shape of another external body that Spinoza saw the key to the solution of the whole problem. Therefore 'the human mind is adapted to the perception of many things, and its aptitude increases in proportion to the number of ways in which its body can be disposed'.²⁶ In other words, the more numerous and varied the means it has 'to move and arrange external bodies', the more it has 'in common' with other bodies. Thus the body, knowing how to be in a state of movement along the contours of circle, in that way knows how to be in a state in common with the state and arrangement of all circles or external bodies moving in a circle.

In possessing consciousness of my own state (actions along the shape of some contour or other), I thus also possess a quite exact awareness (adequate idea) of the shape of the external body. That, however, only happens where and when I actively determine myself, and the states of my body, i.e. its actions, in accordance with the shape of the external body, and not in conformity with the structure and arrangement of my own body and its 'parts'. The more of these actions I know how to

²⁴ *Ibid.*, p 380

²⁵ *Ibid.*

²⁶ *Ibid.*

perform, the more perfect is my thinking, and the more adequate are the ideas included in the ‘mind’ (as Spinoza continued to express it, using the language normal to his contemporaries), or simply in the *conscious states of my body*, as he interpreted the term ‘mind’ on neighbouring pages.

Descartes’ dualism between the world of external objects and the inner states of the human body thus disappeared right at the very start of the explanation. It is interpreted as a difference within one and the same world (the world of bodies), as a difference in their mode of existence (‘action’). The ‘specific structure’ of the human body and brain is here, for the first time, interpreted not as a barrier separating us from the world of things, which are not at all like that body, but on the contrary as the same property of universality that enables the thinking body (in contrast to all others) to be in the very same states as things, and to possess forms in common with them.

Spinoza himself expressed it thus: ‘There will exist in the human mind an adequate idea of that which is common and proper to the human body, and to any external bodies by which the human body is generally affected – of that which is equally in the part of each of these external bodies and in the whole is common and proper.

‘Hence it follows that the more things the body has in common with other bodies, the more things will the mind be adapted to perceive’.²⁷

Hence, also it follows that ‘some ideas or notions exist which are common to all men, for ... all bodies agree in some things, which ... must be adequately, that is to say, clearly and distinctly, perceived by all’.²⁸ In no case can these ‘common ideas’ be interpreted as specific forms of the human body, and they are only taken for the forms of external bodies by mistake (as happened with the Cartesians and later with Berkeley), despite the fact that ‘the human mind perceives no external body as actually existing, unless through the ideas of the affections of its body’.²⁹

The fact is that the ‘affections of one’s body’ are quite objective, being the actions of the body in the world of bodies, and not the results of the action of bodies on something unlike them, ‘in corporeal’. Therefore,

²⁷ Spinoza, *Op. cit.*, pp 386-7.

²⁸ *Ibid.*, p 386.

²⁹ *Ibid.*, p 384.

'he who possesses a body fit for many things possesses a mind of which the greater part is external'.³⁰

From all that it follows that 'the more we understand individual objects, the more we understand God',³¹ i.e. the general universal nature of things, world substance; the more individual things our activity embraces and the deeper and more comprehensively we determine our body to act along the shape of the external bodies themselves, and the more we become an active component in the endless chain of the causal relations of the natural whole, the greater is the extent to which the power of our thinking is increased, and the less there is of the 'specific constitution' of our body and brain mixed into the 'ideas' making them 'vague and inadequate' (ideas of the imagination and not of 'intellect'). The more active our body is, the more universal it is, the less it introduces 'from itself', and the more purely it discloses the real nature of things. And the more passive it is, the more the constitution and arrangement of the organs within it (brain, nervous system, sense organs, etc.) affect ideas.

Therefore the real composition of psychic activity (including the logical component of thought) is not in the least determined by the structure and arrangement of the parts of the human body and brain, but by the external conditions of universally human activity in the world of other bodies.

This functional determination gives an exact orientation to structural analysis of the brain, fixes the general goal, and gives a criterion by which we can distinguish the structures through which thinking is carried on within the brain from those that are completely unrelated to the process of thought, but govern, say, digestion, circulation of the blood, and so on.

That is why Spinoza reacted very ironically to all contemporaneous 'morphological' hypotheses, and in particular to that of the special role of the 'pineal gland' as primarily the organ of the 'mind'. On this he said straight out: since you are philosophers, do not build speculative hypotheses about the structure of the body of the brain, but leave investigation of what goes on inside the thinking body to doctors, anatomists, and physiologists. You, as philosophers, not only can, but are bound to, work out for doctors and anatomists and physiologists the functional determination of thinking and not its structural determination, and you must do

³⁰ *Ibid.*, p 462.

³¹ Spinoza, *Op. cit.*, pp 458.

it strictly and precisely, and not resort to vague ideas about an ‘incorporeal mind’, ‘God’, and so on.

But you can find the functional determination of thought only if you do not probe into the *thinking body* (the brain), but carefully examine the real composition of its objective activities among the other bodies of the infinitely varied universum. Within the skull you will not find anything to which a functional definition of thought could be applied, because thinking is a function of external, objective activity. And you must therefore investigate not the anatomy and physiology of the brain but the ‘anatomy and physiology’ of the ‘body’ whose active function *in fact* is thought, i.e. the ‘inorganic body of man’, the ‘anatomy and physiology’ of the world of his culture, the world of the ‘things’ that he produces and reproduces by his activity.

The sole ‘body’ that thinks from the necessity built into its special ‘nature’ (i.e. into its specific structure) is *not the individual brain at all*, and not even the whole man with a brain, heart, and hands, and all the anatomical features peculiar to him. Of necessity, according to Spinoza, only substance possesses thought. Thinking has its necessary premise and indispensable condition (*sine qua non*) *in all nature as a whole*.

But that, Marx affirmed, is not enough. According to him, only nature of necessity thinks, nature that has achieved the stage of man socially producing his own life, nature changing and knowing itself in the person of man or of some other creature like him in this respect, universally altering nature, both that outside him and his own. A body of smaller scale and less ‘structural complexity’ will not think. Labour is the process of changing nature by the action of social man, and is the ‘subject’ to which thought belongs as ‘predicate’. But nature, the universal matter of nature, is also its substance. Substance, having become the subject of all its changes in man, the cause of itself (*causa sui*).

3. Kant – Logic and Dialectics

The most direct path to the creation of dialectical logic, as we have already said, is ‘repetition of the past’, made wise by experience, repetition of the work of Marx, Engels, and Lenin, or critical, materialist rethinking of the achievements that humanity owes in the realm of the Higher Logic to classical German philosophy of the end of the eighteenth and beginning of the nineteenth centuries, to the process of spiritual maturing,

striking in its rapidity, associated with the names of Kant, Fichte, Schelling, and Hegel.

The 'matter of logic' then underwent, in a very short historical period, the most prodigious 'flight of imagination' since antiquity, marked in itself by an inner dialectic so tense that even simple acquaintance with it still cultivates dialectical thinking.

First of all we must note that it was German classical philosophy that clearly recognised and sharply expressed the fact that all problems of philosophy as a special science somehow or other turned on the question of *what thought was and what were its interrelations with the external world*. Understanding of this fact, already matured earlier in the systems of Descartes and Locke, Spinoza and Leibniz, was now transformed into the consciously established jumping-off point of all investigations, into the basic principle of a critical rethinking of the results of the preceding development. Philosophy, completing in Kant a more than two-century cycle of investigation, entered on a fundamentally new stage of understanding and resolving of its special problems.

The need to examine and analyse the path critically was not of course dictated only by the inner needs of philosophy itself, by the striving to completeness and orderliness (although the philosophers themselves so expressed it), but mainly by the powerful pressure of outside circumstances, the crisis-ridden, prerevolutionary state of all intellectual culture. The intense conflict of ideas in all spheres of intellectual life, from politics to natural science, willy-nilly involved in ideological struggle, more and more insistently impelled philosophy to dig down ultimately to the very roots and sources of what was happening, to understand where the general cause of the mutual hostility between people and ideas was hidden, to find and point out to people the rational way out of the situation that had arisen.

Kant was the first to attempt to embrace within the framework of a single conception all the main opposing principles of the thought of the time which was approaching a catastrophic collision. In trying to unite and reconcile those principles within one system he only, against his will, exposed more clearly the essence of the problems which were unresolvable by the tried and known methods of philosophy.

The actual state of affairs in science presented itself to Kant as a war of all against all; in the image of that 'natural' state which, following Hobbes, he characterised (as applied to science) as 'a state of injustice

and violence'. In this state scientific thought ('reason') 'can establish and secure its assertions only through *war...*'. In that case 'the disputes are ended by a victory to which both sides lay claim, and which is generally followed by a merely temporary armistice, arranged by some mediating authority....'³²

Putting it another way, it was the tension of the struggle between opposing principles, each of which had been developed into a system claiming universal significance and recognition, that constituted the 'natural' state of human thought for Kant. The 'natural', actual, and obvious state of thought, consequently, was just dialectics. Kant was not at all concerned to extirpate it once and for all from the life of reason, i.e. from science understood as a certain developing whole, but only ultimately to find a corresponding 'rational' means of resolving the contradictions, discussions, disputes, conflicts, and antagonisms arising in science. Could reason itself, without the aid of 'authority', overcome the anguish of dissension?

'The endless disputes of a merely dogmatic reason', as he put it, 'thus finally constrain us to seek relief in some critique of reason itself, and in a legislation based upon such criticism'.³³

The state of endless disputes, and hostility between theoreticians, seemed to Kant to be a consequence of the fact that the 'republic of scholars' did not as yet have a single, systematically developed 'legislation' recognised by all, or 'constitution of reason', which would enable it to seek solution of the conflicts not in war 'to the death' but in the sphere of polite, academic discussion, in the form of a 'legal process' or 'action' in which each party would hold to one and the same 'code' of logical substantiation and, recognising the opponent as an equally competent and equally responsible party as himself, would remain not only critical but also self-critical, always ready to recognise his mistakes and transgressions against the logical rules. This ideal of the inter-relations of theoreticians – and it is difficult to raise any objection against it even now – loomed before Kant as the goal of all his investigations.

But thereby, at the centre of his attention, there was above all that field which tradition assigned to the competence of logic. It was quite obvious to Kant, on the other hand, that logic in the form in which it

³² Kant, "Critique of Pure Reason," tr. N. K. Smith, London 1929 p 601.

³³ *Ibid.*, p 604.

existed could not in any way satisfy the pressing needs of the situation created, or serve as a tool to analyse it. The very term 'logic' was so discredited by then that Hegel was fully justified in speaking of the universal and complete scorn for this science that for 'hundreds and thousands of years ... was just as much honoured as it is despised now'.³⁴ And only the profound reform that it underwent in the work of the classical German philosophers restored respect and dignity to the very name of the science of thought. Kant was the very first to try to pose and resolve the problem of logic specifically by way of a critical analysis of its content and historical fate. For the first time he compared its traditional baggage with the real processes of thinking in natural science and in the sphere of social problems.

Kant above all set himself the goal of bringing out and summing up the undisputed truths which had been formulated within the framework of traditional logic, though also scorned for their banality. In other words he tried to bring out those 'invariants' that had remained unaffected during all the discussions on the nature of thinking stretching over centuries and millennia, the propositions that no one had called in question, neither Descartes nor Berkeley, neither Spinoza nor Leibniz, neither Newton nor Huygens, not one theoretically thinking individual. Having singled this 'residue' out from logic, Kant was satisfied that what remained was not very much, a few quite general propositions formulated in fact by Aristotle and his commentators.

From the angle from which Kant surveyed the history of logic it was impossible to draw any other conclusion; for it went without saying that if one sought only those propositions in logic with which everyone equally agreed, both Spinoza and Berkeley, both the rationalist-naturalist and the theologian, and all their disagreements were taken out of the brackets, then nothing else would remain within the brackets, nothing except those completely general *ideas* (notions) about thought that seemed indisputable to all people thinking in the defined tradition. There thus existed a *purely empirical* generalisation, really stating only that not a single one of the theoreticians so far occupying themselves with thought had actually disputed a certain totality of judgments. But you could not tell from these judgments whether they were true in themselves, or were really only common and generally accepted illusions.

³⁴ Hegel, "Lectures on the History of Philosophy, Vol. II," p 210.

For all theoreticians had hitherto thought (or had only tried to think) in accordance with a number of rules. Kant, however, transformed the purely empirical generalisation into a theoretical judgment (i.e. into a universal and necessary one) about the subject matter of logic in general, about the legitimate limits of its subject matter: ‘The sphere of logic is quite precisely delimited; its sole concern is to give an exhaustive exposition and a strict proof of the formal rules of all thought ...’.³⁵ Here ‘formal’ means quite independent of how thought precisely is understood, and of its origins and objects or goals, its relations to man’s other capacities and to the external world, and so on and so forth, i.e. independent of how the problem of the ‘external’ conditions within which thinking is performed according to the rules is resolved, and of metaphysical, psychological, anthropological, and other considerations. Kant declared these rules to be absolutely true and universally obligatory for thought in general, ‘whether it be *a priori* or empirical, whatever be its origin or object, and whatever hindrances, accidental or natural, it may encounter in our minds (*Gemüt*)’.³⁶

Having thus drawn the boundaries of logic (‘that logic should have been thus successful is an advantage which it owes entirely to its limitations, whereby it is justified in abstracting indeed, it is under obligation to do so from all objects of knowledge and their differences. ...’³⁷), Kant painstakingly investigated its fundamental possibilities. Its competence proved to be very narrow. By virtue of the formality mentioned, it of necessity left out of account the differences in the views that clashed in discussion, and remained absolutely neutral not only in, say, the dispute between Leibniz and Hume but also in a dispute between a wise man and a fool, so long as the fool ‘correctly’ set out whatever ideas came into his head from God knew where, and however absurd and foolish they were. Its rules were such that it must logically justify any absurdity so long as the latter was not self-contradictory. A self-consistent stupidity must pass freely through the filter of general logic.

Kant especially stresses that ‘general logic contains, and can contain, no rules for judgment’,³⁸ that is ‘the faculty of *subsuming* under the rules;

35 Kant, *Op. cit.*, p 18.

36 *Ibid.*, p 18.

37 *Ibid.*

38 *Ibid.*, p 177.

that is, of distinguishing whether something does or does not stand under a given rule (*casus datae legis*).³⁹ The firmest knowledge of the rules in general (including the rules of general logic) is therefore no guarantee of their faultless application. Since ‘deficiency in judgment is just what is ordinarily called stupidity’, and since ‘for such a failing there is no remedy’,⁴⁰ general logic cannot serve either as an ‘organon’ (tool, instrument) of real knowledge or even as a ‘canon’ of it, i.e. as a criterion for testing ready-made knowledge.

In that case then, for what is it in general needed? Exclusively for checking the correctness of so-called analytical judgments, i.e. ultimately, acts of verbal exposition of ready-made ideas already present in the head, however unsound these ideas are in themselves, Kant stated in full agreement with Berkeley, Descartes, and Leibniz. The contradiction between a concept (i.e. a rigorously defined idea) and experience and the facts (their determinations) is a situation about which general logic has no right to say anything, because then it is a question already of an act of subsuming facts under the definition of a concept and not of disclosures of the sense that was previously contained in the concept. (For example, if I affirm that ‘all swans are white’, then, having seen a bird identical in all respects except colour with my idea of a swan, I shall be faced with a difficulty, which general logic cannot help me to resolve in any way. One thing is clear, that this bird will not be subsumed under my concept ‘swan’ without contradiction, and I shall be obliged to say: it is not a swan. If, all the same, I recognise it as a swan, then the contradiction between the concept and the fact will already be converted into a contradiction between the determinations of the concept, because the subject of the judgment (swan) will be defined through two mutually exclusive predicates (‘white’ and ‘not white’). And that is already inadmissible and equivalent to recognition that my initial concept was incorrectly defined, and that it must be altered, in order to eliminate the contradiction.)

So that every time the question arises of whether or not to subsume a given fact under a given concept, the appearance of a contradiction cannot be taken at all as an index of the accuracy or inaccuracy of a judgment. A judgment may prove to be true simply because the contradiction in the given case *demolishes* the initial concept, and reveals its

39 Kant, *Op. cit.*

40 *Ibid.*

contradictoriness, and hence its falsity. That is why one cannot apply the criteria of general logic unthinkingly where it is a matter of experimental judgments, of the acts of subsuming facts under the definition of a concept, of acts of concretising an initial concept through the facts of experience. For in such judgments the initial concept is not simply explained but has new determinations added to it. A synthesis takes place, a uniting of determinations, and not analysis, i.e. the breaking down of already existing determinations into details.

All judgments of experience, without exception, have a synthetic character. The presence of a contradiction in the make-up of such a judgment is consequently a natural and inevitable phenomenon in the process of making a concept more precise in accordance with the facts of experience.

To put it another way, general logic has no right to make recommendations about the capacity of a judgment since this capacity has the right to subsume under the definition of a concept those facts that directly and immediately *contradict* that definition.

Any empirical concept is therefore always in danger of being refuted by experience, by the first fact that strikes the eye. Consequently, a judgment of a purely empirical character, i.e. one in which an empirically given, sensuously contemplated thing or object functions as subject (e.g. our statement about swans), is true and correct only with the obligatory reservation: 'All swans *that have so far come within our field of experience* are white'. Such a statement is indisputable, because it does not claim to apply to any individual things of the same kind that we have not yet been able to see. And further experience has the right to correct our definitions and to alter the predicates of the statement.

Our theoretical knowledge is constantly coming up against such difficulties in fact, and always will.

But if that is so, if science develops only through a constant juxtaposition of concepts and facts, through a constant and never ending process of resolving the conflict that arises here again and again then the problem of the theoretical scientific concept is sharply posed immediately. Does a theoretical scientific generalisation (concept), claiming universality and necessity, differ from any empirical, inductive 'generalisation'? (The complications that arise here were wittily described a century or more later by Bertrand Russell in the form of a fable. Once there was a hen in a hen-coop. Every day the farmer brought it corn to peck, and the hen

certainly drew the conclusion that appearance of the farmer was linked with the appearance of corn. But one fine day the farmer appeared not with corn but with a knife, which convincingly proved to the hen that there would have been no harm in having a more exact idea of the path to a scientific generalisation.)

In other words, are such generalisations possible as can, despite being drawn from only fragmentary experience relative to the given object, nevertheless claim to be concepts providing scientific *prediction*, i.e., to be extrapolated with assurance to future experience about the self-same object (taking into consideration, of course, the effect of the diverse conditions in which it may be observed in future)? Are concepts possible that express not only and not simply more or less chance common attributes, which in another place and another time may not be present, but also the 'substance' itself, the *very 'nature' of the given kind of object*, the law of their existence? That is to say, are such determinations possible, in the absence of which the very object of the given concept is absent (impossible and unthinkable), and when there is already another object, which for that very reason is competent neither to confirm nor to refute the definition of the given concept? (As, for example, consideration of a square or a triangle has no bearing on our understanding of the properties of a circle or an ellipse, since the definition of the concept 'circumference of a circle' contains only such predicates as strictly describe the boundaries of the given kind of figure, boundaries that it is impossible to cross without passing into another kind). The concept thus presupposes such 'predicates' as cannot be eliminated (without eliminating the object of the given concept itself) by any future, 'any possible' (in Kant's terminology) experience.

So the Kantian distinction between purely empirical and theoretical scientific generalisations arises. The determinations of concepts must be characterised by universality and necessity, i.e. must be given in such a way that they cannot be refuted by any future experience.

Theoretical scientific judgments and generalisations, unlike purely empirical ones, in any case claim to be universal and necessary (however the metaphysical, psychological, or anthropological foundations of such claims are explained), to be confirmable by the experience of everybody of sound mind, and not refutable by that experience. Otherwise all science would have no more value than the utterances of the fool in the parable who produces sententious statements at every opportune and inopportune moment that are only pertinent and justified in strictly

limited circumstances, i.e. thoughtlessly uttering statements applicable only on particular occasions as absolutes and universals, true in any other case, in any conditions of time and place.

The theoretical generalisations of science (and judgments linking two or more) have to indicate not only the definition of the concept but also the whole fullness of the conditions of its applicability, universality, and necessity. But that is the whole difficulty. Can we categorically establish that we have listed the whole series of necessary conditions? Can we be sure that we have included only the really necessary conditions in it? Or have we perhaps included superfluous ones, not absolutely necessary?

Kant remained open on this question, too; and he was right, since there is always the chance of a mistake here. In fact, how many times science has taken the particular for the general. In any case it is clear that 'general', i.e. purely formal, logic has no right here either to formulate a rule making it possible to distinguish the simply general from the *universal*; to distinguish that which has been observed *up to now* from that which will be observed *in the future*, however long our experience goes on for and however broad the field of facts that it embraces. For the rules of general logic judgments of the type of 'all swans are white' are quite indistinguishable from statements of the type of 'all bodies are extended', because the difference in them consists not in the form of the judgment but exclusively in the content and origin of the concept embraced in it. The first is empirical and preserves its full force only in relation to experience already past (in Kant's parlance it is only true *a posteriori*); the second claims to a greater force, to be correct also in relation to the future, and to any possible experience regarding natural bodies (in Kant's parlance it is true *a priori*, i.e. prior to, before being tested by experience). For that reason we are convinced (and science lends our conviction the character of an apodictic affirmation) that however far we travelled in space and however deep we penetrated into matter we would never and nowhere encounter a 'natural body' that refuted our conviction, i.e. 'a body without extension'.

Why? Because there cannot be a body without extension in nature? To answer thus, Kant said, would be impudent. All we can say is the following: if, even in the infinite universe, such remarkable bodies did exist, they could never, in any case, come within our field of vision, within our field of experience. And if they could, then they would be perceived by us as extended, or would not be perceived at all. For such is the structure of our organs of perception that they can only perceive

things in the form of space, only as extensions and continuities (in the form of time).

It may be said that they are such 'in themselves'; Kant did not consider it possible to deny that, or to assert it. But 'for us' they are precisely such, and cannot be otherwise, because then they would not in general be part of our experience, would not become objects of experience, and therefore would not serve as the basis for scientific statements and propositions, for mathematics, physics, chemistry, and other disciplines.

The spatial-temporal determinations of things (the modes of describing them mathematically) are thus rescued from danger of refutation by any possible experience, because they are precisely true on condition of that very experience being possible.

All theoretical propositions as such (i.e. all statements linking two or more determinations together) acquire a *universal* and *necessary* character and no longer need to be confirmed by experience. That is why Kant defined them as *a priori*, synthetic statements. It is by virtue of this character of theirs that we can be quite confident that two times two are four and not five or six not only on our sinful earth but also on any other planet; that the diagonal of a square will be just as incommensurate with its sides; and that the laws discovered by Galileo, Newton, and Kepler will be the same in any corner of the Universe as in the part investigated by us. Because only and exclusively *universal* and *necessary* definitions (in the sense explained above), predicates of the concept, are linked together (synthesised) in these propositions.

But if the main problem that science comes up against proves not to be analytical judgments but synthetic ones, and general logic is only competent to judge analytical correctness, then we must inevitably conclude that there must be a special logic, apart from general logic, having to do only with theoretical applications of the intellect, with the rules of producing theoretical (in Kant's parlance, *a priori*, synthetic) judgments, i.e. judgments that we are entitled to appraise as universal, necessary, and therefore objective.

'When we have reason to consider a judgment necessarily universal ... we must consider it objective also, that is, that it expresses not merely a reference of our perception to a subject, but a quality of the object. For there would be no reason for the judgments of other men necessarily agreeing with mine, if it were not the unity of the object to which they all

refer, and with which they accord; hence they must all agree with one another'.⁴¹

True, we still do not know anything about the thing in itself, i.e. outside the experience of all people in general; but that, in the experience of all existing and future people organised like ourselves, it will necessarily look exactly the same (and therefore anybody will be able to test the correctness of our statement) a theoretical judgment must guarantee.

Hence Kant also drew the conclusion that there must be a logic (or rather a section of logic) that dealt specially with the principles and rules of the theoretical application of thought or the conditions of applying the rules of general logic to the solution of special theoretical problems, to acts of producing universal, necessary, and thus objective judgments. This logic was still not entitled, unlike general logic, to ignore the difference between knowledge (ideas) in content and origin. It could and must serve as an adequate canon (if not as an *organon*) for thinking that laid claim to the universality and necessity of its conclusions, generalisations, and propositions. Kant conferred the title of transcendental logic on it, i.e. the logic of truth.

The centre of attention here naturally turned out to be the problem of what Kant called the intellect's synthetic activity, i.e. the activity by which new knowledge was achieved, and not ideas already existing in the head clarified. 'By *synthesis*, in its most general sense', he said, 'I understand the act of putting different representations together and of grasping what is manifold in them in one (act of) knowledge'.⁴² Thus he assigned synthesis the role and 'sense' of the fundamental operation of thinking, preceding any analysis in content and in time. Whereas analysis consisted in act of arranging ready ideas and concepts, synthesis served as an act of *producing* new concepts. And the rules of general logic had a very conditional relation to that act, and so in general to the original, initial forms of the working of thought.

In fact, Kant said, where reason had not previously joined anything together there was nothing for it to divide and 'before we analyse our representations, the representations must themselves be given, and

41 Kant, "Prologomena zu einer jeden künftigen Metaphysik," *Sämtliche Werke* (Leipzig 1938) p 58.

42 Kant, "Critique of Pure Reason," p 111.

therefore as regards content no concepts can arise by way of analysis'.⁴³ So the original, fundamental, logical forms, it transpired, were not the principles of general logic, not the fundamental principles of analytical judgments (i.e. not the law of identity and the principle of contradiction), but only universal forms, schemas, and means of *uniting* various ideas into the body of some new idea, schemas ensuring *unity of diversity*, means of identifying the different and uniting the heterogeneous.

Thus, notwithstanding the formal order of his exposition, and despite it, Kant in essence affirmed that the really universal initial and fundamental logical forms were not those at all that were considered such by traditional formal logic, but that these were rather the 'second storey' of logical science, and so derivative, secondary, and true only insofar as they agreed with the more universal and important, with the propositions relating to the *synthesis* of determinations in the composition of a concept and judgment.

It was clearly a complete revolution in views on the subject matter of logic as the science of thought. Not enough attention is usually paid to this point in expounding Kant's theory of thought, although it is here that he proved to be the real progenitor of a fundamentally new dialectical stage in the development of logic as a science. Kant was the first to begin to see the main *logical* forms of thinking in *categories* thus including everything in the subject matter of logic that all preceding tradition had put into the competence of ontology and metaphysics, and never into that of logic.

'The union of representations in one consciousness is judgment. Thinking therefore is the same as judging, or referring representations to judgments in general. Hence judgments are either merely subjective, when representations are referred to a consciousness in one subject only, and united in it, or objective, when they are united in a consciousness generally, that is, necessarily. The logical functions of all judgments are but various modes of uniting representations in consciousness. But if they serve for concepts, they are concepts of their necessary union in a consciousness, and so principles of objectively valid judgments'.⁴⁴

Categories are also 'principles of objectively valid judgements'. And just because the old logic had turned up its nose at investigating these

43 Kant, *Op. cit.*, p 111.

44 Kant, "Prologomena," *Op. cit.*, p 66.

fundamental logical forms of thinking, it could neither help the movement of theoretical, scientific knowledge with advice nor tie up the loose ends in its own theory. 'I have never been able to accept the interpretation which logicians give of judgment in general', Kant said. 'It is, they declare, the representation of a relation between two concepts. I do not here dispute with them as to what is defective in this interpretation that in any case it applies only to *categorical* not to hypothetical and disjunctive judgments (the two latter containing a relation not of concepts but of judgments), an oversight from which many troublesome consequences have followed. I need only point out that the definition does not determine in what the asserted *relation* consists'.⁴⁵

Kant clearly posed the task of understanding categories as logical units, and of disclosing their logical functions in the process of producing and transforming knowledge. True, as we shall see below, he also displayed an almost uncritical attitude to the definitions of the categories borrowed by logic from ontology. But the problem was posed: the definitions of categories were understood as logical (i.e. universal and necessary) schemas or the principles of linking ideas together in 'objective' judgments.

Categories were thus those universal forms (schemas) of the activity of the subject by means of which coherent experience became possible in general, i.e. by which isolated perceptions were fixed in the form of knowledge: '...Since experience is knowledge by means of connected perceptions, the *categories* [my italics – *EVI*] are conditions of the possibility of experience, and are therefore valid *a priori* for all objects of experience'.⁴⁶ Any judgment, therefore, that claimed to universal significance, always overtly or covertly included a *category*: 'we cannot think an object save through categories. ...'⁴⁷

And if logic claimed to be the science of thinking it must also develop just this doctrine of categories as a coherent system of categorial determinations of thought. Otherwise it simply had no right to call itself the science of thought. Thus it was Kant (and not Hegel, as is often thought and said) who saw the main essence of logic in categorial definitions of knowledge, and began to understand logic primarily as the sys-

45 Kant, "Critique of Pure Reason," p 158.

46 Kant, "Prologomena," *Op. cit.*, p 171.

47 *Ibid.*, p 173.

tematic exposition of categories, universal and necessary concepts characterising an object in general, those very concepts that were traditionally considered the monopoly of metaphysical investigations. At the same time, and this is linked with the very essence of Kant's conception, categories were nothing other than universal forms (schemas) of the cognitive activity of the subject, purely logical forms of thinking understood not as a psychic act of the individual but a 'generic' activity of man, as the impersonal process of development of science, as the process of the crystallising out of universal scientific knowledge in the individual consciousness.

Kant, not without grounds, considered Aristotle the founder of this understanding of logic, that same Aristotle on whom, following mediaeval tradition, responsibility had been put for the narrow, formal understanding of the boundaries and competence of logic, though in fact it was not his at all. Kant, however, reproached Aristotle for not having given any 'deduction' of his table of categories, but simply only setting out and summing up those categories that already functioned in the existing consciousness of his time. The Aristotelean list of categories therefore suffered from 'empiricism'. In addition, and on Kant's lips the reproach sounds even more severe, Aristotle, not having been content with explaining the logical function of categories, had also ascribed a 'metaphysical meaning' to them, explaining them not only as logical (i.e. theoretical cognitive) schemes of the activity of the mind but also as universal forms of existence, universal determinations of the world of things in themselves, that is to say he 'hypostatised' the purest logical schemas as metaphysics, as a universal theory of objectivity as such.

Kant thus saw Aristotle's main sin as having taken the forms of thinking for the forms of being or existence, and so having converted logic into metaphysics, into ontology. Hence also the task of having, in order to correct Aristotle's mistake, to convert metaphysics into logic. In other words Kant still saw the real significance of Aristotle, through the converting prism of his initial precepts, as the 'father of logic' and understood that Aristotle was such in his capacity as author of the *Metaphysics*. So Kant once and for all cut the roots of the mediaeval interpretation both of Aristotle and of logic, which had seen the logical doctrine of the Stagirite only in the texts of the *Organon*. This unnatural separation of logic from metaphysics, which in fact was due not to Aristotle at all but to the Stoics and Scholastics, acquired the force of prejudice in the Middle Ages, but was removed and overcome by Kant.

Kant did not give his system of categories in the *Critique of Pure Reason*, but only posed the task of creating one in general fashion, ‘since at present we are concerned not with the completeness of the system, but only with the principles to be followed in its construction...’.⁴⁸ He also did not set out the logic, but only the most general principles and outlines of its subject matter in its new understanding, its most general categories (quantity, quality, relation, and modality, each of which was made more concrete in three derivatives). Kant considered that the further development of the system of logic in the spirit of these principles no longer constituted a special work: ‘... it will be obvious that a full glossary, with all the requisite explanations, is not only a possible, but an easy task’.⁴⁹ ‘... It can easily be carried out, with the aid of the ontological manuals for instance, by placing under the category of causality the predicables of force, action, passion; under the category of community the predicables of presence, resistance; under the predicaments of modality, the predicables of coming to be, ceasing to be, change, etc.’⁵⁰

Here again, as was the case with general logic, Kant displayed an absolutely *uncritical* attitude to the theoretical baggage of the old metaphysics, and to the determinations of categories developed in it, since he reduced the business of creating the new logic to very uncritical rethinking, to a purely formal transformation of the old metaphysics (ontology) into logic. In practice it sometimes resulted simply in the renaming of ‘ontological’ concepts as ‘logical’. But the very carrying out of the task posed by Kant very quickly led to an understanding that it was not so simple to do, since what was required was not a formal change but a very serious and far reaching, radical transformation of the whole system of philosophy. Kant himself still did not clearly and completely realise this fact; he had only partially detected the dialectical contradictions of the old metaphysics, in the form of the famous four antinomies of pure reason. A start, however, had been made.

According to Kant categories were purely logical forms, schemas of the activity of the intellect linking together the facts of sensuous experience (perceptions) in the form of concepts and theoretical (objective) judgments. In themselves categories were empty, and any attempt to use

48 Kant, “Prologomena,” *Op. cit.*, p 114.

49 *Ibid.*, p 115.

50 *Ibid.*, p 115.

them as other than logical forms of the generalisation of empirical facts led one way or the other only to balderdash and logomachy. Kant expressed this idea in his own manner, affirming that it was impossible in any case to understand categories as abstract determinations of things in themselves as they existed outside the consciousness of people and outside experience. They characterised, in a universal (abstract-universal) way only the *conceivable* object, i.e. the external world *as and how we of necessity thought of it*, as and how it was represented in consciousness after being refracted through the prism of our sense organs and forms of thinking. Transcendental logic, therefore, the logic of truth, was logic, and only logic, only the doctrine of thinking. Its concepts (categories) told us absolutely nothing about how matters stood in the world outside experience, whether in the world of the 'transcendental' outside the bounds of experience, there was causality, necessity, and chance, quantitative and qualitative differences, a difference in the probability and inevitability of an event occurring, and so on and so forth. That question Kant thought it impossible to answer; but in the world as given to us by experience matters stood exactly as logic pictured them, and science needed nothing more.

Science was therefore always and everywhere obliged to discover causes and laws, to differentiate the probable from the absolutely inevitable, to explain and numerically express the degree of probability of any particular event happening, and so on. In the world with which science was concerned there was no need, even as hypothetically assumed factors, for 'unextended' or 'eternal' factors (i.e. taken outside the power of the categories of space and time), 'incorporeal' forces, absolutely unalterable 'substances', and other accessories of the old metaphysics. The place of the old ontology must now be taken not by some one science, even though new in principle and clarified by criticism, but only the whole aggregate of real experimental sciences mathematics, mechanics, physics, chemistry, celestial mechanics (i.e., astronomy), geology, anthropology, physiology. Only all the existing sciences (and those that might arise in the future) together, generalising the data of experience by means of the categories of transcendental logic, were in a position to tackle the task that the old ontology had monopolised.

To *tackle* it Kant, however, emphasised, but by no means to *solve* it. They could not solve it; for it was insoluble by the very essence of the matter and not at all because the experience on which such a picture of the world as a whole was built was never complete, and not because

science, developing with time, would discover more and more new fields of facts and correct its own propositions, thus never achieving absolute finality in its constructions of the world in concepts. If Kant had argued like that he would have been absolutely right; but with him this quite true thought acquired a rather different form of expression, and was converted into a basic thesis of agnosticism, into an affirmation that it was impossible in general to construct a unified, scientifically substantiated picture of the world even relatively satisfactory for a given moment of time.

The trouble was that any attempt to construct such a picture inevitably collapsed at the very moment of being made, because it was immediately smashed to smithereens by antinomies and immanent contradictions, by the shattering forces of dialectics. The picture sought would inevitably be self-contradictory, which was the equivalent for Kant of its being *false*. Why was that so? The answer is in the chapter of the *Critique of Pure Reason* devoted to analysis of the logical structure of reason as the highest synthetic function of the human intellect.

Another task, it turned out, remained outside the competence of either general or transcendental logic, a task with which scientific understanding was constantly in collision, that of the theoretical synthesis of all the separate 'experimental' statements that made up a single theory developed from a single common principle. Now the job already was not to generalise, i.e. to unite and link together, the sensuously contemplated, empirical facts given in living contemplation, in order to obtain concepts, but the *concepts themselves*. It was no longer a matter of schemas of the synthesis of sensuous facts in reason, but of the unity of reason itself and the products of its activity in the structure of a theory, in the structure of a system of concepts and judgments. Generalising of the factual data by means of a concept, and the generalising of concepts by means of a theory, by means of an 'idea' or general guiding principle, were of course quite different operations. And the rules for them must be different.

There is therefore yet another storey in Kant's logic, a kind of 'meta-logic of truth' bringing under its critical control and surveillance not individual acts of rational activity but all reason as a whole: Thinking with a capital 'T', so to say; thinking in its highest synthetic functions and not separate and partial operational schemas of synthesis.

The striving of thought to create a single, integral theory is natural and ineradicable. It cannot be satisfied, and does not wish to be, by

simple aggregates, simple piling up of partial generalisations, but is always striving to bring them together, to link them together by means of general principles. It is a legitimate striving, and since it is realised in activity and thus appears as a separate power, Kant called it reason in distinction from understanding. Reason is the same as understanding, only it is involved in the solving of a special task, explanation of the absolute unity in diversity, the synthesis of all its schemas and the results of their application in experience. Naturally it also operates there according to the rules of logic, but in resolving this task, thought, though exactly observing all the rules and norms of logic (both general and transcendental) without exception, still inevitably lands in a contradiction, in self-destructing. Kant painstakingly showed that this did not happen as a consequence of slovenliness or negligence in any thinking individuals at all, but precisely because the individuals were absolutely guided by the requirements of logic, true, where its rules and norms were powerless and without authority. In entering the field of reason, thinking invades a country where these laws do not operate. The old metaphysics struggled for whole millennia in hopeless contradictions and strife because it stubbornly tried to do its job with unsuitable tools.

Kant set himself the task of discovering and formulating the special 'rules' that would subordinate the power of thinking (which proved in fact to be its incapacity) to organise all the separate generalisations and judgments of experience into a unity, into the structure of an integral, theoretical schema, i.e. to establish the legislation of reason. Reason, as the highest synthetic function of the intellect, 'endeavours to carry out the synthetic unity, which is thought in the category, up to the completely unconditioned'.⁵¹ In this function thinking strives for a full explanation of all the conditions in which each partial generalisation of understanding (each concept and judgment) can be considered justified without further reservations. For only then would a generalisation be fully insured against refutation by new experience, i.e. from contradiction with other, just as correct generalisations.

The claim to absolutely complete, unconditional synthesis of the existing determinations of a concept, and so of the conditions within which these determinations are unreservedly true is exactly equivalent to a claim to understand things in themselves. In fact, if I risk asserting that subject

51 Kant, "Prologomena," *Op. cit.*, p 318.

A is determined by predicate B in its *absolute totality*, and not just in part that existed or might exist in our field of experience, I remove the very limitation from my assertion (statement) that transcendental logic has established for all experimental judgments; that is to say, I am no longer stating that it is true only in conditions imposed by our own forms of experience, our modes of perception, schemas of generalisation, and so on. I begin to think that the statement ascribing predicate B to subject A is already true not only within the conditions of experience but outside them, that it relates to A not only as the object of any possible experience but also irrespective of that experience, and defines A as an object existing in itself.

That means to remove *all* the limitations governing it from the generalisation, including the conditions imposed by experience. But all the conditions cannot be removed, 'for the conception of the absolute totality of conditions is not applicable in any experience, since no experience is unconditioned'.⁵² This illegitimate *demarche* of thinking Kant called transcendental application of reason, i.e. the attempt to affirm that things in themselves are such as they appear in *scientific* thinking, that the properties and predicates we attribute to them as objects of any possible experience also belong to them when they exist in themselves and are not converted into objects of somebody's experience (perceptions, judgments, and theorising).

Such a transcendental application of understanding entails contradictions and antinomies. A logical contradiction arises within reason itself, disrupting it, breaking up the very form of thinking in general. A logical contradiction is also an index for thought indicating that it has taken on the solution of a problem that is in general beyond its strength. A contradiction reminds thought that it is impossible to grasp the ungraspable (boundless).

Understanding falls into a state of logical contradiction (antinomy) here not only because, and even not so much because, experience is always unfinished, and not because a generalisation justified for experience as a whole has been drawn on the basis of partial experience. That is just what reason can and must do, otherwise no science would be possible. The matter here is quite different; in trying fully to synthesise all the theoretical concepts and judgments drawn from past experience, it is

⁵² Kant, "Prolegomena," *Op. cit.*, p 318.

immediately discovered that the *experience already past* was itself internally antinomic if it of course was taken as a whole and not some arbitrarily limited aspect or fragment of it in which, it goes without saying, contradiction may be avoided. And the past experience is already antinomic because it includes generalisations and judgments synthesised according to schemas of categories that are *not only different* but are directly opposite.

In the sphere of understanding, as transcendental logic showed, there were pairs of mutually opposing categories, i.e. schemas of the action of thinking having diametrically opposite directions. For example, there is not only a category of identity orienting the intellect to discovering the same invariant determinations in various objects, but also its polar category of difference, pointing to exactly the opposite operation, to the discovery of differences and variants in objects seemingly identical. In addition to the concept of necessity there is the concept of chance, and so on. Each category has another, opposite to it and not unitable with it without breaking the principle of contradiction. For clearly, difference is not identity, or is non-identity, while cause is not effect (is non-effect). True, both cause and effect are subsumed purely formally under one and the same category of interaction, but that only means that a higher category embracing both of them is itself subordinated to the law of identity, i.e. ignores the difference between them. And any phenomenon given in experience can always be comprehended by means both of one and of another categorial schema directly opposite to it. If, for example, I look on some fact as an effect, my search is directed to an infinite number of phenomena and circumstances *preceding* the given fact, because behind each fact is the whole history of the Universe. If, on the contrary, however, I wish to understand a given fact as a cause, I shall be forced to go into the chain of phenomena and facts *following* it in time, and to go further and further away from it in time with no hope of encountering it again anywhere. Here are two mutually incompatible lines of search, never coinciding with one another, two paths of investigating one and the same fact. And they will never converge because time is infinite at both ends, and the causal explanation will go further and further away from the search for effects.

Consequently, relative to any thing or object in the Universe, two mutually exclusive points of view can be expressed, and two diverging paths of investigation outlined, and therefore two theories, two conceptions developed, each of which is created in absolute agreement with all the requirements of logic and with all the facts (data of experience)

relating to the matter, but which nevertheless, or rather precisely because of this, cannot be linked together within one theory without preserving and without reproducing this same logical contradiction within it. The tragedy of understanding is that it itself, taken as a whole, is immanently contradictory, containing categories each one of which is as legitimate as the other, and whose sphere of applicability *within the framework of experience* is not limited to anything, i.e. is as wide as experience itself. In relation to any object, therefore, two (at least, of course) mutually opposite theories inevitably must always arise and develop, before, now, and henceforth, forevermore, each of which advances a fully logical claim to be universal, to be correct in relation to all experience as a whole.

The antinomies could be eliminated in one way only, by discarding from logic exactly half of its categorial schemas of synthesis, recognising one category in each pair as legitimate and correct, and banning the other from use in the arsenal of science. That is what the old metaphysics did. It, for example, proclaimed chance or fortuity a purely subjective concept, a characteristic of our ignorance of the causes of phenomena, and so converted necessity into the sole objective categorial schema of a judgment, which led to recognition of the fatal inevitability of any fact, however minute and ridiculous.

That is why Hegel somewhat later called this method of thinking *metaphysical*. It was, in fact, characteristic of the old, pre-Kantian metaphysics, delivering itself from internal contradictions simply by ignoring half of all the legitimate categories of thought, half of the schemas of judgments with objective significance; but at the same time the question arises of which category in the polar pair to prefer and keep, and which to discard and declare a 'subjective illusion'. Here, Kant showed, there was not, and could not be, any objective basis for choosing. It was decided by pure arbitrariness, by individual preference. Both metaphysical systems were therefore equally correct (both the one and the other went equally with the universal principle) and equally subjective, since each of them denied the objective principle contrary to it.

The old metaphysics strove to organise the sphere of reason directly on the basis of the law of identity and of the principle of contradiction in determinations. The job was impracticable in principle because, if categories were regarded as the universal predicates necessarily inherent in some subject, then this subject must be the thing in itself; but the categories, considered as the predicates of one and the same subject of a judgment, prove to contradict *one another* and to create a paradoxical situation. And

then the statement fell under the principle of contradiction, which Kant formulated thus: ‘...No predicate contradictory of a thing can belong to it. ...’⁵³ So, if I determine a thing in itself through a category, I still have no right, without breaking the principle, to ascribe the determinations of the opposing category to it.

Kant’s conclusion was this: quite rigorous analysis of any theory claiming to be an unconditionally full synthesis of all determinations (all the predicates of one and the same thing in itself, claiming the unconditional correctness of its own judgments, will always discover more or less artfully disguised antinomies in the theory.

Understanding, clarified by criticism, i.e. conscious of its legitimate rights and not claiming any sphere of the transcendental banned to it, will always strive for an unconditionally full synthesis as the highest ideal of scientific knowledge, but will never permit itself to assert that it has already achieved such a synthesis, that it has finally determined the thing-in-itself through a full series of its universal and necessary predicates, and so given a full list of the conditions of the truthfulness of its concept. The age-old theoretical opponents should therefore, instead of waging endless war to the death, come to some kind of peaceful co-existence between them, recognising the equal rights of each other to relative truth, to a relatively true synthesis. They should understand that, in relation to the thing-in-itself, they are equally untrue, that each of them, since he does not violate the principle of contradiction, possesses only part of the truth, leaving the other part to his opponent. Conversely, they are both right in the sense that understanding as a whole (i.e. reason) always has not only different interests within it but also opposing ones, equally legitimate and of equal standing. One theory is taken up with the identical characteristics of a certain range of phenomena, and the other with their differences (the scientific determinations, say, of man and animal, man and machine, plant and animal). Each of the theories realises in full the legitimate, *but partial* interest of reason, and therefore neither the one nor the other, taken separately, discloses an objective picture of the thing as it exists outside of and prior to consciousness, and independently of each of these interests. And it is impossible to unite these theories into one without converting the antinomic relation between them into an anti-

⁵³ Kant, “Prologomena,” *Op. cit.*, p 190.

nomie relation between the concepts within one theory, without disrupting the deductive analytical schema of its concepts.

What should 'critique of reason' give to scientific understanding? Not, of course, recipes for eliminating dialectics from knowledge; that is impossible and impracticable because knowledge as a whole is always obtained through polemic, through a struggle of opposing principles and interests. It is therefore necessary that the warring parties in science will be fully self-critical, and that the legitimate striving to apply its principle rigorously in investigating the facts will not be converted into paranoiac stubbornness, into dogmatic blindness preventing the rational kernel in the theoretical opponent's statements from being seen. Criticism of the opponent then becomes a means of perfecting one's own theory, and helps stipulate the conditions for the correctness of one's own judgments more rigorously and more clearly, and so on and so forth.

Thus the 'critique of reason' and its inevitable dialectic were converted by Kant into the most important branch of logic, since prescriptions were formulated in it capable of rescuing thought from the bigoted dogmatism into which understanding inevitably fell when it was left to its own devices (i.e. thinking that knew and observed the rules of general and transcendental logic and did not suspect the treacherous pitfalls and traps of dialectics), and also from the natural complement of this dogmatism, scepticism.

After this broadening of the subject matter of logic, after the inclusion in it both of the categorial schemas of thinking and principles of constructing theories (synthesis of all concepts), and after the comprehension of the constructive and regulative role and function of *ideas* in the movement of knowledge, this science acquired the right for the first time to be, and to be called, the *science of thinking*, the science of the universal and necessary forms and patterns of real thought, of the processing of the facts of experience and the facts of contemplation and representation. In addition, dialectics was also introduced into the structure of logic, as the most important branch crowning the whole, that same dialectics that had seemed, before Kant, either a 'mistake', only a sick state of the intellect, or the result of the casuistic unscrupulousness and incorrectness of individual persons in the handling of concepts. Kant's analysis showed that dialectics was a necessary form of intellectual activity, characteristic precisely of thinking concerned with solving the highest synthetic prob-

lems⁵⁴ and with constructing a theory claiming universal significance, and so *objectivity* (in Kant's sense). Kant thus weaned dialectics, as Hegel put it, of its seeming arbitrariness and showed its absolute necessity for theoretical thinking.

Since it was the supreme synthetic tasks that were pushed to the foreground in the science of that period, the problem of contradiction (the dialectics of determinations of the concept) proved to be the central problem of logic as a science. At the same time, since Kant himself considered the dialectical form of thought a symptom of the futility of scientists' striving to understand (i.e. to express in a rigorous system of scientific concepts) the position of things outside their own Ego, outside the consciousness of man, the problem also rapidly acquired ideological significance. The fact is that at that time the development of science was generating ever tenser conflicts between its theories, ideas, and conceptions. The Kantian 'dialectic' did not in fact indicate any way out, no path for *resolving* conflicts of ideas. It simply stated in general form that conflict of ideas was the natural state of science, and counselled ideological opponents everywhere to seek some form or other of compromise according to the rule of live and let live, to hold to their truth but to respect the truth of the other man, because they would both find themselves ultimately in the grip of subjective interests, and because objective truth common for all was equally inaccessible to both of them.

In spite of this good advice, however, not one of the really militant theories of the time wanted to be reconciled with such a pessimistic conclusion and counsel, and orthodoxy became more and more frantic in all spheres as the revolutionary storm drew nearer. When, in fact, it broke, Kant's solution ceased to satisfy either the orthodox or the revolutionaries. This change of mood was also reflected in logic in the form of a critical attitude to the inconsistency, reticence, and ambiguity of the Kantian solution.

These moods were expressed most clearly of all in the philosophy of Fichte; through it the 'monistic' strivings of the times to create a single theory, a single sense of law, a single system of all the main concepts on life and the world, also burst into the sphere of logic, into the sphere of understanding of the universal forms and patterns of developing thought.

54 See V F Asmus, *Dialektika Kanta*, Moscow 1930, pp 126-27.

4. Fichte and Schelling – The Structural Principle of Logic, Dualism or Monism

Kant did not accept the improvements that Fichte suggested for his theory of thought, on the grounds that they led directly to a need once more to create that very unified metaphysic that Kant had declared impossible and doomed to death from internal contradictions. Before Fichte, in fact, there loomed the image of a certain, perhaps transcendental (in the Kantian sense), but still single and uncontradictory system of concepts providing the main principles of life for humanity. Dialectics was dialectics, but a true theory appertaining to the most important things in the world should still be the one and only theory: ‘The author of this system, for his part, is convinced that there is only one single philosophy, as there is only one single mathematics, and that as soon as this one possible philosophy had been founded and recognised, no new one will arise, and that everything that hitherto had been called philosophy will be counted as an attempt and preparation’.⁵⁵

This single system should still, in spite of Kant’s advice, *defeat* any other not agreeing with it. For that it would have to be ‘more rational’ in every respect, in other words would have to explain and interpret the other system and so become broader than it.

For Fichte the position that Kant pictured as eternally insuperable, i.e. the existence of two equally true, and at the same time equally untrue, theories, was only a temporary, transitional state of spiritual culture that had to be overcome and resolved in a united, single world conception (*Weltanschauung*). The dialectic that Kant recognised on the scale of all scientific knowledge developing through discussion Fichte therefore wished to incorporate into a single scientific system that would include the principle opposing it, interpret it in a certain fashion, and convert it into its own, partial and derivative, principle.

Let the single world conception be transcendental as before, i.e. let it equally say nothing about the world in itself; but for all normally thinking people it should be one and the same, necessarily universal, and in that sense absolutely objective. The dualism that Kant affirmed as a quality of the eternally insuperable state of spiritual culture seemed to revolution-

55 J G Fichte, “Sonnenklarer Bericht an das grössere Publikum über das eigentliche Wesen der neuesten Philosophie,” Berlin 1801, p iv.

ary-minded Fichte only a manifestation of the timidity and inconsistency of thought in realising its own principles. Logic could not justify two mutually exclusive systems at once and if, for all that, it did, then not everything in it was in order.

Fichte sought and found the fundamental inconsistency in the Kantian doctrine on thought in the initial concept that Kant consciously proposed as the basis of all his constructions, in the concept of the 'thing-in-itself'. Already, in this concept, and not in the categorial predicates that might be ascribed to things, there was a flagrant contradiction: the supreme fundamental principle of all analytical statements was violated, the principle of contradiction in determinations. This concept was thus inconsistent in a logically developed system-theory. In fact, *in the concept* 'of a thing as it exists before and outside any possible experience' there was included a bit of nonsense not noted by Kant: to say that the Ego was *conscious* of a thing *outside consciousness* was the same as to say that there was money in one's pocket outside one's pocket.

Whether the famous 'thing-in-itself' existed was not the question here; for, Fichte was convinced that its *concept* was logically impossible. It was therefore also impossible to build a *system of concepts* on this foundation because the flaw of contradiction ran right through the very foundation of Kant's theoretical construction.

Fichte's conclusion was irreproachable: to think a thing-in-itself meant to think the unthinkable (from the standpoint of the principle of contradiction, of course), meant to violate the supreme fundamental principle of all analytical statements in the very course of their substantiation. He reproached Kant with having set a bad example of juggling with the rules of logic itself in the course of substantiating his own system of logic.

Fichte posed the problem as follows. Was logic itself, as a science, obliged to follow the same principles that it affirmed as absolutely universal for any correct thinking, or was it entitled to ignore them? Should logic be a science among other sciences, or was it rather to be likened to a wilful princeling who dictated laws obligatory for all other people but not binding in himself? The question, it would seem, was purely rhetorical. But surely, according to Kant, it was right after all that man thought of things given in contemplation (i.e. in the field of all special sciences) by one set of rules (those of the logic of truth) and about the things given in thought by another set (in the spirit of transcendental dialectics). It was

not surprising that contradictions and the flaws of antinomies appeared between understanding and reason, and, furthermore, within reason itself.

But in that case the very concept of thinking, of the subject, I, was made senseless from the very beginning, i.e. was made contradictory within itself. All the fundamental categories of logic proved to be concepts that denoted not only different but diametrically opposite objects of thought. So we got the position that there were two different Is in every person, in every thinking individual, in constant polemic with each other. One of them contemplated the world and the other thought. Correspondingly, it was suggested, there were two different worlds, the contemplated and the thought of, although they merged into one in direct experience and in real life.

In general Kant was also inclined to that idea, that the I itself, the subject of thinking, was also a 'thing-in-itself'. And for that reason, when one tried to create a system of all the determinations of this I, i.e. a logic as a system of the logical parameters of thinking, the system proved contradictory through and through, i.e. self-destroying. As a result, if one followed Kant, it was quite impossible to construct a logic as a science. It was impossible, in constructing it, to observe the very rules that it prescribed as universal and necessary for all other sciences. But then there was no thought in general as one and the same capacity in different applications, but two different subjects, two different Is (each of which had to be considered without connection with the other) as two fundamentally heterogeneous objects, yet nevertheless called by one and the same name.

Apart from the fact that this led to a muddle of concepts (Kant himself was forced to call one of the Is phenomenal and the other noumenal), the very idea of logic as a science quite lost sense for, according to Fichte, all the conclusions drawn from considering thinking about *thinking* (as a 'thing-in-itself' or noumenon) would equally have no relation at all to thinking about *things given in contemplation and representation*. So all the propositions of logic (i.e. of thinking about thinking) would have no binding force for thinking about things, i.e. for the thinking of natural scientists.

Hence that central idea of Fichte's philosophy was born, the idea of a general scientific doctrine, a theory that, unlike Kantian logic, would set out principles that were really significant for any application of thought. This science would set out laws and rules equally binding on both think-

ing about thinking and thinking about things. Thinking about thinking, i.e. logic, must provide a model and example of observation of the principles of thought (the principles of scientific scholarship) for the other sciences in general. These principles must remain *the same* both when thinking was directed to phenomena in mathematics, physics, or anthropology, and when directed to *concepts*, i.e. to itself.

For a concept was just as much an object of scientific study as any other object; the more so that we only knew any other object *scientifically* insofar as it was expressed in concepts, and in no other way. That meant that to determine or define a concept and to determine the object were absolutely identical expressions.

The initial principle of Fichte's science of science (*Wissenschaftslehre*) was therefore not the contrast or opposition of things and consciousness, of the object and its concept, but the opposition within the I itself. From two different, dualistically isolated halves, having no connection at all with each other, you could not create a single, integral system. What was needed was not dualism, but monism, not two initial principles but one only. Because, when there were two different initial principles, there were two different sciences, which never merged into one.

Fichte also interpreted the object and its concept as two different forms of existence of one and the same I, as the result of self-differentiation of the I into itself. What had appeared to Kant as the object or 'thing-in-itself' (object of the concept) was in fact the product of the unconscious, unreflecting activity of the I, since it produced the sensuously contemplated image of the thing by virtue of imagination. A concept was the product of the same activity, but taking place with *consciousness* of the course and meaning of the activities themselves.

The initial identity of concept and object, or rather of the laws by which the sensuously contemplated world was constituted and those by which the world thought about, the world of concepts, was built, was therefore already included in the identity of their subject, of their origin. The Ego initially created a certain product, by virtue of imagination, and then began to look on it as something distinct from itself, as the object of the concept, as the non-Ego or not-I. But in fact the Ego, in the form of the not-I, was solely concerned, as before, with itself, and regarded itself as it were from the side, as in a mirror, as an object located outside itself.

The job of thought as such thus consisted in understanding its own activity in creating an image of contemplation and representation, in

consciously *reproducing* that which it had produced earlier unconsciously, without giving itself a clear account of what it was doing. The laws and rules of discursive thinking (i.e. of thinking that consciously obeyed the rules) were in fact nothing more nor less than the *conscious laws* (expressed in logical schemas) of *intuitive thinking*, i.e., of the creative activity of the subject, the I, creating the world of contemplated images, the world as it is given in contemplation.

Only from that angle did the operation of comparing a concept with its object acquire rational sense. Fichte showed that the opposition, in no way mediated, between the thing-in-itself and its concept (dualism) had also led Kant into the fullest dualism both within the concept itself and within the system of concepts. Fichte quite consistently, from his point of view, showed that denying the principle of the identity of an object and its concept as the initial principle of logic and logical thinking meant, as well, *denying the principle of identity in its general form*, as a logical postulate. In other words, if logic as a science considered the principles of identity and contradiction (the latter was nothing but a negative formulation of the law of identity) as an absolutely indispensable condition of the correctness of any thinking, then it must apply them to the understanding of *thinking* itself, and to determinations of its specific object or subject matter, which was the concept.

In logic, in fact, *the concept was also the object of study*; and logic must dissect the concept of concept. That being so, in logic, of all sciences, the concept and its object were fully synonymous because any other object could only interest logic to the extent that, and insofar as, it had already been converted into a concept, expressed in a concept; for logic was not concerned with sensuously contemplated or intuited things.

There was no place in logic, therefore, as a scientific system of determinations of thought, and could not be, for such expressions as a 'thing-in-itself' or 'the object before its expression in a concept'. Logic had no business in general with such objects, for they were transcendental things for it, that is lying beyond its possibilities of expression, beyond its competence. Beyond those limits began the sphere of super-rational understanding, faith, irrational intuition, and other aptitudes; but they were not competent to operate within science. And Fichte did not want to have anything to do with them, at least within his *Wissenschaftslehre*.

Such, in essence, was Fichte's criticism of Kant's attempt to create a logic, a classically consistent model (from the logical angle) of a 'right-

wing' critique of dualism, i.e. from the position of subjective idealism. It is no accident that all modern Neopositivists repeat Fichte word for word, discarding the question of the relation of a concept to the external object in a similar way, and replacing it by the question of its relation to the concept (i.e. of a concept to itself). The latter relation is also naturally defined as an *identity* of 'sign' (the term that takes the place of 'concept') and of the designatum. The law of identity (and correspondingly the principle of contradiction) then boils down to this, that one and the same sign must designate one and the same thing, must have one and the same meaning or sense.

Let us, however, return to Fichte. He, having contemplated building a system of logic and a logical model of the world, naturally came into conflict with the conceptions of his teacher Kant. To Kant his venture immediately seemed unacceptable: '...I declare herewith: that I consider *Fichte's science of knowledge* a completely untenable system. Because a pure science of knowledge is nothing more nor less than a *naked* logic, which, with its principles, does not achieve the material of understanding but abstracts from the content of the latter as *pure logic*, from which it is a vain task to pick out a real object and therefore one never attempted, but which, when transcendental philosophy is at stake, must pass into metaphysics'.⁵⁶

Kant from the outset repudiated the attempt to create a metaphysic; not because it must describe the world of things in themselves but only because Fichte wanted to create a logic which when applied, would ensure the building of a single system of concepts not cracked by the flaws of antinomies, a system that would synthesise in itself all the most important conclusions and generalisations of science. That, according to Kant, was unrealisable however the system obtained was interpreted, whether objectively (materialistically) or subjectively (transcendentally). One way or the other it was equally impossible. It was quite natural therefore that Kant considered it a groundless reproach that he 'had not created a system' but had only posed the task and equipped science with the important (though not completely and consistently worked out) principles needed for such a construction: "The presumption, attributing to me the intention, that I wished to provide a propaedeutic to transcen-

56 "Johann Gottlieb Fichte's *Leben und literarischer Briefwechsel* von seinem Sohne Immanuel Hermann Fichte," Bd. II Leipzig, 1862, p 161. See also R. Adamson, "Fichte," London 1881, pp 50-51.

dental philosophy and not the system of the philosophy itself, is incomprehensible to me'.⁵⁷

Fichte began by insisting that Kant's system of philosophical concepts was not a system but only a concatenation of the opinions and principles needed for constructing such and, moreover, very inconsistent ones. The argument therefore passed to a new plane: what was a system? What were the principles and criteria enabling us to differentiate a *system of scientific concepts* from a concatenation of judgments each of which might be true of and by itself, but was not, all the same, linked with the others?

In explaining his concept of 'system', Fichte formulated it as follows: '...My exposition, *as any scientific one must* [my italics – *EVT*], proceeds from the most indefinite, which is again determined before the reader's eyes; therefore, in the course of it, quite other predicates will, of course, be linked to the objects than were originally linked to them; and further this exposition will very often pose and develop propositions which it will afterward refute, and in this way advance through antithesis to synthesis. The finally determined true result obtained from it is only found here in the end. You, of course, only seek this result; and the way that it is found is of no interest to you'.⁵⁸ Thus, according to him a *system* proved to be the result of the removal of contradictions. They remained unmediated outside the system, and as such negated each other. Therefore there was no system in Kant, but only propositions unmediated by development that he took over ready-made and vainly tried to link together formally, which was impossible since they had already negated one another. With Fichte the whole arose precisely from bits, through their successive unification.

In counterposing his position to Kant's, Fichte said: 'The generality that I affirm in no way arises through apprehension of plurality under unity, but rather through derivation of endless plurality from the unity grasped in a glance'.⁵⁹ The initial generality, which was differentiated in the course of its own disintegration into a variety of particulars, also had to be established in scientific system before all else.

But Kant's image of the whole, too, was brought to light through the particulars from which it was built up, as from bits. And now, after Kant,

⁵⁷ *Ibid.*, p 162.

⁵⁸ Fichte, "Sonnenklarer Bericht," pp 217-18.

⁵⁹ *Ibid.*, pp 112-13.

the task could only consist in getting from this whole to the particulars, in testing and re-testing them critically, in purging the system of everything superfluous and fortuitous, and in preserving in it only the diverse definitions that were required of necessity in order to construct the whole. The whole (the generality) then proved to be a criterion for the selection of particulars; it was now necessary to develop the whole system of particulars systematically, step by step, starting from that one, single principle. Then we would get science, a system.

In other words, the logic of analysing Kant's philosophy had immediately concentrated Fichte's attention on the problems that had been brought together in the section of the *Critique of Pure Reason* on transcendental dialectic, on the problems of the absolute synthesis of concepts and judgments into a theory understood as a single system. There also was to be found the 'growing point' of logical science. Fichte proposed calling the new field of investigation of thought 'the science of knowledge' (*Wissenschaftslehre*), i.e. the science of the universal forms and laws of development of a system of scientific determinations. These determinations would, of course, be invariant for any particular science, be it mathematics or physiology, celestial mechanics or anthropology. They must define *any object*, and that meant they must represent a system of universal determinations of every possible object of scientific study, its logical 'parameters'.

Science, consequently, must give itself a clear account of its own activities, achieve self-consciousness, and express its self-consciousness through the same categories through which it comprehended everything else, any other object given in experience. The science of science was in fact a system of determinations outlining any possible object, and at the same time the structure of the subject constructing that object, and the logical forms in turn were the forms realised, abstractly expressed, and built up into a system of rational consciousness in general, i.e. not the empirical consciousness of this or that individual, but only the necessary and universal forms (schemas) of the activity of any possible being possessing thought.

What used to be called 'logic' was only an abstract schema of this universal activity of constructing any possible object in consciousness. Fichte specially investigated and explained his understanding of the relation between his *Wissenschaftslehre* and 'logic'. The latter proved to be only an abstract schema of the same activity as was outlined in the former. Therefore, as he put it, the *Wissenschaftslehre* could not be demon-

strated logically, and it was impossible to premise any logical proposition on it, *even the law of contradiction*; on the contrary, any logical thesis and all logic must be deduced from the *Wissenschaftslehre*. Thus logic received its significance from the science of knowledge and not the science of knowledge from logic.

The fact was that theoretical ‘schematising’ (i.e. operations controlled by logical rules and propositions) by no means lacked necessary and natural premises. Their analysis became vitally important precisely when thinking came up against certain *changes*, which in essence were a uniting of contradictory, opposing determinations.

Here Fichte did not differ with Kant, who well understood that change ‘presupposes one and the same subject as existing with two opposite determinations’,⁶⁰ and that one and the same thing could at *different moments* of time have a certain predicate A, and then lose it and be not-A. If, however, a thing could lose predicate A without ceasing to be itself, and be transformed into something else (into the object of another concept), that meant, according to Kant, that the disappearing predicate did not belong *to the concept* of the given thing, was not one of its universal and necessary determinations. The concept (in contrast to the empirically general representation) expressed only the absolutely unaltered characteristics of the thing. *Theory was not interested in change* – that old prejudice also trapped Kant. All change was a matter of empirical views and not of theory. Theory, constructed according to the rules of logic, must give a picture of the object withdrawn, as it were, from the power of time. Theory had no right to include in the definitions of a concept those determinations that the passage of time had washed off a thing. A concept therefore always came under the protective cover of the principle of contradiction.

But how did matters stand if the object represented in theory (in the form of a theoretical schema constructed according to the rules of logic) began to be understood not as something absolutely unchanging but as something *coming into being*, if only in consciousness, as with Fichte? How did it stand with the principle of contradiction, if the logical schema had in fact to picture a *process of change*, the beginning or the becoming of a thing in consciousness and by virtue of consciousness? What was to be done if logic itself was understood as an abstract schema of the construc-

⁶⁰ Kant, “Critique of Pure Reason,” p 218.

tion of an object in the eyes of a reader, i.e. as a schema of the consistent enriching of the initial concept with newer and newer predicates, a process whereby there was initially only A, but later B necessarily arose (which in itself was understandably not A or was not-A), and then C, D, E, right down to Z? For even the simple combination of A and B was a combination of A and not-A. Or was B nevertheless A?

Fichte's conclusion was: choose between these two – either the principle of contradiction was absolute (but then no synthesis was possible in general, not uniting of different determinations) or there was development and a synthesis of the determinations of concepts (and they did not conform to the absolute requirements of the principle of contradiction).

Fichte followed another, third path. He started from the point that what was impossible to represent in a concept, that is to say the combination or synthesis of mutually exclusive determinations, constantly occurred in *contemplation* or intuition (in activity to construct the image of a thing). Thus, by analysing Zeno's famous paradox and showing that we divide any *finite* length into *infinity*, Fichte concluded: 'From this you see that what is impossible and contradictory in the concept actually happens in the intuition of space.'⁶¹

If, therefore, you came up against a contradiction in a logical expression, the thing was not to hasten to declare that it could not be, but to return to the intuition (*Anschauung*), the rights of which were higher than those of formal logic; and if analysis of the act of intuition showed you that you were forced *of necessity* to pass from one determination to another, opposing one in order to unite it with the first, if you saw that A was necessarily transformed into not-A, you would then be obliged to sacrifice the requirement of the principle of contradiction. Or rather, that principle could not then be regarded as the indisputable measure of truth.

Fichte also demonstrated this dialectic from the example of the origin of consciousness, of the 'positing' of the non-Ego (not-I) by the activity of the Ego, the differentiation of the person himself as the thinking being from himself as thought of, as the object of thought. Could a person become aware of himself, of the acts of his own consciousness, of his own constructive activity? Obviously he could. He not only thought, but also thought about his thinking, and converted the very act of thinking into an object; and that exercise was always called logic.

⁶¹ Fichte, "Thatasachen des Bewußtseyns," Stuttgart and Tübingen 1817, p 9.

The starting point in this case, as was shown above, could only be I, the Ego (*Ich, das Selbst*) understood as the subject of an activity producing something different from itself, that is to say the product, the recorded result. The Ego was initially equal to itself ($I = I$) and, considered as something active, creative, creating, already contained in itself the necessity of its own transformation into a non-Ego (not-I). We saw and knew this directly, from self-observation, for consciousness in general was realised only insofar as a representation of something else arose in it, a representation of a non-Ego, a thing, an object. There could not be empty consciousness not filled by anything.

The transformation of the I into the not-I occurred, of course, quite independently of study of the rules of logic, and before their study. It was a matter of natural 'primary' thought. It was a prototype of logical, reflective thinking that discovered a certain law-governed necessity in itself, in its activity in constructing images of things, and then expressed it in the form of a number of rules, in the form of logic, in order henceforth to follow them consciously (freely) and to submit to them.

All logical rules must therefore be *deduced*, derived by analysis of actual thinking. In other words they had a certain prototype with which they could be compared and contrasted. This approach differed radically from Kant's position, according to which all fundamental logical principles and categories had only to be consistent in themselves so that their predicates did not include contradictions. Kant therefore *postulated* the laws and categories of logic, while Fichte required them to be *deduced*, and their universality and necessity demonstrated.

True, Fichte, like Kant, did not encroach on the actual content of logical forms and laws. On the contrary, he wanted to demonstrate the correctness of all the logical schemas known in pre-Kantian and Kantian logic, by indicating more rigorous conditions for their application. But he thereby also limited them, establishing that the principle of contradiction was only fully authoritative in relation to one determination, and that within a developing system it was constantly being set aside or discarded, since each succeeding determination negated the preceding one both individually and absolutely.

Fichte tried in that way to deduce the whole system of logical axioms and categories, in order to understand them as the universal schemas, consistently taken into practice, for uniting of empirical data, as degrees or phases of the production of concepts, for concretising the initial, still

undivided concept into a number of its universal and necessary predicate-definitions. There is no need here to explain why Fichte did not succeed in his programme of deducing the whole system of logical categories, why he did not succeed in turning logic into an exact science, into a system. In this case it was important to have posed the problem. Let us merely note that the ensuing criticism of his conception was directed precisely at explaining the reasons for his failure, and at analysing the premises that hindered his idea of reforming logic, of deducing its whole content from an investigation of actual thinking, and in that way of uniting within one and the same system categories that stood in a relation of direct negation of one another (formal contradiction), and that had seemed to Kant to be antinomically uncombinable, and not includable within one non-contradictory system.

Schelling, too, occupied himself primarily, from the very start, with the problem of a system of knowledge, or rather, with the problem of the antinomies that inevitably arose in attempts to create such a system. The difficulty lay exclusively in representing in a logically systematic way the fact (directly apparent (intuitive) to every thinking being) that the world is one, and that thought, striving for its own systematic presentation, was also one in itself. But the rules of logic and laws of the activity of the intellect were such that the single world, refracted through them, was split into two in the eyes of reason. And each of the halves so formed claimed the role of the sole true absolute and unconditional, logically systematic representation of the whole world.

Like Kant, Schelling saw the way out not on the plane of logically consistent constructing of determinations but in the practical realisation of the system that presented itself to the human mind as most worthy of it, most acceptable to it, most in accord with its innate strivings. It was impossible to demonstrate anything by formal logic, i.e. to work out a system of uncontradictory proofs that could not be counterposed by its opposite. Such a system simply had to be taken on direct trust and followed unconditionally. The system that Schelling himself chose was expressed in the following principle: *'My vocation in criticism is to strive for unchangeable selfness (Selbstkeit), unconditional freedom, unlimited activity'*.⁶² This system could never be completed, it must always be 'open-ended' in the

62 F W J Schelling, "Frühschriften," Erster Band, Berlin 1971, p 152.

future – such was the concept of activity. Activity when completed, embodied! ‘fixed’ in its product, was already not activity.

It is easy to discern Schelling’s proud principle in these arguments. It was activity that was the absolute and unconditional that could never and must never be *completed* by the creation of a system crystallised once and for all; the absolutely universal in which new differences, differentiations, peculiarities, and particulars would ever be arising and accordingly be merged (identified) with what had previously been established, and on *ad infinitum*. This form of criticism, according to Schelling, embraced dogmatism as its own moment, because it confirmed the thesis that the whole edifice of man’s spiritual culture must henceforth be built on a clear and categorically established foundation, namely on the understanding that the sole subject of all possible predicates was the Ego, i.e., the infinite creative principle existing in every human being and freely presuming both itself and the whole world of objects that it saw, contemplated (intuited), and thought, and on the understanding that no one result already achieved had the force of an absolute, ‘objective’ authority for the Ego, i. e. the force of dogma.

And if there were an opposing system that looked upon man as the passive point of application of previously given, externally objective forces, as a speck of dust in the vortex of elemental world forces, or a toy in the hands of God and his representatives on earth, that dogmatic system, though it had been rigorously proved formally and was not self-contradictory, would have to be combated by the supporter of true criticism until final victory.

Like Fichte, Schelling stood for a new, critical, ‘enlightened’ dogmatism: ‘Dogmatism – such is the result of our common inquiry – is irrefutable *in theory* because it itself has quit the theoretical field to complete its system *in practice*. It is thereby *refutable* in practice for us to realise a system *in ourselves* absolutely opposed to it’.⁶³

Practical activity was the ‘third’ thing on which all mutually contradictory systems came together as on common soil. It was there, and not in the abstractions of pure reason, that the real battle raged that could and must be won. That was where the proof lay that one party, unswervingly following its principle, defended not only its own, egoistic private

⁶³ *Ibid.*, p 156.

interest, but also an interest coinciding with the universal tendencies of the universe, i.e. with absolute and unconditional objectivity.

‘Criticism cannot follow dogmatism into the sphere of the Absolute [understood purely theoretically – *EVI*], nor can the latter follow it, because for both there can be only one *assertion* as an absolute assertion that takes no notice of the opposing system, and that determines *nothing* for the opposing system.

‘Only now, after both have encountered one another, one of them can no longer ignore the other, and whereas before [i.e. in the purely theoretically logical sphere – *EVI*] they were without any resistance to the position won, now the position must be *won by victory*’.⁶⁴

That is the point that divided Fichte and Schelling from Kant; the intellectual culture of humanity cannot lie eternally like Buridan’s ass between two equally logical systems of ideas about the most important things in life. Mankind has, in practice, to act, to live; but it is impossible to act simultaneously in accordance with two opposing systems of recommendations. We are forced to choose one of them and then to act strictly in the spirit of its principles.

Kant himself, it is true, demonstrated in his last works that the arguments of practical reason must all the same tip the scales in favour of one system or the other, although on a purely theoretical plane they are absolutely equal. But with him this theme only broke through as one of the trends of his thinking, while Fichte and Schelling transformed it into the starting point of all their meditations. Hence the slogan about victory, too, in the theoretical sphere. One of the clashing logical conceptions must still prevail over the other, its opposite, and for that it must be reinforced by arguments no longer of a purely logical, rather purely scholastic quality, but armed with practical (moral and aesthetic) advantages as well. Then it was assured of victory, and not simply of the right and the chance of waging an eternal academic dispute.

Like Fichte, Schelling saw the main problem of the theoretical system in synthetic statements and in uniting them: ‘It is these riddles that oppress the critical philosopher. His chief question is not how there can be analytical statements, but how there can be synthetic ones... The most comprehensible thing is how we define everything according to the law

⁶⁴ *Ibid.*, pp 131-32.

of identity, and the most enigmatic how we can define anything still outside this law'.⁶⁵

That is aptly formulated. Any elementary act of synthesising determinations in a judgment – be it that A is B – in fact already requires us to go beyond the law of identity, i.e. to infringe the boundaries established by the principle of contradiction in determinations; for, whatever the adjoined statement B, it is in any case not A, is not-A. It is clearly the logical expression of the fact that any new knowledge infringes the strictly acknowledged limits of the old knowledge, refutes it, and revises it.

Any dogmatism that obstinately insisted on the knowledge already attained and mastered would therefore always reject any new knowledge from the outset on the sole grounds that it contradicted the old. And it did in fact formally contradict it because it was not analytically included in the old and could not be 'derived' from it by logical contrivances of any kind. It must be *united* with the old knowledge in spite of the fact that it formally contradicted it.

That meant, according to Schelling, that a genuine synthesis was not realised by purely theoretical ability that strictly adhered to the rules of logic, but by quite another capacity, which was not bound by the strict limitations of the fundamentals of logic, and even had the right to transgress them when it experienced a powerful need to do so. 'A *system* of knowledge is necessarily either a trick, a game of ideas... – or it must *embrace* reality not through a theoretical ability, but through a practical one, not through a perceptive ability but through a *productive, realising* one, not through *knowledge* but through action'.⁶⁶

With Kant this productive ability was called power of imagination (*Einbildungskraft*). Following him Schelling also plunged into analysis of it, which took him along a rather different road than Fichte's, onto the rails of an objective idealism that was not only reconciled to the thesis of the real existence of the external world but also built a theory of understanding it, although with Schelling himself this theory proved to be something quite different from *logic* and tended rather to a kind of aesthetics, to a theory of the artistic, aesthetic comprehension of the mysteries of the universe. For the men of science Schelling retained, as a working tool, the same old logic that he himself, following Fichte, declared to be a com-

⁶⁵ Schelling, "Frühschriften," pp 129-30.

⁶⁶ *Ibid.*, pp 126-27.

pletely unsatisfactory instrument for understanding and to be justified solely as a canon of the outward systematisation and classification of material obtained by quite other, illogical and even alogical, means.

Whereas Fichte had provided a classical model of criticism of Kant and his logic from the right, from the standpoint of a consistently constructed subjective idealism, another motif began to be clearly seen in the reformatory strivings of the young Schelling, in tendencies leading him to materialism.

In the circles in which he moved, and where his thinking matured, quite other moods prevailed than those induced by Fichte's philosophy. All Fichte's thought had been concentrated on the social and psychic revolution stimulated in minds by the events of 1789-93. The flight of his imagination was also linked with the events and problems of those years; as the revolutionary wave subsided his philosophy folded its wings, and he could not find a new source of inspiration. For Schelling the fervour born of the revolution was only a certain stage that he reached as a sympathiser and even a disciple of Fichte; but, just as the forces of rude reality forced the most zealous Jacobins to reckon with them, so too it became clear to Schelling that to insist on one infinite creative power, the Ego, and on the strength of its moral fervour, in face of the persistent external world meant to bang one's head against the wall of incomprehension, as had actually happened in the end to Fichte.

Being closely linked with the circle of Goethe and the romantic writers, Schelling was much more interested than Fichte in nature (read: natural science) on the one hand, and in the inherited, traditional (in the parlance of Kant and Fichte, objective) forms of social life on the other hand. From the very beginning natural science and art constituted the medium that shaped his mind and his aspirations as an inquirer.

Schelling, it is true, began in the same way as Fichte; he too treated the opposition between subject and object as an opposition within human consciousness, as an opposition between the images of the external world that a person produced 'freely', and the images of the same world that he produced not freely, but unconsciously, in obedience to a compelling force of necessity unknown to him. Like Fichte, Schelling warred with dogmatism (in the idea of which, for him, there were merged both religious orthodoxy, which ascribed necessity to an external God, and philosophical materialism, which ascribed it to external things, to 'pure objects'). For Schelling criticism was a synonym for the standpoint that

the objective (universal and necessary) determinations of the human psyche were initially innate in the psyche itself and discovered in it in the course of its active self-discovery.

In that way Schelling, following Fichte, tried to overcome the dualism of Kant's conception; but with Fichte the dualism had still been preserved and even reproduced in ever sharper form within his conception. All the Kantian antinomies had in fact been merged by him in a single antinomy, in the contradiction between two halves of one and the same Ego. One of them unconsciously created the objective world of images by the laws of causality, space, and time, while the other reconstructed it in the spirit of the requirements of the transcendental ideal, in accordance with the requirements of 'morality'.

It was presupposed, as before, that there were two different Egos in every person, but it was not known how and why they were connected together; and although Fichte united them in the concept of *activity*, the opposition was reproduced again within the Ego in the form of two different principles of activity. And as before it remained an open question what was the inner necessary relation between the two halves of the human Ego. Did they have a common root, a common source, a common 'substance', through the splitting of which the two halves of necessity arose?

Fichte did not find the solution, in spite of his concept of activity. The world of necessary ideas was formed within all Egos quite independently of the activity of the 'better' I, before it awoke in man. The 'better' I already, during its awakening, found the existing world in itself. In turn it (the pure form of practical reason or the ideal) came into the world of necessarily produced ideas, as it were, from outside, like a judge who emerged from somewhere unknown and who brought with him the criteria for evaluating and re-evaluating what existed, i.e. the fruits of the Ego's past labour.

The human Ego was again converted into a field of endless battle between two originally heterogeneous principles. The absolute Ego must take the world of existing ideas, incomplete and unconnected, even mutually contradictory, in accordance with itself and one another. But that again was only attainable in infinity. 'Full agreement of man with himself, and – so that he can agree with himself – agreement of all things outside him with his necessary practical concepts of them – concepts that

determine how they must be ...' (as Fichte formulated the essence of the problem⁶⁷), proved unattainable in the existing world.

Fichte freed himself from the Kantian form of antinomies but reproduced them all intact in the form of contradictions within the very concept of 'activity'. The problem was simply transferred to the sphere of the individual psyche and so made completely insoluble. Schelling reached the same conclusion and began to seek a way out along a new path with the young Hegel. Gradually, in the course of criticising Fichte, the main outlines of a new conception began to appear.

Schelling and Hegel were more and more dissatisfied with the following 'points' in the position of Kant and Fichte:

1. the posing of all the concrete burning issues of the day in a subjective, psychological form;
2. the feeble appealing to 'conscience' and 'duty' that stemmed from that, which put the philosopher into the pose of a preacher of fine and noble but impracticable phrases and slogans;
3. the interpretation of the whole sensuous empirical world, if not as hostile, at least as a passive obstacle to the dictates of 'duty' and the 'ideal';
4. the absolute indifference to everything except pure morality (including the history of humanity and of nature), and to natural science (which underlay Fichteanism);
5. the powerlessness of the categorical imperative (ideal) in the struggle against the 'egoistic', 'immoral', 'irrational' motives of man's behaviour in society, the indifference of real earthly men to the preachers of the higher morality (how light were all the means of paradise developed by the Church and supported by the fullest scholastic explanations in the scales when the passions and forces of circumstance, upbringing, example, and government were thrown into the other pan; the whole history of religion from the beginning of the Christian era went to prove that Christianity could only make people good when they were already good, the young Hegel said, having in mind by the 'scholastic explanations' any philosophy oriented on morality, including that of Kant and Fichte);

⁶⁷ Fichte, "Über den Gelehrten," Berlin 1956, p 45.

6. the difference, insuperable in principle, between the real and the proper, between necessary and free activity, between the world of phenomena and the active essence of man, etc., etc.

All that led to one thing, namely, to comprehending that it was ultimately necessary to find the 'common root' itself of the two halves of human being from which they both stemmed and could be understood. Only then would the human personality appear before us not as the passive point of application of external forces (be they nature or God), i.e. not as an object, but as something acting independently (*das Selbst*), as *subject*.

From that was born the idea of the philosophy of identity. Like any *idea* it existed originally only in the form of an hypothesis, in the form of a principle not yet realised in detail, in the spirit of which the whole mass of existing theoretical material, and in particular the conception of Kant and Fichte, had to be critically revised.

Originally the young Schelling only affirmed that the two halves of the human being, which had been depicted by Kant and Fichte as originally heterogeneous in essence and origin (in spite of their efforts to link them), had something in common after all, i.e. that somewhere in the depths, in the initial essence of matter, they had been merged in one image before being torn apart and separated in dispute, discussion, and antinomy. Schelling's thesis stated that both forms of the Ego's activity (the unconscious and the consciously free) had really to be understood as two branches growing from one and the same trunk, and that it was necessary to discover that trunk first and then trace its growth before it forked.

Schelling had not yet affirmed anything more concrete and definite besides that such identity *must be* and *was*. He had said nothing about where exactly this initial identity was to be seen. His description was, in essence, negative; it was not consciousness, but it was also *not* matter; it was *not* spirit, but it was also *not* substance; it was *not* ideal, but it was also *not* real. What then was it?

Here, in Heine's witty comment 'philosophy ends with Herr Schelling and poetry – I mean folly – begins'. 'But Herr Schelling has now left the philosophical path and is seeking through an act of mystical intuition to achieve contemplation of the absolute itself; he is seeking to intuit it at its centre, in its essence, where there is nothing ideal and nothing real,

neither idea nor extension, neither subject nor object, neither mind nor matter, but there was who knows what!⁶⁸

Why did Schelling nevertheless turn from the path of philosophy here, from the path of thinking in rigorously defined determinations, to the path of poetry, to the path of metaphors and a kind of aesthetic intuition? Only because the logic that he knew and recognised did not permit the uniting of opposing contradictory predicates in concepts of one and the same subject. He, like Kant, held it sacred that the law of identity and the principle of contradiction were absolutely unbreakable laws for conceptual thinking, and that breaking them was tantamount to breaking the laws of thought in general, the forms of scientism. Here, he thought, in agreement with Fichte, that everything that was impossible in a concept (because of contradiction) became possible in contemplation or intuition.

Schelling supposed that all the acts performed consciously by man in accordance with the rules of logic had been quite fully and exactly described in the transcendental philosophy of Kant and Fichte. That part of philosophy seemed to him to have been created once and for all. He did not intend to reform it at all; he only wanted to broaden the scope, the sphere of action, of its principles, wanted them to embrace the fields that had fallen outside Fichte's field of vision, in particular natural science.

The turn to natural science here was not fortuitous. The fact was that the attempt to investigate the sphere of *unconscious activity* in more detail led directly to it, that is to say the attempt to investigate the mode of vital activity that man had followed before and irrespective of how he began a special reflection, converted himself into an object of special investigation, and began to reflect specifically on what originated within himself, and how it did so. In all his activity at this stage (which also followed from Kant's point of view) being subordinated to the conditions of space, time, and causality, came within the competence of the natural sciences. In other words, the forms and modes of unconscious activity were scientifically described precisely through the concepts of physics, chemistry, physiology, psychology, and so on.

For unconscious activity was nothing else than *life*, the mode of existence of *organic nature*, of the organism. But in the life of the organism (of

68 Heinrich Heine, "Zur Geschichte der Religion und Philosophie in Deutschland," in *Werke und Briefe*, Bd. 5, Berlin 1961, p 299.

any biological individual) mechanical, chemical, and electrical motions were joined together, and the organism could therefore be studied by mechanics, chemistry, physics, and optics. In the living organism, Nature had concentrated all her secrets and determinations, and had synthesised them. After the organism had been broken down into its constituents, however, the chief thing of all remained uncomprehended, namely, why were they linked together that way and not in some other way? Why in fact was a living organism obtained and not a pile of its components?

With a purely mechanical approach the organism proved to be something quite incomprehensible, because the principle of a mechanism was the uniting (consistent synthesis) of ready-made, previously given parts; the living organism, however, did not originate through the *building up of parts into a whole* but, on the contrary through the beginning or origin, the *generation of parts* (organs) from an originally undifferentiated whole. Here the whole preceded its own parts, and functioned in relation to them as the purpose they all served. Here each part could only be understood through its role and function in the whole, outside of which it simply did not exist, or not, in any case, as such.

The problem of understanding organic life was analysed by Kant in his *Critique of the Power of Judgment* (*Kritik der Urteilskraft*) as the problem of the purposefulness of the structure and function of the living organism. But the standpoint of transcendental idealism forced him to affirm that, although we and our reason could not cognise the organism other than by means of the concept of a goal, nevertheless it was impossible to attribute any goal to the organism in itself, because a goal presupposed consciousness (and that meant the whole apparatus of transcendental apperception) and the animal and vegetable did not possess such.

The problems of life also proved to be the stumbling block that forced Schelling to stop and critically re-examine certain concepts of the philosophy of transcendental idealism. Like Kant he categorically objected to introducing supernatural causes into the framework of the thinking of the natural science. On those grounds he resolutely rejected vitalism, the idea that, in inorganic nature (i.e. the world of mechanics, physics, and chemistry), a certain 'higher principle' descended from somewhere outside and organised the physical, chemical particles in the living body. There was no such principle *outside consciousness*, Schelling affirmed, following Kant. The naturalist must seek in nature itself the causes of the origin of the organism from inorganic nature. Life must be fully explained by way of natural science, without implicating any kind of

extranatural or supernatural force in it. ‘There is an older delusion, which is that organisation and life are inexplicable by the principles of Nature. – With it only so much can be said: the first source of organic nature is physically inscrutable; so this unproved statement serves no purpose other than to sap the courage of the investigator. ... It would be at least one step toward that explanation if one could show that the succession of all organic beings had come about through the gradual evolution of one and the same organisation’.⁶⁹

Man and his peculiar organisation stood at the logic apex of the pyramid of living creatures. And in that case we had every grounds and right to ascribe to nature itself, if not purpose in the transcendental sense, at least that objective characteristic which is reproduced in our reason (by virtue of its specifically transcendental structure) as a purpose, ‘in the form of a goal’.

What that characteristic was, Schelling did not consider it possible to say. In any case it was a matter of the capacity involved in nature itself to engender a succession of more and more complex and highly organised living creatures, up to and including man, in whom a ‘soul’, consciousness, was awakened and transcendental mechanisms arose, i.e. a capacity consciously (freely) to reproduce everything that occurred in nature unconsciously, without a goal or purpose.

But then it was necessary to think of nature not as naturalists had so far done (the mathematician plus the physicist, plus the chemist, plus the anatomist, each of them occupying himself with only his own private field and not even trying to link the results of his investigations with those of his neighbour). It must be considered as some kind of *primordial whole* in which the subject matter of the special sciences was *differentiated*. We must therefore not build up the picture of the whole like a mosaic, from the special sciences, but must endeavour, on the contrary, to understand them as consecutive stages in the development of one and the same whole, initially undivided. The idea of nature as a whole, quite characteristic of the classical Greeks and of Spinoza, Schelling also advanced as the main principle by which alone the antinomy between mechanism and organism could be scientifically resolved (without appeal to supernatural factors). ‘As soon as our investigation ascends to the idea of Nature as an entity the opposition between mechanism and organism disappears

69 F W J Schelling, “Von der Weltseele,” Hamburg 1809, pp vi-vii.

immediately, an opposition that has long hampered the progress of natural science and that will long continue to block our enterprise's success in the eyes of quite a few. ...⁷⁰

Schelling sought the way out by developing the concepts of mechanics and organic life from one and the same truly universal principle, which led him to the idea of representing nature as a whole, as a dynamic process in the course of which each successive stage or phase negated the preceding one, i.e. included a *new* characteristic. The purely formal (analytical) determination of a higher phase of the process could therefore not be deduced from the determination of a lower one, that was done simply by making a synthesis, by adding on a new determination. It was not surprising that, when the higher phase of a *dynamic process* was put directly alongside a lower phase of the same process, they were thought to be two simultaneously co-existing 'objects' (which is precisely how they look in empirical intuition), and proved to be mutually directly *contradictory*.

The basic task of the philosophy of nature, consequently, consisted just in tracing and showing how, in the course of a dynamic process, determinations *arose that were directly opposed* to the initial one. In other words, we thought of a dynamic process only as one of the gradual engendering of oppositions, of determinations of *one and the same thing*, i.e. of nature as a whole, that mutually negated one another.

Schelling saw in that the universal law of the natural whole, operating identically in the field of mechanics, and of chemistry, and of electromagnetism, and of organic life. Such was the truly universal (i.e. identical for all the phenomena of nature) law of bifurcation, of the polarisation of the initial state. The attraction and repulsion of masses in mechanics, the north and south poles in magnetism, positive and negative electricity, acids and alkalis in chemical reactions – such were the examples flooding in on Schelling from all sides, and supplied again and again by the discoveries of Volta and Faraday, Lavoisier and Kilmeyer. The most diverse scientific discoveries were seen as fulfilment of Schelling's predictions, and his fame grew. His disciples were to be found among doctors, geologists, physicists, and biologists; and that not by chance. Schelling's philosophy proposed a form of thinking, the need for which was already imminent in the womb of theoretical natural science. Exhilarated by

⁷⁰ Schelling, *Op. cit.*, pp vii-viii.

success, Schelling continued to work the lode he had discovered for all it was worth.

But the transition of mutual opposites described appeared most marked and unsullied precisely on the boundary where natural and transcendental philosophy met, which was where the Ego arose from the sphere of the unconscious dynamic process (from the non-Ego), i.e. the transcendental, spiritual organisation of man, or, on the contrary, where objective knowledge of the not-I was born from the conscious activity of the I. This mutual, reciprocal passage of the determination of the Ego into a determination of the non-Ego demonstrated the action of the universal law of the dynamic process in its purest and most general form, i.e. the act of the transformation of A into not-A, of the bifurcation or splitting into two, of the 'dualisation' of the initial, originally undifferentiated state.

But how was the initial absolute state, identical in itself, to be thought of, from the polarisation of which there arose the main 'dualism' of the natural whole, i.e. the Ego and the non-Ego, the I and the not-I, the freely conscious creativity of the subject and the whole vast sphere of the 'dead', congealed, fossilised creative activity, the world of objects?

That was where the specifically Schelling philosophising began. It turned out that it was impossible to think of the initial identity, i.e. to express it in the form of a rigorously delimited concept. On being expressed in a *concept* it immediately came forward as an antinomic bifurcation. Identity was realised in the concept (in science) precisely through its absence, through contrasts that had nothing formally in common between them.

We have reached a very important point. That Schelling called his system the philosophy of identity was not at all because it represented a system of determinations or definitions common to the I and the not-I. Rather the contrary. Schelling denied the possibility of such a *system of concepts* in principle. His philosophy was put forward in the form of two formally unjoined systems of concepts, formally opposed in all their determinations yet nevertheless mutually presupposing each other. One was the system of determinations of the Ego as such (transcendental philosophy); the other was the system of assembled universal determinations of the object, of the non-Ego (natural philosophy).

The first disclosed and described in the shape of formally non-contradictory constructions the specifically subjective forms of man's

activity that it was impossible to ascribe to nature existing outside of and before human consciousness. The second, on the contrary, strove to disclose pure objectivity, carefully purged of everything introduced into it by man's *conscious, volitional* activity, and to depict the object as it existed 'before it entered consciousness'.

Within the confines of natural philosophy (theoretical natural science) the theoretical scientist 'fears nothing more than interference of the subjective in this kind of knowledge'. Within the limits of transcendental philosophy (logic and epistemology), on the contrary, he was 'most of all afraid that something objective has been implicated in the purely subjective principle of knowledge'.⁷¹

To sum up: if transcendental philosophy were constructed just as correctly as natural philosophy, there would be nothing of the other in the structure of each and there could not be a single concept or theoretical determination between them; for such a determination would directly infringe the two supreme principles of logic, the law of identity and the principle of contradiction. It would simultaneously express both the objective and the subjective, and would contain directly *identified opposites*. The two given sciences could not therefore be formally united into one. It was impossible to develop two series of scientific (formally correct) determinations from one and the same *concept* because it would be formally incorrect and inadmissible from the standpoint of the rules of logic.

Therefore philosophy on the whole was impossible as one science. From that Schelling concluded that the whole system of philosophy would 'find consummation in two fundamental sciences, which, mutually opposed in principle and direction, seek each other out and complement each other'. There was not, and could not be, some 'third' science in which would be discovered whatever there was in common between the world in consciousness and the world outside consciousness, and which would be a system of laws and rules obligatory in the same way for the one world and the other. It was impossible in principle to present such laws and rules *in the form of a science* because it would then be built from the outset on an infringement of the law of identity.

But there were, all the same, laws common to the world and knowledge, otherwise it would be senseless in general to speak of knowledge, of agreement of the objective and the subjective, and the very concept of

71 Schelling, "System des transzendentalen Idealismus," Hamburg 1957, p 11.

truth as the coincidence of knowledge with its object would be nonsense. *General* laws consequently did operate, but not as rigidly binding rules, but rather as reasons not strictly formulated, related to the aspirations of the poet-artist who directly experienced his blood relationship and unity with the cognised object and with nature. The artist of genius and nature operated by the same laws.

The identity of the laws of the subjective and objective worlds could only be realised in the act of creation. But creativity did not submit to formal schematising, dying and becoming fossilised in it. Thus it came about that 'an absolute Simple, Identical, cannot be comprehended or communicated through description, and not at all through conception. It can only be intuited'.⁷² Here intuition was all powerful, the inspired intuition of creative insight, intellectual and aesthetic intuition. Thus it was, therefore, that Schelling's system culminated in and was completed by a philosophy of art.

Thus the primary identity was a fact but was not expressible in a *concept*, was the initial premise of any concept, but was not determined through a concept. Identity was, as it were, made up of two always diverging trends of investigation, namely demonstration of how the objective was transformed into the subjective (which was the competence of theoretical natural science, spinning its thread from mechanics through chemistry to biology and anthropology, i.e. to man), and demonstration of how the subjective was transformed into the objective (which was the competence of transcendental philosophy, starting from knowledge and its forms *as from fact*, and demonstrating the objectivity, i.e. the universality and necessity, of knowledge).

The problem consequently began to appear as follows: two diametrically opposite spheres stood facing one another contrasted in all their characteristics. Their identity (the fact of their agreement was truth) was realised precisely through the transition that transformed the one into the other. But the transition, the moment of the transition itself, was *irrational* and could not be expressed by a *non-contradictory concept*, because it was at that very moment that the transition from A into not-A took place, i.e. their coincidence, their *identity*. To express it in a *concept* meant to smash the form of the concept.

⁷² Schelling, *Op. cit.*, p 294.

Here Schelling came directly up against the narrowness of the Kantian logic, which attributed to the law of identity and the principle of contradiction the character of the absolute premises of the very possibility of thinking in concepts. For there was *no room* within these rules for the moment of the *transition of opposites* into one another, and it broke them. Schelling, while agreeing that there was self-destruction of the form of thinking here, was forced in fact to conclude that real truth could not be caught and expressed *through* a concept. In his eyes therefore art and not science represented the highest form of mental activity.

If the rules of general logic were absolute, then the passage of consciousness into nature and vice versa, by which the time-honoured identity of the subjective and the objective was realised, remained inexpressible in concepts; and the act of knowing was forced again and again to make a leap, a jump, an act of irrational intuition, of poetic seizing of the absolute idea, of truth.

In other words, Schelling, beginning with a quite justified statement of the fact that logic in its Kantian conception actually put an insurmountable barrier in the way of attempts to understand, that is to *express, the fact of the transformation of opposites into one another in concepts*, i.e. in rigorously defined determinations, took the step toward rejection of *logic in general*. It did not even occur to him to reform *logic itself* in order to make it a means of expressing what appeared in intuition (contemplation) as a self-evident fact. Instead he began to make up for and compensate the limitedness and insufficiency of the existing logic (mistaken by him as the inferiority of thought as such), by the force of intellectual and aesthetic intuition, an absolutely irrational capacity that it was impossible either to study or to teach. This magic force also had to unite everything that reason (thought in general) was not in a position to join together but was only capable of ripping to bits, separating, and choking to death.

In his own constructions, in spite of a mass of bold guesses and ideas, some even of genius, that influenced the development of nineteenth century science, and which in essence had a clearly marked dialectical character, Schelling kept adopting the pose of a God-inspired prophet and genius, uniting without fear or doubt concepts that seemed to contemporary scientists to be fundamentally ununitable. And whereas he himself, in his youth, had had sufficient tact and competence in the field of the natural sciences, and had often hit the nail on the head by intuition, his pupils and successors, who adopted the empty schema from him but did not possess his erudition in science or his talent, reduced his

method and manner of philosophising to the caricature that Hegel later jeered at so caustically.

Schelling, however, exposed the rigidity of Kant's logic. And though he did not set himself the task of reforming it radically, he prepared the ground very thoroughly for Hegel.

Logic as such remained only an episode in Schelling's system of ideas, an insignificant section of the transcendental philosophy, a scholastic description of rules of a purely formal order in accordance with which it was necessary only to formalise, i.e. to classify and schematise, knowledge obtained in quite another way and by quite other abilities. For Schelling logic, consequently, was by no means a *schema for producing knowledge*, but served as a means of describing it verbally, terminologically 'for others', of expressing it through a system of rigorously defined and non-contradictorily determined terms (Schelling himself called them 'concepts'). Ultimately its recommendations seemed only external, verbally explicated forms of knowledge, and nothing more.

The process of producing knowledge was itself, in fact, done by the power of imagination, which Schelling analysed very closely and circumstantially in the form of various 'intuitions'. And here, in the field of intuition and imagination he also discovered *dialectics* as the true schema of the productive, actively subjective capacity of man to understand and alter the world of the images and concepts of science.

So Schelling confirmed dialectics as the genuine theory of scientific knowledge, but then broke all its links with logic. His position returned logic once more to the pitiable condition in which it had been before the attempts of Kant and Fichte to reform it in accordance with the needs of the times.

After Schelling the problem consisted in *uniting dialectics* as the true schema of developing knowledge *and logic* as the system of rules of thinking in general. What was the relation of the rules of logic to the real schemas (laws) of the development of understanding? Were they different, mutually unconnected 'things'? Or was logic simply the conscious and deliberately applied schema of the real development of science? If it was, it was all the more inadmissible to leave it in its old, so primitive form. At this point the torch was taken up by Hegel.

5. Hegel – Dialectics as Logic

Hegel's solution of the problem of the subject matter of logic has played a special role in the history of this science. In order to understand the Hegelian logic it is not enough just to clarify the direct sense of its propositions. It is more important and difficult to consider the real subject matter through the fanciful turns of Hegel's style. It is about this that we shall now speak, which will also give us a chance to understand Hegel critically, and to restore for ourselves an image of the original from its distorted presentation. Learning to read Hegel in a materialist way, as Lenin read him and advised reading him, means learning to compare his representation of the object critically with the *object itself*, at every step tracing the divergence between the copy and the original.

It would be an easy task if the reader had the two objects of this comparison – the copy and the original – ready-made before him. The copy exists. But where is the original? We cannot take the existing logical consciousness of the scientist as the original, for this consciousness itself must be tested for its logicity, and itself presupposes a critical analysis of existing logical forms from the standpoint of their correspondence with the real requirements of the development of science. And for an understanding of the real forms and laws of theoretical cognition Hegel's *Science of Logic*, despite all its faults associated with idealism, can offer more than the 'logic of science'.

The true logic of science is not given to us directly; it still has to be dug out and understood, and then converted into a consciously applied instrument for working with concepts, into a logical method of resolving problems that do not admit of solution by traditional logical methods. That being so, critical study of the *Science of Logic* cannot be reduced to a simple comparison of its propositions with those of the logic by which scientists are consciously guided, accepting it as irreproachable and admitting of no doubts.

So comparing the copy (the science of logic) with the original (with the actual forms and laws of theoretical understanding) proves to be quite a difficult matter. The difficulty is that Hegel's presentation of the subject matter (in this case thought) has to be compared critically not with a ready-made, previously known prototype of it, but with an object whose outlines are only beginning to be traced out for the first time in the course of a critical surmounting of the idealist constructions. This reconstruction is feasible if the structure of the optics through which Hegel

examined the object of his investigation is clearly understood. This distorting lens, while a magnifying one (the system of the fundamental principles of Hegelian logic) enabled him to see exactly, although in an idealistically distorted form, the *dialectic* of thought, which is the logic that remains invisible to the eye not philosophically equipped, and to simple common sense.

It is important, first of all, to understand clearly what the *real object* was that Hegel investigated and described in his *Science of Logic*, so as to find the critical range immediately in regard to his presentation. 'That the subject matter of logic is thought, with that everyone agrees', Hegel stressed in his *Shorter Logic*.⁷³ Later, quite naturally, logic as a science received the definition of *thinking about thought* or thought thinking about itself.

In that definition and the conceptions expressed by it there is still nothing either of the specifically Hegelian or of the specifically idealist. It is simply the traditional ideas of the subject matter of logic as a science, quite clearly and succinctly expressed. In logic the object of scientific comprehension proves to be thought itself, while any other science is thinking about something else. In defining logic as thinking about thought, Hegel quite accurately indicated its sole difference from any other science.

The next question, however, arises from that and requires a no less clear answer. *But what is thought?* It goes without saying, Hegel replied (and one again has to agree with him), that the sole satisfactory answer can only be an exposition of the heart of the matter, i.e. a concretely developed theory, a *science of thought*, a 'science of logic', and not an ordinary definition. (Compare Engels' view in *Anti-Dühring*: 'Our definition of life is naturally very inadequate.... All definitions are of little value. In order to gain an exhaustive knowledge of what life is, we should have to go through all the forms in which it appears, from the lowest to the highest'.⁷⁴ And later: 'To science definitions are worthless because always inadequate. The only real definition is the development of the thing itself, but this is no longer a definition'.⁷⁵

73 G W F Hegel, "System der Philosophie, Erster Teil, Die Logik," also known as "Encyclopaedie der philosophischen Wissenschaften im Grundrisse."

74 Engels, "Anti-Dühring," *MECW* vol. 25 p 77.

75 *Ibid.*, p 77.

In any science, however, and therefore in logic too, one has to mark everything out in advance and outline its contours, if only the most general boundaries of the object of investigation, i.e. to indicate the field of the facts to which the given science must devote its attention. Otherwise the criterion for their selection will be unclear and its role will be tyrannous and arbitrary, taking only those facts into consideration that confirm its generalisations, and ignoring everything else as allegedly having no relation to the matter or to the competence of the science concerned. Hegel gave such a *preliminary* explanation, not concealing from the reader exactly what he understood by the word ‘thought’.

This is a very important point, and everything else hangs on proper understanding of it. It is no accident that the main objections to Hegel, both justified and unjustified, have hitherto been directed precisely at it. Neopositivists, for example, unanimously reproach Hegel with having inadmissibly broadened the subject matter of logic by his conception of thought, including in the sphere of examination a mass of ‘things’ that one cannot call thought in the usual and strict sense; above all the concepts traditionally referred to metaphysics, and to ‘ontology’, i.e. to the science of things themselves, the system of categories (the universal definitions of reality outside consciousness, outside subjective thinking understood as the psychic capability of man).

If thinking were to be so understood, the Neopositivist reproach must really be considered reasonable. Hegel actually understood as thought something at first glance enigmatic, even mystical, when he spoke of it as taking place outside man and apart from man, independently of his head, and of ‘thought as such’, of ‘pure thought’, and when he considered the object of logic to be precisely that ‘absolute’ superhuman thought. Logic in his definition must be understood even as having a content that *‘shows forth God as he is in his eternal essence before the creation of Nature and of a Finite Spirit.’*⁷⁶

Such definitions are capable of confusing and disorienting at the very start. But of course there is no such ‘thought’ as some superhuman force creating nature, and history, and man himself and his consciousness from itself somewhere in the Universe. But is Hegel’s logic then the presentation of a non-existent subject? Of an invented, purely fantastic object? In that case, how are we to rethink his constructions critically? With what,

⁷⁶ Hegel, “Science of Logic,” tr. A V Miller, p 50.

with what real object, must we compare and contrast his strings of theoretical determinations in order to distinguish the truth in them from the fallacy? With the real thinking of man? But Hegel would reply that in his *Science of Logic* it is a matter of quite *another* object, and that if empirically observed human thought is not like it, that is no argument against *his* logic, for criticism of a theory only makes sense when the theory is compared with the same object as it represents, and not with another one; and it is impossible to compare logic with the acts of thinking actually taking place in people's heads because people think very *illogically* at every step, even elementarily illogically, let alone according to a logic of a much higher order, of the kind that Hegel had in mind.

When you point out to a logician, therefore, that man's real thinking does not occur as it is depicted in his theory, he could reasonably reply that it was so much the worse *for this thinking* and that the theory did not need to be adapted to the empirical but that real thought must be made logical and brought into harmony with logical principles.

For logic as a science, however, a fundamental difficulty arises here. If it were only permissible to compare logical principles with logical thought, did that then not wipe out any possibility whatsoever of checking whether or not they were *correct*? It is quite understandable that these principles would always be in agreement with thoughts that had previously been made to agree with them. After all, it only meant that logical principles agreed with themselves, with their own embodiment in empirical acts of thought. In that case, a very ticklish situation was created for theory. Logic had in mind only logically immaculate thinking, and logically incorrect thinking was not an argument against its schemas. But it consented to consider only such thinking as logically immaculate as exactly confirmed its own ideas about thought, and evaluated any deviation from its rules as a fact falling outside its subject matter and therefore to be considered solely as a 'mistake' needing to be 'corrected'.

In any other science such a claim would evoke consternation. What kind of a theory was it that consented to take into account only such facts as confirmed it, and did not wish to consider contradictory facts, although there must be millions and billions such? But surely that was exactly the traditional position of logic, which was presented by its devotees as standing to reason, and which made logic absolutely unself-critical on the one hand and incapable of development on the other.

That, incidentally, was where Kant's illusion originated, the illusion that logic as a theory had long ago acquired a fully closed, completed character and not only was not in need of development of its propositions but could not be by its very nature. Schelling also understood Kant's logic as an absolutely precise presentation of the principles and rules of thinking in concepts.

Hegel had doubts about the claim that it was the rules of logic that prevented understanding of the process of the passage of the concept into the object and vice versa, of the subjective into the objective (and in general of opposites into one another). He saw in it not evidence of the organic deficiency of thought but only the limitations of Kant's ideas about it. Kantian logic was only a limitedly true theory of thought. Real thought, the real subject matter of logic as a science, as a matter of fact was something else; therefore it was necessary to bring the theory of thought into agreement with its real subject matter.

Hegel saw the need for a critical reconsideration of traditional logic primarily in the extreme, glaring discrepancy between the principles and rules that Kant considered absolutely universal forms of thought and the real results that had been achieved by human civilisation in the course of its development. 'A comparison of the forms to which Spirit has risen in the worlds of Practice and Religion, and of Science in every department of knowledge Positive and Speculative – a comparison of these with the form which Logic, that is, Spirit's knowledge of its own pure essence – has attained, shows such a glaring discrepancy that it cannot fail to strike the most superficial observer that the latter is inadequate to the lofty development of the former, and unworthy of it'.⁷⁷

Thus the existing logical theories did not correspond to the real *practice of thought*, and *thinking about thought* (i.e. logic) consequently lagged behind *thinking about everything else*, behind the thinking that was realised as the science of the external world, as consciousness fixed in the form of knowledge and things created by the power of knowledge, in the form of the whole organism of civilisation. In functioning as *thinking about the world*, thought had achieved such success that beside it *thinking about thought* proved to be something quite incommensurable, wretched, deficient, and poor. To take it on faith that human thought had really been and was guided by the rules, laws, and principles that in the aggregate

⁷⁷ Hegel, *Ibid.*, p 51.

constituted traditional logic was to make all the progress of science and practice simply inexplicable.

Hence there arose the paradox that the human intellect, which had created modern culture, had come to a standstill in amazement before its own creation. Schelling had also expressed this amazement of the 'spirit', and it was just at this point that Hegel began to differ with him.

Hegel considered that the rules by which the 'spirit' was actually guided, contrary to the illusions that it had created on its own account (in the person of professional logicians) and had set out in the form of textbooks of logic, could and must be brought out and set forth in the *form of a concept*, quite rationally, without shifting everything hitherto not comprehended onto 'intuition', i.e. onto an ability that was from the very outset something quite different from thought. Hegel's posing of the matter played a special role because it, for the first time, subjected all the main concepts of logical science, above all the concept of *thought*, to careful analysis.

At first glance (and people usually proceed from such a 'first glance', adopting it absolutely uncritically from everyday usage), thought represented one of man's subjective psychic abilities along with others like intuition, sensation, memory, will, and so on and so forth. By thinking was also understood a special kind of *activity* directed, unlike practice, at altering ideas, at reorganising the images that were in the individual's *consciousness*, and directly at the verbal shaping of these ideas in speech; ideas, when expressed in speech (words, terms) were called concepts. When man altered real things outside his head, and not ideas, that was no longer considered thinking, but at best only activities *in accordance with thought*, according to the laws and rules dictated by it.

Thought was thus identified with *reflection*, i.e. with psychic activity in the course of which a person gave himself an account of what he was doing, and how, and became aware of all the schemas and rules by which he acted. The sole job of logic then proved, quite understandably, to be simply the ordering and classifying of the corresponding schemas and rules. Every individual could discover them for himself in his own *consciousness* because, even without any study of logic, he was guided by them (only not, perhaps, systematically). As Hegel justly put it, 'such logic had no other business than could be done through the activity of simple

formal thought, and so it certainly produced nothing that one could not otherwise have done just as well.⁷⁸

Everything we have said also applied fully to Kant, which is why Hegel said that ‘the Kantian philosophy could not have any effect on the treatment of the sciences. *It left the categories and methods of ordinary knowledge quite undisturbed*.’⁷⁹ It only introduced order into the schemas of existing consciousness, only built them into a system (in so doing, true, it came up against the facts of a mutual contradiction between the various schemas). So the Kantian logic appeared as a kind of honest confession of existing consciousness, of its systematically expounded self-consciousness, and nothing more; or rather, of its *conceits* – an exposition of what existing thought thought of itself. But just as it was a blunder to judge a person according to what and how he thought of himself, so it was impossible to judge thinking by its self-opinion; it was much more useful to examine what it was really doing, and how, possibly even without giving itself a proper evaluation of it.

Having thus posed the problem Hegel proved to be the first professional logician who resolutely and consciously threw aside the old prejudice that thought was presented to the investigator only in the form of speech (external or internal, oral or written). The prejudice was not accidental; thought could only look at itself from the side, as it were, as an object different from itself, only insofar as it had expressed itself, embodied itself in some external form. And the completely conscious thought that all the old logic had in view really assumed language, speech, the word, as its outward form of expression. In other words thought achieved *awareness* of the schemas of its own activity precisely through and in language. (This circumstance had in fact been recorded in the very name of logic, which is derived from the Greek *logos*, word.) Not only Hegel and the Hegelians, incidentally, spoke of this, but also some of their opponents in principle, like Trendelenburg, who noted that traditional (formal) ‘logic becomes conscious of itself in speech and so in many respects is a grammar absorbed with itself.’⁸⁰

Let us note in passing that all schools of logic, without exception, having ignored Hegel’s criticism of the old logic have shared this old

78 Hegel, “Science of Logic,” p 37.

79 Hegel, “Shorter Logic,” §60.

80 Adolf Trendelenburg, “Logische Untersuchungen,” Berlin 1840, p 16.

prejudice to this day as though nothing had happened. It is most outspokenly professed by Neopositivists, who directly identify thought with linguistic activity and logic with the analysis of language. The most striking thing about this is the self-conceit with which they project this archaic prejudice as the latest discovery of twentieth century logical thinking, as the manifestation to the world at long last of the principle of the scientific development of logic, as an axiom of the 'logic of science'.

Language (speech) is, nevertheless, not the sole empirically observed form in which human thought manifests itself. Does man really not discover himself as a *thinking* being in his actions, in the course of actually shaping the world around him, in the making of things? Does he really only function as a thinking being when talking? The question is surely purely rhetorical. The thought of which Hegel spoke discloses itself in human *affairs* every bit as obviously as in words, in chains of terms, in the lacework of word combinations. Furthermore, in real affairs man demonstrates the real modes of his thinking more adequately than in his narrations of them.

But, that being so, man's *actions*, and so too the results of his actions, the things created by them, not only could, but must, be considered *manifestations of his thought*, as acts of the objectifying of his ideas, thoughts, plans, and conscious intentions. Hegel demanded from the very start that thought should be investigated *in all the forms* in which it was realised, and above all in human affairs, in the creation of things and events. Thought revealed its force and real power not solely in talking but also in the whole grandiose process of creating culture and the whole objective body of civilisation, the whole 'inorganic body of man' (Marx), including in that tools and statues, workshops and temples, factories and chancelleries, political organisations and systems of legislation.

It was on that basis that Hegel also acquired the right to consider in logic the objective determinations of things outside consciousness, *outside the psyche of the human individual*, in all their independence, moreover, from that psyche. There was nothing mystical nor idealist in that; it meant the forms ('determinations') of things created by the activity of the thinking individual. In other words, the forms of his thought embodied in natural materials, 'invested' in it by human activity. Thus a house appeared as the architect's conception embodied in stone, a machine as the embodiment of the engineer's ideas in metal, and so on; and the whole immense objective body of civilisation as thought in its 'otherness' (*das Idee in der Form des Anderssein*), in its sensual objective embodiment. The whole

history of humanity was correspondingly also to be considered a process of the ‘outward revelation’ of the power of thought, as a process of the realisation of man’s ideas, concepts, notions, plans, intentions, and purposes, *as a process of the embodying of logic*, i.e. of the schemas to which men’s purposive activity was subordinated.

The understanding and careful analysis of thought in this aspect (investigation of the ‘active side’ as Marx called it in his first thesis on Feuerbach) was still not idealism. Logic, furthermore, by following such a path, thus took the decisive step toward genuine (‘intelligent’) materialism, toward understanding of the fact that all logical forms without exception were universal forms of the development of reality outside thought, reflected in human consciousness and tested in the course of millennia of practice. In considering thought in the course of its materialisation as well as in its verbal revelation Hegel did not go beyond the bounds of the analysis of *thought* at all, beyond the limits of the subject matter of logic as a special science. He simply brought into the field of view of logic that real phase of the process of development of thought without understanding which logic could not and never would be able to become a real science.

From Hegel’s standpoint the real basis for the forms and laws of thought proved to be only the aggregate historical process of the *intellectual development of humanity* understood in its universal and necessary aspects. The subject matter of logic was no longer the abstract identical schemas that could be found in each individual consciousness, and common to each of them, but the *history of science and technique* collectively created by people, a process quite independent of the will and consciousness of the separate individuals although realised at each of its stages precisely in the conscious activity of individuals. This process, according to Hegel, also included, as a phase, the act of realising thought in object activity, and through activity in the forms of things and events outside consciousness. In that, in Lenin’s words, he ‘came *very close* to materialism’.⁸¹

In considering thought as a real productive process expressing itself not only in the movement of words but also in the changing of things, Hegel was able, for the first time in the history of logic, to pose the problem of a special analysis of thought-forms, or the analysis of thought

⁸¹ Lenin, “Philosophical Notebooks,” *LCW* vol. 38 p 278.

from the aspect of form. Before him such an aim had not arisen in logic, and even could not have. 'It is hardly surprising that economists, wholly under the influence of material interests, have overlooked the formal side of the relative expression of value, when professional logicians, before Hegel, even overlooked the formal aspect of the propositions and conclusions they used as examples'.⁸²

Logicians before Hegel had recorded only the external schemas in which logical actions, judgments and inferences functioned *in speech*, i.e. as schemas of the joining together of terms signifying general ideas, but the logical form expressed in these figures, i.e. the category, remained outside their sphere of investigation, and the conception of it was simply borrowed from metaphysics and ontology. So it had been even with Kant, despite the fact that he had nevertheless seen categories precisely as the *principles of judgments* (with objective significance, in his sense).

And since logical form, about which Marx spoke in the first edition of *Das Kapital*, was understood as a form of activity realised equally well in the movement of verbal terms and in the movement of the things involved in the work of the thinking being, there then for the first time only, arose the possibility of analysing it specially as such, of abstracting it from the special features of its expression in some partial material or other (including those which were linked with the specific features of its realisation in the fabric of language).

In *logos*, in reason, *Sage und Sache*,⁸³ i.e. myth and fact, or rather legend and true story, were equally expressed in the logical aspect (in contrast to the psychological-phenomenological). (Incidentally, play on words, for example, was very characteristic of Hegel, puns however that threw light on the genetic relationship of the ideas expressed by the words. *Sage* is legend, myth, hence 'saga', a legend of high deeds (cf. *bylina*, the form of Russian epic); *Sache* is a broad capacious word signifying not so much a single, sensuously perceived thing, as the essence of the matter, situation, the point, the actual state of affairs (or things), i.e. everything that is or was in the matter itself (cf. Russian *byl'*, meaning a true story, fact, what really happened). This etymology is used in the *Science of Logic* to express very important shades of meaning, which sound as follows in Lenin's translation and materialist interpretation: "With this introduction of

82 Marx, "Das Capital," Volume I, Hamburg 1867 p 21.

83 See Hegel, "Jenaer Realphilosophie," Berlin 1969, p 183.

Content into logical consideration”, the subject becomes not *Dinge* but *die Sache, der Begriff der Dinge* [i.e. not things, but the essence, the concept of things], not things but the laws of their movement, materialistically.”⁸⁴

Considered as the activity of the thinking being in its universal form, thought was also fixed in those of its schemas and moments as remained *invariant* in whatever special material the relevant activity was performed and whatever product it put out at any one instant. In the Hegelian view it was quite irrelevant how, precisely, the action of thinking took place or takes place, whether in articulated vibrations of the ambient air and their identifying signs or in some other natural, physical substance. ‘In all human contemplation there is thought, just as thought is the general in all conceptions, recollections, and on the whole any mental activity, in all wishes, desires, etc. All these are only further specifications of thought. While we so conceive thought, it itself appears in another aspect than when we only speak; we have intellectual power over and above any other abilities, like contemplation, imagination, will and the like’.⁸⁵

All the universal schemas being depicted in the activity of the thinking being, including that directed toward immediately intuited or represented material, must therefore be considered not less as *logical* parameters of thought than the schemas of its expression in language, or in the form of the figures known in the old logic. Thought in the broadest sense of the word, as activity altering images of the external world in general expressed in words (and not the words in themselves), the thought that really ‘affects everything human and makes humanity human’,⁸⁶ as a capacity that creates knowledge in any forms, including that of the contemplated images, and ‘penetrates’ into them, and hence not simply the subjective, psychic act of using or treating words, was the subject matter of logic, the science of thought.

Thought, in fact, included the human ‘*determination* of sensation, intuition, images, ideas, aims, obligations, etc., and also thoughts and concepts’⁸⁷ (‘thoughts and concepts’ here have the meaning of the old, purely formal logic). Thought in general thus ‘*appears* at first not in the form of

⁸⁴ Lenin, *Op. cit.*, p 94.

⁸⁵ Hegel, “Shorter Logic,” §24(1).

⁸⁶ *Ibid.*, §2.

⁸⁷ *Ibid.*, §3.

thought but as feeling, intuition, imagination – *forms* that are to be distinguished from thought as form'.⁸⁸ The thought-form as such appears to us only in the *course of thinking about thought itself*, i.e. only in logic.

But before man began to think about *thought*, he had already *to think*, though still not realising the logical schemas and categories within which this thinking took place, but already embodying them in the form of the concrete statements and concepts of science, engineering, morals, and so on. Thought was thus realised at first as activity in all the diversity of its outward manifestations. The thought-form here was 'sunk' into the material of concrete thoughts, sense images, and ideas, was 'sublated' in them, and was therefore counterposed to conscious thinking as the form of external reality. In other words, thought and the thought-form did not appear at first to the thinking being as forms of his own activity at all (of his 'self' – *das Selbst*), creating a certain product, but as forms of the *product itself*, i.e. of concrete knowledge, images and concepts, intuition and representation, as the forms of tools, machines, states, etc., etc., and as the forms of realised aims, wishes, desires, and so on.

Thought could not 'see' itself otherwise than in the mirror of its own creations, in the mirror of the external world, *which we knew through thought-activity*. Thought, as it appeared in logic, was thus the same thought as had been realised in the form of knowledge of the world, in the form of science, engineering, art, and morality. But it was far from the same thing *in form*, because 'there is a difference between having sensations and ideas, determined and *penetrated by thought*, and having *thoughts about them*'.⁸⁹

Neglect of this very important distinction led the old logic into a dual error. On the one hand it only defined thought as 'a subjective, psychic capability of the individual' and therefore counterposed to thought so understood the whole sphere of 'intuition, ideas, and will' as something existing outside thought and having nothing in common with it, as the object of reflection existing outside thought. On the other hand, in not distinguishing *in form* between the relative strength of the two revelations of thought mentioned above, it could also not say how the *thought-form* as such ('in and for itself') was differentiated from the form of intuition and representation, in the shape of which it had originally appeared and was

⁸⁸ *Ibid.*, §2.

⁸⁹ Hegel, "Shorter Logic," §2.

hidden, and consequently confused the one with the other, taking the form of the concept for the form of intuition, and vice versa.

Hence, too, it came about that, under the form of *concept*, the old logic considered every kind of *idea* or *notion* whatsoever, insofar as it was expressed in speech or in a term, that is to say, the image of intuition or contemplation held in consciousness by means of speech, which recorded it. As a result, too, the old logic embraced the concept itself only from the aspect from which it was really not distinguished in any way from any notion or intuitive image expressed in speech, from the aspect of the abstract and general, which was really just as common to the concept as to the notion. Thus it came about that it took the form of *abstract identity* or *abstract universality* for the specific form of the concept, and could therefore only raise the law of identity and the principle of contradiction in determinations to the rank of absolute, fundamental criteria of the thought-form in general.

Kant also took that stand, understanding by concept *any general notion* insofar as it was fixed by a term. Hence his definition: "The concept is... a general image or representation of that which is common to many objects, consequently a general idea, *provided that it can be included in several objects*."⁹⁰

Hegel himself required a more profound solution of the *problem of the concept and of thinking in concepts* from logic. For him a concept was primarily a synonym for real *understanding* of the essence of the matter and not simply an expression of something general, of some identity of the objects of intuition. A concept disclosed the real nature of a thing and not its similarity with other things; and not only should it express the abstract generality of its object (that was only one of the moments of a concept, relating it to notion), but also the *special nature* or peculiarity of the object. That was why the form of the concept proved to be a dialectical unity of universality and particularity, a unity that was also *revealed* through manifold forms of judgment and inference, and came out into the open in judgments. It was not surprising that any judgment destroyed the form of abstract identity and represented its self-evident *negation*. Its form was: A is B (i.e. not-A).

Hegel distinguished clearly between universality, which dialectically contained the whole richness of the particular and the singular within

⁹⁰ Kant, "Logik," Leipzig, p 98.

itself and in its determinations, and the simple abstract generality, identicalness, of all the single objects of a given kind. The universal *concept* expressed itself the *actual law* of the origin, development, and fading or disappearance of single things. And that was already quite another angle on the concept, much truer and deeper, because, as Hegel demonstrated with a mass of examples, the real law (the immanent nature of the single thing) did not always appear on the surface of phenomena in the form of a simple identicalness, of a common sign or attribute, or in the form of identity. If that were so there would be no need for any theoretical science. The job of thought was not limited to empirically registering common attributes. The central concept of Hegel's logic was therefore the *concrete-universal*: he brilliantly illustrated its distinction from the simple, abstract universality of the sphere of notions in his famous pamphlet *Wer denkt abstrakt? (Who thinks abstractly?)*. To think abstractly meant to be enslaved by the force of current catchphrases and clichés, of one-sided, empty definitions; meant to see in real, sensuously intuited things only an insignificant part of their real content, only such determinations of them as were already 'jelled' in consciousness and functioned there as ready-made stereotypes. Hence the 'magic force' of current catchphrases and expressions, which fence reality off from the thinking person instead of serving as the form of its expression.

In this last interpretation logic finally became a real logic of understanding of *unity in variety*, and not a scheme for manipulating readymade ideas and notions; a logic of critical and self-critical thought and not a means of the uncritical classification and pedantic, schematic presentation of existing ideas.

From premises of that kind Hegel concluded that real thought in fact took other forms and was governed by other laws than those that current logic considered the sole determinations of thinking. Thought had obviously to be investigated as collective, co-operative activity in the course of which the individual, with his schemas of conscious thinking, performed only partial functions. In fulfilling them, however, he was constantly forced at the same time to perform actions that would not fit in, in any way, with the schemas of ordinary logic. In really taking part in common work he was all the time subordinating himself to the laws and forms of *universal thought*, though not conscious of them as such. Hence the 'topsy-turvy' situation arose in which the real forms and laws of thought were expressed and understood as some kind of *external necessity*, as an *extra-logical* determination of the action; and on the sole ground that they were

still not revealed and realised by logic, not acknowledged as logical interpretations.

As can easily be seen, Hegel criticised traditional logic, and the thinking appropriate to it, by the same 'immanent procedure' that was one of his main conquests, namely, he counterposed to the assertions, rules, and basic propositions of logic not some kind of opposing assertions, rules and basic propositions but the process of the practical realisation of its own principles in real thought. He showed it its own image, pointing out those of its features that it preferred not to notice and not to recognise. Hegel required only one thing of thinking in accordance with logic, namely uncompromising consistency in applying the principles adduced. And he showed that it was the consistent application of these principles (and not departure from them) that in fact led inevitably, with inexorable force, to *negation* of the principles themselves as one-sided, incomplete, and abstract.

That was the very critique of reason, from the standpoint of reason itself, that Kant had begun; and this critique (self-criticism) of reason and its circumscribing logic led to the conclusion that 'the nature of thought is itself dialectics, that as understanding it must fall into the negative of itself, into contradiction. ...'⁹¹ Kant had actually reached a similar conclusion; and whereas before him logic could be unself-critical *out of ignorance*, now it could maintain its precarious position only if it quite consciously rejected facts unacceptable to it, only by becoming *consciously unself-critical*.

The historically unavoidable defect of Kantian logic was that it pedantically schematised and described a mode of thought that led to a bringing out and sharp formulation of the contradictions contained in any concept but did not show how they could and should be resolved *logically* without shifting this difficult task onto 'practical reason', onto 'moral postulates', and other factors and abilities lying outside logic. Hegel, however, saw the main job facing logic after the work of Kant, Fichte, and Schelling, as precisely in finding, bringing out, and indicating to thought, the means of intelligently and concretely resolving the contradictions into which it inevitably fell when consciously guided by the traditional, purely formal logic. That, too, was the real distinction between Hegel's conception of thought and logic and all preceding ones.

⁹¹ Hegel, "Shorter Logic," §11.

The old logic, coming up against the logical contradiction that it itself brought to light just because it rigorously followed its own principles, always balked at it, retreated to analysis of the preceding movement of thought, and always strove to find an error or mistake in it leading to the contradiction. For formal logical thinking contradictions thus became an insurmountable barrier to the forward movement of thought, an obstacle in the way of concrete analysis of the essence of the matter. It therefore also came about that 'thought, despairing of managing *by itself* to resolve the contradiction into which it had got itself, turns back to the solutions and reliefs that were the spirit's lot in its other modes and forms'.⁹² It could not be otherwise, since the contradiction did not develop through a mistake. No mistake, it ultimately proved, had been made in the preceding thinking. It was necessary to go even further back, to uncomprehended contemplation, sense perception, aesthetic intuition, i.e. to the realm of lower forms of consciousness (lower, that is, in relation to conceptual thinking), where there was really no contradiction for the simple reason that it had still not been disclosed and clearly expressed. (It never hurts, of course, to go back and analyse the preceding course of argument and check whether there has not been a formal mistake, for that also happens not infrequently; and here the recommendations of formal logic have a quite rational sense and value. It may turn out, as a result of checking, that a given logical contradiction is really nothing but the result of committing an error or mistake somewhere. Hegel, of course, never dreamed of denying such a case. He, like Kant, had in mind only those antinomies that developed in thought as a result of the most formally 'correct' and faultless argumentation.)

Hegel also suggested that a contradiction should be resolved as well as disclosed, and resolved by the same logical thinking as had brought it out when a definite concept was being developed.

He treated both the origin and the mode of resolution of logical contradictions differently. Like Kant he understood that they did not arise at all through the negligence or carelessness of individual thinking persons but unlike Kant he understood that they could and must be resolved and must not always be preserved as antinomies. But so that it could resolve them thought must fix them sharply and clearly in advance, precisely as

⁹² Hegel, *Ibid.*, §11.

antinomies, as *logical* contradictions, as real, and not imaginary, contradictions in determinations.

Dialectics, according to Hegel, was the form (or method or schema) of thought that included the process both of elucidating contradictions and of concretely resolving them in the corpus of a higher and more profound stage of rational understanding of the same object, on the way toward further investigation of the essence of the matter, i.e. in the course of developing science, engineering, and ‘morality’, and all the spheres he called the ‘objective spirit’.

This conception immediately brought about constructive shifts in the whole system of logic. Whereas Kant’s ‘dialectic’ was only the final, third part of logic (the doctrine on the forms of understanding and reason), where it was a matter actually of the statement of the logically unresolvable antinomies of theoretical cognition, with Hegel it appeared quite another matter. With him the sphere of the logical was divided into three main sections or aspects, i.e. three main directions were distinguished in it, as follows:

1. the abstract or rational;
2. the dialectical or negatively reasonable;
3. the speculative or positively reasonable.

Hegel specially stressed that ‘these three aspects in no case constitute three *parts* of logic, but are only *moments of any logically real nature*, that is of any concept or of any truth in general’.⁹³

In the empirical history of thought (as in any given, historically achieved state of it) these three aspects appeared either as three consecutive ‘formations’ or as three different but closely related systems of logic. Hence we got the illusion that they could be depicted as three different sections (or ‘parts’) of logic, following one after the other.

Logic as a whole, however, could not be obtained by a simple uniting of these three aspects, each of which was taken in the form in which it had been developed in the history of thought. That called for critical treatment of all three aspects from the standpoint of higher principles, those historically last achieved. Hegel characterised the three ‘moments’ of logical thought that should constitute Logic as follows.

⁹³ Hegel, “Shorter Logic,” §79.

1. 'Thought as *understanding* remains stuck in firm determination and does not get beyond differentiation of the latter; such a limited abstraction applies to it as existing and being for itself'.⁹⁴ The separate (isolated) historical embodiment of this 'moment' in thought appeared as *dogmatism*, and its logical, theoretical self-awareness as 'general', i.e. purely formal logic.
2. 'The *dialectical* moment is the own self-abolition of such ultimate determinations and their transition into their opposites'.⁹⁵ Historically this moment appears as *scepticism*, i.e. as the state in which thought, feeling bewildered among opposing, equally 'logical' and mutually provoking dogmatic systems, is powerless to choose and prefer one of them. Logical self-awareness, corresponding to the stage of scepticism, was distinguished in the Kantian conception of dialectics as a state of the insolubility of the antinomies between dogmatic systems. Scepticism (Kant's type of 'negative dialectic') was higher than dogmatism both historically and in content because the dialectic included in reason or understanding was already *realised*, and existed not only 'in itself' but 'for itself'.
3. 'The *speculative or positively reasonable* conceives the unity of determinations in their opposition, the *affirmation* that is contained in their resolution and their transition'.⁹⁶ Hegel also saw systematic treatment of this last 'moment' (and correspondingly critical rethinking of the first two from the angle of the third) as the historically pressing task in logic, and therefore his own mission and the aim of his work.

When critically rethought in the light of the principles only now elicited, the 'moments' considered ceased to be independent parts of logic and were transformed into three abstract aspects of one and the same logical system. Then a logic was created such that, when thinking was guided by it, thought became fully self-critical and was in no danger of falling into either the dullness of dogmatism or into the sterility of sceptical neutrality.

94 *Ibid.*, §80.

95 Hegel, "Shorter Logic," §81.

96 *Ibid.*, §82.

Hence, too, there followed the external, formal division of logic into (1) the doctrine of being, (2) the doctrine of essence, and (3) the doctrine of the notion (concept, idea).

The division of logic into the objective (the first two sections) and the subjective coincided at first glance with the old division of philosophy into ontology and logic proper; but Hegel stressed that such a division would be very inexact and arbitrary because, in logic, the opposition between the subjective and the objective (in their ordinary meaning) disappeared.⁹⁷

His position on this question calls besides for a thorough commentary since superficial criticism of his conception of logic and its subject matter has so far been primarily that his position *ignored* the opposition (contrast) between the subjective and the objective (between thinking and being) and therefore casuistically produced specifically logical schemas of thought for the ontological determination of things outside thought and, on the contrary, universal definitions of the reality outside thought for schemas of the logical process, thus committing two sins: (a) hypostatizing logical forms, and (b) logicalising reality.

If the original sin of Hegelianism had really been a simple, naive blindness in relation to the contrast between thought and reality, between the concept and its object, then Kant's dualism would have been the apex of philosophical wisdom. In fact, however, Hegel's 'error' was not so simple, and was not in the least characterised by the evaluation cited above. Hegel saw the difference and, what is more important, the contradiction (opposition) between the world of things outside consciousness and the world of thought (the world in thought, in science, in *concepts*), and was much more acutely aware of it than his naive critics among the Kantians; and in any case he ascribed much greater significance for logic to this opposition than, say, positivists do (who, especially in a logic, directly identify the concept and the object of the concept).

The point is quite another one; and another understanding of it follows from the specifically Hegelian conception of *thought*, and thus also from Hegel's solution of the problem of the relation of thought and the world of things.

That is why, when Hegel formulated a programme for the critical transformation of logic as a science, he posed the task of bringing it (i.e.

⁹⁷ Hegel, "Shorter Logic," §82.

thought's awareness of the universal schemas of its own work) into correspondence with its real object, i.e. with real thought, with its real universal forms and laws.

The last-named do not exist in thought simply or even so much as schemas and rules of *conscious* thinking, but rather as universal schemas of *objective* thinking that are realised not so much as a subjective psychic act as the productive process that created science, technique and morality.

In defending the objectivity of logical forms so understood, Hegel of course was right in many respects; and his critique of the subjective idealist interpretation of the logical (Hume, Kant, Fichte) is topical in the struggle against many of their present-day successors, in particular Neopositivists. As social formations science and technique ('the materialised power of knowledge' as Marx defined it) exist and develop of course outside the individual's consciousness. But, according to Hegel, there was no other consciousness than that of the individual, never had been, and never would be; and the logical forms of development of science and technique really stood in opposition to the consciousness and will of the individual as quite objective limits to his individually performed actions, even as limits dictated to him *from outside*.

'According to these determinations, thoughts can be called objective, and they can also be taken to include the forms that are considered for the present in ordinary logic and are looked upon only as forms of *conscious* thought. Logic here coincides with *Metaphysics*, with the science of *things* conceived in thought...'⁹⁸

In this conception of the objectivity of thought-forms there was as yet, of course, no facet of the specifically Hegelian, i.e. *objective*, idealism. One cannot reproach Hegel with having allegedly extended the boundaries of the subject matter of logic impermissibly so that it began to embrace not only thought but things. Hegel (and Kant, too) did not in general speak just about *things as such*; he had in mind exclusively things *comprehended in thoughts*. It was in that sense that he asserted that 'in logic thoughts are so conceived that they have no other content than that belonging to the thought itself and produced through it'.⁹⁹ In other words

98 Hegel, "Shorter Logic," §24.

99 *Ibid.*, §6.

logic had in mind not things but those of *their determinations* as were posited by the action of thought, i.e. *scientific* determinations.

Thus, what Hegel affirmed within the limits of consideration of pure thought was much more rigorous and consistent than the logic before him; and he justly reproached it precisely for not having been able to confine itself rigorously within the bounds of its own subject matter, and for having imported into it material not assimilated by thought and not reproduced by thought-activity.

His requirement of including all the categories (the subject matter of the old metaphysics and ontology) in logic in no way meant going beyond the limits of thought. It was equivalent to a demand for a critical analysis to be made of the *thought-activity* that had engendered the determinations of the old metaphysics, and for those thought-forms to be brought out that both logic and metaphysics had applied quite uncritically and unconsciously, without clearly realising what they consisted of. Hegel had no doubt that ‘thought-forms must not be used without having been subjected to investigation’ and that ‘we must make the thought-forms themselves the object of cognition’.¹⁰⁰ But such an investigation was already thought, and the activity taking place in those very forms was the act of applying them. If we looked on logic as investigation (cognition) of thought-forms, he wrote, this investigation ‘must also unite the activity of thought-forms and their critique in cognition. The thought-forms must be taken in and for themselves; they are the object and the activity of the object itself; they themselves inquire into themselves, must determine their limits and demonstrate their defects themselves. That will then be that activity of thought that will soon be given separate consideration as *dialectics*. ...’¹⁰¹

The subject matter of logic then proved to be those really *universal* forms and patterns within which the collective consciousness of humanity was realised. The course of its development, empirically realised as the history of science and technique, was also seen as that ‘whole’ to the interests of which all the individual’s separate logical acts were subordinated.

And inasmuch as the individual was involved in the common cause, in the work of *universal* thought, he was continually forced to perform

100 Hegel, “Shorter Logic,” §41.

101 *Ibid.*

actions dictated 'by the interests of the whole' and not confined to the schemas of 'general' logic. He would naturally not realise his actions in logical concepts, although these acts were performed by *his own thinking*. The schemas (forms and laws) of universal thought would be realised unconsciously through his psyche. (Not 'unconsciously' in general, but without *logical* consciousness of them, without their expression in logical concepts and categories.)

In this connection Hegel introduced one of his most important distinctions between thought 'in itself' (*an sich*), which also constituted the subject matter, the object of investigation, in logic, and thought 'for itself' (*für sich selbst*), i.e. thought that had already become aware of the schemas, principles, forms, and laws of its own work and had already worked quite consciously in accordance with them, fully and clearly realising what it was doing, and how it was doing it. Logic was also consciousness, the expression through concepts and categories of those laws and forms in accordance with which the process of thinking 'in itself' (*an sich*) took place. In logic it also became the *object for itself*.

In logic thought had consequently to become the same 'for itself' as it had earlier been only 'in itself'.

Hegel therefore also formulated the task of bringing logic into line with its *real subject matter*, with *real thought*, with the really universal forms and laws of development of science, technique, and morality.

In other words he wanted to make the subjective consciousness of thought about itself *identical* with its object, with the real universal and necessary (objective) forms and laws of universal (and not individual) thought. That also meant that the principle of the *identity of the subjective and the objective* must be introduced into logic as the highest principle, i.e. the principle that the real forms and laws of thought must be delineated in logic exactly, adequately, and correctly. The principle of the identity of subject and object signified nothing more, and did not signify any 'hypostatization' of the forms of subjective thought, because one and the same thought was both object and subject in logic, and it was a matter of the agreement, coincidence, and identity of this thought (as consciously performed activity) with itself as unconsciously performed productive activity, or as activity hitherto taking place with a false consciousness of its own actions.

In defending the *objectivity* of logical forms Hegel of course stood head and shoulders above (and closer to materialism) than all those who

up to the present have reproached him with having ‘hypostatised’ logical forms in order to defend their version of the identity of thought and object as a purely conventional principle, as the principle of the identity of sign and thing designated, of the concept and that which is thought in it. Hegel was 100 per cent right in his critique of the subjective idealist version of the logical and of its objectivity (as merely the agreement of all thinking individuals, as merely the identity – read *equality* of all the schemas by which each Ego taken separately operated). His critique not only hit at Kant, Fichte, and Schelling, but also strikes all today’s Neopositivists.

(Marx, incidentally, also defined the categories of political economy as ‘objective thought-forms’: ‘They are the socially valid, and therefore objective thought-forms. ...’¹⁰²)

Thus the statement that there was no difference for logic between the subjective and the objective did not mean anything else on Hegel’s lips than an affirmation that logic must consider, within itself, within its own theory, and link together in one system, literally *all* the logical schemas of thought activity, beginning with the categories and finishing up with the figures of judgments and conclusions. And within it there must be room both for those schemas that prior to Kant were considered simply determinations of things outside consciousness and for those that were usually considered to be ‘specific’ to consciousness and had allegedly *no* relation to things outside the mind.

Hegel did not dream of repudiating the differences between the categorial schemas given in the determinations of categories and the figures of formal logic, of course; but he did require them to be explained and disclosed within logic itself and not to be presumed in advance, uncritically borrowed from the old metaphysic and its corresponding logic. He required the one and the other to be included in logic in critically rethought form.

‘The relation of such forms as concept, judgment, and conclusion to other forms like causality, etc., can only be discovered within logic itself.’¹⁰³

102 Marx, “Capital,” Vol. I, *MECW* vol. 35 p 537.

103 Hegel, *Op. cit.*, §50.

Hegel thus did not include the determinations of things as they existed outside the mind or in everyday consciousness in logic at all, but solely those determinations that appeared to the mind in *science*, and in theoretical consciousness, that were 'posited' or formulated by *thought itself*. And since science was the realised force (faculty) of thought, materialised mental, theoretical labour, he also saw primarily 'objectified' *determinations of thought* in the determinations of things.

The requirement of including all *categories* in logic was therefore equivalent to requiring a critical analysis to be made of those *activities* of thought that were materialised or objectified in the concepts of the old metaphysic, and to requiring disclosure of the *logic of thought* that was earlier realised in the form of various schemas of the universe, and so to requiring a critical understanding of all the categories that the old logic had taken over quite uncritically from ontological systems.

Hegel thus did not go outside the framework of the subject matter of logic at all but only beyond the limits of the notions of earlier logicians about these limits. While remaining within the boundaries of the investigation of thought, and only of thought, he nevertheless saw more within those boundaries than previous logicians, and saw those logical (universal) schemas of developing thought that the old logic had not considered universal at all and had therefore not included in the theory. Logic thus proved to be pinned to discovery and investigation of the *objective* laws governing the subjective activity of individuals, and those forms in which, whether or not the individuals so wished it, or whether or not they realised it, they were forced, insofar in general as they thought, to express the results of their subjective efforts.

That is in what Hegel saw the true difference between the real *laws* of thought and the rules that the old logic had promoted to the rank of laws. Man can break rules, unlike laws, and does so at every step, thus demonstrating that they are not laws. Because laws cannot be broken, they constitute the determinateness of the object, which cannot be omitted without the object itself, in this case *thought*, ceasing to exist.

And if man thinks, then his activities are subordinated to law and cannot overstep its bounds, although he may at the same time break the rules in the most flagrant way. A law can be 'broken' in one way only, by ceasing to think, i.e. by escaping from the realm that is governed by the laws of thought and where they operate as inexorably as the law of gravitation in the world of spatially determined bodies. But for man such a

‘way out’ is equivalent to overstepping the bounds of human existence in general.

Hegel also showed that the real development of determinations, i.e. the real forward movement of thought, even in the simplest cases, not to mention the process of development of science, technique, and morality, took place precisely through breach (or removal) of all the rules that had been established for thought by the old logic, through their dialectical negation. But the constant *negation* of the rules established by conscious thought for itself got out of control, was not aware of itself, and proved to be a fact *outside thought*, although it took place within the latter. Thought had this fact ‘in itself’ but not ‘for itself’.

But as soon as this fact was recognised as a universal and necessary logical thought-form, it was also transformed into a *fact of consciousness*, a fact of conscious thought, and the latter became *consciously* dialectical. Previously it had only been so ‘in itself’, i.e. despite its own consciousness of itself. But now it became ‘for itself’ precisely what it had previously been only ‘in itself’.

The subject matter of logic consequently could not merely be the forms that had already been realised or apprehended, and had already been included in existing consciousness (in textbooks of logic and metaphysics). It was impossible to grasp them *ready-made*, or to classify them. They had to be brought out in the very course of reasoning about them, in the course of actual thinking about thought.

And when Kant considered the forms of thought as some ready-made object, already depicted (realised, comprehended), his logic represented only an uncritical classification of existing notions about thought.

But if logic was to be a science, it must be a critical, systematic investigation that did not accept a single determination on faith, and unproved by thought, i.e. without being reproduced by it quite consciously. In this investigation *criticism* of the thought-forms known to cultivated thinking was only possible and thinkable as *self-criticism*. The schemas, rules, forms, principles, and laws of this thought were here subjected to criticism not by comparing them with some object lying outside them, but solely by bringing out the dialectic they included in themselves and which was discovered immediately as soon as we began in general to think, rigorously and fully realising what we were doing and how we were doing it.

In that way, too, the very identity of the forms of cultivated thought with the forms of the unconsciously performed actions of the intellect

must be carried out, actions to which thought had had to submit during the historical process of its realisation in the form of science, technique, art and morality. Logic was nothing else (or rather should be nothing else) than the proper apprehension of those forms and laws within which the real thinking of people took place. The identity of thought and the conceivable, as the principle of the logical development and construction of logic, signified nothing more.

It was merely a matter of this, that the schemas of *cultivated thought* (i.e. of the processes taking place in the consciousness of the individual) should coincide with those of the structure of the science in the movement of which the individual was involved, i.e. with the 'logic' dictated by its content. If the schema of the activity of a theoretician coincided with that of the development of his science, and the science was thus developed through his activity, Hegel would attest the *logicality* of his activity, i.e. the *identity* of his thinking with that impersonal, universal process which we also call the development of science. Logic recognised the activities of such a theoretician as logical also when they were even formally not quite irreproachable from the standpoint of the canons of the old logic.

Hegel therefore began to consider all the categories (of quality, quantity, measure, causality, probability, necessity, the general and the particular, and so on and so forth) in quite a new way. For him they were not at all the most general determinations of the things given in intuition or contemplation or in direct experience to each individual, not transcendental schemas of synthesis directly inherent (i.e. inborn) in each individual consciousness (as Kant, Fichte, and Schelling had in fact treated them). It was impossible to discover these thought-forms in the separate consciousness taken in isolation, within the individual Ego. They were there at best only 'in themselves', only in the form of unrealised tendencies and so not brought to awareness. Categories were only discovered and demonstrated their determinations through the historically developing scientific, technical, and moral 'perfecting' of the human race, because only in it, and not in the experience of the isolated individual, did thought become 'for itself' what it had been 'in itself'.

Categories themselves, in the individual's own experience (were revealed in action, in processing of the data of perception) not in the whole fullness and dialectical complexity of their composition and connections but only in abstract, one-sided aspects. It was therefore impossible to derive them from analysis of the experience of the isolated individual.

They were only discovered through the very complex process of the interaction of a mass of single minds mutually correcting each other in discussion, debate, and confrontations, i.e. through a frankly dialectical process that, like a huge centrifuge, ultimately separated the purely objective schemas of thought from the purely subjective (in the sense of individual, arbitrary) schemas of activity, and as a result crystallised out logic, a system of determinations of purely universal, impersonal, and featureless thought in general.

Categories were therefore also universal forms of the origin of any object in *thought*, gradually depicted in the aggregate scientific consciousness of humanity. They were universal determinations of the object *as and how* it appeared in the eyes of science, in the ether of 'universal thought'. Hegel consented to call determinations of things only those determinations that had been developed by science, by active thought. They were, therefore, none other than thought-forms realised in concrete material, determinations of thought embodied in the object, i.e. in the scientific concept of the external thing. Hegel, therefore, and only therefore, also spoke of the identity of thought and object and defined the object as a concept realised in sensuous, physical material.

The determinations of categories, naturally, could also function as determinations of things in the contemplation (experience) of the individual; not of every individual, however, but only of those who in the course of their education had mastered the historical experience of humanity, and 'reproduced' in their individual consciousness the path taken by human thought (of course, only in its main, decisive features and schemas). Categories were the forms of organisation of this experience (described by Hegel in his *Phenomenology of Mind*).

Categories were thus universal forms of the reconstruction, reproduction, in the *consciousness of the individual* of those objects that had been created before him by the collective efforts of past generations of thinking beings, by the power of their collective, impersonal thought. In individually repeating the experience of humanity, which had created the world of spiritual and material culture surrounding him from the cradle, this individual also repeated that which had been done before him and for him by the 'universal spirit', and so acted according to the same laws and in the same forms as the impersonal 'universal spirit' of humanity. That means that categories appeared at once as universal schemas of the scientific formation of the individual consciousness, rising gradually from the zero level of its erudition to the highest stages of spiritual culture at

the given moment, and as schemas of the individual mastery (reproduction) of the whole world of images created by the thought of preceding generations and standing opposed to the individual as a quite objective world of spiritual and material culture, the world of the concepts of science, technique and morality.

This world was the materialised thought of humanity, realised in the product, was alienated thought in general; and the individual had to de-objectify, and arrogate to himself, the modes of activity that were realised in it, and it was in that the process of his education properly consisted. In the trained mind categories actually functioned as active forms of a concept. When the individual had them in his experience, and made them forms of his own activity, he also possessed them, and knew and realised them, *as thought-forms*. Otherwise they remained only *general forms of the things* given in contemplation and representation, and counterposed to thought as a reality existing outside it and independently of it.

With this was linked the naive fetishism that directly accepted the *available* concepts and notions of science about things, the norms of morals and justice, the forms of the state and political system and the similar products of the thinking of people who had objectified their own conscious activity in them, for purely objective determinations of things in themselves. It accepted them as such only because it *did not know* that they had not been created without the involvement of thought, and did not know *how*, moreover, they were produced by thought. It could not reproduce or repeat the process of thought that had brought them into being and therefore, naturally, considered them eternal and unalterable determinations of things in themselves, and the expression of their essence. It believed quite uncritically, on trust, everything that it was told about these things in the name of science, the state and God. It believed not only that these things *appeared* so today in the eyes of the thinking person but also that they were really so.

Hegel's conception of thought (in the context of logic) thus of necessity also included the process of the 'objectification of thought' (*Vergegenständlichung oder Entäusserung des Denkens*), i.e. its sense-object, practical realisation through action, in sensuous-physical material, in the world of sensuously contemplated (intuited) things. Practice, the process of activity on sense objects that altered things in accordance with a concept, in accordance with plans matured in the womb of subjective thought, began to be considered here as just as important a level in the development of

thought and understanding, as the subjective-mental act of reasoning (according to the rules) expressed in speech.

Hegel thus directly introduced practice into logic, and made a fundamental advance in the understanding of thought and in the science of thought.

Since thought outwardly expressed itself (*sich entäußert, sich entfremdet*, i.e. ‘alienates itself’, ‘makes itself something outside itself’) not only in the form of speech but also in real actions and in people’s deeds, it could be judged much better ‘by its fruits’ than by the notions that it created about itself. Thought, therefore, that was realised in people’s actual actions also proved to be the true criterion of the correctness of those subjective-mental acts that were outwardly expressed only in words, in speeches, and in books.

6. Feuerbach – Once More about the Principle of Constructing a Logic: Idealism or Materialism?

So far we have spoken almost exclusively about Hegel’s positive gains, which constituted an epoch in logic as a science. Let us now touch on the historically inevitable ‘costs of production’ connected with the idealism of Hegel’s conception of thought, and on the defects in his logic that do not permit us to adopt his conception *in toto*, and that can only be surmounted by developing materialist philosophy.

Historically things developed in such a way that Feuerbach was the first person in Germany to speak about the ‘costs of production’ of Hegelian idealism.

Like every materialist Feuerbach fought the dualist opposing of thought to being as the initial principle of philosophy. In the course of his reasoning, therefore, he naturally reproduced Spinoza’s decisive arguments against Cartesian dualism. This line of polemic, it is true, has to be deduced by analysis, since Feuerbach had in mind not only dualism in the pure form in which it was expressed by Kant, but also the philosophy of Fichte, Schelling, and Hegel, i.e. the attempts systematically made to overcome dualism ‘from the right’, in the form of idealistic monism. Feuerbach strove, however, to show that the surmounting of dualism in this case inevitably remained fictitious, formal, and verbal and that idealism in general did not, and could not, encroach on the fundamental premises of the Kantian system. In Schelling and Hegel, therefore, he primarily considered the unsurmounted Kant. ‘The Hegelian philosophy

is the abolition of the contradiction of thought and being as *Kant* in particular expressed it, but, mark you, only its abolition ... within *one* element, *within* thought'.¹⁰⁴

As a matter of fact, the so-called philosophy of absolute identity was a philosophy of the *identity of thinking in itself*; as before there was an unfilled gap between thought and being outside thought. The problem seemed to be resolved only because conceivable being, i.e. being in the form in which it had already been expressed in thought, had been put everywhere in the place of real being. Under the grandiose, profoundly thought-out construction of the Hegelian philosophy, therefore, there was hidden as a matter of fact an empty tautology; we thought the surrounding world as and how we thought it.

So the philosophy of Schelling and Hegel had not, in fact, established any identity of thought and being and not just an 'absolute' one, because 'being as such' – free independent self-sufficient being existing outside and independently of thought – had simply not been taken into account in it, and remained something wholly immaterial and undetermined.

The fundamental principle of Kantian dualism thus remained untouched. The thinking mind was considered from the very outset as something absolutely opposed to everything sensuous, corporeal, and material, as a special immaterial being, organised in itself and formed by immanent logical laws and schemas as something independent and self-sufficient. Hegel's *Logic* also represented thought as the activity of such a supernatural and extraphysical subject, which was then forced to enter into special relations of 'mediation' from outside with nature and man so as to shape them in its own image and likeness.

Such a presentation of the thinking mind of necessity presupposed, in addition, that nature and man, as the 'opposites' of the mind, or spirit, as the object and material of its moulding activity, were represented as something passive and amorphous in themselves. Only as a result of the moulding activity of the thinking spirit did nature and man become what they were and acquire all their well-known, concrete forms. Moreover, nothing other was represented in fact, as the product of the activity of the spirit, than the empirically obvious state of affairs in the real world; and the whole complicated magic of mediation once more merely served, in

104 Ludwig Feuerbach, "Vorläufige Thesen zur Reform der Philosophie," in *Kleinere Schriften II (1839-1846)*, Berlin 1970, p 257.

the guise of a 'gift of God', to return the same determinations to man and nature that had been previously taken from them by the act of abstraction. Without this preliminary 'robbery' of man and nature the spiritualistic philosophy could not have attributed a single one of its very impoverished determinations to the thinking spirit.

In this interpretation of the problem of the relation of thought and being, Feuerbach above all saw a scholastically refurbished, 'rationalised' theology. The absolute thinking spirit of spiritualism, like the Biblical God, was a fantastic creature, constructed out of determinations alienated from man by an act of abstraction. The thinking about which Hegelian logic was concerned was, in fact, human thought, but abstracted from man and counterposed to him as the activity of a special being existing outside him.

Proceeding from that quite correct understanding (in general and on the whole) of the root errors of Hegelian idealism (and thereby of idealism in general, since the Hegelian system was the most consistent expression of the idealist point of view), Feuerbach rethought the very posing of the problem of the relation of thought to being. It was impossible, he showed, to ask how 'thought in general' was related to 'Being in general', since that already presupposed that thought (in its form alienated from man) was looked upon as something independent contrasted with being from outside. But being, however, understood not in Hegel's way, i.e. not as an abstract, logical category, not as being in thought, but as the real, sensuously objective world of nature and man, already included thought. Being included not only stones, trees, and stars, but also the thinking body of man.

Thus, to represent being as something deprived of thought meant to represent it incorrectly, to exclude man, capable of thinking, from it in advance; and that meant to deprive being of one of its most important 'predicates', to think of it 'imperfectly'. The argument given here repeated the course of Spinoza's thought, was its developed interpretation, its translation into the language of a more modern philosophical terminology.

The whole problem thus boiled down to resolving whether thought could, in general, be distinguished from man as a material, sensuously objective creature, and to fixing it and considering it from the very beginning as something independent, in contrast to everything corporeal, sensuous, and material; or whether thought should be understood as a

property ('predicate') inseparable from man. Feuerbach considered the decisive argument in favour of materialism to be the arguments of natural science, medicine, and physiology. Materialism, relying on medicine, was also 'Archimedes' fulcrum in the dispute between materialism and spiritualism, for it was a matter here, in the final count, not of the divisibility or non-divisibility of matter, but of the divisibility or non-divisibility of man, not of the being or not-being of God but of the being or not-being of man, not of the eternity or temporality of matter but of the eternity or temporality of man, not of matter scattered and extended outside man in heaven and earth but of matter concentrated in the human skull. In short, it is a matter, in this dispute, so long as it is not conducted in mad confusion, only of the head of man. It alone is both the source and the goal and end of this dispute'.¹⁰⁵

Feuerbach considered that the basic problem of philosophy was thus, and only thus, put on a firm footing of fact, and so, naturally, resolved in favour of materialism.

Thought was the real function of the living brain, and was inseparable from the matter of the brain. If we had brain matter in mind, then it was quite ridiculous in general to ask how thought was 'linked' with it, how the one was connected with the other and 'mediated' it, because there simply was no 'one' and 'the other' here, but only one and the same thing; *the real being of the living brain was also thought, and real thought was the being of the living brain.*

That fact, expressed in philosophical categories, revealed 'the *immediate* unity of soul and body, which admits of nothing in the middle between them, and leaves no room for distinction or even contrast between material and immaterial being, is consequently the point where matter thinks and the body is mind, and conversely the mind is body and thought is matter'.¹⁰⁶ The 'identity' of thought and being, so understood, must also (according to Feuerbach) constitute an axiom of true philosophy, i.e. a fact not requiring scholastic proof and 'mediation'.

Feuerbach did not reproach Schelling and Hegel at all for having recognised in general the unity ('identity') of thought and being in the *thinking man*, but only for having tried to depict it as the *final* unity of oppo-

105 Feuerbach, "On Spiritualism and Materialism," *Kleinere Schriften IV*, Berlin 1972, p 125.

106 *Ibid.*, pp 152-53.

sites, as the *product* of the joining together of an insubstantial thinking spirit and unthinking flesh. He reproached them with thus having tried to stick together a picture of the real fact from two equally false abstractions, of proceeding from illusion to fact and from abstraction to reality.

The materialist, Feuerbach affirmed, must proceed in the opposite way, taking as his starting point the directly given fact, in order to explain the origin of those false abstractions that idealists uncritically accepted as facts.

Schelling and Hegel started from the thesis of the initial opposition of incorporeal thought and of flesh without thought in order ultimately to reach the unity of the opposites. That was the false path of spiritualism. The materialist must proceed from the factual direct unity (indivisibility) of the human individual in order to understand and show how and why the illusion of an imaginary opposition of thinking and corporeal being arose in the head of this individual.

The illusion of the opposition of the thinking spirit and the flesh in general, was consequently a purely subjective fact, i.e. a fact existing only in the head of the human individual, a purely psychological fact. It arose for a quite natural reason, precisely because the thinking brain was the same sort of material, sensuous organ as all of man's other organs.

The position was the same as with the eye, the organ of vision. If I saw stars by means of the eye, then quite understandably I could not at the same time see the eye itself; and conversely, if I wanted to examine the eye, even in a mirror, I would have to turn my gaze away from the stars. Vision would be impossible in general if I were to see all the detail of the structure of the eye itself at the same time as the object, i.e. all the inner material conditions by means of which this vision was effected. In the same way, too, 'the brain could not think if, in thinking, the organic foundation and conditions of thought became objects of its consciousness',¹⁰⁷ i.e. the material structures and processes themselves by means of which thinking took place in the body of the brain. As structures they became objects only for physiology and anatomy. As the organ of thought the brain was structurally a functionally adapted exactly so as to perform activity directed toward external objects, so as to think *not about itself but about the other, about the objective*. And it was quite natural that 'the organ gets lost, and forgets and disavows itself in the *opus fervet* (the work

107 Feuerbach, *Ibid.*, p 123.

heat) of its own activity, the activity in its objects'.¹⁰⁸ Hence, too, arose the illusion of the complete independence of everything corporeal, material, and sensuous, including the brain, from thought.

But the illusion is understandably no argument in favour of idealism. Of itself, in spite of the inevitable illusions, thought always remained the material activity of a material organ, a material process. 'What *for me*, or *subjectively*, is a purely mental, immaterial, unsensuous act, *in itself* or objectively is a material, sensuous act'.¹⁰⁹ 'In the brain-act, as the highest act, arbitrary, subjective, mental activity, and involuntary, objective material activity are identical and indistinguishable'.¹¹⁰

Thus the logic of the struggle against dualism and spiritualism directly forced Feuerbach, in essence, to express a dialectical proposition to recognise that the living, thinking brain was an 'object' in which there proved to be directly identical oppositions, namely, thought and sensuously objective being, thinking and what was thought, the ideal and the real, the spiritual and the material, the subjective and the objective. The thinking brain was the special 'object' that could be properly expressed in philosophical categories only through directly identifying mutually exclusive determinations, through a thesis that embraced a direct unity, i.e. identity, of opposing categories.

Not having mastered dialectics in its general form, Feuerbach, it is true, often wavered, constantly admitting determinations that he was then forced to correct, supplement, and make specific; as a result his exposition was made rather nebulous and ambiguous, but the essence remained the same.

It was just because thinking was a material process, the material activity of a material organ directed to material objects, that the products of that activity (thoughts) could be correlated, compared, and collated with 'things in themselves', with things outside thought, which everybody did at every step without the aid of the mediating activity of God or an absolute spirit. Concepts and images existed in the same space and in the same time as real things; and *one and the same subject* thought about and sensuously perceived the surrounding world, and that subject was pre-

108 Feuerbach, *Op. cit.*, p 124.

109 Feuerbach, "Wider den Dualismus von Leib und Seele, Fleisch und Geist," *Kleinere Schriften III*, Berlin 1971, p 125.

110 *Ibid.*

cisely the human individual, the same individual who really lived and existed as a sensuously objective creature. The unity (indivisibility) of the object, of the surrounding, sensuously objective world, corresponded to the unity (indivisibility) of this subject. Just as a thinking and sensuously contemplating person was one and the same person and not two different beings coordinating their inter-relations with the help of God or the absolute spirit; so the world thought of, on the one hand, and sensuously contemplated, on the other hand, were again *one and the same world* (namely the real one), and not two different worlds between which one had to look for a special passage or bridge, or mediation, resorting to the aid of a divine principle.

That was why determinations of the world in thought (logical determinations) were directly and spontaneously determinations of the sensuously contemplated or intuited world. And it was absurd to ask what was the special relation of the system of logical determinations to the sensuously given world, to the world in intuition and representation. A logical system was nothing else than the expression of the determinateness of the sensuously contemplated or intuited world. The question of the relation of logical and metaphysics was also an illusory and sham question. There was no such relation, because logic and metaphysics were spontaneously and directly *one and the same*. The universal determinations of the world in thought (logical determinations, categories) were nothing else than the expression of the abstract, universal determinateness of things given in intuition, because both thought and intuition (contemplation) had to do with one and the same real world.

And if by logic was understood not a collection of rules for the expression of thought in speech, but the science of the laws of development of real thinking, then, similarly, by logical forms must be understood not the abstract forms of sentences and expressions, but the abstract, universal forms of the real content of thought, i.e. of the real world sensuously given to man. "The so-called *logical* forms of judgments and conclusions are therefore not *active* thought-forms, not *causal* conditions of reason. They *presuppose* the metaphysical concepts of universality, singularity, and particularity, the whole and the parts, necessity, foundation and consequence; they are given only through these concepts; they are consequently arbitrary, derived, not original thought-forms. Only metaphysical conditions or relations are logical ones – only metaphysics as the science of categories is the true *esoteric* logic – that was Hegel's profound thought. The so-called logical forms are only *abstract, elementary*

speech-forms; but speech is not thought, otherwise the greatest chatter-box would be the greatest thinker'.¹¹¹

Thus Feuerbach agreed completely with Hegel on logical forms and laws being absolutely identical with metaphysical ones, although he understood the reason and the grounds for that circumstance quite differently from the idealist Hegel. Here we have a clearly expressed materialist interpretation of the principle of the identity of the laws and forms of thought and being. From the materialist point of view it states that logical forms and patterns are nothing else than *realised universal forms and patterns of being*, of the real world sensuously given to man.

That is the reason why Neokantians like Bernstein called consistent materialism spiritualism inside out. Nevertheless Feuerbach's interpretation of the identity of thought and being remains true and indisputable for any materialist, including the Marxist, but only, of course, in the most general form, so long as we are concerned with the fundamentals of logic and the theory of knowledge, and not with the details of the knowledge built up on that foundation. Since Feuerbach later began a specifically anthropological concretisation of general materialist truths, arguments developed in his exposition that were obviously weak not only in comparison with the Marxist-Leninist solution of the problem, but even in comparison with Spinoza's conception; and they subsequently gave vulgar materialists, positivists, and even Neokantians occasion to consider him their predecessor and their – though not completely consistent – ally.

A rather more detailed analysis of the features of Feuerbach's treatment of the identity of thinking and being is not without interest for two reasons: (1) because it was materialism; and (2) because it was materialism without dialectics.

The materialism consisted in this case in an unqualified recognition of the fact that thought was the mode of the real existence of the material body, the activity of the thinking body in real space and time. The materialism appeared, furthermore, in recognition of the identity of the mentally comprehended and sensuously perceived world, Feuerbach's materialism, finally, was expressed in man's being recognised as the subject of thought, that same man who lived in the real world, and not a special being hovering outside the world, contemplating and comprehending it

111 Feuerbach, "Zur Kritik der Hegelischen Philosophie," Berlin 1955, p 35.

‘from outside’. All those are fundamental tenets of materialism in general, and consequently also of dialectical materialism.

What then were the weaknesses of Feuerbach’s position? In general, and on the whole, they were the same as those of all pre-Marxian materialism, and primarily incomprehension of the role of practical activity as activity altering nature. For even Spinoza had in mind only the movement of the thinking body along the given contours of natural bodies and lost sight of this moment, a point that Fichte made against him (and so in general against the whole form of materialism represented by him), namely that man (the thinking body) did not move along ready-made forms and contours presented by nature but actively created new forms, not inherent in nature, and moved along them, overcoming the ‘resistance’ of the external world.

‘The chief defect of all materialism up to now (including Feuerbach’s) is that the object, reality, what we apprehend through our senses, is understood only in the form of the *subject or contemplation*;¹¹² but not as *sensuous human activity, as practice*, not subjectively. Hence in opposition to materialism the *active side* was developed abstractly by idealism which of course does not know real sensuous activity as such. Feuerbach wants sensuous objects, really distinguished from the objects of thought: but he does not understand human activity itself as *objective activity*’.¹¹³

Hence it followed that man (the subject of cognition) was considered the passive side of the object-subject relation, as the determined member of this inter-relation. Furthermore, man was abstracted here from the combinations of social relations and transformed into an isolated individual. The man-environment relations were therefore interpreted as the relations of the individual to all the rest, to everything that lay *outside the individual brain* and existed *independently of it*. But outside the individual, and independently of his will and consciousness, there existed not only nature

112 Note by the translator, Roy Pascal (*ibid.*, p 207): ‘*Anschauung*. I have used “contemplation,” for this term. This the normal translation is somewhat ambiguous, and should be understood as “sense-perception” in strong contrast to its meaning of “meditation”.’

113 Marx, “Theses on Feuerbach,” translated by Roy Pascal, c.f. *MECW* vol. 5, p 7. Pascal notes: ‘Activity through objects’.

but also the social historical environment, the world of things created by man's labour, and the system of relations between man and man, developed in the labour process. In other words, not only did nature by itself ('in itself') lie outside the individual but also humanised nature, altered by labour. For Feuerbach the surrounding world or environment given in intuition or contemplation was taken as the starting point, and its premises were not investigated.

When, therefore, he faced the problem of where and how man (the thinking body) was in immediate union (contact) with the environment, he answered: in intuition, *in the individual's contemplation*, since it was the individual that he always had in mind. That was the root of all his weaknesses, because in contemplation there was given the individual the product of the activity of other individuals interacting among themselves in the process of producing material life, and those properties and forms of nature that had already been transformed into the properties and forms of the activity of man, its object and its product. The 'nature as such' that Feuerbach wished to 'contemplate' did not, as a matter of fact, lie within his field of view, because this 'nature, the nature that preceded human activity, is not by any means the nature in which Feuerbach lives, nor the nature which to-day no longer exists anywhere (except perhaps on a few Australian coral-islands of recent origin) and which, therefore, does not exist for Feuerbach'.¹¹⁴

Feuerbach's attention was also diverted from the real complexities of the social relations between theory and practice, from the division of labour that 'alienated' thought (in the form of science) from the majority of individuals and converted it into a force existing independently of them and outside them. He therefore saw nothing in the thought idolised by Hegel (i.e. science) than a certain modification of religious illusions.

114 Marx, "The German Ideology," *MECW* vol. 5, p 40.

-- Certain Problems of the
Marxist-Leninist Theory of Dialectics --

7. A Contribution to the Problem of a Dialectical Materialistic Critique of Objective Idealism

In order to overcome the weaknesses, or rather defects, of any philosophical system, it is necessary to understand them. Marx demonstrated this sort of ‘understanding’ in relation to Hegel, and thereby went much further in matters of logic than either Hegel or his materialist antipode Feuerbach.

Marx, Engels, and Lenin showed both the historical contribution of Hegel and the historically conditioned limitations of his scientific advances, the clearly drawn boundary across which the Hegelian dialectic could not step, and the illusions, whose power it was incapable of overcoming despite all the strength of its creator’s mind. Hegel’s greatness, like his limitations, was due on the whole to his having exhausted the possibilities of developing dialectics on the basis of idealism, within the limits of the premises that idealism imposed on scientific thinking. Irrespective of his intentions, Hegel showed, with exceptional clarity, that idealism led thinking up a blind alley and doomed even dialectically enlightened thought to hopeless circling within itself, to an endless procedure of ‘self-expression’ and ‘self-consciousness’. For Hegel, (precisely because he was a most consistent and unhypocritical idealist, who thereby disclosed the secret of every other, inconsistent and incomplete idealism) ‘being’, i.e. the world of nature and history existing outside thought and independently of it, was inevitably transformed into a mere pretext for demonstrating the logical art, into an inexhaustible reservoir of ‘examples’ confirming over and over again the same schemas and categories of logic. As the young Marx remarked, ‘the matter of logic’ (*die Sache der Logik*) fenced the ‘logic of the matter’ (*die Logik der Sache*)¹ off from Hegel, and therefore both the Prussian monarch and the louse on the monarch’s head could equally well serve the idealist dialectician as ‘examples’ illustrating the category ‘real individuality in and for itself’.

1 “Contribution to the Critique of Hegel’s Philosophy of Right,” *MECW* vol. 3, p 91.

With such an approach both a boiling tea-kettle and the Great French Revolution were only 'examples' illustrating the relation of the categories of quality and quantity; but any empirical reality impinging on the eye, however fortuitous it might be in itself, was thereby converted into an external embodiment of absolute reason, into one of the necessary dialectical stages of its self-differentiation.

The profound flaws in the Hegelian dialectic were directly linked with idealism, due to which the dialectic was readily transformed into ingenious, logically subtle apologies for everything that existed. It is therefore necessary to look into all these circumstances more closely.

Hegel actually counterposed man and his real thought to impersonal, featureless – 'absolute' – thought as some force existing for ages, in accordance with which the act of 'divine creation of the world and man' had occurred. He also understood logic as 'absolute form', in relation to which the real world and real human thought proved to be something essentially derivative, secondary and created.

In that, too, the idealism of Hegel's conception of thinking was revealed; and it was the specifically Hegelian objective idealism that converted thought into some new god, into some supernatural force existing outside man and dominating him. This specifically Hegelian illusion, however, did not at all express an idea simply taken uncritically by Hegel from religion, or a simple atavism of religious consciousness, as Feuerbach suggested, but a much more profound and serious circumstance.

The fact is that the Hegelian conception of thought represented an uncritical description of the real position of things formed on the soil of a narrowly professional form of the division of social labour, that is to say, on the division of mental work from physical labour, from immediately practical, sensuously objective activity.

Under the spontaneously developing division of social labour there arose of necessity a peculiar inversion of the real relations between human individuals and their collective forces and collectively developed faculties, i.e. the universal (social) means of the activity, an inversion known in philosophy as *estrangement* or *alienation*. Here, in social reality, and not at all simply in the fantasies of religiously minded people and idealist philosophers, universal (collectively realised) modes of action were organised as special social institutions, established in the form of trades and professions, and of a kind of caste with its own special rituals,

language, traditions, and other 'immanent' structures of a quite impersonal and featureless character.

As a result, the separate human individual did not prove to be the bearer, i.e. to be the subject, of this or that universal faculty (active power), but, on the contrary, this active power, which was becoming more and more estranged from him, appeared as the subject, dictating the means and forms of his occupation to each individual from outside. The individual as such was thus transformed into a kind of slave, into a 'speaking tool' of alienated universally human forces and faculties, means of activity personified as money and capital, and further as the state, law, religion, and so on.

The same fate also befell *thought*. It, too, became a *special occupation*, the lot for life of professional scholars, of professionals in mental, theoretical work. *Science is thought transformed in certain conditions into a special profession*. Given universal alienation, thought achieved the heights and levels of development needed for society as a whole only in the sphere of science (i.e. within the community of scholars), and in that form was really *opposed* to the majority of human beings and not simply opposed to them but also dictating to them what they must do from the standpoint of science, and how they must do it, and what and how they must think, etc., etc. The scientist, the professional theoretician, lays down the law to them not in his own name, personally, but in the name of Science, in the name of the Concept, in the name of an absolutely universal, collective, impersonal power, appearing before other people as its trusted representative and plenipotentiary.

On that soil, too, there arose all the specific illusions of the professionals of mental, theoretical work, illusions that acquired their most conscious expression precisely in the philosophy of objective idealism, i.e. of the self-consciousness of alienated thought.

It will readily be noted that Hegel, in his logic, quite exactly expressed, in scholastically disguised form, the fundamental features of human life activity: man's faculty (as a thinking creature) to look at himself 'from outside' as it were, as something 'other', as a special object; or in other words to transform *the schemas of his own activity into its own object*. (That is the very special feature of man which the young Marx recognised as follows, and that in the course of a critique of Hegel: "The animal is immediately one with its life activity. It does not distinguish itself from it. It is *its life activity*. Man makes his life-activity itself the object of his will

and of his consciousness. He has conscious life activity. It is not a determination with which he directly merges²).

Since Hegel looked upon this feature of human life activity exclusively through the *eyes of logic*, he registered it solely to the extent that it was already transformed into a scheme of thought, into a logical schema, into a rule in accordance with which man more or less consciously built this or that specific activity (be it in the material of language or something else). He therefore registered things, and the position of things (acts) located outside the individual's consciousness and beyond his will (*Dinge und Sache*), exclusively as moments, as metamorphoses of thought (subjective activity), realised and realisable in natural, physical material, including in that also the organic body of man himself. The special feature of human life activity described above in Marx's words also appeared in the Hegelian representation as a *scheme of thought* realised by man, as a logical figure.

The real picture of human life activity obtained here is a topsy-turvy, upside-down representation. In reality man thinks because that is his real life activity. Hegel said the contrary, that real human life activity was such because man thought in accordance with a definite schema. All determinations of human life activity, naturally, and through it the position of things outside man's head, were only fixed here insofar as they were 'posited by thought', and appeared *as the result* of thought.

This is only natural because the logician who specially studied thought was no longer interested in things (or the position of things) as such, as a reality existing before, outside of, and independently of man and his activity (the logician did not look on reality at all as the physicist or biologist, economist or astronomer did), but in things as, and as what, they appeared as a result of the activity of a thinking being, of the subject, as the *product* of thought understood as an activity, the specific product of which was the *concept*.

So Hegel was 'guilty' of remaining a 'pure' logician just there where the standpoint of logic was inadequate. This peculiar professional blindness of the *logician* showed up primarily in the fact that he looked upon practice, i.e. the real, sensuously objective activity of man, *solely* as a criterion of truth, *solely* as the verifying authority for thought, for the

2 "Estranged Labour," *MECW* vol. 3, p 276.

mental, theoretical work completed before and independently of practice, or rather for the results of that work.

Practice there was thus also understood abstractly, was only illuminated from that aspect, and in those characteristics, which it owed in fact to thought, because it was the act of realising a certain intention, plan, idea, concept, or some aim selected in advance, was absolutely not analysed as such in a determination of its own, not dependent on some thought. All the results of people's practical activity – things made by human labour, and historical events and their consequences – were correspondingly only taken into account insofar as they embodied or objectified some idea or another. In a conception of the historical process as a whole such a point of view was understandably the purest ('absolute') idealism. As regards logic, however, the science of thought, it was not only justified but was the sole rational position.

In fact, can we reproach the *logician* for abstracting everything in the most rigorous fashion that had nothing to do with the subject matter of his investigation, and for paying attention to any fact only insofar as it could be understood as the consequence, as the form of disclosure, of his *subject matter*, of the subject matter of *his science*, i.e. of thought? To reproach the professional logician for the fact that the 'matter of logic' concerned him more than the 'logic of the matter', (i.e. the logic of any other concrete sphere of human activity) would be as stupid as to reproach the chemist for excessive attention to the 'matter of chemistry'. But Marx's words above, directed at Hegel, concealed quite another meaning.

The fault of the narrow professional was not at all his rigorous limitation of thought to the framework of the subject matter of his science, but his incapacity to see clearly the boundaries of the competence of his science associated with this limitation of his view of things.

The same applied to Hegel, the typical professional logician. As a logician he was right to look upon a statement or a fact exclusively from the standpoint of the abstract schemas of thought revealed in it, when the logic of any matter interested him only insofar as it was revealed in it in general. The mysticism of Hegel's logic, and at the same time its insidious feature, which Marx called his 'false positivism',³ began where the special standpoint of the logician *ex professo* was adopted and distinguished from

3 "Critique of Hegel's Philosophy in General," *MECW* vol. 3, p 339.

the sole *scientific* standpoint from the heights of which only the 'ultimate', most profound, most cherished, and most important truth accessible in general to man and to humanity was allegedly discovered.

As a logician Hegel was quite right in looking on any phenomenon in the development of human culture as an act disclosing the power of thought. But it was the work of a moment, by adding a little something to that view (admissible and natural in logic), namely that the *essence of the phenomena in themselves* from which the special, logical abstractions were drawn was expressed just in those abstractions, for the truth to be transformed into a lie. The exact results of a chemical investigation of the composition of the colours used to paint the Sistine Madonna would be converted into such a lie the moment the chemist looked on them as the sole scientific explanation of the unique 'synthesis' created by Raphael's brush.

Abstractions that quite precisely expressed (described) the forms and schemas of the flow of thought in all forms of its concrete realisation were immediately and directly passed off as schemas of the process that had *created* the whole diversity of human culture, in which they were discovered. As a result the whole mystique of Hegel's conception of thought was concentrated in a single point. In considering all the manifold forms of human culture as a result of manifestation of the faculty to think that functions in man, he lost any chance of understanding from where in general this unique faculty, and its schemas and rules, appeared in man. By raising thought to the rank of a divine power and force impelling man to historical creation from within, Hegel simply passed off the absence of a reply to this reasonable question as the only possible answer to it.

The sensuously objective activity of the millions of people who by their labour created the body of culture, the self-consciousness of which is scientific thought, remained outside Hegel's field of view, seemed to him the 'prehistory' of thought. The external world therefore appeared as the initial material for producing the concept, as something that had to be processed by means of existing concepts in order to concretise them.

Thought was thus transformed into the only active and creative force, and the external world into its field of application. Naturally, if the sensuously objective activity (practice) of social man was represented *as the consequence*, as the *external objectification of ideas*, plans, and concepts created by thought (i.e. by persons occupied in mental work), it became

in principle impossible to say either what was the source of thought in the head of theoreticians or how it arose.

Thought *was*, Hegel replied; and to ask about its *origin* from something else was to ask a futile question. It *was*, it *operated* in man, and gradually arrived at awareness of its own activities, and of their schemas and laws. Logic was self-consciousness of this creative principle, of this infinite creative power, of this absolute form, which had never arisen from anywhere. In man this creative force was only revealed, objectified, and estranged so as then in logic to cognise itself as such, as the universal creative force.

That was the whole secret of Hegel's objective idealism. In logic, consequently, objective idealism means the absence of any answer whatsoever to the question from whence thought originates. In the form of logic, defined as a system of eternal and absolute schemas of every kind of creative activity, Hegel deified real human thought and its logical forms and patterns.

That was at once the strength and the weakness of his conception of thought and logic. Its strength was that he idolised (i.e. defined as given outside time, as absolute) the nevertheless *real logical forms and laws of human thought* discovered by him through study of human spiritual and material culture. Its weakness was that, for all that, he *idolised* the logical forms and laws of human thought, i.e. declared them absolute, without even allowing the problem of their *origin* to be posed.

The fact was that idealism, i.e. the view of thought as a universal faculty that was only '*aroused*' to self-consciousness in man and did not *arise* in the exact and strict sense from the soil of definite conditions formed outside him and independently of him, led to a number of absolutely unresolvable problems in logic itself.

While making an exceptionally important advance in understanding of the logical forms of thought, Hegel stopped halfway, and even turned back, as soon as he was faced with the question of the inter-relation of sensuously perceived forms of the embodiment of the mind's activity (thought), in which the mind (or spirit) became the object of consideration for itself. Thus he refused to recognise the word (speech, language) as the sole form of the 'effective being of the spirit', of the external disclosure of the creative power of thought. Nevertheless, he continued to consider it the principal, most adequate form, the form in which thought was counterposed to itself.

'In the beginning was the Word' – in respect of human thought (the thinking mind of man) Hegel maintained the Biblical position unsullied, accepting it as something self-evident and making it the basic principle of all subsequent construction, or rather reconstruction, of the development of the thinking spirit to self-consciousness.

The thinking mind of man was first aroused (i e. counterposed itself to everything else) precisely *in the word* and through the word, as the faculty of 'naming', and therefore took shape primarily as the 'kingdom of names' and titles. The *word* also functioned as the first 'objective reality of thought activity'. both in essence and in time, as the initial and *immediate* form of being of the spirit for itself.

This appeared clearly as follows: one 'finite spirit' (the thought of the individual) made itself the subject matter (object) of another, also 'finite', spirit in the word and through the word. Having arisen from the 'mind' as a definitely articulated sound, on being heard the word was again converted into 'spirit', into the state of the thinking mind of another person. The vibrations of the ambient air (the audible word) also proved to be only the pure *mediator* between the two states of the spirit, the mode of the relation of spirit to spirit, or, expressing it in Hegelian language, of the spirit *to itself*.

The word (speech) functioned here as the first tool of the external objectification of thought, which the thinking spirit created 'from itself' in order to become the object for itself (in the image of another thinking spirit). The real tool – the stone axe or cutting tool, scraper or wooden plough – began to appear as the second and secondary, derived tool of the same process of objectification as the sensuously objective *metamorphosis of thought*.

Thus Hegel saw in the word the form of the actual being of the thinking spirit in which the latter manifested its own creative force (faculty) before everything, before and independently of the real moulding of nature by labour. Labour only realised what the thinking spirit had found in itself in the course of *utterance*, in the course of its dialogue with itself. But in this interpretation the *dialogue* proved to be only a *monologue* of the thinking spirit, only its mode of 'manifestation'.

In the *Phenomenology of Mind* all history therefore began with an analysis of the contradiction that arose between thought (insofar as it *expressed itself in the words* 'here' and 'now') and all its other content *not yet expressed in words*. The *Science of Logic* also suggested this schema, and contained the

same, though implicit premise at its very beginning. Thought, it was suggested there, had realised and was realising itself primarily in and through the word. So it was no accident that the consummation of all the ‘phenomenological’ and ‘logical’ history of the thinking spirit consisted in returning to the starting point: the thinking spirit achieved its absolutely exact and perfect representation, naturally in the printed word – in a treatise on logic, in the *Science of Logic*.

Hegel therefore also maintained the following in logic:

“It is in human Language that the Forms of Thought are manifested and laid down in the first instance. In our day it cannot be too often recalled, that what distinguishes man from the beasts is the *faculty of Thought*. Language has penetrated into whatever becomes for man *something inner* – becomes, that is, an idea, something which he makes his very own; – and what man transforms to Language contains concealed, or mixed up with other things, or worked out to clearness – a Category....”⁴

That was the deepest root of Hegel’s idealism. By that step thought as an activity taking place in the head in the form, precisely, of inner speech, was converted into the starting point for understanding all the phenomena of culture, both spiritual and material, including all historical events, social, economic, and political structures, and so on and so forth. The whole world of the products of human labour and all history, then began to be interpreted as a process taking place ‘from the power of thought’. The whole grandiose conception of the history of the estrangement (objectification) of the creative energy of thought and its inverse mastering of the fruits of its labour (disobjectification), which began with the word and completed its cycle in the word, was just the history outlined in the *Science of Logic*.

The clue to Hegel’s conception is not so very complicated. The idea that man *thought initially*, and then only really acted served as the foundation of his schema. Hence also the schema ‘word—act—thing made by the act—again word’ – (this time a verbally expressed report on what had been done). And further, there was a new cycle according to the same schema, but on a new basis, owing to which the movement had the form

⁴ Hegel’s “Science of Logic,” translated by A. V. Miller, Preface, p 31.

not of a circle but of a spiral each turn of which, however, both began and ended at one and the same point, in a word.

The rational kernel and at the same time the mystifying feature of the schema described here are most easily considered by analogy (although it is more than a simple analogy) with the metamorphoses that political economy brings out when analysing commodity-money circulation. Just as accumulated labour concentrated in machines, in the instruments and products of labour, functions in the form of *capital*, in the form of 'self-expanding value', for which the individual capitalist functions as 'executor', so too scientific knowledge, i.e. the *accumulated mental labour* of society functions in the form of Science, i.e. the same sort of impersonal and featureless anonymous force. The individual professional theoretician functions *as the representative* of the self-developing power of knowledge. His social function boils down to being the individual embodiment of the *universal* spiritual wealth accumulated over centuries and millennia of mental labour. He functions as the animated tool of a process that is completed independently of his individual consciousness and his individual will, the process of the increase of knowledge. He does not think here as *such* – Knowledge, which has taken root in his head during his education, 'thinks'. He does not control the concept; rather the Concept controls him, determining both the direction of his research and the modes and forms of his activity.

There is the same *turning upside down* as in the sphere of material production based on exchange value, the same real mystification of the relations between the universal and the particular in which the abstract universal is not an aspect or property of the sensuously concrete (in this case living man) but rather the contrary, the sensuous concrete, individual man proves to be only an abstract, one-sided 'embodiment' of the universal (in this case Knowledge, Concept, Science). This is not simply an analogy with what happens in the world of relations founded on value, but the same social process, only in the sphere of mental rather than material production.

"This inversion, by which the sensibly concrete is regarded as a form of manifestation of the abstract and general, instead of the abstract and general being regarded on the contrary as a property of the concrete, is characteristic of the expression of value. At the same time, it makes the expression of value difficult to understand. If I say: Roman law and German law are both law, that is self-evident. If, on the other hand, I say:

the law, which is an abstraction, is realised as such in Roman law and in German law which are concrete laws, the connection between the abstract and the concrete becomes mystical."⁵

So Hegel's idealism was not in the least the fruit of religious fantasy or of a religiously oriented imagination. It was only an uncritical description of the real state of things, on the soil of which the professional theoretician, the narrow specialist of mental labour, operated (thought). The forms of his philosophy were the practically inevitable illusions (even practically useful) that he inevitably created in his own work, illusions that were fed by the objective position of that work in society, and reflected its position. It was the knowledge acquired by him as concepts immediately in the course of his education, i.e. in the form of verbal-sign expressions, which was *for him* the beginning (starting point) of his specific activity, and the end, its specific *goal*, its real 'entelechy'.

But the analogy we have used enables us also to understand another circumstance, i.e. the mechanism itself of the 'inversion' or 'turning upside down' described above. The pattern of commodity-money circulation is, as we know, expressed by the formula C—M—C. The commodity (C) appears in it as both the *beginning* and the *end* of the cycle, and money (M) as its *mediating link*, as the 'metamorphosis of the commodity'. But at a certain point in the self-closing cyclical movement C—M—C—M—C—M... and so on, money ceases to be a simple 'intermediary', the means of circulation of the mass of commodities and suddenly discloses an enigmatic faculty for 'self-expansion'. Schematically this phenomenon is expressed in the formula as follows: M—C—M'. The Commodity, the *real starting point* of the process as a whole, acquires the former role of money, the role of *intermediary* and *means* of the transient *metamorphosis of money*, in which the latter is embodied in order to complete the act of 'self-expansion'. Money, having acquired so mysterious a property, is also capital, and in the form of the latter acquires 'the occult quality of being able to add value to itself'⁶ and 'suddenly presents itself as substance endowed with an independent motion of its own, a substance of which commodities and money are themselves merely forms'.⁷ In the formula

5 "The Value Form," Appendix to *Capital*, published in *Capital and Class*, No. 4 1978.

6 "Capital," *MECW* vol. 35, p 164.

7 *ibid*, p 159.

M—C—M' value appears as an 'automatically operating subject', as the 'substance-subject' of the whole cyclic movement, constantly returning to its starting point; 'value is here the active factor in a process in which, while continually assuming by turns the form of money and the form of commodities, it at the same time changes in magnitude, gives birth to surplus value, so that the original value spontaneously expands'⁸ and this happens 'in itself'.

In his *Science of Logic*, Hegel recorded the same situation, only not in regard to value but to knowledge (understanding, truth). In fact he dealt with the process of accumulation of knowledge, because the concept is also *accumulated knowledge*, the 'constant capital', so to say, of thought, which always appears in science in the form of the word. Hence, too, the idea of knowledge, analogous to the idea of *value*, as a self-expanding substance, as a subject-substance.

Thus we are dealing not with the abstract fantasies of an idealist but with the same uncritical description of the real process of the production and accumulation of knowledge as the theory of political economy, which takes as the starting point of its explanation an exactly recorded but not understood fact. The fact is that money, appearing as the form of movement of capital, as the starting point and goal of the whole cyclical process of coming back 'to itself', discloses a mysterious, occult faculty for self-expansion and self-development. This fact, left unexplained, becomes mysterious and occult; and a property is ascribed to it that in fact belongs to quite another process that is *expressed* ('reflected') in its form.

In disclosing the secret of the self-expansion of value, i.e. the secret of the production and accumulation of surplus value, in *Capital* Marx employed (and not by chance, but deliberately and consciously) the whole terminology of Hegelian logic given above, and of Hegel's conception of thought. The fact is that the idealist illusion created by Hegel the logician had the same nature as the practically necessary ('practically true') illusions that entrap the mind of man caught up in the process of the creation and accumulation of surplus value, which is not understood by him and takes place independently of his consciousness and will. The logical and socio-historical patterns of the origin of these illusions were objectively and subjectively the same.

⁸ *ibid*, p 164.

For the capitalist a certain sum of money (a certain value *indispensably expressed in money form*) is the starting point of all his further activity as a capitalist, and therefore the *formal goal* of his special activity. From where this sum of money arose, originally, with its occult properties, and how, may have no special interest for him.

Something analogous also happens with the professional theoretician, with the person who represents 'personified' knowledge, science, the concept. For him, the knowledge accumulated by humanity, and recorded moreover in verbal, sign form, also appears simultaneously as the *starting point* and as the *goal* of his special work.

From his point of view, naturally, the concept makes itself out to be a 'self-developing substance', 'an automatically operating subject', 'the subject substance of all its changes', and of all its metamorphoses.

Hence, from the real form of the life activity of the professional theoretician there also grow all the practically necessary illusions about thought and concept that were systematically expressed in Hegel's *Science of Logic*. The Hegelian logic described the system of the objective forms of thought within the limits of which revolved the process of *extended reproduction of the concept*, which never began, in its developed forms, 'from the very beginning', but took place as the *perfecting of already existing concepts*, as the transformation of *already accumulated* theoretical knowledge, as its 'increment'. The concept was always already *presupposed* here in the form of a jumping-off point for new conquests, since it was a matter of *extending* the sphere of the cognised, and in that the initial concepts played a most active role.

If the separate forms of the manifestation that expanding, growing knowledge drew by turns into its living circulation were recorded, the following definitions would be obtained: science (accumulated knowledge) is words (the 'language of science'); science is the things created on the basis of knowledge, i.e. the objectified, materialised force of knowledge. Knowledge becomes the subject of a certain process in which, here, while constantly changing its verbal form into an objective material one it alters its magnitude and its scale, throws off as surplus (added) knowledge from itself as the initial knowledge, and '*self-develops*'. For the movement in which knowledge unites new knowledge to itself is its own movement, and its expansion is consequently *self-expansion*, self-intensification, self-development. It has acquired the occult faculty of creating knowledge by virtue of the fact that it is itself knowledge.

By analogy with the production and accumulation of surplus value, *logical forms* (the real forms of the production of knowledge) began therefore to appear here as forms of the '*self-development*' of knowledge, and so were *mystified*. The mystification consisted in the pattern or scheme that expressed the features of the activity of the professional theoretician, being accepted and passed off as the pattern of development of knowledge in general.

So, we see, it was the same mystification as in political economy, in analysing which Marx stressed that his investigation did not begin with an analysis of value, but with analysis of a commodity.

From the logical standpoint that is most important in principle, because it was the analysis of a commodity that bared the secret of the birth and origin of value, and then also the secret of its manifestation in money, in money form. In the contrary case, the secret of the birth of value was unresolvable in principle.

The same thing took place with the concept of thought in the Hegelian scheme. Hegel recorded those features that were actually realised in the process of thought in its developed form, in the form of science, as a special (isolated) sphere of the division of social labour, and the formula that there quite accurately reflected the surface of the process appeared as follows: word—act—word (W—A—W), in which by 'word', is understood verbally recorded knowledge, knowledge in its universal form, in the form of the 'language of science', in the form of formulae, diagrams, symbols, models of all kinds, blueprints, etc., etc.

A really critical mastering of Hegel's logic, carefully preserving all its positive features and purging it of mystic worship of 'pure thought' and the 'divine concept', proved only to be within the power of Marx and Engels. No other philosophical system since Hegel has been able to handle it as a 'tool of criticism', since not one of them has adopted the standpoint of a revolutionary, critical attitude to the objective conditions that feed the illusions of idealism, i.e. to the situation of the estrangement (alienation) of the real, active faculties of man from the majority of individuals, the situation in which all the universal (social) forces, i.e. the active faculties of social man, appear as forces independent of the majority of individuals and dominating them as external necessity, as forces monopolised by more or less narrow groups, strata, and classes of society.

The sole path to a real, critical mastering of Hegel's conception of thought lay through a revolutionary, critical attitude to the world of alienation, i.e. to the world of commodity-capitalist relations. Only along that path could the objective-idealist illusions of Hegel's conception be really *explained*, and not simply attacked by such biting epithets (that equally explained nothing) as 'mystical nonsense', 'theological atavism', and others of that kind.

8. The Materialist Conception of Thought as the Subject Matter of Logic

After what Hegel had done it was only possible to advance in a single direction, along the road to materialism, to a clear understanding of the fact that all dialectical schemas and categories revealed in thought by Hegel were universal forms and laws, reflected in the collective consciousness of man, of the development of the external real world existing outside of and independently of thought. Marx and Engels had already begun a materialist rethinking of the Hegelian dialectic at the beginning of the 1840s, and the materialistically rethought dialectic fulfilled the role, for them, of the logic of the development of the materialist world outlook.

This movement was seen as a direct continuation of Feuerbach's argumentation; and when it was expressed in the terms of his philosophy it appeared approximately as follows. The Ego did not think, nor Reason, nor even the brain. *Man thought* by means of his brain and, moreover in unity and contact with nature. Abstracted from that unity he no longer thought. That was where Feuerbach left it.

But, continued Marx, man, too, did not think in immediate unity with nature. Man only thought when he was in unity with society, with the social and historical collective that produced his material and spiritual life. Abstracted from the nexus of the social relations within and through which he effected his human contact with nature (i.e. found himself in human unity with it), he thought as little as a brain isolated from the human body.

Thus it was along the path of development of logic that the problem of the nature of human thought, the problem of the *ideal*, reached its full stature.

The ideal is the subjective image of objective reality, i.e. reflection of the external world in the forms of man's activity, in the forms of his

consciousness and will. The ideal is not an individual, psychological fact, much less a physiological fact, but a socio-historical one, the product and form of mental production. It exists in a variety of forms of man's social consciousness and will as the subject of the social production of material and spiritual life. In Marx's description, 'the ideal is nothing other than the material when it has been transposed and translated inside the human head'.⁹

All the diverse forms of resolving the problem of the ideal in the history of philosophy are attracted to two poles – the materialist and the idealist. Pre-Marxian materialism, while justly rejecting spiritualist and dualist ideas of the ideal as a special substance counterposed to the material world, considered the ideal as an image, as the reflection of a material body in another material body, i.e. as an attribute, a function, of specially organised matter. This general materialist conception of the nature of the ideal, which constituted the essence of the line of Democritus-Spinoza-Diderot-Feuerbach, irrespective of variants of its concretisation by individual materialists, also served as the starting point for the Marxist-Leninist solution of the problem.

The weak sides of the pre-Marxian materialism, which appeared as a trend among French materialists (especially in Cabanis and La Mettrie) and later in Feuerbach, and acquired independent form in the middle of the nineteenth century as so-called vulgar materialism (Büchner, Vogt, Moleschott, and others), were linked with an unhistorical, anthropological, naturalistic conception of the nature of man and led to a rapprochement and ultimately to direct *identification of the ideal with the material, neurophysiological structures of the brain and their functions*. The old materialism set out from a conception of man as part of nature but, not bringing materialism as far as history, it could not understand man in all his peculiarities as a product of labour transforming both the external world and man himself. By virtue of that the ideal could not be understood as the result and active function of labour, of the sensuously objective activity of social man, as the image of the external world arising in the thinking body not in the form of the result of passive contemplation but as the product and form of active transformation of nature by the labour of generations succeeding one another in the course of historical development. The main transformation that Marx and Engels effected in the materialist

⁹ "Capital," Afterword, *MECW* vol. 35, p 19.

conception of the nature of the ideal therefore related primarily to the active aspect of the relation of thinking man to nature, i.e. the aspect that had been mainly developed, as Lenin put it, by ‘clever’ idealism, by the line of Plato-Fichte-Hegel, and was emphasised by them in an abstract, one-sided, idealist way.

The main fact on which the classic systems of objective idealism had grown up was the independence of the aggregate social culture and its forms of organisation from the individual, and more broadly the conversion in general of the universal products of social production (both material and spiritual) into a special social force opposed to individuals and dominating their wills and minds. It was for that reason that ‘the social power, i.e. the multiplied productive force, which arises through the co-operation of different individuals as it is determined within the division of labour, appears to these individuals, since their co-operation is not voluntary but natural, not as their own united power but as an alien force existing outside them, of the origin and end of which they are ignorant, which they thus cannot control, which on the contrary passes through a peculiar series of phases and stages independent of the will and the action of man, nay even being the prime governor of these’.¹⁰ The power of the social whole over individuals was directly disclosed and functioned in the form of the state and the political system of society, in the form of a system of moral, ethical, and legal limitations and norms of social behaviour, and further, of aesthetic, logical and other standards and criteria. The individual was forced from childhood to reckon much more seriously with the requirements and limitations expressed and socially sanctioned in them than with the immediately perceived external appearance of single things and situations, or the organically inherent desires, inclinations, and needs of his own body. The social whole was also mystified in the ‘fundamental’ principles of objective idealism.

Exposing the earthly basis of idealist illusions, Marx and Engels wrote:

“This sum of productive forces, forms of capital and social forms of intercourse, which every individual and generation finds in existence as something given, is the real basis of what

¹⁰ “German Ideology,” *MECW* vol. 5, p 47.

the philosophers have conceived as “substance” and “essence of man”, and what they have identified and attacked... ‘.¹¹

All general images, however, without exception, neither sprang from universal schemas of the work of thought nor arose from an act of passive contemplation of nature unsullied by man, but took shape in the course of its practical, objective transformation by man, by society. They arose and functioned as forms of the *social-man determination of the purposive will of the individual*, i.e. as forms of real activity. General images, moreover, were crystallised in the body of spiritual culture quite unintentionally, and independently of the will and consciousness of individuals, although through their activities. In intuition they appeared precisely as the forms of things created by human activity, or as ‘stamps’ (‘imprints’) laid on natural, physical material by man’s activities, as forms of purposive will alienated in external substance.

People were only concerned with nature as such to the extent that it was involved in one way or another in the process of social labour, was transformed into material, into a means, a condition of active human practice. Even the starry heavens, in which human labour still could not really alter anything, became the object of man’s attention and contemplation when they were transformed by society into a means of orientation in time and space, into a ‘tool’ of the life activity of the organism of social man, into an ‘organ’ of his body, into his natural clock, compass, and calendar. The universal forms and patterns of natural material really showed through and were realised just to the extent to which this material had already been transformed into building material of the ‘inorganic body of man’, of the objective body of civilisation and so the universal forms of ‘things in themselves’ appeared to man immediately as active forms of the functioning of his ‘inorganic body’.

The ideal existed immediately only as the form (mode, image) of the *activity* of social man (i.e. of a quite objective, material being), directed to the external world. When, therefore, we spoke of the material system, of which the ideal was the function and mode of existence, that system was only social man in unity with the objective world through which he exercised his specifically human life activity. The ideal thus did not boil down to the state of matter found in the cranium of the individual, i.e.

11 *ibid*, p 54.

the brain. It was the *special function of man as the subject of social labour activity*, accomplished in forms created by preceding development.

Between contemplating and thinking man and nature in itself there existed a very important mediating link through which nature was transformed into thought, and thought into the body of nature. That was practice, labour, production. It was production (in the broadest sense of the word) that transformed the object of nature into the object of contemplation and thought. ‘Even the objects of the simplest “sensuous certainty” are only given to him [i.e. to man – *EVT*] through social development, industry and commercial intercourse’.¹²

Therefore, Marx said, Feuerbach also stopped at the standpoint of *contemplation* (intuition) of nature and ‘never manages to conceive the sensuous world as the total living sensuous *activity* of the individuals composing it’,¹³ did not see that the object of his contemplation was the product of joint human labour. And in order to single out the image of nature in itself it was necessary to expend rather more labour and effort than the simple efforts of ‘disinterested’, aesthetically developed contemplation.

In immediate contemplation (intuition) the objective features of ‘nature in itself’ were bound up with the features and forms that had been stamped on it by the transforming activity of man, and all the purely objective characteristics of natural material, moreover, were given to contemplation through the image that the natural material had acquired in the course of, and as a result of, the subjective activities of social man. Contemplation was immediately concerned not with the object but with objective activity (i.e. activity on objects), transforming it, and with the results of this subjective (practical) activity.

A purely objective picture of nature was therefore disclosed to man not in contemplation but only through activity and in the activity of man socially producing his own life, of society. Thought, setting itself the aim of depicting the image of nature in itself, had to take that circumstance fully into account, because only the same activity as transformed (altered and occasionally distorted) the ‘true image’ of nature, could indicate what it was like before and without ‘subjective distortions’.

¹² “German Ideology,” *MECW* vol. 5, p 39.

¹³ *ibid.*, p 40-41.

Only practice, consequently, was capable of resolving which features of the object given in contemplation belonged to the object of nature itself, and which had been introduced into it by man's transforming activity, i.e. by the subject.

Therefore 'the question whether objective truth is an attribute of human thought – is not a theoretical but a *practical* question. Man must prove the truth, i.e. the reality and power, the "this-sidedness" of his thinking in practice', Marx wrote in his second thesis on Feuerbach. 'The dispute over the reality or non-reality of thinking that is isolated from practice is a purely *scholastic* question'.¹⁴

That, too, constitutes the solution of many of the difficulties that have faced and still face philosophers.

In analysing the relation of production to consumption, i.e. a problem of political economy, and hence not a psychological one, Marx formulated the question as follows: 'If it is clear that production offers consumption its external object, it is therefore equally clear that consumption *ideally posits* the object of production as an internal image, as a need, as a drive and as purpose'.¹⁵ But consumption, as Marx showed, is only an inner moment of production, or production itself, since it creates not only the external object but also the subject capable of producing and reproducing this object, and then of consuming it in the appropriate manner. In other words, production creates the form itself of man's active practice, or the faculty of creating an object of certain form and using it for its purpose, i.e. in its role and function in the social organism. In the form of an active, real faculty of man as the agent of social production, the object exists ideally as a product of production, i.e. as an inner image, requirement, and an urge and goal of human activity.

The ideal is therefore nothing else than the form of things, but existing outside things, namely in man, in the form of his active practice, i.e. it is *the socially determined form of the human being's activity*. In nature itself, including the nature of man as a biological creature, the ideal does not exist. As regards the natural, material organisation of the human body it has the same external character as it does in regard to the material in which it is realised and objectified in the form of a sensuously perceived thing. Thus the form of a jar growing under the hands of a potter does

14 "Theses on Feuerbach, §2" *op. cit.*, p 6.

15 "Grundrisse," *MECW* vol. 28, p 30.

not form part either of the piece of clay or of the inborn, anatomical, physiological organisation of the body of the individual functioning as potter. Only insofar as man trains and exercises the organs of his body on objects created by man for man does he become the bearer of the active forms of social man's activity that create the corresponding objects.

It is clear that the ideal, i.e. the active form of social man's activity, is immediately embodied, or as it is now fashionable to say, is 'coded', in the form of the neuro-cerebral structures of the cortex of the brain, i.e. quite materially. But the *material* being of the ideal is not itself ideal but only the *form of its expression in the organic body of the individual*. In itself the ideal is the socially determined form of man's life activity corresponding to the form of its object and product. To try and explain the ideal from the anatomical and physiological properties of the body of the brain is the same unfruitful whim as to try and explain the money form of the product of labour by the physico-chemical features of gold. Materialism in this case does not consist at all in identifying the ideal with the material processes taking place in the head. Materialism is expressed here in understanding that the ideal, as a socially determined form of the activity of man creating an object in one form or another, is engendered and exists not in the head but with the help of the head in the real objective activity (activity on things) of man as the active agent of social production.

Scientific determinations of the ideal are therefore obtained by way of a materialist analysis of the 'anatomy and physiology' of the social production of the material and spiritual life of society, and in no case of the anatomy and physiology of the brain as an organ of the individual's body. It is the world of the products of human labour in the constantly renewed act of its reproduction that is, as Marx said, 'the perceptibly existing human psychology'; and any psychology to which this 'open book' of human psychology remains unknown, cannot be a real science. When Marx defined the ideal as the material 'transposed and translated inside the human head', he did not understand this 'head' naturalistically, in terms of natural science. He had in mind the socially developed head of man, all of whose forms of activity, beginning with the forms of language and its word stock and syntactical system and ending with logical categories, are products and forms of social development. Only when expressed in these forms is the external, the material, transformed into social fact, into the property of social man, i.e. into the ideal.

At first hand, transformation of the material into the ideal consists in the external fact being expressed in language, which 'is the immediate actuality of thought' (Marx). But language of itself is as little ideal as the neuro-physiological structure of the brain. It is only the *form of expression* of the ideal, its material-objective being. Neopositivists, who identify thought (i.e. the ideal) with language, with a system of terms and expressions, therefore make the same naturalistic mistake as scientists who identify the ideal with the structures and functions of brain tissue. Here, too, the form only of its material expression is taken for the ideal. The material is really 'transplanted' *into the human head*, and not simply into the brain as an organ of the individual's body, (1) only when it is expressed in immediately, generally significant forms of language (understood in the broadest sense of the word, including the language of drawings, diagrams, models, etc.), and (2) when it is transformed into an active form of man's activity with a real object (and not simply into a 'term' or 'utterance' as the material body of language). In other words the object proves to be idealised only when the faculty of actively recreating it has been created, relying on the language of words or drawings; when the faculty of converting words into deeds, and through deeds into things, has been created.

Spinoza understood this beautifully. With good reason he linked adequate ideas, expressed in the words of a language, precisely with ability to reproduce given verbal forms in real space. It was just there that he drew the distinction between a determination expressing the essence of the matter, i.e. the ideal image of the object, and nominal, formal definitions that fixed a more or less accidentally chosen property of the object, its outward sign. A circle, for example, could be defined as a figure in which lines drawn from the centre to the circumference were equal. But such a definition did not quite express the essence of a circle, but only a certain property of it, which property was derivative and secondary. It was another matter when the definition included the proximate cause of the thing. Then a circle should be defined as a figure described by any line one end of which was fixed and the other moved. This definition provided the *mode of constructing the thing* in real space. Here the *nominal definition* arose *together* with the *real action of the thinking body along the spatial contour of the object of the idea*. In that case man also possessed an adequate idea, i.e. an ideal image, of the thing, and not just signs expressed in words. That is also a materialist conception of the nature of the ideal. The ideal exists there where there is a capacity to recreate the object in space, relying on

the word, on language, in combination with a need for the object, plus material provision of the act of creation.

Determination of the ideal is thus especially dialectical. It is that which is not, together with that which is, that which does not exist in the form of an external, sensuously perceived thing but at the same time does exist *as an active faculty of man*. It is being, which is, however, not-being, or the effective being of the external thing in the phase of its becoming in the activity of the subject, in the form of its inner image, need, urge, and aim; and therefore the *ideal being* of the thing is distinguished from its *real being*, and also from the bodily, material structures of the brain and language by which it exists 'within' the subject. The ideal image of the object is distinguished from the structure of the brain and language in principle by the fact that it is *the form of the external object*. It is also distinguished from the external matter of nature but in the organic body of man and in the body of language as a subjective image. The ideal is consequently the subjective being of the object, or its 'otherness', i.e. the being of one object in and through another, as Hegel expressed this situation.

The ideal, as the form of social man's activity, exists where the process of the transformation of the body of nature into the object of man's activity, into the object of labour, and then into the product of labour, takes place. The same thing can be expressed in another way, as follows: the form of the external thing involved in the labour process is 'sublated' in the subjective form of objective activity (action on objects); the latter is objectively registered in the subject in the form of the mechanisms of higher nervous activity; and then there is the reverse sequence of these metamorphoses, namely the verbally expressed idea is transformed into a deed, and through the deed into the form of an external, sensuously perceived thing, into a thing. These two contrary series of metamorphoses form a closed cycle: thing—deed—word—deed—thing. Only in this cyclic movement, constantly renewed, does the ideal, the ideal image of the thing exist.

The ideal is immediately realised in a symbol and through a symbol, i.e. through the external, sensuously perceived, visual or audible body of a word. But this body, while remaining itself, proves at the same time to be the being of another body and as such is its '*ideal being*', its meaning, which is quite distinct from its bodily form immediately perceived by the ears or eyes. As a *sign*, as a *name*, a word has nothing in common with what it is the sign of. What is 'common' is only discovered in the act of transforming the word into a deed, and through the deed into a thing

(and then again in the reverse process), in practice and the mastering of its results.

Man exists as man, as the subject of activity directed to the world around and to himself, from such time, and so long, as he actively produces his real life in forms created by himself and by his own labour. And labour, the real transformation of the world around and of himself, which is performed in socially developed and socially sanctioned forms, is just the process – beginning and continuing completely independent of thought – within which the ideal is engendered and functions as its metamorphosis, idealisation of reality, nature, and social relations is completed, and the language of symbols is born as the external body of the ideal image of the external world. In that is the secret of the ideal and in that too is its solution.

In order to make both the essence of the secret, and the means by which Marx resolved it, clearer, let us analyse the most typical case of the idealisation of actuality, or the act of the birth of the ideal, namely the phenomenon of price in political economy. ‘The price, or the money form, of commodities is, like their form of value generally, distinct from their palpable and real bodily form. It is, that is to say, only an ideal or imaginary form’.¹⁶ In the first place let us note that price is an objective category and not a psycho-physiological phenomenon. Yet it is ‘only an ideal form’. It is that which constitutes the materialism of the Marxian conception of price. Idealism on the contrary consists in affirming that price, since it is only an ideal form, exists solely as a subjective, psychic phenomenon, the interpretation that was given by none other than Bishop Berkeley, who wrote not only as a philosopher but also as an economist.

In making his critique of the idealist conception of money, Marx showed that price was the value of the product of man’s labour expressed in money, for example, in a certain quantity of gold. But gold of itself, by its nature, was not money. It proved to be money because it performed a peculiar social function, the measure of value of all commodities, and as such functioned in the system of social relations between people in the process of the production and exchange of products; hence, too, the ideality of the form of price. Gold, while remaining itself in the process of circulation, nevertheless proved to be immediately the form of exis-

¹⁶ “Capital,” *MECW* vol. 35, p 105.

tence and movement of a certain 'other', represented and replaced that 'other' in the process of commodity-money circulation, and was its metamorphosis. 'As *price*, the commodity relates to money on one side as something existing outside itself, and secondly it is *ideally* posited as money itself, since money has a reality different from it. ... Alongside real money, there now exists the commodity as ideally posited money'.¹⁷ 'After money is posited as a commodity in reality, the commodity is posited as money in the mind'.¹⁸

The ideal positing, or positing of the real product as the *ideal image of another product*, is accomplished during the circulation of the mass of commodities. It arises as a means of resolving the contradictions maturing in the course of the circulation process, and within it (and not inside the head, though not without the help of the head), as a means of satisfying a need that has become immanent in commodity circulation. This need, which appears in the form of an unresolved contradiction of the commodity form, is satisfied and resolved by one commodity 'being expelled' from their equal family and being converted into the immediately social standard of the socially necessary expenditure of labour. 'The problem and the means of solution', as Marx said, 'arise simultaneously'.¹⁹

In real exchange, before the appearance of money (before the conversion of gold into money), the following position had already taken shape: 'Intercourse in virtue of which the owners of commodities exchange their own articles for various other articles, and compare their own articles with various other articles, never takes place without leading the various owners of the various kinds of articles to exchange these for one special article in which the values of all the others are equated. Such a third commodity, inasmuch as it comes to function as equivalent for various other commodities, acquires, though within narrow limits, a generalised or social equivalent form'.²⁰ Thus the possibility and the necessity also arise of expressing the reciprocal exchange relation of two commodities through the exchange value of a third commodity, still without the latter entering directly into the real exchange but serving merely as the general measure of the value of the commodities really

17 "Grundrisse," *MECW* vol. 28, p 125.

18 *ibid*, p 126.

19 "Capital," *MECW* vol. 35, p 99.

20 *ibid*, p 99.

exchanged. And the 'third commodity', although it does not enter bodily into the exchange, is all the same involved in the act of exchange, since it is also present only *ideally*, i.e. in the idea, in the mind of the commodity-owners, in speech, on paper, and so on. But it is thus transformed into a symbol and precisely into a symbol of the social relations between people.

All theories of money and value that reduce value and its forms to pure symbolics, to the naming of relations, to a conventionally or legally instituted sign, are associated with that circumstance. By the logic of their origin and structure they are organically related to those philosophers and logicians who, not being able to conceive the act of birth of the ideal from the process of social man's objective-practical activity proclaim the forms of expression of the ideal in speech, in terms and statements, to be conventional phenomena, behind which, however, there stands something mystically elusive – be it the 'experience' of Neopositivists, the 'existence' of Existentialists, or the intuitively grasped, incorporeal, mystical 'eidetic being' of Edmund Husserl. Marx disclosed once and for all the whole triviality of such theories of the ideal, and of its reduction to a symbol or sign of immaterial relations (or connections as such, connections without a material substratum). 'The fact that commodities are only nominally converted in the form of prices into gold and hence gold is only nominally transformed into money led to the doctrine of the *nominal standard of money*. Because only imaginary gold or silver, i.e. gold and silver merely as money of account, is used in the determination of prices, it was asserted that the terms pound, shilling, pence, taler, franc, etc., denote ideal particles of value but not weights of gold or silver or any form of materialised labour'.²¹ Furthermore, it was already easy to pass to the notion that the prices of commodities were merely terms for relations or propositions, pure signs.

Thus objective economic phenomena were transformed into simple symbols behind which there was hidden the will as their substance, representation as the 'inner experience' of the individual Ego, interpreted in the spirit of Hume and Berkeley. By exactly the same scheme modern idealists in logic convert terms and statements (the verbal envelope of the ideal image of the object) into simple names of relations in which the 'experiences' of the solitary individual are posited by the symbolising

21 "Contribution to Critique of Political Economy," *MECW* vol. 29, p 314.

activity of language. Logical relations are transformed simply into the names of connections (but of what with what is not known).

It must be specially stressed that the ideal transformation of a commodity into gold, and thus of gold into a symbol of social relations, took place both in time and in essence before the real conversion of the commodity into money, i.e. into hard cash. Gold became the measure of the value of commodities before it became the medium of circulation, and so functioned initially as money purely ideally. 'Money only circulates commodities which have already been *ideally* transformed into money, not only in the head of the individual but in the conception held by society (directly, the conception held by the participants in the process of buying and selling)'.²²

That is a fundamentally important point of the Marxian conception not only of the phenomenon of price but also of the problem of the ideal, the problem of the idealisation of reality in general. The fact is that the act of exchange always posits an already formed system of relations between people mediated by things; it is expressed in one of the sensuously perceived things being transformed, without ceasing to function in the system as a separate, sensuously perceived body, into the *representative of any other body*, into the sensuously perceived body of an ideal image. In other words, it is the *external embodiment of another thing*, not its sensuously perceived image but rather *its essence*, i.e. the *law* of its existence within the system that in general creates the situation being analysed. The given thing is thus transformed into a symbol the meaning of which remains all the time outside its immediately perceived image, in other sensuously perceived things, and is disclosed only through the whole system of relations of other things to it or, conversely, of it to all the others. But when this thing is really removed from the system it loses its role, i.e. its significance as a symbol, and is transformed once more into an ordinary, sensuously perceived thing along with other such things.

Its existence and functioning as a symbol consequently does not belong to it as such but only to the 'system within which it has acquired its properties. The properties attaching to it from nature therefore have no relation to its existence as a symbol. The corporeal, sensuously perceived envelope or 'body' of the symbol (the body of the thing that has been transformed into a symbol) is quite unessential, transient, and temporary

²² "Grundrisse," *MECW* vol. 28, p 123.

for its existence as a symbol; the 'functional existence' of such a thing completely 'absorbs ... its material existence', as Marx put it.²³ Furthermore, the material body of the thing is brought into conformity with its function. As a result the symbol is converted into a token, i.e. into an object that already means *nothing in itself* but only represents or expresses another object with which it itself has nothing in common (like the name of the thing with the thing itself). The dialectic of the transformation of a thing into a symbol, and of a symbol into a token, is also traced in *Capital* on the example of the origin and evolution of the money form of value.

The functional existence of a symbol consists precisely in its not representing *itself* but *another*, and in being a means, an instrument expressing the *essence of other sensuously perceived things*, i.e. their universal, socially-human significance, their role and function within the social organism. In other words, the function of a symbol consists in its being just the body of the ideal image of the external thing, or rather the law of its existence, the law of the universal. A symbol removed from the real process of exchange of matter between social man and nature also ceases in general to be a symbol, the corporeal envelope of the ideal image. Its 'soul' vanishes from its body because its 'soul' is in fact the objective activity of social man effecting an exchange of matter between humanised and virgin nature.

Without an ideal image man cannot, in general exchange matter with nature, and the individual cannot operate with things involved in the process of social production. But the ideal image requires real material, including language, for its realisation. Therefore labour engenders a need for language, and then language itself.

When man operates with symbols or with tokens and not with objects, relying on symbols and tokens, he does not act on the ideal plane but only on the verbal plane. And it very often happens that, instead of discovering the real essence of things by means of terms, the individual sees only the terms themselves with their traditional meanings, sees only the symbol and its sensuously perceived body. In that case the linguistic symbol is transformed from an instrument of real activity into a fetish, blocking off with its body the reality that it represents. Then, instead of understanding and consciously changing the external world in accordance with its general laws expressed in the form of the ideal image, man begins

23 "Capital," *MECW* vol. 35, p 110.

to see and change only the verbal, terminological expression and thinks that, in so doing he is changing the world itself.

This fetishisation of the verbal existence of the ideal was very characteristic of the Left Hegelian philosophy of the period of its decline, to which Marx and Engels drew attention at the time. This fetishisation of language, and with it fetishisation of the system of social relations that it represents, proves to be the absolutely inevitable end of any philosophy that does not understand that the ideal is engendered and reproduced only through social man's objective-practical activity, and that it also only exists in that process. In the opposite case some form or other of fetishisation both of the external world and of symbolics develops.

It is very curious that no variety of fetishisation of the verbal-symbolic existence of the ideal embraces the ideal as such. Fetishisation registers the results of human activity but not man's activity itself, so that it embraces not the ideal itself but only its estrangement in external objects or in language, i.e. congealed products. That is not surprising; *the ideal as a form of human activity exists only in that activity*, and not in its results, because the activity is a constant, continuing negation of the existing, sensuously perceived forms of things, is their change and sublation into new forms, taking place in accordance with general patterns expressed in ideal forms. When an object has been created society's need for it is satisfied; the activity has petered out in its product, and the ideal itself has died.

An ideal image, say of bread, may arise in the imagination of a hungry man or of a baker. In the head of a satiated man occupied in building a house, ideal bread does not arise. But if we take society as a whole ideal bread, and ideal houses, are always in existence, and any ideal object with which man is concerned in the process of production and reproduction of his material life. In consequence of that all nature is idealised in man and not just that part which he immediately produces or reproduces or consumes in a practical way. Without a constant re-idealising of the real objects of human life activity, without their transformation into the ideal, and so without symbolisation, man cannot in general be the active subject of social production.

The ideal also appears as the product and form of human labour, of the purposive transformation of natural material and social relations effected by social man. The ideal is present only where there is an individual performing his activity in forms given to him by the preceding

development of humanity. Man is distinguished from beasts by the existence of an ideal plane of activity. 'But what ... distinguishes the most incompetent architect and the best of bees, is that the architect has built a cell in his head before he constructs it in wax. The labour process ends in the creation of something which, when the process began, already existed in the worker's imagination, already existed in an ideal form'.²⁴

We must once more note that if the head is understood naturalistically, i.e. as a material organ of the separate individual's body, then there is no difference in principle, it transpires, between the architect and the bee. The wax cell that the bee builds also exists beforehand in the form of the pattern of the insect's activity programmed in its nerve centres. In that sense the product of the bee's activity is also given 'ideally' before its real performance. But the insect's forms of activity are innate in it, inherited together with the structural, anatomical organisation of its body. The form of activity that we can denote as the ideal existence of the product is never differentiated from the body of the animal in any other way than as some real product. The fundamental distinction between man's activity and the activity of an animal is this, that no one form of this activity, no one faculty, is inherited together with the anatomical organisation of the body. All forms of activity (active faculties) are passed on only in the form of objects created by man for man. The individual mastery of a humanly determined form of activity, i.e. the ideal image of its object and product, are therefore transformed in a special process that does not coincide with the objective moulding of nature (shaping of nature in objects). The form itself of man's activity is therefore transformed into a special object, into the object of special activity.

When the ideal was defined above as the form of man's activity, that definition was, strictly speaking, incomplete. It characterised the ideal only according to its objectively conditioned content; but the ideal is only there where the form itself of the activity corresponding to the form of the external object is transformed for man into a special object with which he can operate specially without touching and without changing the real object up to a certain point. Man, and only man, ceases to be 'merged' with the form of his life activity; he separates it from himself and, giving it his attention transforms it into an idea. Since man is given the external thing in general only insofar as it is involved in the process of

24 "Capital," *MECW* vol. 35, p 187-88.

his activity, in the final product – in the idea – the image of the thing is always merged with the image of the activity in which this thing functions.

That constitutes the epistemological basis of the identification of the thing with the idea, of the real with the ideal, i.e. the epistemological root of any kind or shade of idealism. True, the objectification of the form of activity as a result of which it becomes possible to take it as the form of the thing, and conversely the form of the thing as the product and form of subjective activity, as the ideal is still not, as a matter of fact, idealism. This real fact is only transformed into one variety or another of idealism or fetishism given certain social conditions, or more concretely given the spontaneous division of labour, in which the form of activity is forcibly imposed on the individual by social processes that are independent of him and not understood by him. The objectification (materialisation) of social forms of human activity characteristic of commodity production (commodity fetishism) is quite analogous to the religious alienation of active human faculties in ideas about gods. This analogy is realised quite clearly already within the limits of the objective-idealist view of the nature of the ideal. Thus the young Marx, still a Left Hegelian, noted that all the ancient gods possessed the same ‘real existence’ as money did. ‘Did not the ancient Moloch reign? Was not the Delphic Apollo a real power in the life of the Greeks? Kant’s critique means nothing in this respect. If somebody imagines that he has a hundred talers, if this concept is not for him an arbitrary, subjective one, if he believes in it, then these hundred imagined talers have for him the same value as a hundred real ones.... Real talers have the same existence that the imagined gods have. Has a real taler any existence except in the imagination, if only in the general or rather common imagination of man?’²⁵

The real nature of this analogy, however, was only disclosed by him later, on the basis of the materialist conception of nature and money and religious images. The ‘similarity’ of commodity fetishism and religious estrangement is rooted in the real connection of people’s social ideas and their real activity, and the forms of practice, in the active role of the ideal image (notion). Up to a certain point man is able to change the form of his activity (or the ideal image of the external thing) without touching the thing itself, but only because he can separate the ideal image from him-

²⁵ “Doctoral Dissertation,” *MECW* vol. 1, p 104.

self, objectify it, and operate with it as with an object existing outside him. Let us recall once more the example of the architect, cited by Marx. The architect builds a house. not simply in his head but by means of his head, on the plane of ideas on Whatman paper, on the plane of the drawing board. He thus alters his internal state, externalising it, and operating with it as with an *object distinct from himself*. In changing it he potentially alters the real house, i.e. changes it ideally, potentially, which means that he alters *one sensuously perceived object instead of another*.

In other words activity on the plane of representation, altering the ideal image of an object, is also sensuous objective activity transforming the sensuously perceived image of the thing to which it is directed. Only the thing altered here is special; it is only the objectified idea or *form of the person's activity taken as a thing*. That circumstance also makes it possible to slur over the fundamental, philosophical, epistemological difference between material activity and the activity of the theoretician and ideologist who directly alters only the verbal, token objectification of the ideal image.

A person cannot pass the ideal as such to another person, as the pure form of activity. One can observe the activity of a painter or an engineer as long as one likes, striving to catch their mode of action, the form of their activity, but one can thus only copy the external techniques and methods of their work but never the ideal image itself, the active faculty itself. The ideal, as the form of subjective activity, is only masterable through active operation with the object and product of this activity, i.e. through the form of its product, through the objective form of the thing, through its active disobjectification. The ideal image of objective reality therefore also only exists as the form (mode, image) of living activity, coordinated with the form of its object, but not as a thing, not as a materially fixed state or structure.

The ideal is nothing else than a concatenation of the general forms of human activity realised by individuals, which determine the will and aptitude of individuals to act as an aim and law. It is quite understandable that the individual realisation of the ideal image is always linked with some deviation or other, or rather with concretisation of the image, with its correcting in accordance with the specific conditions, new social needs, the peculiarities of the material, and so on. And so, it posits the capacity to correlate the ideal image consciously with real, not yet idealised actuality. In that case the ideal functions as a special object for the individual, and object that he can alter purposively in accordance with the

needs (requirements) of his activity. When, on the contrary, the individual only masters the ideal image formally, as a rigid pattern and sequence of operations, without understanding its origin and links with real (not idealised) actuality, he proves incapable of taking a critical attitude to this image, i.e. as a special object differentiated from him. Then he merges with it, as it were, and cannot treat it as an object correlated with reality and alter it accordingly. In that case, strictly speaking, it is not the individual who operates with the ideal image but the dogmatised image that acts in and through the individual. Here it is not the ideal image that is a real function of the individual but, on the contrary, the individual who is a function of the image, which dominates his mind and will as an externally given formal scheme, as an estranged image, as a fetish, as a system of unarguable rules coming inevitably from somewhere out of the blue. The idealist conception of the nature of the ideal corresponds to just such a consciousness.

The materialist conception, on the contrary, will prove to be natural to the man of communist society in which culture will not be counterposed to the individual as something given to him from outside, something independent and alien, but will be the form of his own real activity. In communist society, as Marx showed, it will become immediately obvious that *all forms of culture are only forms of the activity of man himself*, which is only brought to light in the conditions of bourgeois society by a theoretical analysis dispelling the illusions inevitable under them. 'Everything that has a fixed form, such as the product, etc., appears as merely a moment, a vanishing moment, in this movement. ... The conditions and objectifications of the process are themselves equally moments of it, and its only subjects. are the individuals, but individuals in mutual relationships, which they equally reproduce and produce anew. The constant process of their own movement, in which they renew themselves even as they renew the world of wealth they create'.²⁶

A consistently materialist conception of thought, of course, alters the approach to the key problems of logic in a cardinal way, in particular to interpretation of the nature of logical categories, Marx and Engels established above all that the external world was not given to the individual as it was in itself simply and directly in his contemplation, but only in the

²⁶ "Grundrisse," *MECW* vol. 29, p 98.

course of its being altered by man: and that both *the contemplating man* himself and *the world contemplated* were products of history.

The forms of thought, too, the categories, were accordingly understood not as simple abstractions from unhistorically understood sensuousness, but primarily as universal forms of social man's sensuously objective activity reflected in consciousness. The real objective equivalent of logical forms was seen not simply in the abstract, general contours of the object contemplated by the individual but in the forms of man's real activity transforming nature in accordance with his own ends: 'It is precisely *the alteration of nature by men*, not solely nature as such, which is the most essential and immediate basis of human thought, and it is the measure that man has earned to change nature that his intelligence has increased.²⁷ The subject of thought here already proved to be the individual in the nexus of social relations, the socially determined individual, all the forms of whose life activity were given not by nature, but by history, by the process of the moulding of human culture.

The forms of human activity (and the thought-forms reflecting them) are consequently laid down in the course of history independently of the will and consciousness of individuals, to whom they are counterposed as the forms of a historically developed system of culture, a system that does not develop at all according to the laws of psychology, since the development of social consciousness is not a simple arithmetic sum of psychic process but a special process governed in general and on the whole by the laws of development of society's material life. These laws not only do not depend on the will and consciousness of individuals but, on the contrary, also actively determine that will and consciousness. The separate individual does not develop the universal forms of human activity by himself, and cannot do so, whatever the powers of abstraction he possesses, but assimilates them ready-made in the course of his own acquiring of culture, together with language and the knowledge expressed in it.

Psychological analysis of the act of reflection of the external world in the individual head therefore cannot be the means of developing logic. The individual thinks only insofar as he has already mastered the general (logical) determinations historically moulded before him and completely independently of him. And psychology as a science does not investigate

27 Engels, "Dialectics of Nature," *MECW* vol. 25, p 511.

the development of human culture or civilisation, rightly considering it a premise independent of the individual.

While Hegel's recording of these facts led him to idealism, Marx and Engels, having considered the real (objective) prototype of logical definitions and laws in the concrete, universal forms and laws of social man's objective activity, cut off any possibility of subjectivist interpretation of the activity itself. Man does not act on nature from outside, but 'confronts nature as one of her own forces'²⁸ and his objective activity is therefore linked at every stage with, and mediated by, objective natural laws. Man 'makes use of the mechanical, physical, and chemical properties of things as means of exerting power over other things, and in order to make these other things subservient to his aims ... Thus nature becomes an instrument of his activities, an instrument with which he supplements his own bodily organs, adding a cubit and more to his stature, scripture notwithstanding'.²⁹ It is just in that that the secret of the *universality* of human activity lies, which idealism passes off as the consequence of reason operating in man: 'The universality of man appears in practice precisely in the universality which makes all nature his inorganic body – both inasmuch a nature is (1) his direct means of life, and (2) the material, the object, and the instrument of his life activity. Nature is man's *inorganic* body – nature, that is, insofar as it is not itself the human body'.³⁰

The laws of human activity are therefore also, above all, laws of the natural material from which 'man's inorganic body', the objective (material) body of civilisation, is built, i.e. laws of the movement and change of the objects of nature, transformed into the organs of man, into moments of the process of production of society's material life.

In labour (production) man makes one object of nature act on another object of the same nature in accordance with their own properties and laws of existence. Marx and Engels showed that the logical forms of man's action were the consequences (reflection) of real laws of human actions on objects, i.e. of practice in all its scope and development, laws that are independent of any thinking. Practice understood materialistically, appeared as a process in whose movement each object involved in

28 "Capital," *MECW* vol. 35, p 187.

29 *ibid.*, p 189.

30 "Estranged Labour," *MECW* vol. 3, p 275-76.

it functioned (behaved) in accordance with its own laws, bringing its own form and measure to light in the changes taking place in it.

Thus mankind's practice is a fully concrete (particular) process, and at the same time a universal one. It includes all other forms and types of the movement of matter as its abstract moments, and takes place in conformity with their laws. The general laws governing man's changing of nature therefore transpire to be also general laws of the change of nature itself, revealed by man's activity, and not by orders foreign to it, dictated from outside. The universal laws of man's changing of nature are also universal laws of nature only in accordance with which can man successfully alter it. Once realised they also appear as laws of reason, as logical laws. Their 'specificity' consists precisely in their in their universality, i.e. in the fact that they are not only laws of subjectivity (as laws of the physiology of higher nervous activity or of language), and not only of objective reality (as laws of physics or chemistry), but also laws governing the movement both of objective reality and of subjective human life activity. (That does not mean at all, of course, that thought does not in general possess any 'specific features' worthy of study. As a special process possessing features specifically distinguishing it from the movement of objective reality, i.e. as a psycho-physiological faculty of the human individual, thought has, of course, to be subjected to very detailed study in psychology and the physiology of the higher nervous system, but not in logic). In subjective consciousness these laws appear as 'plenipotentiaries' of the rights of the object, as its universal, ideal image: 'The laws of logic are the reflections of the objective in the subjective consciousness of man'.³¹

9. On the Coincidence of Logic with Dialectics and the Theory of Knowledge of Materialism

Like any other science logic is concerned with explaining and systematising objective forms and patterns not dependent on men's will and consciousness, within which human activity, both material-objective and mental-theoretical, takes place. Its subject matter is *the objective laws of subjective activity*.

Such a conception is quite unacceptable to traditional logic since, from the standpoint of the latter, it unites the unjoinable, i.e. an affirma-

31 Lenin's "Philosophical Notebooks, *LCW* vol. 38, p 183.

tion and its negation, A and not-A, opposing predicates. For the subjective is not objective, and vice versa. But the state of affairs in the real world and in the science comprehending it also proves unacceptable to traditional logic, because in it the transition, formation, and transformation of things and processes (including into their own opposite) prove to be *the essence of the matter* at every step. Traditional logic is consequently inadequate to the real practice of scientific and therefore has to be brought into correspondence with the latter.

Marx and Engels showed that science and practice, quite independently of consciously acquired logical notions, developed in accordance with the universal laws that had been described by the dialectical tradition in philosophy. It can (and in fact does) happen, even in situations when each separate representative of science involved in its general progress is consciously guided by undialectical ideas about thought. Science as a whole, through the clash of undialectical opinions mutually provoking and correcting one another, develops for all that in accordance with a logic of a higher type and order.

The theoretician who has succeeded finally in finding the concrete solution to some contentious problem or other has been objectively forced to think dialectically. Genuine logical necessity drives a road for itself in this case despite the theoretician's consciousness, instead of being realised purposively and freely. It therefore transpires that the greatest theoreticians and natural scientists, whose work has determined the main lines of development of science, have been guided as a rule by the dialectical traditions in logic. Thus Albert Einstein owed much to Spinoza, and Heisenberg to Plato, and so on.

Taking this conception as their starting point, Marx, Engels, and Lenin established that it was dialectics, and only dialectics, that was the real logic in accordance with which modern thought made progress. It was it, too, that operated at the 'growing points' of modern science, although the representatives of science were not wholly conscious of the fact. That was why logic as a science coincided (merged) not only with dialectics but also with *the theory of knowledge* of materialism. 'In *Capital* Marx applied to a single science logic, dialectics, and the theory of knowledge of materialism (three words are not needed; it is one and the same thing)', is how Lenin categorically formulated it.³²

³² Lenin's "Philosophical Notebooks, *LCW* vol. 38, p 319.

The problem of the relation of logic, the theory of knowledge, and dialectics occupied a special place in Lenin's work. One can say, without danger of exaggeration, that it forms the core of all his special philosophical reflections, to which he returned again and again, each time formulating his conception and solution more succinctly and categorically.

In Lenin's reflections, especially those arising in the course of critical rethinking of Hegelian structures, two themes are clearly distinguished: (1) the inter-relation between logic and epistemology; and (2) the conception of dialectics as a science that includes its own scientific, theoretical solution of problems that are traditionally isolated from it in the form of logic and the theory of knowledge. Reconstruction of the considerations that enabled Lenin to formulate the position of modern materialism (i.e. Marxism) so categorically is very important for the simple reason that no unanimous interpretation of his propositions has yet been reached in Soviet philosophy.

Although the direct object of the critical analysis documented in the *Philosophical Notebooks* was first and foremost Hegel's conception, it would of course be a mistake to see in that book only a critical commentary on Hegel's works. Lenin was concerned, it goes without saying, not with Hegel as such but with the real content of problems that still preserve their urgent significance to this day. In other words Lenin undertook, in the form of a critical analysis of the Hegelian conception, a survey of the state of affairs in philosophy in his own day, comparing and evaluating the means of posing and resolving its cardinal problems. Quite naturally, the problem of scientific knowledge came to the fore, around which – and more clearly as time went on – all world philosophical thought revolved at the end of the nineteenth century and the beginning of the twentieth. Here is how Lenin depicted the aim of his investigations: "The theme of logic. To be compared with present-day 'epistemology'".³³

The inverted commas enclosing the word 'epistemology' are not there quite by chance. The fact is that the isolation of a number of old philosophical problems in a special philosophical science (it is all the same whether we recognise it then as the sole form of scientific philosophy or as only of the many divisions of philosophy) is a fact of recent origin. The term itself came into currency only in the latter half of the nineteenth century as the designation of a special science, of a special

33 *ibid.*, p 103.

field of investigation that had not been sharply distinguished in any way in the classical philosophical systems, and had not constituted either a special science or even a special division, although it would be an error, of course, to affirm that knowledge in general and scientific knowledge in particular had only become the subject of specially close attention with the development of ‘epistemology’.

The setting up of epistemology as a special science was associated historically and essentially with the broad spread of Neokantianism, which became, during the last third of the nineteenth century, the most influential trend in the bourgeois philosophical thought of Europe, and was converted into the officially recognised school of professorial, university philosophy, first in Germany, and then in all those areas of the world from which people came to the German universities hoping to study serious professional philosophy there. Neokantianism owed its spread not least to the traditional fame of Germany as the home of Kant, Fichte, Schelling, and Hegel.

Its special feature was not at all, of course, the discovery of knowledge as the central philosophical problem, but the specific form in which it was posed, which boiled down (despite all the disagreements among the various branches of this school) to the following: ‘It is accepted to call the doctrine of knowledge, inquiring into the conditions by which indisputably existing knowledge becomes possible, and limits are established in accordance with these conditions up to which any knowledge whatsoever can be extended but beyond which there opens up the sphere of equally undemonstrable opinions, the “theory of knowledge” or “epistemology”. ... The theory of knowledge, of course, together with the tasks mentioned above, rightly poses itself yet other, and supplementary, tasks. But if it wants to be a science making sense it must, above all, concern itself with explaining the problem of the existence or non-existence of boundaries to knowledge ...’³⁴

The Russian Kantian A. I. Vvedensky, author of the definition just quoted, very accurately and clearly indicated the special feature of the science that ‘it is accepted to call’ epistemology in the literature of the Neokantian trend, and in all the schools that have arisen under its predominant influence. Dozens of similar formulations could be cited from

34 A. I. Vvedensky, *Logika kak chast’ teorii poznaniiya* (Logic as Part of the Theory of Knowledge), Moscow 1923, p 29.

the classical authors of Neokantianism (Rickert, Wundt, Cassirer, Windelband) and the work of such representatives of 'daughter' branches as Schuppe and Vaihinger.

The job of the theory of knowledge, consequently, was considered to be the establishment of 'limits of knowledge', boundaries that knowledge could not cross in any circumstances, or however high the development of the cognitive capacities of a person or of humanity, or of the technique of scientific experiment and research. These 'limits' differentiated the sphere of what was knowable, in principle from that of what was in principle unknowable, extralimital, 'transcendent'. They were not determined at all by the limitation of human experience in space and time (in that case extension of the 'sphere of experience' would constantly widen them, and the problem would boil down simply to differentiation between what was already known and what was not yet known but was, in principle, knowable), but by the eternal and immutable nature of man's psycho-physiological peculiarities through which all external influences were refracted (as through a prism). These 'specific mechanisms', by which alone the external world was given to man, were those that generated the 'limit' beyond which lay what was in principle unknowable. What was unknowable in principle proved to be nothing more nor less than the real world lying outside man's consciousness, as it was 'before its appearance in consciousness'. In other words 'epistemology' was distinguished as a special science in this tradition only on the grounds of *a priori* acceptance of the thesis that, human knowledge was not knowledge of the external world (i.e. existing outside consciousness) but was only a process of the ordering, organisation, and systematisation of facts of 'inner experience', i.e. ultimately of the psycho-physiological states of the human organism, absolutely dissimilar to the states and events of the external world.

That meant that any science, be it physics or political economy, mathematics or history, did not tell us anything (and could not) about just how matters stood in the external world, because in fact it described only facts arising within ourselves, the psycho-physiological phenomena illusorily perceived as a sum of external facts.

For the sake of special proof of this thesis a special science 'epistemology' was created that concerned itself exclusively with the 'inner conditions' of knowledge and purged them carefully of any dependence whatsoever on the effect of 'external conditions', above all of a 'condi-

tion' such as the existence of an external world with its own objective laws.

'Epistemology' was thus distinguished as a special science counterposed to 'ontology' (or 'metaphysics'), and not at all as a discipline investigating the real course of human knowledge of the surrounding world; quite the contrary, it was born as a doctrine postulating that every form of knowledge without exception was not a form of knowledge of the surrounding world but only a specific schema of the organisation of the 'subject of knowledge'.

From the standpoint of this 'theory of knowledge' any attempt to interpret existing knowledge as knowledge (understanding) of the surrounding world was impermissible 'metaphysics', 'ontologisation' of purely subjective forms of activity, an illusory attributing of determinations of the subject to 'things in themselves', to the world outside consciousness.

By 'metaphysics' and 'ontology' then was meant not so much a special science of 'the world as a whole', a universal scheme of the world, as the whole aggregate of real, so-called 'positive' sciences (physics, chemistry, biology, political economy, history, and so on). So that the main fervour of Neokantian 'epistemologism' proved to be directed precisely against the idea of a scientific world outlook, of a scientific understanding of the world realised in the real sciences themselves. A 'scientific world outlook', according to this view, was an absurdity, nonsense, since 'science' (read: the whole aggregate of natural and social sciences) in general knew nothing about the world outside consciousness and did not speak of it. Under the scornful term 'metaphysics' Neokantians therefore in fact refuse the laws and patterns discovered and formulated by physics, chemistry, biology, political economy, history, etc., any philosophical significance as a world outlook. From their point of view metaphysics could not be a 'science', and science (read again: the aggregate of all sciences) could not and had no right to play the role of 'metaphysics', i.e. to lay claim to an objective meaning (in the materialist sense of the term) for its statements. A world outlook therefore also could not be scientific, because it was the connected aggregate of views of the world within which man lived, acted, and thought, and science was not in a position to unite its achievements in a world outlook without thereby falling into difficulties that were unresolvable for it, into contradictions.

This had already, allegedly, been demonstrated once and for all by Kant. It was impossible to build a world outlook from the data of science. But why not, precisely?

Because the very principles of knowledge, which were the conditions for the possibility of any scientific synthesis of notions into concepts, judgments, and inferences, i.e. into categories, at the same time also proved to be the conditions of the impossibility of achieving a full synthesis of all scientific ideas into the body of a connected, united, and non-contradictory picture of the world. And that, in the language of Kantians, meant that a world outlook built on scientific principles (or simply a scientific world outlook) was impossible in principle. In a scientific world outlook (and not by chance, not from lack of information, but of the necessity inherent in the very nature of thought expressed in categorial schemas) there were always flaws of contradictions cracking it to bits that were unconnectable with one another without flagrant breach of the supreme principle of all analytical judgments, the principle of contradiction in scientific determinations.

Man could unite and connect the isolated fragments of the scientific picture of the world into a higher unity in one way only, by breaking his own supreme principles; or, what was the same thing, by turning unscientific schemas of the coupling of ideas in a united whole into the principles of synthesis, since the latter had no relation with the principle of contradiction, but were the principles of faith and opinion, dogmas that were equally undemonstrable and uncontroversible scientifically, and were acceptable solely according to irrational whims, sympathy, conscience, etc., etc. Only faith was capable of synthesising the fragments of knowledge into a united picture at those points where all attempts to do so by means of science were doomed to failure. Hence the slogan specific to all Kantians of the uniting of science and faith, of the logical principles of the construction of a scientific picture of the world and of irrational precepts (logically undemonstrable and incontrovertible), compensating the powerlessness organically built into the intellect to accomplish the highest synthesis of knowledge.

Only within the limits described above could the meaning of the Kantian posing of the problem of the relation of logic to the theory of knowledge be understood. Logic as such was interpreted by all Kantians as *part of the theory of knowledge*. Occasionally this 'part' was given the main significance and it almost swallowed the whole (for example, in the variants of Cohen and Natorp, Cassirer and Rickert, Vvedensky and

Chelpanov), and occasionally it was relegated to a more modest place, subordinated to the other 'parts' of the theory of knowledge; but logic was always 'part'. The theory of knowledge was broader, because its job was wider, since reason (understanding) was not the sole, though the most important, means of processing the data of sensations, perceptions, and ideas into the form of knowledge, into concepts and a system of concepts, into science. Logic, therefore, in the Kantian interpretation, never covered the whole field of the problems of the theory of knowledge; beyond it lay an analysis of processes effected by other aptitudes, that is to say, perception, and intuition, and memory, and imagination, and many others. Logic, as the theory of discursive thought, which moved in rigorous determinations and in strict accord with rules clearly realisable and formulatable, only partly did the job of the theory of knowledge, only through analysis of its own object, singled out from the whole complex of cognitive faculties. The main job of the theory of knowledge, however, thus also remained logic's chief task, i.e. to establish the limits of knowledge and clarify the inner limitedness of the possibilities of thought in the course of constructing a world outlook.

Logic therefore had neither the least connection nor least relation with understanding of the real world of 'things in themselves'. It was applicable solely to things already realised (with or without its involvement), i.e. to the psychic phenomena of human culture. Its special task was rigorous analysis of the already available images of consciousness (transcendental objects), i.e. their resolution into simple components, expressed in strictly defined terms, and the reverse operation, the synthesis or linking together of the components into complex systems of determinations (concepts, systems of concepts, theories) again by the same rigorously established rules.

Logic must also demonstrate that real discursive thought was incapable of leading knowledge beyond the limits of existing consciousness, or of crossing the boundaries dividing the 'phenomenal' world from the world of 'things in themselves'. Thought, if it were logical, could not concern itself with 'things in themselves', and had no right to. So that, even within the boundaries of knowledge, thought was assigned in turn a limited field of legitimate application, within which the rules of logic were binding and obligatory.

The laws and rules of logic were inapplicable to the images of perception as such, to sensations, to ideas, to the phantoms of mythologised consciousness, including in that the idea of God, of the immortality of

the soul, and so on. But they did, and had to, serve as filters, as it were, retaining these images at the boundaries of scientific knowledge. And only that. To judge whether these images were true in themselves, whether they played a positive or a negative role in the body of spiritual culture, thought oriented on logic had neither the possibilities nor the right. In fact there was not and could not be a rationally substantiated, scientifically verified position in relation to any image of consciousness if it arose before and independently of the special logical activity of the mind, before and outside science. In science, inside its specific limits defined by logic, the existence of such images was inadmissible. Beyond its limits their existence was sovereign, outside the jurisdiction of reason and comprehension and therefore morally and epistemologically inviolable.

Considering the special features of the Kantian interpretation of the relation of logic and epistemology, one can understand the close attention that Lenin paid to Hegel's solution of this problem. In Hegel's understanding of the matter logic as a whole and in full, without irrational vestiges, embraced the whole field of the problems of knowledge and left no images of contemplation or fantasy outside its boundaries. It included their examination as external products (realised in the sensuously perceived material) of the real force of thought, because they were thought itself, only embodied not in words, judgments, and conclusions, deductions and inferences, but in *things* (actions, events, etc.) sensibly opposed to the individual consciousness. Logic merged here with the theory of knowledge because all other cognitive faculties were considered as *forms of thought*, as thinking that had not yet attained an adequate form of expression, had not yet matured to it.

Here we come up against the extreme expression, as it were, of Hegel's absolute idealism, according to which the whole world, and not only the cognitive faculties, was interpreted as alienated or estranged (embodied) thought that has not yet arrived at itself. With that, of course, Lenin as a consistent materialist could not agree. It is very indicative, however, that Lenin formulated his attitude to the Hegelian solution very cautiously: 'In this conception [i.e. Hegel's – *EV*], logic coincides with the *theory of knowledge*. This is in general a very important question'.³⁵

35 Lenin's "Philosophical Notebooks," *LCW* vol. 38, p 175.

We have succeeded, it seems, in demonstrating just why, in the course of Lenin's reading of Hegel's logic, this problem appeared more and more clearly to him to be 'very important', and perhaps the most important of all; why Lenin's thought returned to it again and again, in circles as it were, each time becoming more and more definite and categorical. The fact is that the Kantian conception of logic, generally accepted at the time, as part of the theory of knowledge, by no means remained an abstract, philosophical, theoretical construction. The Kantian theory of knowledge defined the limits of the competence of science in general, leaving the most acute problems as regards world outlook beyond its limits, and declaring them 'transcendental' for logical thought, i.e. for theoretical knowledge and solution. But in this case the union of scientific investigation and faith in the corpus of a world outlook would be not only permissible but necessary. And it was in fact under the banner of Kantianism that the revisionist stream (the principles of which had been laid down by Eduard Bernstein and Conrad Schmidt) surged forward in the socialist movement. The Kantian theory of knowledge was directly oriented here on 'uniting' 'rigorous scientific thought' (the thinking of Marx and Engels, according to Bernstein, was not strictly scientific because it was marred by foggy Hegelian dialectics) with 'ethical values' and undemonstrable and irrefutable faith in the transcendental postulates of the 'good', of 'conscience' of 'love of one's neighbour' and of the whole 'human race' without exception, and so on and so forth.

The harm done to the working class movement by the propagation of 'higher values' was not, of course, the talk about conscience being good and lack of conscience bad, or about love of the human race being preferable to hatred of it. The harm of the Kantian idea of uniting science with a system of 'higher' ethical values consisted in principle in its orienting theoretical thought itself along lines other than those along which the teaching of Marx and Engels had been developed. It plotted its own, Kantian strategy of scientific research for social-democratic theoreticians and confused ideas on the main line of development of theoretical thought and on the lines along which theoretical solution of the real problems of modern times could and should be sought. The Kantian theory of knowledge turned theoretical thinking not to analysis of the material, economic relations between people that form the foundation of the whole pyramid of social relations, but to elaborating of far-fetched 'ethical' constructions, morally interpretable policies, and social psychol-

ogy of the Berdyaev kind, and to other things, which were interesting but absolutely useless (if not harmful) to the working class movement.

The orientation of theoretical thought not on the logic of *Capital* but on moral-fictional harping on the secondary, derivative defects of the capitalist system in its secondary, superstructural storeys, led to the decisive, dominant trends of the new, imperialist stage of the development of capitalism escaping the notice of the theoreticians of the Second International; not because they lacked talent, but rather because of a petty-bourgeois class orientation and a false epistemological position.

In this respect the fate of Rudolf Hilferding and H. W. C. Cunow was very characteristic. Insofar as they tried to develop Marx's political economy by means of the 'latest' logical devices, rather than of dialectics, it inevitably degenerated into a superficial classificatory description of contemporary economic phenomena, i.e. into a quite uncritical acceptance of them, into an apologia. This path led directly to Karl Renner and his *Theory of the Capitalist Economy*, the Bible of right-wing socialism, which was already linked, as regards its method of thinking and logic of investigation, with vulgar positivist epistemology. Renner's philosophical credo was as follows: '... Marx's *Capital*, written in an age far removed from us, with a quite different way of thinking, and a manner of exposition not worked out to the end, with every new decade increases the reader's difficulties. ... The style of writing of the German philosophers has become foreign to us. Marx came from a very philosophical age. Science today no longer proceeds deductively (not only in research but also in presentation), but rather inductively; it starts 'from experimentally established facts, systematises them and so by degrees arrives at the level of abstract concepts. For an age that is so accustomed to think and to read, the first section of Marx's principal work presents sheer insuperable difficulty'.³⁶

The orientation on 'modern science' and the modern way of thinking', already begun with Bernstein, turned into an orientation on the idealistic and agnostic vogue interpretations of 'modern science', on Humean-Berkeleyan and Kantian epistemology. Lenin saw that quite clearly. From the middle of the nineteenth century bourgeois philosophy frankly moved 'back to Kant', and further back to Hume and Berkeley;

36 Karl Renner, *Die Wirtschaft als Gesamtprozess und die Sozialisierung*, Berlin 1924, p 5.

and Hegel's logic, despite all its absolute idealism, was more and more clearly depicted as the pinnacle of the development of all pre-Marxian philosophy in the field of logic understood as the theory of the development of scientific knowledge, *as the theory of knowledge*.

Lenin repeatedly stressed that it was only possible to *move forward* from Hegel along one line and one line only, that of a materialist reworking of his achievements, because Hegel's absolute idealism had really exhausted all the possibilities of idealism as a principle for understanding thought, knowledge, and scientific consciousness. But, because of certain circumstances lying outside science, only Marx and Engels had been able to take that line. It was closed to bourgeois philosophy; and the slogan 'Back to Kant' was imperiously dictated by the fear aroused in the bourgeoisie's ideologists by the social perspectives opened up from the heights of the dialectical view of thought. From the moment the materialist view of history appeared, Hegel was seen by bourgeois consciousness as none other than the 'spiritual father' of Marxism. That had a considerable grain of truth, too, for Marx and Engels had disclosed the genuine sense of Hegel's main achievement, dialectics, and demonstrated not only the constructive, creative power of its principles, understood as the principles of man's rational attitude to the world, but also their revolutionary, destructive force.

Why then did Lenin, while fighting Hegel's absolute idealism, begin to join sides with him more and more just at that point where the idealism seemed in fact to become *absolute*? For surely the conception of logic as a science embracing in its principles not only human thought but also the real world outside consciousness was linked with panlogism, with the interpretation of the forms and laws of the real world as alienated forms of thought, and thought itself as the absolute force and power organising the world?

The fact is that Hegel was and remains the sole thinker before Marx who consciously introduced practice into logic with full rights as the criterion both of truth and of the correctness of the operations that man performs in the sphere of the verbal, symbolic explication of his psychic states. In Hegel logic became identified with the theory of knowledge precisely because man's practice (i.e. realisation of the aims of the 'spirit' in sense objects, in natural, physical material was brought into the logical process as a phase, was looked upon as thought in its external revelation, in the course of checking its results through direct contact with 'things in themselves'.

Lenin traced the development of Hegel's corresponding ideas with special scrupulousness. '... The practice of man and of mankind is the test, the criterion of the objectivity of cognition. Is that Hegel's idea? It is necessary to return to this', he wrote.³⁷ And returning to it, he wrote confidently, and quite categorically: '... Undoubtedly, in Hegel practice serves as a link in the analysis of the process of cognition, and indeed as the transition to objective ("absolute", according to Hegel) truth. Marx, consequently, clearly sides with Hegel in introducing the criterion of practice into the theory of knowledge: see the *Theses on Feuerbach*?³⁸

In appearing as a practical act thought included *things outside consciousness* in its movement, and then it turned out that the 'things in themselves' were subordinated to the dictates of thinking man and obediently moved and changed according to laws and schemas dictated by his thought. Thus not only did the 'spirit' move according to logical schemas, but also the world of 'things in themselves'. Logic consequently proved to be precisely a theory of knowledge of *things also*, and not solely a theory of the self-knowledge of the spirit.

Formulating the 'rational kernel' of Hegel's conception of the subject matter of logic, Lenin wrote: 'Logic is the science not of external forms of thought, but of the laws of development "of all material, natural and spiritual things", i.e., of the development of the entire concrete content of the world and of its cognition, i.e., the sum-total, the conclusion of the *History* of knowledge of the world'.³⁹

There is no such a formulation, and furthermore no such a *conception* of the subject matter of logic in Hegel himself. In this passage Lenin did not simply translate Hegel's thought 'into his own words', but reworked it materialistically. Hegel's own text, in which Lenin discovered the 'rational kernel' of his conception of logic, does not sound at all like that. Here it is: 'The indispensable basis, the Concept, the Universal, which is Thought itself – in so far, that is, as in using the word *Thought* one can abstract from the idea – this cannot be regarded as a *merely* indifferent form which is attached to some content. But these thoughts of all natural and spiritual things [Only these words are found in Lenin's formulation – *EVI*] even the substantial content, are yet such as to possess manifold determina-

37 Lenin's "Philosophical Notebooks," *LCW* vol. 38, p 211.

38 *ibid.*, p 212.

39 *ibid.*, p 92-93.

tions and to contain the distinction between Soul and Body, between a concept and its respective reality; the deeper basis is the soul in itself, the pure concept, which is the very core of objects, their very life-pulse, as it is the core and pulse of subjective thinking itself. To bring into clear consciousness this *logical* character which gives soul to mind and stirs and works in it, this is our problem'.⁴⁰

The difference between Hegel's formulation and Lenin's is one of *principle*, because there is nothing in Hegel about the development of natural things, and could not even be. It would therefore be a gross error to think that the definition of logic as the science of the laws of development of all material and spiritual things is only Hegel's idea transmitted by Lenin, or even simply cited by him. It is nothing of the sort; it is *Lenin's own idea*, formulated, by him in the course of a critical reading of Hegel's words.

Hegel's logic is also his theory of knowledge for the reason that the science of thought was inferred by him from an investigation of the history of the spirit's self-knowledge, and thus of the world of natural things, since the latter were considered moments of the logical process, schemas of thought, concepts, alienated in natural material.

Logic is also the theory of knowledge of Marxism, but for quite another reason, because the forms themselves of the activity of the 'spirit' – the categories and schemas of logic – are inferred from investigation of the history of humanity's knowledge and practice, i.e. from the process in the course of which thinking man (or rather humanity) cognises and transforms the material world. From that standpoint logic also cannot be anything else than a theory explaining the universal schemas of the development of knowledge and of the material world by social man. *As such it is also a theory of knowledge*, any other definition of the tasks of a theory of knowledge inevitably leads to one version or another of the Kantian conception.

In no case, according to Lenin, logic and the theory of knowledge were two different sciences. Even less could logic be defined as part of the theory of knowledge. The logical determinations of thought therefore included exclusively universal categories and laws (schemas) of the development of the objective world in general cognised in the course of the millennia of the development of scientific culture and tested for objectiv-

40 Hegel's "Science of Logic," transl. A. V. Miller, p 37.

ity in the crucible of social man's practice, schemas common to both natural and socio-historical development. Being reflected in social consciousness, in mankind's spiritual culture, they functioned as active logical forms of the work of thought, and logic was a systematic, theoretical depiction of the universal schemas, forms, and laws of development of nature *and* of society, *and* of thought itself.

In this conception, however, logic (i.e. the materialist theory of knowledge) was fully merged without residue in *dialectics*. And once more there were not two sciences, however 'closely linked' with one another, but one and the same science, one in subject matter and its stock of concepts. And this, Lenin stressed, was not 'an aspect of the matter', but 'the essence of the matter'. In other words, unless logic was understood simultaneously as the *theory of knowledge*, it could not be truly understood.

So logic (the theory of knowledge) and dialectics, according to Lenin, were in a relationship of full identity, full coincidence of subject matter and stock of categories. Dialectics had no subject matter distinct from that of the theory of knowledge (logic), just as logic (the theory of knowledge) had no object of a study that would differ in any way from the subject matter of dialectics. In the one and in the other it was a matter of universal forms and laws of development in general that were reflected in consciousness precisely in the shape of logical forms and laws of thought through the determination of categories. And because categories as schemas of the synthesis of experimental data in concepts had a quite objective significance, the same significance also attached to the 'experience' processed with their aid, i.e. to science, the scientific picture of the world, the scientific outlook.

'Dialectics *is* the theory of knowledge of (Hegel and) Marxism', Lenin wrote in his notes '*On the Question of Dialectics*', in which he summed up the vast job he had done in several years of hard work on critically reworking the Hegelian conception of logic in a materialist way. "This is the "aspect" of the matter (it is not "an aspect" but the *essence* of the matter) to which Plekhanov, not to speak of other Marxists, paid no attention'.⁴¹ That categorical conclusion, hardly admitting of any other interpretation than a literal one, must not be considered as a phrase dropped by chance, but as a real resume of all Lenin's understanding of the problem of the relation-

41 Lenin's "Philosophical Notebooks," *LCW* vol. 38, p 362.

ship of dialectics, logic, and the theory of knowledge of modern materialism.

In the light of the foregoing, attempts to interpret their relation in the body of Marxism in such a way that dialectics is transformed into a special category treating 'pure forms of being', and logic and the theory of knowledge into special sciences connected with dialectics but not, however, merged with it, and devoted exclusively to the 'specific' forms of the reflection of this ontology in men's consciousness – the one (epistemology) being devoted to the 'specific' forms of knowledge and the other (logic) to the 'specific' forms of discursive thought – proved to be bankrupt (and in no way linked with Lenin's conception).

The idea whereby logic is distinguished from dialectics as the particular from the general and therefore studies just that 'specific feature' of thought from which dialectics digresses, is based on a simple misunderstanding, on neglect of the fact that the 'specific nature' of the forms and laws of thought consists precisely in their universality.

Logic as a science is not at all interested in the 'specific features' of the thinking of the physicist or chemist, economist or linguist, but only in those universal (invariant) forms and laws within which the thinking of any person flows, and of any theoretician, including the logician by profession, who specially thinks about thought. From the angle of materialism, therefore, logic also investigates forms and laws that equally govern both thinking about the external world and thinking about thought itself, and is thus the science of the universal forms and patterns of thought and reality; so that the statement that logic must study the 'specific forms' of the movement of thought as well as the universal ones (common to thought and being), in fact ignores the historically formed division of labour between logic and psychology, depriving psychology of its subject matter, and throwing onto logic a task that is too much for it.

To understand logic as a science distinguished from dialectics (though closely connected with it) means to understand both logic and dialectics incorrectly, and not in a materialist way; because logic, artificially separated from dialectics, is inevitably converted into a description of purely subjective methods and operations, i.e. of forms of activities depending on the will and consciousness of people, and on the peculiarities of the material, and therefore ceases to be an objective science. While dialectics, counterposed to the process of the development of knowledge (thought), in the form of a doctrine about 'the world as a whole', in the

form of ‘world schematics’ is just as inevitably converted into extremely general statements about everything on earth and not about anything in particular (something of the sort of that ‘everything in nature and society is interconnected’, or that ‘everything develops’ and even ‘through contradictions’, and so on).

Dialectics, understood so, is tacked on to the real process of cognition in a purely formal way, through examples ‘confirming’ one and the same general proposition over and over again. But it is clear that such a formal superimposition of the general onto the particular does not deepen our understanding of either the general or the particular by a single jot, while dialectics is transformed into a dead scheme. Lenin therefore quite justly considered the transformation of dialectics into a sum of examples as the inevitable consequence of not understanding it as the logic and theory of knowledge of materialism.

Being the science of the universal forms and patterns within which any process, either objective or subjective, takes place, logic is a rigorously defined system of special concepts (logical categories) reflecting the stages (‘steps’) consecutively passed through in the formation of any concrete whole (or correspondingly of the process of its mental-theoretical reproduction). The sequence of the development of the categories in the body of a theory has an objective character, i.e. does not depend on the will and consciousness of people. It is dictated primarily by the objective sequence of the development of empirically based theoretical knowledge,⁴² in the form of which, the objective sequence of the real historical process, purged of its disruptive fortuities and of the historical form, is reflected in people’s consciousness.

Logical categories are thus directly stages in distinguishing the world, i.e. of cognising it, and nodal points helping to cognise and master it.⁴³

In explaining this view Lenin remarked on the general sequence of the development of logical categories: ‘First of all impressions *flash by*, then *Something* emerges—afterwards the concepts of *quality* (the determination of the thing or the phenomenon) and *quantity* are developed. After that study and reflection direct thought to the cognition of identity—difference—Ground—Essence versus phenomenon—causality, etc. All these moments (steps, stages, processes) of cognition move ... from

42 Engels, “Dialectics of Nature,” *MECW* vol. 25, p 505.

43 Lenin’s “Philosophical Notebooks,” *LCW* vol 38, p 93.

subject to object, being tested in practice and arriving through this test at truth'.⁴⁴ 'Such is actually the *general course* of all human cognition (of all science) in general. Such is the course also of *natural science* and *political economy* (and history)'.⁴⁵ The *movement* of scientific cognition, Lenin said, was the nub.⁴⁶

Logical categories are stages (steps) in cognition developing the object in its necessity, in the natural sequence of the phases of its own formation, and not at all man's technical devices imposed on the subject like a child's bucket on sand-pies. Not only do the determinations of each of the logical categories therefore have an objective character, i.e. determine the object and not simply the form of subjective activity, but the sequence in which the categories appear in the theory of thought also has the same necessary character. It is impossible to determine necessity or purpose strictly scientifically, on an objective basis, before and independently of the scientific determination of identity and difference, quality and measure, etc., just as it is impossible to understand capital and profit scientifically unless their 'simple components' – commodity and money have previously been analysed, and just as it is impossible to understand the complex compounds of organic chemistry while their constituent chemical elements are unknown (not identified by analysis).

In outlining a plan for systematic treatment of the categories of logic, Lenin noted: 'If Marx did not leave behind him a Logic (with a capital 'L'), he did leave the *logic of Capital*, and this ought to be utilised to the full in this question'.⁴⁷ Moreover, one can only distinguish the logical categories underlying the theory of political economy from the movement of the theory by basing oneself on the best (dialectical) traditions in the development of logic as a science. 'It is impossible completely to understand Marx's *Capital*, and especially its first chapter, without having thoroughly studied and understood the *whole* of Hegel's Logic'.⁴⁸ 'In his *Capital*', Lenin wrote further, 'Marx first analyses the simplest, most ordinary and fundamental, most common and everyday *relation* of bourgeois (commodity) society, a relation encountered billions of times, viz.

44 *ibid.*, p 319.

45 *ibid.*, p 318.

46 *ibid.*, p 87.

47 *ibid.*, p 319.

48 *ibid.*, p 180.

the exchange of commodities. In this very simple phenomenon (in this “cell” of bourgeois society) analysis reveals *all* the contradictions (or the germs of *all* the contradictions) of modern society. The subsequent exposition shows us the development (*both* growth *and* movement) of these contradictions and of this society in the Σ of its individual parts, from its beginning to its end.

‘Such must also be the method of exposition (or study) of dialectics in general (for with Marx the dialectics of bourgeois society is only a particular case of dialectics)’.⁴⁹

10. Contradiction as a Category of Dialectical Logic

Contradiction as the concrete unity of mutually exclusive opposites is the real nucleus of dialectics, its central category. On that score there cannot be two views among Marxists; but no small difficulty immediately arises as soon as matters touch on ‘subjective dialectics’, on dialectics as the logic of thinking. If any object is a living contradiction, what must the thought (statement about the object) be that expresses it? Can and should an objective contradiction find reflection in thought? And if so, in what form?

Contradiction in the theoretical determinations of an object is above all a fact that is constantly being reproduced by the movement of science, and is not denied by dialectics or by materialists or idealists. The point that they dispute is something else, namely: what is the relationship of the contradiction in thought to the object? In other words, can there be a contradiction in true, correct thought?

The metaphysical logician tries to demonstrate the inapplicability of the dialectical law of the coincidence or concurrence of opposites, which amounts to their identity, to the very process of thought. Such logicians are occasionally prepared even to recognise that the object can, in agreement with dialectics, be by itself inwardly contradictory. The contradiction is in the object but must not be in the ideas about it. The metaphysician, however, still cannot permit himself in any way to recognise the truth of the law that constitutes the nucleus of dialectics, in relation to the logical process. The principle of contradiction is transformed into an absolute, formal criterion of truth, into an indisputable *a priori* canon, into the supreme principle of logic.

⁴⁹ *ibid.*, p 360-61.

Some logicians strive to substantiate this position, which it is difficult to call other than eclectic, by citing the practice of science. Any science, when it comes up against a contradiction in determinations of an object, always strives to resolve it. In that case does it not act in accordance with the recipes of metaphysics, which holds that any contradiction in thought is inadmissible, and something that must be got rid of somehow or other? The metaphysician in logic interprets similar moments in the development of science in such a way. Science, he says, always strives to avoid contradictions, but in dialectics there is an opposite tendency.

The view under consideration is based on a misunderstanding, or rather simply on ignorance of the important historical fact that dialectics was born just where metaphysical thought (i.e. thinking without knowing or desiring to know any other logic than formal logic) finally became caught up in the logical contradictions it had brought to light just because it persistently and consistently observed the ban on any kind of contradiction whatsoever in determinations. Dialectics as logic is the means of resolving these contradictions, so that it is stupid to accuse it of an itch to pile up contradictions. It is irrational to see the cause of the illness in the coming of the doctor. The question can only be whether dialectics is successful in curing the contradictions into which thought falls, in fact, as a result of a most rigorous metaphysical diet that unconditionally forbids any contradiction. And if it is successful, just why is it?

Let us turn to the analysis of a striking example, a typical case of how mountains of logical contradictions have been piled up just by means of absolutised formal logic, and rationally resolved only by means of dialectical logic. We have in mind the history of political economy, the history of the disintegration of the Ricardian school and the rise of Marx's economic theory. The way out of the blind alley of the theoretical paradoxes and antinomies into which the Ricardian school had got was found, as we know, only by Karl Marx, and was found precisely by means of dialectics as logic.

That Ricardo's theory contained a mass of logical contradictions was not discovered by Marx at all. It was plainly seen by Malthus, and Sismondi, and McCulloch, and Proudhon. But only Marx was able to understand the real character of the contradictions of the labour theory of value. Let us, following Marx, consider one of them, the most typical and acute, the antinomy of the law of value and the law of the average rate of profit.

David Ricardo's law of value established that living human labour was the sole source and substance of value, an affirmation that was an enormous advance on the road to objective truth. But profit was also value. In trying to express it theoretically, i.e. through the law of value, a clear logical contradiction was obtained. The point was that profit was new, newly created value, or rather part of it. That was an indisputably true analytical determination. But only new labour produced new value. How, however, did that tie up with the quite obvious empirical fact that the quantity of profit was not determined at all by the quantity of living labour expended on its production? It depended exclusively on the quantity of capital as a whole, and in no case on the size of that part that went on wages. And it was even more paradoxical that the higher the profit the less living labour was consumed during its production.

In Ricardo's theory the law of the average rate of profit, which established the dependence of the scale of profit on the quantity of capital as a whole, and the law of value, which established that only living labour produced new value, stood in a relation of direct, mutually exclusive contradiction. Nevertheless, both laws determined one and the same object (profit). This antinomy was noted with spiteful delight in his day by Malthus.

Here then was a problem that it was impossible to resolve on the principles of formal logic. And if thought had arrived here at an antinomy, and had landed in a logical contradiction, it was difficult to blame dialectics for it. Neither Ricardo nor Malthus had any idea of dialectics. Both knew only the Lockian theory of understanding and the logic (and that formal) corresponding to it. Its canons were indisputable for them, and the only ones. This logic justified a general law (in this case the law of value) only when it was demonstrated as an immediately general empirical rule under which all facts whatsoever were subsumed without contradiction.

It was found that there was in fact no such relationship between the law of value and the forms of its manifestation. As soon as one tried to treat profit theoretically (i.e. to understand it through the law of value), it suddenly proved to be an absurd contradiction. If the law of value was universal, profit was impossible in principle. By its existence it refuted the abstract universality of the law of value, the law of its own particular existence.

Ricardo, the creator of the labour theory of value, was primarily concerned with the accord of the theoretical statements with the object. He soberly, and even cynically, expressed the real state of affairs; and the latter, riddled with unresolvable antagonisms, was naturally presented in thought as a system of conflicts, antagonisms, and logical contradictions. This circumstance, which bourgeois theoreticians regarded as evidence of the weakness and incompleteness of his theory, was evidence rather of the contrary, of its strength and objectivity.

When Ricardo's disciples and successors no longer made correspondence of theory to the object their chief concern, but rather agreement of the developed theoretical determinations with the requirements of formal logical consistence, with the canons of the formal unity of theory, the labour theory of value began to disintegrate. Marx wrote of James Mill: 'What he tries to achieve is formal, logical consistence. The *disintegration* of the Ricardian school "therefore" begins with him'.⁵⁰

In fact, as Marx showed, the general law of value stood in a relation of mutually exclusive contradiction with the empirical form of its own manifestation, with the law of the average rate of profit. That was *a real contradiction of a real object*. And it was not surprising that, in trying to subsume the one law directly and immediately under the other, a logical contradiction was obtained. But when, nevertheless, they continued trying to make value and profit agree directly and *without contradiction*, they then obtained a problem that was, in Marx's words, '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'.⁵¹

The metaphysically thinking theoretician, coming up against such a paradox, inevitably interprets it as the result of mistakes committed earlier in thought, in the working out and formulation of the universal law. And he naturally seeks a solution of the paradox by way of a purely formal analysis of the theory, by making the concepts more precise, by correcting expressions, and so on. *A propos* of this approach to solving the problem Marx wrote: "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

50 "Theories of Surplus Value, Part III," *MECW* vol. 32 p 258.

51 "Theories of Surplus Value, Part III" *MECW* vol. 32 p 277.

moreover is to be brought about by a *verbal fiction*, by changing *vera rerum vocabula*. (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.)⁵²

When the general law contradicts the empirically common position of things the empiricist immediately sees the way out in altering the formulation of the general law in such a fashion that the empirically general will be directly subsumed under it. At first glance that is how it ought to be; if thought contradicts the facts, then the thought should be altered so as to bring it into line with the general phenomena immediately given on the surface. In fact, this is theoretically false, and by taking it the Ricardian school arrived at complete rejection of the labour theory of value. The general law revealed by Ricardo was sacrificed to crude *empeiria* (experience), but the crude empiricism was inevitably converted into a ‘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’.⁵³

Formal logic, and the metaphysics that made it an absolute, knew only two ways of resolving contradictions in thought. The first was to adjust the general law to the directly general, empirically obvious, state of affairs. That, as we have seen, brought about loss of the concept of value. The second way was to represent the internal contradiction, express thinking as a logical contradiction, as an external contradiction of two things, each of which was, in itself, non-contradictory, a procedure known as reducing the internal contradiction to a contradiction ‘in different relations or at a different time’. It was done as follows. Profit could not be explained from value without contradiction? Well, what of it! There was no need to persist in a one-sided approach; one must admit that profit originated in reality not only from labour but also from many other factors. It was necessary role of land, and of machines, and of demand, and of many, many other account. The point, they said, lay not in the contradictions but in the fullness. So the triune formula of vulgar economics ‘Capital—interest; land—rent; labour—wages’. There was no

52 *Ibid.*, *MECW* vol. 32 p 277-8.

53 “Theories of Surplus Value, Part I” *MECW* vol. 30 p 395.

logical contradiction there, it is true; it had disappeared, but with it, too, had disappeared the theoretical approach to things in general.

The conclusion was obvious; not every means of resolving the contradictions led to *development* of the theory. The two ways outlined above signified a solution such as was identical with converting the theory into empirical eclecticism. Because theory in general existed only where there was a conscious and principled striving to understand all the separate phenomena as necessary and the same general, concrete substance, in this instance the substance of value, of living human labour.

The only theoretician who succeeded in resolving the logical contradictions of the Ricardian theory so as to bring about not disintegration but *real development* of the labour theory of value was, of course, Karl Marx. What did his dialectical materialist method of resolving the antinomy consist in? First of all, we must state that the real contradictions discovered by Ricardo did not disappear in Marx's system. Furthermore, they were presented in it as *necessary* contradictions of the object itself, and not at all as the result of mistakenness of the idea, or of inexactitudes in determinations. In the first volume of *Capital*, for example, it is demonstrated that surplus value is exclusively the product of that part of capital which is expended on wages and converted into living labour, i.e. variable capital. The proposition in the third volume, however, reads: 'However that may be, the outcome is that surplus-value springs simultaneously from all portions of the invested capital'.⁵⁴

Between the first and the second propositions a whole system was developed, a whole chain of connecting links; between them, nevertheless, there was preserved a relationship of mutually exclusive contradiction banned by formal logic. That is why vulgar economists triumphantly declared, after the appearance of the third volume of *Capital*, that Marx had not fulfilled his pledge, that the antinomy of the labour theory of value remained unresolved by him and that the whole of *Capital* was consequently nothing more than speculative, dialectical hocus-pocus.

The general is thus also contradicted in *Capital* by its own particular manifestation, and the contradiction between them does not disappear just because a whole chain of mediating links has been developed between them. On the contrary, this actually demonstrates that the antinomies of the labour theory of value are not logical ones at all but real

⁵⁴ "Capital, Volume III" *MECW* vol 37, p 40.

contradictions in the object, correctly expressed by Ricardo, though not understood by him. In *Capital* these antinomies are not done away with at all as something subjective, but prove to be understood, i.e. have been *sublated* in the body of a deeper and more concrete theoretical conception. In other words, they are *preserved* but have lost the character of logical contradictions, having been converted into abstract moments of the concrete conception of economic reality. And there is nothing surprising in that; any concrete, developing system includes contradictions as the principle of its self-movement and as the form in which the development is cast.

So let us compare how the metaphysician Ricardo and the dialectician Marx understood value. Ricardo, of course, did not analyse value by its form. His abstraction of value, on the one hand, was incomplete, and on the other was formal, and for that reason was untrue. In what, then, did Marx see the fullness and pithiness of the analysis of value that was missing in Ricardo? First, in value being a living concrete contradiction.

Ricardo showed value only from the aspect of its substance, i.e. took labour as the substance of value. As for Marx, he (to use an expression from *Hegel's Phenomenology of Mind*) understood value not only as substance but also as subject. Value was represented as the substance-subject of all the developed forms and categories of political economy; and with that conscious dialectics in this science began. Because the 'subject' in Marx's conception (in this case he employed the terminology of the *Phenomenology of Mind*) is reality developing through its own internal contradictions.

But let us look a little closer at Marx's analysis of value. First of all it investigates the direct, moneyless exchange or barter of commodity for commodity. In exchange, in the course of which one commodity is replaced by another, value is only manifested, is only expressed; and in no case is it created. It is manifested as follows: one commodity plays the role of relative value, and the other, counterposed to it, the role of equivalent. 'In one expression of value, one commodity cannot simultaneously appear in both forms. These forms are polar opposites, are mutually exclusive'.⁵⁵

The metaphysician will no doubt be delighted to read that two mutually exclusive economic forms cannot simultaneously be combined in one commodity! But can one say that Marx was refuting the possibility of the

⁵⁵ "Capital, Volume I" *MECW* vol. 35 p 59.

coincidence of mutually exclusive determinations in the object and in its conception? Rather the contrary. The fact is that we are not yet concerned with the *concept* of value, with value as such. The passage cited crowns the analysis of the *form of the revelation* of value. Value itself still remains a mysterious and theoretically unexpressed essence of each of the commodities. On the surface of phenomena it really appears as if two abstract, one-sided forms of its revelation are visible. But value itself does not coincide with either of these forms, or with their simple, mechanical unity. It is a third something, something lying deeper. In relation to its owner, for example, linen as a commodity appears only in the relative form of value; and in that same relation it cannot be simultaneously an equivalent.

But matters appear so only from an *abstract, one-sided* angle. For the owner of linen is absolutely equal to the owner of a coat, and from the position of the latter the relation under consideration proves directly the opposite, so that we do not have two different relations, but *one concrete objective relation, a mutual relation* of two commodity owners. From the *concrete* standpoint each of the two commodities – linen and coat – mutually measures the other's value and – also *mutually* serves as the material in which it is measured. In other words each mutually presupposes that the equivalent form of value is realised in the other commodity, the very form in which the latter can no longer be because it is in the relative form.

In other words the exchange really being completed presupposes that *each of the two* commodities mutually related in it simultaneously takes on both economic forms of the revelation of value in itself, both measuring its own value and serving as the material for expressing the value of the other commodity. And if, from the abstract, one-sided point of view, each of them is only in one form, and functions as relative value in one relation and as equivalent in the other, from the concrete aspect, i.e. in fact, each of the commodities is *simultaneously* and, moreover, *within one and the same relation* in both mutually exclusive forms of the expression of value. If the two commodities do not mutually recognise each other as equivalents, exchange simply cannot take place. If, however, exchange does take place, that means that the two polarly excluded forms of value are combined in each of the two commodities.

What you get, then, says the metaphysician, is that Marx contradicts himself. How can he say that two polar forms of the expression of value cannot be combined in one commodity, and then state that in real ex-

change they are all the same so combined? The answer is that concrete examination of things refutes the result obtained by the abstract, one-sided approach to them, and shows it to be untrue. The truth of commodity exchange is just that a relation is realised in it that is absolutely impossible from the angle of an abstract, one-sided view.

Something else is discovered in the form of the contradiction under consideration, as analysis shows, and that is the absolute content of each of the commodities, its value, the *inner* contradiction of value and use-value. 'Thus the contrast between use-value and value hidden away within the commodity', Marx wrote, 'has an outward and visible counterpart, namely the relation between two commodities, the relation in which the commodity whose value is to be expressed counts only as use-value, whereas the commodity in terms of which value is to be expressed counts only as exchange-value. The simple value form of a commodity is, therefore, the simple phenomenal form of the inherent contrast (within the commodity) between use-value and value'.⁵⁶

From the aspect of logic this point is extraordinarily instructive. The metaphysician, coming up against the fact of the coincidence of contradictory determinations in a concept, in the statement of a thing, sees in it a false theoretical expression and strives to turn the internal contradiction into an external contradiction of two things, each of which, in his view, is internally non-contradictory, into a contradiction 'in various relations or at a different time'. Marx acted quite the contrary. He showed that the inner contradiction hidden in each of the interrelated things in a contradiction of an external order.

As a result value was presented as an inner relation of a commodity *to itself*, outwardly revealed through the relation to another commodity. The other commodity played only the role of a mirror in which the inwardly contradictory nature of the commodity that expressed its value was reflected. In philosophical terms, the external contradiction was presented only as a phenomenon and the relation to the other commodity (as mediated through this relation) as the relation of the commodity to itself. The *inner* relation, the relation to itself, was also value as the absolute economic content of each of the mutually related commodities.

The metaphysician always strives to reduce the internal relation to an external one. For him a contradiction in 'one relation' is an index of the

⁵⁶ "Capital, Volume I" *MECW* vol. 35, p 66.

abstractness of knowledge, an index of the confusion of different planes of abstraction, and so on, and an external contradiction is a synonym of the 'concreteness' of knowledge. For Marx, on the contrary, it was an index of the one-sidedness and superficiality of knowledge when an object was presented in thought simply as an external contradiction, signifying that only the outward form of the manifestation of an internal contradiction had been caught, instead of the contradiction itself. Dialectics obliges one always to see, behind a thing's relation to another thing, its own relation to itself, its own inner relation.

The difference between dialectics and metaphysics does not consist at all in the former's recognising only inner contradictions and the latter's recognising only external ones. Metaphysics really always tries to reduce the inner contradiction to a contradiction 'in different relations', denying it objective significance. Dialectics by no means reduces the one to the other. It recognises the objectivity of both. The point, however, does not lie in reducing an external contradiction to an inner one, but in *deriving* the former from the latter and thus comprehending the one and the other in their objective necessity. Dialectics moreover does not deny the fact that an inner contradiction always appears in phenomena as an external one.

The immediate coincidence of mutually exclusive economic determinations (value and use-value) in *each* of the two commodities meeting in exchange is also the true theoretical expression of the essence of simple commodity exchange. And this essence is value. From the logical aspect the concept of value (in contrast to the outward form of its manifestation in the act of exchange) is characterised by its being presented as an immediate contradiction, as the direct coincidence of two forms of economic existence that are polar opposites.

Thus, what was effected in the real act of exchange was impossible from the angle of abstract (formal, logical) reason, namely, the direct or immediate identification of opposites. This was the theoretical expression of the real fact that direct commodity exchange could not be completed smoothly, without collisions, without conflicts, without contradictions and crises. The point was that direct commodity exchange was not in a position to express the socially necessary measure of the expenditure of labour in the various branches of social production, i.e. value. And value therefore remained, within the limits of the simple commodity form, an unresolved and unresolvable antinomy. In it the commodity *had to be, yet could not be*, in the two polar forms of expression of value, and consequently real exchange by value was impossible. But it did happen some-

how, and consequently both polar forms of value were somehow combined in each commodity. There was no way out of the antinomy. Marx's contribution was precisely that he understood that, and expressed it theoretically.

Insofar as exchange through the market remained the sole and universal form of the social exchange of things, the antinomy of value found its solution in the movement of the commodity market itself. The market created the means for resolving its own contradictions. So money was born. Exchange became not direct and unmediated, but mediated – through money; and the coincidence of mutually exclusive economic forms in a commodity came to an end, as it were, since it was split into two 'different relations', into an act of sale (which transformed use-value into value) and an act of purchase (which converted value into use-value). The two antinomic acts, mutually exclusive in their economic content, already did not coincide immediately but were completed at a different time and in different parts of the market.

"The antinomy seemed at first glance to be resolved by all the rules of formal logic; but the semblance was purely external. In fact the antinomy had not disappeared at all, but had only acquired a new form of expression. Money did not become absolutely pure value, and the commodity thus pure use-value. Both commodity and money were fraught, as before, with an inner contradiction that was expressed, as before, in thought in the form of a contradiction in determinations; once again, moreover, the contradiction was unresolved and unresolvable, and revealed itself in the clearest way, though only from time to time, precisely in crises, and then making itself felt the more strongly.

"The only commodity is money', says the commodity owner at times when this contradiction does not show on the surface. 'The only money is commodities', he asserts in a directly opposite way during a crisis, refuting his own abstract statement. Marx's theoretical, but concrete, thinking showed that the inner opposition of the economic determinations of money existed at every fleeting second, even when they were not manifested in an obvious, visible way but were hidden in commodities and in money, when everything was apparently going swimmingly and the contradiction seemed resolved once and for all.

In theoretical determinations of money the antinomy of value brought out earlier was preserved; in them it formed the 'simple essence' both of commodities and of money, although on the surface of phenom-

ena it proved to be annulled, broken down into two 'different relations'. But these relations, like the direct exchange of commodity for commodity, formed on inner unity that was preserved in all its acuteness and tension in both commodities and money, and consequently also in theoretical determinations of the one and of the other. As before, value remained an internally contradictory relation of a commodity to itself, which was no longer revealed, though, on the surface through a direct relation to another commodity of the same sort, but through its relation to money. Money now functioned as the means by which the mutual, reciprocal transformation of the two originally exposed poles of the expression of value (value and use-value) was effected.

From that angle the whole logical structure of *Capital* was traced out from a new and very important aspect. Any concrete category was presented as a metamorphosis through which value and use-value passed during their reciprocal transformations into one another. The forming of the capitalist, commodity system appears in Marx's theoretical analysis as a complicating of the chain of connecting links through which the poles of value, mutually attracting and at the same time excluding each other, have to pass. The path of the reciprocal transformation of value and use-value becomes longer and longer, and more and more complicated, and the tension between the poles increases.

The relative and temporary resolution of the tension takes place through crises, and its final resolution is through socialist revolution.

That approach to things immediately gave thought an orientation in the analysis of any form of economic relation. In fact, just as the commodity market found a relative resolution of its objective contradictions in the birth of money, so the theoretical determinations of money in *Capital* served as a means of relatively resolving the theoretical contradiction revealed in the analysis of the simple value form. Within the limits of the simple form the antimony of value remained unresolved and fixed in thought as a contradiction in the concept. Its sole true logical resolution consisted in tracing how it was resolved objectively in practice in the course of the movement itself of the commodity market. And the movement of the investigating thought consisted in revealing this new reality that developed by virtue of the impossibility of resolving the objective contradiction originally disclosed.

Thus the very course of theoretical thought became not a confused wandering but a rigorous purposive process, in which thinking used

empirical facts to find the conditions and data that were lacking for solution of a clearly formulated task, of a problem. Theory therefore appeared as a process of the constant resolution of problems pushed to the fore by the investigation of the empirical facts itself.

Investigation of the commodity-money circulation led to an antinomy. As Marx wrote: "Turn and twist as we may, the sum total remains the same. If equivalents are exchanged, then no surplus value is created; and if non-equivalents are exchanged, still no surplus value is created. Circulation, the exchange of commodities, does not create value".⁵⁷ So, he concluded, capital could not arise from circulation, just as it could not arise outside it. It 'must simultaneously take place in the sphere of circulation and outside the sphere of circulation. Such are the conditions of the problem. That is the nut we have to crack!'⁵⁸

Marx's way of posing the problem was not at all fortuitous and was not simply a rhetorical device. It was linked with the very essence of the dialectical method of developing theory, following the development of the actual object. The solution of the question corresponds to the posing of it. The problem arising in thought in the form of a contradiction in the determination could only be resolved if the theoretician (and the real owner of money) was 'lucky enough to find somewhere within the sphere of circulation, to find in the market, a commodity whose use-value has, the peculiar quality of being a source of value; a commodity whose actual consumption is a process whereby labour is embodied, and whereby therefore value is created'.⁵⁹

Objective reality always develops through the origin within it of a concrete contradiction that finds its resolution in the generation of a new, higher, and more complex form of development, the contradiction is unresolvable. When expressed in thought it naturally appears as a contradiction in the determinations of the concept that reflects the initial stage of development. And that is not only correct, but is the sole correct form of movement of the investigating mind, although there is a contradiction in it. A contradiction of that type in determinations is not resolved by

57 "Capital, Volume I" *MECW* vol. 35 p 174.

58 "Capital, Volume I," *MECW* vol. 35, p 177. Marx actually used the Latin tag *Hic Rhodus, hic salta!*, ['Here is Rhodes, now jump!'] which the Pauls render here as "That is the nut we have to crack!" – Tr.

59 *Ibid.*, p 177.

way of refining the concept that reflects the given form of development, but by further investigating reality, by discovering another, new, higher form of development in which the initial contradiction finds its real, actual, empirically established resolution.

It was not fortuitous that the old logic passed this very important logical form over as a 'question'. For the real questions, the real problems that arise in the movement of the investigating mind, always rise before thought in the form of contradictions in the determination, in the theoretical expression of the facts. The concrete contradiction that arises in thought also leads toward a further and, moreover, purposive examining of the facts, toward the finding and analysing of just those facts that are lacking for solving the problem and resolving the given theoretical contradiction.

If a contradiction arises of necessity in the theoretical expression of reality from the very course of the investigation, it is not what is called a logical contradiction, though it has the formal signs of such but is a logically correct expression of reality. On the contrary, the logical contradiction, which there must not be in a theoretical investigation, has to be recognised as a contradiction of terminological, semantic origin and properties. Formal analysis is also obliged to discover such contradictions in determinations; and the principle of contradiction of formal logic applies fully to them. Strictly speaking it relates to the use of terms and not to the process of the movement of a concept. The latter is the field of dialectical logic. But there another law is dominant, the law of the unity or coincidence of opposites, a coincidence, moreover, that goes as far as their identity. It is that which constitutes the real core of dialectics as the logic of thought that follows the development of reality.

11. The Problem of the General in Dialectics

The category of the general or universal occupies an extremely important place in the body of dialectical logic. What is the general or universal? Literally, in the meaning of the word, it is relating to all, i.e. to all individuals in the form of the limitless multitude of which the world within which we live and about which we speak presents itself to us at first glance. That is, very likely, all that can be said about the general that is unquestionable, equally acceptable to everyone.

Without going into the philosophical disagreements about the general or universal, one can note that the term 'common' (or rather 'general' or

universal') is used very ambiguously in the living language, indeterminately, and relates not only to different objects or meanings that do not coincide with one another, but also to directly opposite ones that are mutually exclusive. Any large dictionary (e.g. the *Shorter Oxford Dictionary*) contains a dozen such meanings. At the extremes of the spectrum, moreover, there are meanings such as can scarcely be considered consistent or compatible. 'Common' is used even for two objects, let alone all, both for what appertains to each of them (like the biped nature or mortality of both Socrates and Caius, or like the velocity or speed of an electron and of a train) and cannot exist separately from the relevant individua in the form of a separate 'thing', and for what exists precisely outside the individua in the form of a special individuum, namely a common ancestor, a common field (i.e. one for two (or all)), a common motor vehicle or entry, a common (mutual) friend or acquaintance, and so on and so forth.

One and the same word, or one and the same sign, obviously does not serve just for one and the same thing. Whether one sees in that the imperfection of natural language or on the contrary considers it the superiority of the flexibility of a living language over the rigidity of the definitions of an artificial language, the fact itself remains a fact and one, moreover, that is often encountered and therefore calls for explanation.

But then the quite reasonable question arises, whether or not it is possible to find something common between two extreme, mutually exclusive meanings of the word 'common' (or 'general') in the living language, equally sanctioned by usage, to find the *basis* of the fact of the divergence of meanings. In the interpretation that is sanctioned as the 'sole correct one' by the tradition of formal logic, it is impossible to discover such a common attribute as would form part of the definition of two polar meanings of 'common' ('general'). Nevertheless, it is clear that here, as in many other cases, we are dealing with related words which, like human relatives, although they have nothing in common between them, all with equal right bear one and the same surname.

This relationship between the terms of natural language was once brought out by Ludwig Wittgenstein as quite typical in the following example: Churchill-A has a family likeness to Churchill-B in attributes a, b, c; Churchill-B shares attributes b, c, d with Churchill-C; Churchill-D has only a single attribute in common with Churchill-A, while Churchill-E and Churchill-A have not a single one in common, nothing except the name.

The image of a common ancestor, however, of a progenitor, cannot be reconstructed by abstracting those attributes, and only those, that are genetically preserved by all his (or her) descendants. There simply are no such attributes. But there is a community of name, recording a common origin.

It is the same with 'common' ('general') as a term. The original meaning of the word also cannot be established by a purely formal union of attributes, uniting all the offspring-terms into one family, into one class, because (to continue the analogy) Churchill-Alpha would have to be represented as an individuum who was simultaneously both brunette and blonde (not-brunette), both gangling and dwarfish, both snub-nosed and hook-nosed, and so on.

But there, of course, the analogy ends, because the position with related terms is rather different. The ancestor, as a rule, does not die but continues to live alongside all its offspring as an individuum among other individua, and the problem consists in discovering among the *existing separate individua* the one that was born before the others and therefore could have given birth to all the rest.

Among the attributes of a common ancestor who continues to live among his descendants, one has to presuppose a capacity to give birth to something which is opposite to itself, i.e. a capacity to give birth both to the gangling (in relation to itself) and the dwarfish (again in relation to itself). The common ancestor, consequently, can be representable as an individuum of medium height with a straight nose, and ash-grey locks, i.e. to 'combine' *opposing* determinations (if only potentially) in himself, to combine both the one and the other, directly opposite determinations *in himself*, like a solution or mixture. Thus the colour grey can be fully represented as mixture of black and white, i.e. as simultaneously white and black. There is nothing incompatible in that with the 'common sense' that Neopositivists like to enlist as an ally against dialectical logic.

But it is just here that the two incompatible positions in logic, and in understanding of the general (universal), take shape – that of dialectics and the completely formal conception. The latter has no desire to admit into logic the idea of *development* organically linked (both in essence and in origin) with the concept of *substance*, i.e. the principle of the *genetic community* of phenomena that are at first glance quite heterogeneous (insofar as no abstract, common attributes can be discovered among them).

It was thus that Hegel saw the point of departure of the paths of dialectical thought (in his terminology ‘speculative’) and purely formal thought; and in that connection he highly values Aristotle’s relevant statement: ‘As to what concerns more nearly the relation *of the three souls*, as they may be termed (though they are incorrectly thus distinguished), Aristotle says of them, with perfect truth, that we need look for no one soul in which all these are found, and which in a definite and simple form is conformable with any of them. This is a profound observation, by *means of which truly speculative thought marks itself out from the thought which is merely logical and formal* [my italics – EVI]. Similarly among figures only the triangle and the other definite figures, like the square, the parallelogram, etc., are truly anything; for what is common to them, the universal figure [or rather the ‘figure in general’ – EVI], is an empty thing of thought, a mere abstraction. On the other hand, the triangle is the first, the truly universal figure, which appears also in the square, etc., as the figure which can be led back to the simplest determination. Therefore, on the one hand, the triangle stands alongside of the square, pentagon, etc., as a particular figure, but – and this is Aristotle’s main contention – it is the truly universal figure [or rather the ‘figure in general’ – EVI]. ... Aristotle’s meaning is therefore this: an empty universal is that which does not itself exist, or is not itself species. All that is universal is in fact real, in that by itself, without further change, it constitutes its first species, and when further developed it belongs, not to this, but to a higher stage’.⁶⁰

If we look at the problem of the determination of the general as a universal (logical) category from this angle, or at the problem of the theoretical reconstruction of the common ancestor of a family of related meanings seemingly having nothing in common, there is some hope of resolving it.

The stand of formal logic, oriented on finding the abstract, common element in every single representative of one class (all having one and the same name) yields nothing in this instance. The general in this sense cannot be found here, and cannot for the reason that there actually is no such thing, not in the form of attribute or determination actually common to all the individual in the form of a resemblance proper to each of them taken separately.

60 Hegel’s “Lectures on the History of Philosophy,” vol. II, Aristotle pp 185-86.

It is quite clear that the concrete (empirically obvious) essence of the link uniting the various individua in some 'one', in a common multitude or plurality, is by no means posited and expressed in an abstract attribute common to them, or in a determination that is equally proper to the one and the other. Rather such unity (or community) is created by the attribute that one individuum possesses and another does not. And the absence of a certain attribute binds one individuum to another much more strongly than its equal existence in both.

Two absolutely equal individuals, each of which has the very same set of knowledge, habits, inclinations, etc., would be absolutely uninteresting to one another, and the one would not need the other. They would simply bore each other to death. It is nothing but a simple doubling of solitariness. The general is anything but continuously repeated similarity in every single object taken separately and represented by a common attribute and fixed by a sign. The universal is above all the regular connection of two (or more) particular individuals that converts them into moments of one and the same concrete, real unity. And it is much more reasonable to represent this unity as the aggregate of *different*, separate moments than as an indefinite plurality of units indifferent to one another. Here the general functions as the law or principle of the connection of these details in the make-up of some whole, or totality as Marx preferred to call it, following Hegel. Here analysis rather than abstraction is called for.

If we return to the question of the genetic community of the different (and opposing) meanings that the term 'common' or 'general' ('universal') has acquired in the evolution of the living language, the problem seemingly boils down to recognising that among them which can confidently be considered as the progenitor-meaning, and then to tracing why and how the initial meaning, first in time and immediately simple in essence, was broadened so as to embrace something opposite, something that was not originally intended at all. Since it is difficult to suspect our remote ancestors of an inclination to invent 'abstract objects' and 'constructions', it is more logical (it would seem) to consider the original meaning the one that the term 'common' still preserves in such expressions as 'common ancestor' and 'common field'. Philological research provides evidence, incidentally, in favour of that view. 'What would old Hegel say in the next world', Marx wrote with satisfaction to Engels, 'if he heard that the *general* (*Allgemeine*) in German and Norse means nothing but the common land (*Gemeinland*), and the particular, *Sundre*, *Besondere*,

nothing but the separate property divided off from the common land? Here are the logical categories coming damn well out of “our intercourse” after all.⁶¹

It is quite understandable that if we have in mind here the originally simple, ‘truly general’ meaning of the word, as Hegel would have said, then it is impossible to discover in the idea according to which the general (universal) precedes the individual, the separate, the particular, the isolated, or exclusive, both in essence and in time, even a hint of the refined mysticism that permeates the corresponding views of Neoplatonists and medieval Christian scholasticism, whereby the universal is made a synonym of the idea, being considered from the very beginning as the word, *as logos*, as something incorporeal, spiritualised, purely mental. On the contrary, the universal in its original meaning appears distinctly in the mind, and therefore in the language expressing it, as a synonym of a quite corporeal substance, in the form of water, fire, tiny uniform particles (‘indivisibles’), and so on. Such a notion may be considered naive (though in fact it is far from being so naive), crudely sensual, ‘too materialistic’, but there is not the slightest tendency to, or trace of, mysticism in it.

It is therefore quite absurd to press the accusation that is constantly advanced against materialism by its opponents, the accusation of a disguised Platonism that is immanently linked, as it were, with the thesis of the *objective reality* of the universal. If, of course, one takes the view from the very beginning (but why – we do not know) that the universal is the idea, and only the idea, then not only do Marx and Spinoza turn out to be ‘cryptoplatonists’ but also Thales and Democritus.

One is forced to evaluate the identification of the universal with the idea (as the initial thesis of any system of philosophical idealism) as an axiom accepted quite without proof, as the purest prejudice inherited from the Middle Ages. Its vitality is not fortuitous but is linked with the really immense role that the word and the verbal ‘explication’ of the idea have played and play in the moulding of intellectual culture. From that, too, arises the illusion that the universal allegedly has its actual existence (its reality) only and exclusively in the form of *logos*, in the form of the meaning of a word, term, or linguistic sign. Since philosophical consciousness specially reflecting on the universal is concerned from the very

61 Marx to Engels 25 March 1868, *MECW* vol. 42, pp 557.

beginning with its verbal expression, the dogma of the identity of the universal and the sense (meaning) of a word also begins to seem a natural premise, and the soil on which it grows, and the air that it breathes, to be something self-evident.

We would note in passing that the prejudice described here, read as absolute truth by modern Neopositivists, also seemed such to Hegel, who is not a favourite with them. Hegel, too, candidly suggested that materialism was impossible as a philosophical system on the grounds that philosophy was the science of the *universal*, and the universal was the idea, just the idea, and only the idea, and could not be anything else. He had the immense advantage over the latest devotees of this prejudice that he understood thought itself much more profoundly. Thus it was Hegel himself who thoroughly undermined the prestige of the prejudice that consisted in identifying thought and speech; but he returned a prisoner to it by a roundabout route since, though he did not consider the word the sole form of the being there of an idea, it retained the significance of the *first* form of its being for him, both in time and in essence. Hegel, and this was typical of him in general, first smashed the old prejudice, and then restored it to all its rights by means of a cunningly clever dialectical apparatus.

The radical, materialist rethinking of the achievements of his logic (dialectics) carried through by Marx, Engels, and Lenin, was linked with affirmation of the *objective reality of the universal*, not at all in the spirit of Plato or Hegel, but rather in the sense of a law-governed connection of material phenomena, in the sense of the law of their being joined together in the composition of some whole, in the context of a self-developing totality or aggregate, all the components of which were related as a matter of fact not by virtue of their possessing one and the same identical attribute, but by virtue of a unity of genesis, by virtue of their having one and the same common ancestor, or to put it more exactly, by virtue of their arising as diverse modifications of one and the same substance of a *quite material* character (i.e. independent of thought and word).

Uniform phenomena therefore do not necessarily possess anything like a 'family resemblance' as the sole grounds for being counted as one class. The *universal* in them may be outwardly expressed much better in the form of differences, even opposites, that make the separate phenomena complement one another, components of a whole, of some quite real, organic aggregate, and not an amorphous plurality of units taken

together on the basis of a more or less chance attribute. On the other hand, the universal, which manifests itself precisely in the particularities, in the individual characteristics of all the components of the whole without exception, also exists in itself as alongside other isolated individua derived from it. In that there is nothing even remotely mystical; a father often lives a very long time side by side with his sons. And if he is not present, he *was* once, of course, i.e. must be definitely thought of in the category of 'being there'. The genetically understood universal does not simply exist, naturally, in the ether of the abstract, in the elements of the word and idea; and its existence in no way abolishes or belittles the reality of its modifications and of the separate individua derived from it and dependent on it.

In Marx's analysis of capital the concept of the universal that we have briefly described plays most important methodological role. "To the extent that we are considering it here, as a relation distinct from that of value and money, capital is *capital in general*, i.e. the incarnation of the qualities which distinguish value as capital from value as pure value or as money. Value, money, circulation, etc., prices, etc., are presupposed, as is labour, etc. But we are still concerned with neither with a *particular* form of capital, nor with an *individual capital* as distinct from other individual capitals, etc. We are present at the process of its becoming. This dialectical process of its becoming is only the ideal expression of the real movement through which capital comes into being. The later relations are to be regarded as its developments coming out of this germ. But it is necessary to establish the specific form in which it is posited at a *certain* point. Otherwise confusion arises".⁶²

Here there is very clearly brought out that relation between value and capital which Hegel in the passage cited above, discovered between a triangle and a square, pentagon, etc., and, moreover, in a dual sense. (1) The concept of value in general is in no case defined here through the aggregate of the abstract, general attributes that one may want to discover in the composition of all its special forms (i.e. commodities, labour power, capital, rent, interest, etc., etc.) but is achieved by way of the most rigorous analysis of one single, quite specific, and actually existing relation between people, the relation of the direct exchange of one commodity, for another. In the analysis of this value reality, reduced to its simplest

⁶² "Grundrisse," *MECW* vol. 28, p 236.

form, the universal determinations of value are brought out that are later met (reproduced) at higher levels of development and analysis as abstract, general determinations of money and labour power, and capital.

(2) If we are concerned with defining capital in general, then, as Marx specially remarked, we must take the following point of principle into account, which has ‘more of a logical than an economic character’.⁶³ ‘... Capital in general, as *distinct* from the particular real capitals, is itself a *real* existence. This is recognised by ordinary economics, even if it is not understood, and forms a very important moment of its doctrine of equilibrations, etc. for example, capital in this *general form*, although belonging to individual capitalists, in its *elemental form* as capital, forms the capital which accumulates in the banks or is distributed through them, and, as Ricardo says, so admirably distributes itself in accordance with the needs of production.⁶⁴ Likewise, through loans, etc., it forms a level between the different countries. If it is therefore e.g. a law of capital in general that, in order to realise itself, it must posit itself doubly, and must realise itself in this double form, then e.g. the capital of a particular nation which represents capital *par excellence* in antithesis to another will have to lend itself out to a third nation in order to be able to realise itself. This double positing, this relating to self as to an alien, becomes damn real in this case. While the general is therefore on the one hand only a mental (*gedachte*) mark of distinction (*differentia specifica*), it is at the same time a *particular* real form alongside the form of the particular and individual’.⁶⁵ It is ‘the same also in algebra’, Marx continued. ‘For example, *a, b, c*, are numbers as such; in general; but then again they are whole numbers as opposed to *a/b, b/c, c/b, c/a, b/a*, etc., which latter, however, presuppose the former as their general elements’.⁶⁶

The situation of the dialectical relation between the general (universal) and the particular, the individual, by virtue of which the general cannot in principle be revealed in the make-up of the particular individuals by formal abstraction (by way of identifying the similar or identical in

63 *Ibid.*, p.377-78.

64 D. Ricardo, *On the Principles of Political Economy*, London 1821, p 139 (Marx’s footnote).

65 Marx, “Grundrisse,” p 378. There is a footnote in the Grundrisse at this point, cf. Hegel, *Science of Logic*, p 600. Tr. A V Miller, London 1969.

66 “Grundrisse,” *MECW* vol. 28, p 379.

them) can be most vividly demonstrated by the example of the theoretical difficulties connected with the concept 'man', with the definition of the essence of man, the solution of which was found by Marx, basing himself precisely on a dialectical understanding of the problem of the general.⁶⁷ '... The essence of man is no abstraction inherent in each separate individual. In its reality it is the *ensemble* (aggregate) of social relations'.⁶⁸ as Marx aphoristically formulated his conception in the famous theses on Feuerbach.

Here one clearly sees not only the sociological principle of Marx's thinking, but also its logical principle. Translated into the language of logic, his aphorism means that it is useless to seek the general determinations expressing the essence of a class, be it the human race or some other genus, in a series of the abstract, general attributes possessed by each member of the given class taken separately. The essence of human nature in general can only be brought out through a scientific, critical analysis of the 'whole ensemble', of man's social and historical relations to man, through concrete investigation and understanding of the patterns with which the process of the birth and evolution both of human society as a whole and of the separate individual has taken place and is taking place.

The separate individual is only human in the exact and strict sense of the word, insofar as he actualises – and just by his individuality – some ensemble or other of historically developed faculties (specifically human forms of life activity), of a culture formed before and independently of him, and mastered by him during upbringing (the moulding of the person). From that angle the human personality can rightly be considered as an individual embodiment of culture, i.e. of the universal in man.

Universality so understood is by no means a silent, generic 'sameness' of individuals but reality repeatedly and diversely broken up within itself into particular (separate) spheres mutually complementing each other and in essence mutually dependent on each other and therefore linked together by bonds of community of origin no less firm and no less flexible than the organs of the body of a biological specimen developed from one and the same egg cell. In other words, theoretical, logical determination

67 See Ilyenkov's "Dialectics of the Abstract and Concrete in Marx's *Capital*," 1960.

68 Marx, "Theses on Feuerbach," *MECW* vol. 5., p 4.

of the concrete universality of human life can consist solely in disclosing the necessity with which the diverse forms of specifically human life activity develop one from the other and in interaction of the one on the other, the faculties of social man and his corresponding needs.

The materialist conception of the essence of man sees (in full agreement with the data of anthropology, ethnography, and archaeology) the universal form of human life in labour, in the direct transformation of nature (both external and his own) that social man brings about with the help of tools made by himself. That is why Marx felt such sympathy to Benjamin Franklin's famous definition (quoted in Boswell's *Life of Johnson*) of man as a tool-making animal: a tool-making animal and only therefore also a thinking animal, talking, composing music, obeying moral norms, and so on.

The definition of man in general as a tool-making animal is a typical example in which the Marxian conception of the universal as the concretely universal is seen most clearly of all, and also the Marxian conception of its relation to the particular and the individual. From the standpoint of the canons of formal logic this definition is much too concrete to be universal, for under it such undoubted members of the human race as Mozart or Leo Tolstoy, Raphael or Kant cannot be subsumed.

Formally such a definition applies only to a narrow circle of individuals, to the workers in engineering works, say, or workshops. Even workers who do not make machines (or tools) but only use them, formally do not come within the scope of this definition. The old logic therefore rightly regarded it not as a universal but exclusively as a particular definition, not as a definition of man in general but of a particular profession.

The general (concretely universal) stands opposed to the sensuously given variety of separate individuals primarily not as a mental abstraction but as their own *substance*, as a concrete form of their interaction. As such it also *embodies* or includes the whole wealth of the particular and individual in its concrete determinateness and that not simply as the possibility of development but as its necessity. The conception of the general and of its paths of scientific realisation described here is by no means the monopoly of philosophical dialectics. Science, in its real historical development, unlike its depiction in the epistemological and logical constructions of Neopositivists, always begins, more or less consistently, from such a concept of the universal, and that often in spite of the conscious logical precepts and maxims that its representatives profess. This circumstance is

clearly traceable in the history of the concept 'value', a universal category of political economy.

The abstraction of value in general and the word that records it are as old as market relations. The Greek *axia*, the German *Werth*, and so on were not created by Sir William Petty, or Adam Smith, or Ricardo. Every merchant and peasant of all ages used 'value' or 'worth' for everything that could be bought or sold, everything that cost something, or was worth something.

And if the theoretical political economists had tried to work out a *concept* of value in general, guided by the recipes that purely formal, nominalistically oriented logic still suggests to science, they would never, of course, have done so. Here it has not been a matter at all, from the very beginning, of the bringing out of the abstractly general, of the similar that each of the objects possesses, which general word usage long ago united in the term 'value' (in that case it would simply introduce order into the notions that any shopkeeper uses, and the matter would be limited to simple 'explication' of the shopkeeper's notions about value, to a simple, pedantic enumeration of the attributes of those phenomena to which the word 'value' is opposite, and no more; and the whole exercise would amount simply to clarification of the scope of the term's applicability). The whole point, however, is that the classical political economists posed the question quite differently, so that the answer to it proved to be a *concept*, i.e. an awareness of the real generality. Marx pointed out clearly the essence of their posing of the question.

The first English economist Sir William Petty arrived at the concept of value by the following reasoning: 'If a man can bring to London an ounce of Silver out of the Earth in Peru in *the same time* that he can produce a Bushel of Corn, then one is the natural price of the other. ...'⁶⁹

Let us note in passing that in the reasoning adduced here the term 'value' is absent in general, 'natural price' being spoken of. But we are present here right at the birth of the fundamental *concept* of all subsequent science of the production, distribution, and accumulation of wealth. Here the concept also expresses (reflects) (like Hegel's example of the triangle) such a real phenomenon given in experience as (being quite particular

69 Sir Wm. Petty. *A Treatise of Taxes and Contributions*. 1867: cited by Marx in *Theories of Surplus Value*, Part I, p 356.

among other particulars) at the same time proves to be universal and represents value in general.

The classical political economists spontaneously groped out the way of determining value in its general form; but in retrospect, having already formed the relevant concept, they tried to ‘verify’ it in accordance with the canons of logic, relying on Locke’s notions about thought and the universal, which led them into a number of paradoxes and antinomies. The general, when they tried to ‘justify’ it by analysis of its own particular variants, like profit and capital, was not only not confirmed, but was directly refuted by them, contradicted by them.

Only Marx succeeded in establishing the reason for the origin of the various paradoxes, and so the way out; and he did so just because he was guided by dialectical notions of the nature of the general and its inter-relations with the particular and the individual. The reality of the universal in nature is a law, but a law in its reality (as is shown, in particular, by modern natural science, e.g. the physics of the microworld) is not realised as some abstract rule by which the movement of each single particle taken separately would be governed, but only as a *tendency* manifesting itself in the behaviour of a more or less complex ensemble of individual phenomena, through the breach and negation of the universal in each of its separate (individual) manifestations. And thought is forced willy-nilly to take that circumstance into account.

The general determinations of value (of the law of value) are worked out in *Capital* in the course of an analysis of one example of the concreteness of value, historically the first and therefore logically the simplest, i.e., the direct exchange or barter of one commodity for another, with the most rigorous abstraction of all other individual forms (developed on its basis), namely money, profit, land rent, and so on. Marx saw the shortcoming of Ricardo’s analysis of value precisely in his not being able, when examining the problem of value in its general form, to forget profit. That is why Ricardo’s abstraction proved *incomplete* and so *formal*.

Marx himself obtained a solution of the problem in general form because all the subsequent formations – not only profit but also even money – were taken as not existent at the start of the analysis. Only direct exchange or barter without money was analysed; and it was immediately clear that such a raising of its individual to the general differed in principle from the act of simple, formal abstraction. Here the *peculiarities* of the simple commodity form, specifically distinguishing it from profit, land

rent, interest, and other individual forms of value, were not thrown away as something inessential; quite the contrary, their theoretical expression coincided with the determination of value in its general form.

The incompleteness of Ricardo's abstraction, and the formality linked with it, consisted precisely in its being formed on the one hand through his inability to abstract it from the existence of other developed forms of value, and on the other hand through his abstracting of the *peculiarities* of direct commodity exchange. The general was thus taken in the end as completely isolated from the particular and separate, and ceased to be its theoretical expression. That is what distinguishes the dialectical conception of the general from the purely formal conception.

The distinction between Marx's dialectical *materialist* conception, however, and the interpretation given the general in Hegel's idealistic dialectics is no less important. And it is important to bring this out clearly for the reason that their conceptions are too often equated in Western literature. Yet it is quite obvious that the orthodox Hegelian interpretation of the general, despite all its dialectical value, comes close, on a decisive point of principle and not just in details, to that very metaphysical view that Hegel himself had so strongly undermined the authority and influence of. This comes out particularly clearly in the concrete applications of the principles of Hegelian logic to the analysis of real, earthly problems.

The point is as follows. When Hegel explains his 'speculative' conception of the general in opposition to the 'purely formal' on the example of geometrical figures (treating the triangle as 'the figure in general') it may seem at first glance that here was the logical schema in ready-made form that enabled Marx to cope with the problem of the general determination of value. Actually, it would seem that Hegel saw the difference between genuine universality and purely formal abstraction in the truly general's itself existing in the form of the particular, i.e. its an empirically given reality existing in time and space (outside men's heads) and perceived in contemplation.

According to Hegel, the general *as such*, in its strict and exact sense, exists exclusively in the ether of 'pure thought' and in no case in the space and time of external reality. In that sphere we are dealing only with a number of particular alienations, embodiments, hypostasies of the 'genuinely general'.

That was why the definition of man as a tool-making animal would have been quite unacceptable to Hegelian logic, and logically incorrect. For the orthodox Hegelian, as for any representative of the formal logic criticised by him (a very notable unanimity!), Franklin's definition (and Marx's) was much too concrete to be general or universal. In the production of tools Hegel saw not the basis of everything human in man, but only one, though important, manifestation of his *thinking* nature. In other words the idealism of the Hegelian interpretation of the general leads to the very same result as the metaphysical interpretation he so disliked.

When Hegelian logic is taken in its pristine form as the means of evaluating the movement of thought in the first chapters of *Capital*, the whole movement seems 'illegitimate' and 'illogical'. The Hegelian logician would be right, from his angle, if he were to say of Marx's analysis of value that there was no general determination of this category in it, that Marx only 'described' but did not theoretically 'deduce' the determination of one *special, particular* form of the realisation of value in general, because that, like any truly general category of human life activity, was a form immanent in the 'rational will' and not in man's external being, in which it was only manifested and materialised.

So Hegelian logic, despite all its superiority over formal logic, could not and cannot be taken into the armoury of materialistically oriented science without any essential amendments, and without a radical purging of all traces of idealism. For idealism did not remain something 'external' for logic at all, but orientated the very logical sequence of thought. When Hegel spoke, for example, of the *transitions* of opposing categories (including the general and the particular), the schema of the examination then and there received a one-way character. In the Hegelian schema there could be no place, say, for the transition that Marx discovered in the determinations of value, the transformation of the singular or individual into the general. With Hegel only the general had the privilege of alienating itself in forms of the particular and the singular, while the singular always proved to be a product, a particular 'modus' of universality (and therefore poor in content).

The actual history of economic (market) relations testified, however, in Marx's favour, demonstrating that the form of value in general was by no means always the *general* form of the organisation of production. It *became* the general, but up to a certain point (and for very long) it remained a particular relation happening from time to time between people and things in production. Only capitalism made value (the commodity

form of the product) the general form of the interrelations of the components of production.

This transition of the individual and chance into the general was not at all rare in history, but was even rather the rule. It has always happened in history that phenomena that subsequently became general arose first precisely as individual exceptions to the rule, as anomalies, as something particular and partial. Hardly anything really new can arise in any other way.

It is in the light of that, that the rethinking to which the Hegelian dialectical conception of the general was subjected by Marx and Lenin must be understood. While preserving all the dialectical moments noted by Hegel, materialism deepened and broadened its conception, transforming the category of the general or universal into the most important category of the logic of concrete investigation of concrete, historically developing phenomena.

In the context of the materialist conception of the dialectics of history and the dialectics of thought, the Hegelian formulae sound differently from on the lips of their creator, having lost all mystical colouring. The general includes and embodies in itself the whole wealth of details, not as the 'idea' but as a quite real, particular phenomenon with a tendency to become general, and developing 'from itself' (by virtue of its inner contradictions) other just as real phenomena, other particular forms of actual movement'. And there is not a trace of any of the Platonic-Hegelian mystique in that.

Conclusion

Quite understandably we have not undertaken the task here of giving a systematic exposition of Marxist-Leninist logic. That is beyond the power of a single person, and can scarcely be done within the space of one book. We have simply tried to throw some light on a number of the conditions and premises for further work in that direction, which we consider should be a collective effort.

We think, however, that only by taking the conditions formulated above into account can such a work be successful, i.e. lead to the creation of a capital work which could rightly bear one of three titles: *Logic, Dialectics, or The Theory of Knowledge* (of the modern, materialist world outlook); and which could take as its epigraph Lenin's words: "Three words are not needed: it is one and the same thing".

The creation of a Logic understood as a system of categories, of course, constitutes only one stage. The next step would have to be the realisation, actualisation of the logical system in a concrete scientific investigation, because the end product of all work in the field of philosophical dialectics is the resolution of the concrete problems of concrete sciences. Philosophy alone cannot achieve this 'end product'; that calls for an alliance of dialectics and concrete scientific research, understood and realised as the business-like collaboration of philosophers and natural scientists, of philosophy and social and historical fields of knowledge. But in order for dialectics to be an equal collaborator in concrete scientific knowledge, it must first develop the system of its own specific philosophical concepts, from the angle of which it could display the strength of critical distinction in relation to actually given thought and consciously practised methods.

It seems to us that this conclusion stems directly from the analysis we have presented here, and that this conception corresponds directly to Lenin's ideas both on the plane of the inter-relations of the latter and the other branches of scientific knowledge. It appears to us that, in the conceptions set out above, logic does become an equal collaborator with the other sciences, and not their servant, and not their supreme overseer, not a 'science of sciences' crowning their system as just another variety of 'absolute truth'. Understood as logic, philosophical dialectics becomes a necessary component of the scientific, materialist world outlook, and no longer claims a monopoly in relation to the 'world as a whole'. The scientific world outlook can only be described by the whole system of modern sciences. That system also includes philosophical dialectics, and without it cannot claim either fullness or scientism.

The scientific world outlook that does not include philosophy, logic, and the theory of knowledge, is as much nonsense as the 'pure' philosophy that assumes that it alone is the world outlook, taking on its shoulders a job that can only be done by a whole complex of sciences. Philosophy is also the logic of the development of the world outlook, or, as Lenin put it, its 'living soul'.

Activity and Knowledge^{*}

In pedagogy, there is a troubling and (when you think about it) strange problem that is usually described as the problem of ‘the practical application of knowledge to life’. And it is in fact true that the graduate from school (whether high school or college) finds himself in the quandary of not knowing how to ‘apply’ knowledge to any problem that arises outside the walls of school.

This seems to imply that human abilities should include the special ability of somehow ‘correlating’ knowledge with its object, i.e. with reality as given in contemplation. This means that there should be a special kind of activity of correlating knowledge and its object, where ‘knowledge’ and ‘object’ are thought of as two different ‘things’ distinct from the person himself. One of these things is knowledge as contained in general formulae, instructions, and propositions, and the other thing is the unstructured chaos of phenomena as given in perception. If this were so, then we could clearly try to formulate rules for making this correlation, and enumerate and classify typical errors so that we could warn ahead of time how to avoid them. In instructional theory, one often tries to solve the problem of knowing ‘how to apply knowledge to life’ by creating just this kind of system of rules and warnings. But the result is that the system of rules and warnings becomes so cumbersome that it starts to impede rather than help things, becoming an additional source of errors and failures.

Thus, there is every reason to believe that the very problem we are trying to solve arises only because the ‘knowledge’ has been given to the person in an inadequate form; or, to put it more crudely, it is not real knowledge, but only some substitute.

In fact, knowledge in the precise sense of the word is always knowledge of an object. Of a particular object, for it is impossible to know ‘in general’, without knowing a particular system of phenomena, whether these are chemical, psychological, or some other phenomena.

^{*} First published: Ilyenkov E. V., “Deyatel’nost’ i Znanie” (1974), in: E. V. Ilyenkov, *Filosofiya i Kul’tura* [Philosophy and Culture], Moscow: Politizdat (1991), © Novokhat’ko A. G. 1991; Translated by Peter Moxhay 2002.

But, after all, in this case the very phrase about the difficulties of ‘applying’ knowledge to an object sounds rather absurd. To know an object, and to ‘apply’ this knowledge – knowledge of the object – to the object? At best, this must be only an imprecise, confusing way of expressing some other, hidden situation.

But this situation is rather typical.

And this situation is possible only under particular circumstances, when the person has mastered not knowledge of an object but knowledge of something else instead. And this ‘other thing’ can only be a system of phrases about an object, learned either irrespective of the latter or in only an imaginary, tenuous, and easily broken connection to it. A system of words, terms, symbols, signs, and their stable combinations, as formed and legitimised in everyday life – ‘statements’ and ‘systems of statements’. Language, in particular, the ‘language of science’ with its supply of words and its syntactic organisation and ‘structure’. In other words, the object, as represented in available language, as an already verbalised object.

Yes, if ‘knowledge’ is always identified with verbally organised consciousness, then the problem will in fact be as described above – as the special problem of ‘correlating’ knowledge and object. But when the question is posed like this, the very problem of the ‘application’ of knowledge to the real world is easily replaced by the problem of the ‘correct’ verbalisation of unverballed material. The verbal ‘object’ then turns into a synonym for the chaos of totally unorganised ‘sense data’ – into a synonym only for what I do not know about the object.

In general, we obtain the well-known program of Neopositivism with its utopian hopes of erecting a system of ‘rules’ that provide procedures for going from language to facts that lie outside of language, and vice versa, where there must be no ‘contradictions’ within language. This leads to the main principle of the Neopositivist solution – if you have verbalised certain known facts but have nevertheless obtained a contradiction within language, then it means that you have verbalised the facts ‘incorrectly’ – not according to the rules. It means that you have ‘broken’ some ‘rule of verbalisation’.

You have crossed the boundary dividing the world of the verbalised from the world of the unverballed, into some place that is forbidden (‘by the rules’).

The Neopositivist program, with its accompanying ‘logic’, is therefore regressive in its very essence. It replaces the real problem of knowl-

edge – as knowledge (cognition) of an object that exists not only outside of language but also independent of any self-organised language – by the problem of the verbal formation of verbally unformed material. Here the latter is thought of as the totally unformed chaos of ‘sense data’, as the passive material of ‘knowledge’, which can be formed verbally in one of two ways – either ‘correctly’ or ‘incorrectly’. But here ‘correctly’ means according to the rules of available language, i.e. such that it is forced to fit without contradiction into available language, into the available semantic-syntactic ‘framework’, into available ‘knowledge’.

The real problem of the cognition of the object has therefore been twisted around into a purely linguistic problem – the problem of first assimilating available language (‘the language of science’) and then of assimilating ‘facts’ in the forms of this (available) language. Naturally, this problem is solved by refining one’s linguistic ingenuity, allowing any ‘data’ to be expressed in such a way that they work without a hitch, without contradiction, within the available ‘language framework’, within available ‘knowledge’.

This is precisely what Imre Lakatos had in mind when he rightly noted that the Neopositivist program, if realised, would mean the death of science – available knowledge would forever be ‘frozen’ in the form of the available language of science. And the object would forever be doomed to the pathetic role of an object of linguistic manipulations and would not be present in the content of knowledge in any other form. It would not be allowed in – it would be held back at the entrance to ‘knowledge’ by the filters of Neopositivistic ‘logic’.

And therefore, according to this logic, it is also not permitted to know the object (as something outside of and independent of language). We can know only ‘the language of a particular object region’. And the question of which ‘facts’ are included in it (i.e. do not contradict it), and which are excluded from it (i.e. contradict it), depends on which ‘language’ is assumed.

Therefore, the very expression ‘to know an object’, according to Neopositivist logic, is illegitimate, for to a verbally formed consciousness it has the faint odour of ‘metaphysical’ or ‘transcendental’ language, i.e. of a somewhat ‘other worldly’ language. Here, ‘to know’ means to know language, for nothing else is given to humans to know. To the extent that ‘knowledge’ and ‘object’ have turned out to be merely two terms that mean essentially the same thing – namely, language – the problem of

‘applying’ one of these to the other has turned into the problem of correlating (coordinating) various aspects of language – semantics with syntax, syntax with pragmatics, pragmatics with semantics, and so on and so forth. Here, the object is always the verbally formed object. In the Neopositivist conception of things, the object simply does not exist in any form before it ‘came into being’ as a verbal sign, before it was embodied in language.

It seems as if the real solution to the problem of ‘correlating’ knowledge with the object can only consist in foreseeing and avoiding, from the very beginning, the very possibility that the problem might arise, for once it has arisen it is notoriously insoluble.

This means organising the process of assimilating knowledge as knowledge of the object, in the most precise and direct sense of this word. In the very sense that Neopositivist philosophy strives to disallow using such insults as ‘crude’ and ‘metaphysical’ – as an object that stubbornly exists outside of and completely independently of consciousness (and of language). Not as a separate ‘thing’ that we can always specially consider and represent while ignoring its surroundings, but precisely as a system of things possessing its own, language – independent, ‘extra-language’ organisation and connections – as a concrete whole.

This is the only way to overcome verbalism – that chronic disease of school education that results in the notorious problem of ‘applying’ knowledge to life, of ‘correlating’ knowledge and object, but where the knowledge is in fact just a verbal shell, and where in reality we know nothing or next to nothing about the ‘object’ beyond what has already been said about it – beyond what has already been expressed by a word or a statement.

It is not easy to overcome this well-known disease – to do so is much harder than to describe it. It is even more important, however, to analyse it as precisely and as profoundly as possible, so that we can evaluate the effectiveness of the medicine. Otherwise – as often happens – the disease only gets driven inside, instead of being cured at the root.

Only the traditional philosophical naivete of the authors of books on teaching can possibly explain why they pin their hopes on the so-called ‘principle of visual learning’. This principle, which has been used in schools for almost a century now, is in fact not at all as radical as it seems. When it is applied ineptly it leads to the opposite result from the intended one, since it creates only the illusion of a cure. It uses its multi-

coloured cosmetics to paint over the external attributes of verbalism – its most glaring and obvious symptoms. Apparent health is thus obtained, but the disease then strikes deeper – and more important – ‘organs of cognition’. And, most importantly, it strikes the capacity for imagination in its most important function, which Kant called the ‘capacity for judgment’ – the ability to determine whether a given particular case comes under a given rule or not.

School often doesn’t just fail to cultivate this capacity once it has arisen, but rather actively deadens it. And it does so precisely using the notorious ‘principle of visual learning’. It is not difficult to understand how this happens.

The fact is that, since this principle is taken as a panacea, as a ‘bridge’ between verbally acquired knowledge and the object, it focuses the pedagogue not on facilitating a real encounter between the person (the student) and the object, but just the opposite – towards the painstaking prevention of any such encounter, towards the removal of the object from the process of instruction.

The fact is that, instead of the object – in the serious, materialistic understanding of the word – the person is never presented with the object that he ought to compare and contrast with the formulae that have been given to him verbally. He is given something completely different that is only externally similar to it. What exactly? Artificially and previously chosen ‘visual examples’ that illustrate (i.e. confirm) the correctness of the assertions – the verbally formed statements that have been presented to him. In other words, instead of the real object, the student is presented with an artificially selected fragment of objective reality that just precisely agrees with its verbal description, i.e. a graphical equivalent of the given abstraction.

As a result, the student develops a particular mentality whose insidiousness is only observed later on. From the very beginning, his attention is focused on actively searching for just those sensibly perceived phenomena that precisely agree with their own description – on singling out those ‘properties’ of the object that have already been uniquely expressed by verbal formulae, by a ‘noncontradictory system of statements’. The student thus develops a mentality for which the word (language) becomes not a means for mastering the surrounding world, but just the opposite, the surrounding world becomes an external means for learning and

practicing verbal formulae. Here, only the latter turn out to be the object of learning that is genuinely mastered.

And this is achieved precisely by means of the ‘principle of visibility’, by systematically presenting the student with only such sensibly perceived things, cases and situations that precisely agree with their verbal description, i.e. that are nothing but a materialised abstract conception – i.e. ‘objects’ specially prepared in order to agree with a verbally given instruction, formula, or ‘rule’.

Any ‘visual aid’ (or any real thing from the surrounding world used as a ‘visual aid’) creates only an illusion of the concreteness of knowledge, of the concreteness of understanding, and at best it makes it easier for the person to learn formulae, to understand formulae, i.e. abstract schemas, for here the ‘visual aid’ is just a particular case of ‘truth’ enclosed in a formula or word. This is precisely how one derives the notion of the self-sufficiency of abstract ‘schemas’, unavoidably accompanied by the idea that an individual sensibly perceived ‘object’ (or case, or situation) is nothing but a more-or-less random ‘example’, i.e. a more-or-less random ‘embodiment’ of an abstractly general rule.

It is natural that there cannot and should not arise any polemical relationship between a ‘general rule’ assimilated in verbal form and a specially selected (or made) ‘example’ that supports it. Any disagreement, any lack of correspondence between one and the other can have only one cause – an incorrectness in the verbal expression, an incorrectness in the use of words. If the words have been used correctly, then the ‘general rule’ and the ‘particular case’ will fit each other precisely. There is no difference between them in content – these are one and the same formula, except that in one case it is presented ‘visually’ and in the other case ‘nonvisually’, i.e. as the meaning of certain word-signs.

Of course, when we have such an artificial relationship between the general formula and the ‘particular case’, the problem of correlating them does not require (and therefore does not develop) the capacity for imagination – the ability to construct an image from the mass of ‘impressions’ or unorganised sensations. Here, this ability is simply not needed, for the image of the thing is presented ready-made, and the whole problem has been reduced to merely expressing it in words. After all, a ‘visual aid’ is not the thing but a ready-made image of the thing – it has been created independent of the activity of the student – by the artist who prepared it by strictly following verbal instructions, or else by the pedagogue who

gave him this image in verbal form. In either case, as an 'object', as a reality existing outside of, prior to, and completely independent of the activity of cognition, the student is presented with an image that has been previously organised by words, and the student has to do only one thing – to make the inverse translation of this image into verbal form. The student thinks that he is describing an 'object', but in fact he is only reproducing an 'alienated' – a visually embodied – verbal formula, which has been used (but not by him) to create the image that was presented to him. The student thus learns only how to reproduce ready-made images – images that have already received their citizenship in the world of language. He does not produce the image, for he never encounters any object – any 'raw material' for the image – that has not already been processed by words. This has already been done for him by the pedagogue or the artist.

Thus, the student goes from a ready-made image to its verbal expression – this kind of learning is operating by the skin of its teeth. However, the decisive part of the path of cognition – to go from the object to an image (and then back from this image to the object) – remains outside the range of the student's activity. In school, he is never confronted with the problem of correlating the image with the object – instead of the object, he is always given a ready-made image as a substitute. The corresponding ability of course never develops, since no activity with the object has taken place. What the student really acts with is an image – one that was created outside of his own mind. That is, he acts with a materialised conception.

After all, this is what geometric figures drawn on the blackboard are, or counting sticks (it doesn't matter whether they are sticks of wood or of plastic-what's important is that they are an image of 'quantity', or, more precisely, of number), and coloured pictures, and all the other 'real-object' stage props of the schoolchild.

The object all by itself – not yet transformed into an image by someone else's activity (or into a 'schematism', if we use the language of Kant) – remains outside the classroom door, beyond the boundaries of the 'academic subject'. The student encounters the object itself only outside of school and talks about it not in the 'language of science', but in 'ordinary', everyday language, using it to assemble his own, spontaneously formed conceptions, his 'personal' experience.

It is clear that this is where the crack appears between the world of scientific knowledge and the world of the conceptions found in everyday experience – a crack which then widens into a divide between knowledge and beliefs.

This divide is not a result of hypocrisy, dishonesty, or some other moral defect; the student simply does not know how to relate these two ‘different’ spheres of knowledge to each other. After all, a belief is also knowledge, but it is acquired independently, as an end result of personal experience, whereas ‘knowledge’ assimilated during class is instilled in him as a ready-made, abstract ‘rule’, to which he must, is required to, is obligated to subordinate his actions in order to solve the kind of strictly-defined problems he encounters in school-problems which are often of no interest to him whatsoever. These are problems that he never meets with outside of school (although he is promised that he will do so later on, when he becomes an astronaut or a taxi driver, but often this doesn’t help).

So, during class the schoolchild ends up dealing with ready-made images (schemas) of reality and the verbal formulae that express them, but he encounters the object only outside of lessons, outside of school. As a result, he never finds a bridge between these two very dissimilar worlds – these two spheres of his life activity – he is lost when he finally encounters any reality that has not been scientifically prepared for him. He ends up being able to ‘apply formulae’ successfully only in a situation that is precisely as described in the textbook, i.e. only when life has already been organised ‘according to science’. That is, when the object has already been systematised by someone else’s activity, where it has already been made according to the ‘rules’, where science has already been applied.

Where, in other words, we are talking only about the so-called ‘visualisation’ of verbally given formulae or rules. Here, it is precisely the formula that organises the ‘image’, that directs the activity of constructing the image or ‘visual representation’ that replaces a ready-made verbal instruction – an image that is supposed to be the ‘essence’ of the matter, but that we can nonetheless safely ‘do without’.

The person whose psyche has been developed in this way ends up a slave to ready-made ‘formulae’ even in the very act of contemplation, in the process of everyday perception – even in the object, he has become used to see precisely that which has been given to him in verbal form – that which precisely corresponds to words.

Of course, all this should not be understood as a ‘rejection of the principle of visual learning’. In its place, this principle is good and useful – and precisely as a principle that makes it easier to assimilate abstract formulae. But that is all. When we begin to dream that it can be used to solve a different problem – the problem of developing the ability to correlate abstract (verbally given) formulae with the object – then just the opposite result is obtained.

The person then develops a type of mentality where, when he looks at an object, he sees (‘visually represents’) only what he already knows about it through someone else’s words – through the words of the text-book author or the teacher. And not an iota more – he thus constructs not an image of the object, but only its ‘schema’ as given by words. If anything is then ‘correlated’, it is only a verbal instruction (a word) being correlated with itself – with its own semiotic expression – and not with anything else. The object – in the serious, materialistic meaning of this word – remains completely ‘transcendental’.

The principle of ‘visual learning’ is therefore helpless in the battle with verbalism. It only disguises it, and thereby subsumes it.

But, after all, serious, materialistic philosophy has for a long time suggested that teaching adopt another, more radical guiding principle. This is the organisation of a special form of activity that really requires – and therefore develops – the special abilities that are more fundamental for the human psyche than speech (language) or the mechanisms of speech that connect the word with the image.

Traditional ‘learning’ activity is clearly not of this kind – it reduces to the process of assimilating ready-made knowledge, ready-made information, and ready-made conceptions, i.e. it is realised as the activity of the embodying of ready-made images in language and – inversely – of the ‘visualisation’ of verbally formed conceptions.

Here, what is needed is activity of a different order – activity oriented directly at the object. Activity that changes the object, rather than an image of it. For only in the course of this activity does the image first arise, i.e. as a visual representation of the object, rather than as a ‘schema’ given a priori by a verbal instruction or ‘rule’.

The difference here is a fundamental one, and was clearly pointed out as long ago as Kant in his distinction between an ‘image’ and a ‘schema’, or ‘schematism’, as psychic formations that are fundamentally different in origin, with no ‘common root’. Because of this, the problem remained

insoluble for Kant. The really fundamental (universal) form of human activity remained outside the bounds of his psychology: direct-object activity, outside of consciousness and independent of consciousness, accomplishing the work of the hands and dealing not with an 'image', but with the thing in its most direct, 'crude', meaning, in a 'crudely material' sense-activity that directly masters the object. Activity to which school teaching has devoted so little time and attention, although it is precisely in the course of this (and only this) activity that one develops the 'schemas' or 'schematisms' on which Kant conferred the scary names 'transcendental' and 'a priori'.

Real thinking is formed precisely when – and only when – the work of language is indissolubly joined to the work of the hands – the organs of direct-object activity. Not hands drawing letters, words, and 'statements' on paper, but hands making things, i.e. changing obstinate, intractable, and capricious matter. Only thus can we observe its objective nature – independent of words or ready-made 'images' – its objective character or 'stubbornness'. Only thus does the object reveal itself as the thing in itself, compelling us to reckon with it more than with words or with 'schemas' that 'visualise' those words. It is clear that this is the only way one can hope to overcome verbalism and avoid the problem of 'the application of knowledge to life' – a problem that school teaching itself has created.

The Universal*

What is the 'universal'?

What should one understand by this word if vagueness and misunderstanding are to be avoided at least while reading two adjacent paragraphs? In the literal sense of the word '*vseobshchee*' (universal) means '*obshchee vsem*' (common to all). 'Vsem' (all) stands for the individuals whose infinite multitude makes up the first-glance impression of the world we live in or speak about. But this is perhaps all that is indisputable and similarly understood by one and all about the 'universal'. Leaving aside for now the properly philosophical controversies about the 'universal', it will be noted that the very term '*obshchee*' (universal) is applied rather haphazardly in living language because it has among its 'denotations' not only different or non-coincident, but directly opposite and mutually exclusive, objects and designations. The *Dictionary of the Modern Russian Language* recounts twelve such meanings, with two hardly compatible ones found at the extremes of the spectrum. 'Common', even though to some two, not to mention 'all', is that which belongs to the composition of either, as does the quality of being bipedal and mortal to Socrates and Caius or velocity to electron and train, and cannot exist separately from these two individuals. Also understood as 'common' is that which exists apart from these two individuals, precisely as a thing or yet another individual, like common ancestor, common – one for two (for all), field, common motor-car or kitchen, common friend or acquaintance, and so on, and so forth.

Apparently, the same word, the same 'sign' does not serve in these cases to designate at all the same thing. Whether this should be regarded as one of the 'imperfections' of the natural language or, contrariwise, the advantage of flexibility that the natural language has over the rigid definitions of artificial languages, this remains a fact and a fairly typical one, and, therefore, calls for an explanation.

In the case of the absolute non-ambiguity of a term, the definition (and application) is assumed for the ideal of the 'language of science'. The science which seeks an accurate definition of universal logical categories

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is duty-bound to come to terms with this ‘ambiguity’ of the term ‘common’ in the living language, – at least, in order not to be misunderstood whenever the ‘common’ and ‘general’ come under discussion.

Of course, the fact of ambiguity can be merely brushed off by assuming one of the opposite meanings for the initial one and declaring the other as illegitimate and, subsequently, discarding it on account of the ‘non-scientific character’ of the natural language. But then one would have to coin another term, another ‘sign’ to designate this ‘illegitimate’ meaning and thereupon try to clarify the relationship of the newly-devised sign to the term ‘common’, i.e., to revive, even though in a different verbal form, the former problem.

Let us make an assumption and grant that one can use ‘common’ as connoting solely the abstract oneness, the identical, or the invariant which can be revealed in the composition of two (or more) sensuously perceived individual ‘facts’ (‘extra-lingual facts’). Let us further assume that it has been agreed upon not to use (nor to imply) the meaning that the word has in the word combinations ‘common field’, ‘common ancestor’, ‘common friend (foe)’, and so on. Then, the word is quite plainly used to define a solitary object (individual) which exists and is conceived apart from, and independently of, the individuals to which it presents itself as something ‘common’.

Assuming further that we have also ruled out of ‘scientific language’ expressions such as ‘*Zhuchka* is a dog’, ‘logic is a science’, where the common (in the sense we made legitimate) appears also as the direct definition of an individual (particular) thing or object presented in contemplation (in ‘sensation’, in imagination, in fact, anywhere but in the language) and we will go on to use the cumbersome verbal constructions invented for this purpose by ‘relational logic’. Then it would seem as if the difficulties concerned with the relationship of the ‘common’ to the individual would vanish from our language, and would no longer be expressed in it. And just that. For they all will remain and reappear under a somewhat different cloak, as difficulties concerning the relationship of ‘language in general’ to ‘extra-linguistic facts’. And this admission wouldn’t make them any easier to handle or solve. Once again they would arise in ‘language’ striving to express ‘extra-linguistic facts’.

We shall not analyse in more detail those innumerable and fruitless attempts to settle the logical problem (of defining the ‘common’) through its replacement by another one concerned with the techniques of expres-

sion in a 'language' of 'extra-linguistic facts': the techniques capable, allegedly, of sparing the intellect the difficulties concerned with the inter-relationship of the 'common' and the 'individual', and from the 'ambiguities' and 'uncertainties' of the natural language. The entire lengthy and rather ill-famed case-history of neo-positivism comes down to a kind of reciprocal refutation and back-biting. This belated attempt to refurbish nominalism with all its metaphysics (and the interpretation of the object of thinking as an unbound sea of 'atomised facts',) rejecting (on grounds totally unknown) the objective reality of the common and the universal, has proven with sufficient clarity that the solution sought-for cannot be found along these lines.

The 'natural language', in any case, does not exclude the reality of the 'common' outside the language; as a result, Plato's or Hegel's metaphysics is expressible in this language in no less correct terms than the metaphysics of neo-positivism. Natural language at least allows us to express in words the problem which the 'language of science' is vainly attempting to rule out by declaring it 'inexpressible'. Yet the 'language of science' comes back to it continually in roundabout ways by formulating it inadequately or transporting it to the plane of pure psycho-physiology or linguistics, – as a problem of the relationship of the verbal sign to its 'meaning'. For example, the proponents of the language of science try to express the sum-total of the individual, the once-given and unique 'experiences', i.e., the fleeting 'states' of the psychophysiology of the human individual.

If so formulated, the issue of the essence of the 'common' (universal) becomes irrelevant, but this would be merely to surrender to the problem, not to resolve it. In real life (not least of all the life of a theorist) and, therefore, in the living language called upon to express this life, the problem of the universal and its relationship to the individual by no means disappears.

But then it is pertinent to ask: is it possible to find out anything about the two extreme – and mutually exclusive – meanings of the word 'common', equally valid by virtue of their presence in the living language, and to discover what they have in common, i.e., to find out the source of this difference of meanings?

The way that the word's interpretation has been proclaimed as 'singularly correct' in the tradition of formal logic makes this impossible; in other words, no such 'common feature' in the definition of either meaning of the term 'common' can be discovered. It is clear nevertheless, and

even to neo-positivists, the staunchest supporters of the above tradition, that in the latter case, just as in so many others, we are dealing with relative words, much like human relatives, which may have nothing in common, and still bear – with equal right – the same family name.

Such a relationship between the terms of the ‘natural language’ was recorded by L. Wittgenstein as fairly typical: Churchill-A has with Churchill-B the family likenesses a, b, c; Churchill-B shares with Churchill-C the features b, c, d; Churchill-D has as few as one single feature in ‘common’ with Churchill-A while Churchill-E and Churchill-A have not even one feature, nothing whatever in common, except their name, and their common ancestor, we should add.

In this case it is crystal-clear that the character of the common ancestor and the founder of the Churchill family will be hard to reconstruct by abstracting those – and only those – ‘common features’ which were genetically conserved by all his descendants. These common features are simply non-existent. Meanwhile the common name, the proof of the common origin, is there.

Much the same is true of the very term ‘common’. The original meaning of the word cannot be reconstructed through a purely formal juncture of ‘features’ into one family, or bringing into one ‘kin’ all descendant terms, for, by way of expanding the analogy, Churchill-Alpha would have to be portrayed as an individual both fair and dark-haired (= not fair-haired); big and little; snub- and hook-nosed and so on.

But this is where the analogy ends up in all likelihood, for at the sources of the kin-family there are always two genetic lines, so that Churchill-Alpha is not to blame for more than 50 per cent of the family likenesses in his direct descendants. Which ones in particular? That is the question which purely formal means will perhaps fail to answer.

The situation with relative terms is somewhat different. For the ancestor, as a rule, hardly ever dies but continues his life side-by-side with his descendants, as does an individual with other individuals; the question here boils down to finding out, among the available particular individuals, the one who preceded in birth all the others and was able, therefore, to give birth to the rest. This comes about without any contribution on the part of the second, extraneous genetical line and one which could be held responsible for the emergence of ‘common features’ incompatible in any one person; and so their relation to one another will be that of a purely logical negation.

Among the ‘features’ of the common ancestor who continues alive amidst his posteriors, one is bound to suggest an ability to generate something contrary to himself – the ability to generate both, a big man (relative to himself) and, on the contrary, a little man (again relative to himself). Logically, this leads one to infer that the ‘common ancestor’ may well be visualised as an individual of medium height, with a straight nose and light grey hair, i.e., one who ‘combines’, even though potentially, contrasting definitions; or who contains inside himself as though in a state of solution or mixture – this trait and that, its direct opposite. Thus, grey colour can be easily thought of as a mixture of black and white, i.e., as black and white simultaneously, in the same person, and at the same time to boot. There is virtually nothing here incompatible with the ‘good sense’ which positivists like to recruit as their ally in their attacks against dialectical logic.

Nevertheless, this is the one point about which there appears to be two distinctly incompatible viewpoints in logic, especially in trying to understand the ‘common’ (universal). One is that of dialectics, and, the other that which stipulates the ultimately formal conception of the problem of the ‘common’ and is unwilling to admit into logic the idea of evolution as being organically linked to the concept of substance both in essence and in origin. I stress an evolution linked to the concept of substance, i.e., the principle of the genetic similarity of phenomena which at first glance one puts down as basically heterogeneous, because of the failure to find any abstract common ‘features’ between them. This fact accounts for the inimical, not to say spitefully annoyed, attitude of the neo-positivist leaders to this respectable category. Precisely this proposition was seen by Hegel, for one, as the point of divergence, the parting of the ways between dialectical (or ‘speculative’ in his terms of reference) and purely formal thinking. It was this kind of understanding that he identified as the profound and ample advantage of Aristotle’s mind over the minds of those of his followers in the field of Logic who have presumed and are presuming themselves to be the singularly legitimate heirs of Aristotle in the field of Logic while declaring invalid the line of development of Spinoza, Hegel and Marx:

‘As to what concerns more nearly *the relation of the three souls* [nutrient soul, sensitive soul and intelligent soul, i.e. plant life, animal life and human life], as they way be termed (though they are incorrectly thus distinguished), Aristotle says of them, with perfect truth, that we need look for no one soul in which

all these are found, and which in a definite and simple form is conformable with any one of them. This is a profound observation, by means of which truly speculative thought marks itself out from the thought which is merely logical and formal. Similarly among figures only the triangle and the other definite figures, like the square, the parallelogram, &c., are truly anything; for what is common to them, the universal figure, is an empty thing of thought, a mere abstraction. On the other hand, the triangle is the first, the truly universal figure, which appears also in the square, &c., as the figure which can be led back to the simplest determination.

Therefore, on the one hand, the triangle stands alongside of the square, pentagon, &c., as a particular figure, but – and this is Aristotle's main contention – it is the truly universal figure [more precisely, the figure in general – E.J.]. In the same way the soul must not be sought for as an abstraction, for in the animate being the nutritive and the sensitive soul are included in the intelligent, but only as its object or its potentiality; similarly, the nutritive soul, which constitutes the nature of plants, is also present in the sensitive soul, but likewise only as being implicit in it, or as the universal. Or the lower soul inheres only in the higher, as a predicate in a subject: and this mere ideal is not to be ranked very high, as is indeed the case in formal thought; that which is for itself is, on the contrary, the never-ceasing return into itself, to which actuality belongs. We can determine these expressions even more particularly. For if we speak of soul and body, we term the corporeal the objective and the soul the subjective; and the misfortune of nature is just this, that it is objective, that is, it is the Notion only implicitly, and not explicitly. In the natural there is, no doubt, a certain activity, but again this whole sphere is only the objective, the implicit element in one higher. As, moreover, the implicit in its sphere appears as a reality for the development of the Idea, it has two sides; the universal is already itself an actual, as, for example, the vegetative soul. Aristotle's meaning is therefore this: an empty universal is that which does not itself exist, or is not itself species. All that is universal is in fact real, as particular, individual, existing for another. But that universal is real, in that by itself, without

further change, it constitutes its first species, and when further developed it belongs, not to this, but to a higher stage. These are the general determinations which are of the greatest importance, and which, if developed, would lead to all true views of the organic, &c., since they give a correct general representation of the principle of realisation'.¹

If we view from this standpoint the problem of defining 'the common in general' as a universal (logical) category which seems to have nothing to do with the problem of theoretical reconstruction of the 'common ancestor' of a family of related meanings, then we can only dimly hope to solve it.

The formal-logical guideline which directs one to search for the abstract, i.e., something common to all individual specimens of the same 'kin', (and having the same name) does not work in this case. The 'universal' is not to be found in this way, for the sole reason that it is really missing here. It is not to be found either as the 'feature' or definition actually common to all individuals, nor as a likeness or identity typical of each of these, if they are taken independently of one another.

Needless to say, a certain linguistic dexterity may help to find the 'identity' everywhere but then it would hardly have any significance except a nominal one.

What does the reader have in 'common' with a book? That both belong to the three-dimensional Euclidean space? Or that both of them comprise carbon, oxygen, hydrogen, etc.?

What is 'common' between the employer and employee? Or consumption and production?

Clearly, the concrete-empirical, apparent essence of the relation that binds together various phenomena (individuals) into some 'one', into a common 'set', is by no means delineated and expressed by their abstract-common feature, nor in the definition equally characteristic of both. The unity ('or commonness') is provided much sooner by the 'feature' which one individual possesses and another does not. The very absence of the known feature ties one individual to another much stronger than its equal presence in both.

¹ Hegel's "Lectures on The History of Philosophy," translated by J. B. S. Haldane, *Aristotle*. Ilyenkov gives the original German.

Two absolutely identical individuals each of whom possesses the same set of knowledge, habits, proclivities, etc., would find themselves absolutely uninteresting to, and needless of, each other. It would be simply solitude multiplied by two. One wit, as he explained to his young friend the ABC of dialectical logic, advised him to ask himself the question: what is it in his bride that attracts the young man; wherein lie the ties of their ‘commonness’?

The discussion here is not so much about individualities, but in general about particular (and, therefore, typical in their specialty) objects coming essentially, rather than nominally, under the same genus, for example, in reference to production and consumption.

This is the idea behind the most common, most abstract (and for this reason still poorly defined) conception of the universal in dialectics. It is not the ‘likeness’ numerically recurrent in each separately taken individual object which is represented in the form of the ‘common feature’ and perpetuated with a ‘sign’. It is, above all else, that objective relation of two (or more) particular individuals which transforms them into the moments of the same, concrete, real – and not merely nominal – unity which it would be a great deal more reasonable to represent in the form of some totality of various special moments, than by an uncertain ‘set’ of ‘units’ (‘atomised facts’, etc.), completely indifferent to one another. The ‘universal’ acts here as the law or principle governing the interrelations of these details within some whole, a ‘totality’ as Marx chose to put it following Hegel. What is required here is not an abstraction but analysis.

This is a problem which one cannot, of course, hope to resolve by searching for the ‘likenesses’, i.e., the abstract characteristics – the common to ‘all’ details. An attempt toward this goal would be perhaps just as hopeless as an attempt to learn the general arrangement and principles of operation of a radio-receiver by attempting to find out that ‘common’ element which a transformer has with a resistor, a condenser with a loudspeaker diffuser, and all these together with a wave-range switch.

If we come back to the issue of the genetic similarity of the various (and opposite) meanings which the term ‘universal’ has acquired through the evolution of the living language and the mind that expresses itself in language, then the problem is reduced to the task of identifying amongst them the one meaning which can be reliably considered as the originator-meaning. Then one must try to discover why and how this meaning, the first in time, and directly simple in essence, has expanded so much as to

include even its opposite, or something which had not been presupposed at the very outset.

Since our distant ancestors can hardly be suspected of having had an inclination to invent 'abstract objects' and 'constructs', it would seem more logical to assume as original the meaning that the term 'common' has retained in word combinations, such as 'common ancestor' or 'common field'. This is also supported by the extant philological evidence. Marx stated positively: 'But what would Old Hegel say, were he to learn in the hereafter that the *general* [*das Allgemeine*] in German and Nordic means only the communal land, and that the *particular*, the *special* [*das Sondere, Besondere*] means only private property divided off from the communal land?'²

Now it is self-evident then that given this originally simple or, as Hegel would have put it, genuinely general sense of the words, that the notion which establishes the 'common' (the 'universal'), both in time and in essence, prior to the 'individual', the separate, the particular or the specific, will not even give a hint as to the refined mysticism which colours the concept of the universal as it appears in neo-Platonists and Medieval Christian scholastics. These made the 'universal' synonymous with 'thought', viewed from the very outset as the word, the 'logos', as something incorporeal, spiritualised, and exclusively immaterial. By contrast, the 'universal' in its original-universal sense stands out clearly in the mind and, therefore, in the language expressing it, as a synonym for a totally corporeal substance, whether water, or fire or miniscule homogeneous particles ('indivisibles'), and so forth. Such a notion may look naive (though it is far from that in fact), crudely sensuous, and 'excessively materialistic', but there is no mysticism here, not even the slightest tendency toward it.

In this context it looks quite incongruous to accuse materialism, as some of its opponents do continually, of 'well-camouflaged Platonism' which, allegedly, is necessarily connected with the thesis about the objective reality of the universal. Naturally, if one should accept from the very beginning (no one knows why) the view that the universal is a thought and nothing but a thought, then not only Marx and Spinoza, but even Thales and Democritus would pass for 'crypto-platonists'. Identification of the 'universal' with the 'thought' is the point of departure for any

² Karl Marx To Engels, 25 March 1868, *MECW* Vol 42.

system of philosophical idealism, whether it belongs to the latter's 'empirical' or patently rationalistic wing, and is to be regarded as an axiom accepted without any evidence whatsoever, or a sheer prejudice inherited from the Middle Ages. Its continuing force is far from accidental. It stems from that really great role that has been attributed to the 'Word' and to the verbal 'externalisation' of the 'thought' in the development of spiritual culture. In fact, this role is what creates the delusion that the 'universal' possesses its existent being (its reality) only and exclusively in the form of 'logos', in the form of the meaning of a word, term or linguistic sign. Since the philosophical thinking reflecting on the 'universal' has been dealing, since its inception, with the 'universal' in its verbal expression and verbal being, this tradition begins very soon to regard the dogma about the identity of the 'universal' and the 'sense (meaning) of the word', not surprisingly, as the natural premise and the ground it rests on, the air it breathes, in a word, as something 'self-evident'.

However, the mere fact that a particular philosophical reflection, since the very outset, has dealt with the 'universal' in the latter's verbal being, is not enough to put an equality sign here.

We would like to note in passing that the prejudice which modern neo-positivists assume as the absolute truth was never regarded this way by Hegel, none-too-dear to the neo-positivists. Hegel, too, believed sincerely that materialism is impossible in principle as a philosophical system, on the theory that philosophy is the science about the universal, while the universal is the thought, – only the thought, and precisely the thought, and can't be anything but the thought. Nevertheless, Hegel's profound insights in comparison to the more recent proponents of this prejudice consisted in this, that he understood full-well one simple truth, to the point of banality, namely, that the 'thought' (thinking) is expressed (accomplished, objectivised, explicated) not only in the word or chains of 'utterances' but also in man's actions and deeds and, therefore, in the results of these deeds, not the least of which is found in the products of man's labor, his purposeful – i.e., rational – activity. Hence, the 'forms of thinking' can be, according to Hegel, discovered and investigated within man's rational endeavors in whatever way executed, in whatever form 'explicated'. Hence, the 'logos', too, is understood by Hegel as the form, scheme and sense of 'speech' and 'essence' (*Sage und Sache*) – both 'act' and 'actuality' – and not only as a pattern of speech or the constructed pattern of chains of words, utterances and the latter's formal transformations – as the neo-positivists have asserted to this day.

Having undermined dramatically the prestige of the prejudice whereby thinking (= the universal) was identified with speech (internal or external), Hegel, nevertheless, returns in a round-about way under its captivity, for although he holds the 'word' to be perhaps not the only form of '*Dasein* of the thought', yet he reserves for it the significance of the first form of its '*Dasein*' – both in time and essence. The thinking mind awakens, under the Hegelian concept, first as the 'naming' force, and only after the mind has realised itself in the 'word' and through the 'word' does it pass to the 'self-embodiment' of it in working tools, political affairs, in the erection of churches and factories, in the making of Constitutions and other 'external' actions.

Here, too, the 'word' appears, eventually, as the first embodiment of the 'universal' and as its last self-presentation, consummating all the cycles of its 'embodiment'. Absolute Mind finally apprehends itself in the treatise on Logic.

For the practical and *gegenständliche* life of mankind, it constitutes the 'middle' term of the scheme, *Medius Terminus*, a mediating link of the cycle that has the 'word' for its commencement and its end. Here, too, there occurs an identification of the 'universal' with the 'word', though in a way not as direct and unrefined as in the Apostle John or Carnap. Hegel, in his characteristic manner, begins by shattering the old prejudice and then restores it with all its former rights, using as he does, a sophisticated dialectical mechanism.

The radically materialistic re-conception of the achievements of Hegelian logic (dialectics), as worked out by Marx, Engels and Lenin, was connected with the affirmation of the objective reality of the 'universal', in its most direct and accurate sense; – but not at all in the sense of Plato and Hegel who identified this 'universal' with the 'thought' which, they asserted, existed before, beyond and altogether independently of man and mankind and acquired independent being only in the 'Word'. The Marxist idea developed, it can be said, in the sense of the regularity of material phenomena, in the sense of the law governing the cohesion within some – always well-defined – whole, and within some self-developing 'totality', all the components of which, are essentially 'related' with one another. Thus their idea developed not because 'all' of the data possess a common 'feature', but because of the unity of genesis, and a descent from the same 'common ancestor', or, more precisely, because of their emergence as broadly variable modifications of the same 'substance' having a positively material (i.e., independent of thought or word) character.

Hence, the phenomena of the ‘same kin’, – homogenous phenomena – may not necessarily be possessed in the ‘family likeness’ as the only ground for attributing them to the ‘same kin’. The ‘universal’ in them may outwardly express itself equally well through differences, even opposites, which make these phenomena the mutually complementary component parts of the ‘whole’. Thus we attain some genuinely real ensemble, or some ‘organic totality’, rather than an amorphous set of units which are ascribed to that ‘set’ on the strength of some ‘similarity’ or ‘feature’ more or less accidental to each of them, or on the basis of a formal ‘identity’ totally irrelevant to its specific nature, its particularity or individuality.

On the other hand, that ‘universal’ which reveals itself precisely in the particular or individual characteristics of all component parts of the ‘whole’ without exception – in each one of many homogeneous phenomena – is itself as ‘real as the particular’, as existing along with other ‘particular’ individuals, its derivatives. There is no element of mystery about this, for the father very often lives a long time side-by-side with his sons. And if not present among the living any more, he surely must have existed at one time, i.e., must be conceived necessarily in the category of ‘existent being’. Thus, the genetically understood ‘universal’ exists, self evidently, not at all in the ether of abstraction, or only in the element of word and thought. Neither does its existence, by any means, nullify or diminish the reality of its modifications, its derivatives or the universally-dependent, particular individuals.

In the Marxist analysis of *Capital* the concept of the ‘universal’ briefly outlined above is of prime importance methodologically:

‘To the extent that we are considering it here, as a relation distinct from that of value and money, capital is *capital in general*, i.e. the incarnation of the qualities which distinguish value as capital from value as pure value or as money. Value, money, circulation etc., prices etc. are presupposed, as is labour etc. But we are still concerned neither with a *particular* form of capital, nor with an *individual* capital as distinct from other individual capitals etc. We are present at the process of its becoming. This dialectical process of its becoming is only the ideal expression of the real movement through which capital comes into being. The later relations are to be regarded as developments coming out of this germ. But it is necessary

to establish the specific form in which it is posited at a *certain* point. Otherwise confusion arises'.³

This is a clear-cut declaration of the same 'value' versus 'capital' interrelationship as is revealed by Hegel in the above quotation between the triangle and square, pentagon, etc., and in a dual sense to boot.

Firstly, the concept of 'value in general' is by no means defined here in terms of the sum-total of those abstract-universal 'features' which can be identified at will within 'all' special types of value (e.g. commodity, manpower, capital, rent, interest, and so on), but is arrived at through an accurate analysis of one single clearly 'specific' relation which may exist (and so it did and does) between people – the relation of direct exchange of one commodity for another, the equation, '1 frock-coat = 10 meters of cloth'.

The analysis of this value-type of reality – reduced to the simplest form – reveals those definitions of 'value in general' which are met with (reproduced) at higher stages of development and the latter's analysis as the universal definitions of money, and labour force, and capital. It is impossible, however, to cull these definitions through a direct abstraction from all these 'special forms' of the relationship of value (as 'common' to all of them).

Secondly, when the point at issue is the 'specific definition of capital in general', here, too, as Marx very specially points out, allowance has to be made for the following principal consideration 'un caractère plus logique qu'économiste'.⁴

'... however, capital in general, as *distinct* from the particular real capitals, is itself a *real* existence. This is recognised by ordinary economics, even if it is not *understood*, and forms a very important moment of its doctrine of equilibrations etc. For example, capital in this *general form*, although belonging to individual capitalists, in its *elemental form* as capital, forms the capital which accumulates in the banks or is distributed through them, and, as Ricardo says, so admirably distributes itself in accordance with the needs of production. Likewise,

3 "Grundrisse," *MECW* vol. 28 p 236.

4 *ibid.* p 378-9.

through loans etc., it forms a level between the different countries. If it is therefore e.g. a law of capital in general that, in order to realise itself, it must posit itself doubly, and must realise itself in this double form, then e.g. the capital of a particular nation which represents capital *par excellence* in antithesis to another will have to lend itself out to a third nation in order to be able to realise itself. This double positing, this relating to self as to an alien, becomes damn real in this case. While the general is therefore on the one hand only a mental [*gedachte*] mark of distinction [*differentia specifica*], it is at the same time a *particular* real form alongside the form of the particular and individual'.⁵

'The same also in algebra. For example, *a, b, c* are numbers as such; in general; but then again they are whole numbers as opposed to *a/b, b/c, c/b, c/a, b/a* etc., which latter, however, presuppose the former as their general elements'.⁶

Of course, the analogy – just as any analogy – is no proof of the 'universality' of the logical interrelationship. In this case it is simply illustrative of the idea discussed above. But here, too, it can be used to remind us about an important aspect of the dialectical conception of 'universality'. In this case, the 'universal' appears again as a positively determinate, although in a general form, number *a, b, c*. This is exactly 'number in general', like a number in its elementary form, or as any number 'converted to its simplest determinateness', but without the ultimate loss of determinateness, or 'speciality'. By contrast, the formal concept of 'number in general', deprived of 'inherence' in the special type of numbers, is merely a name; not a concept, where the 'universal' is expressed in terms of its 'particular nature'.

Indeed, in mathematics, because of the highly specific nature of its abstractions, the 'abstract-universal' coincides with the 'concrete-general'. Yet 'number in general', (i.e., *a, b, c* etc.), is obtained also when the formal operation of the abstraction (extraction) of the 'same' has been performed among all types of numbers; 'a', 'b', 'c', etc., i.e., precisely as 'bricks', as 'atoms' of sorts, which remain essentially the same regardless

⁵ *ibid.* p 378.

⁶ *Ibid.*, p 379.

of the sign formation of which they become but component parts. The simplicity is gone, however, once we step outside of algebra where the 'universal' may not be necessarily present in its modifications (in its own well-developed forms), in the same form as in the simplest elementary case. Incidentally, this happens even in mathematics itself, as when a triangle as a 'figure in general', is never retained as such in a square or pentagon, nor is it given in inherence or contemplation, although it can be identified analytically within their composition. It should be by an analysis, indeed, not by an abstraction which merely sets apart the available 'common feature'.

Let us take this situation – the one of the dialectical inter-relationship between the universal and particular and the individual. Here the 'universal' cannot be identified in principle within the composition of particular individuals by means of a formal abstraction by revealing the common, the identical in them. This can be shown most demonstrably in the case of the theoretical difficulties associated with the concept of 'man', the definition of 'man's essence' and the search for his 'specific generic definition'.

Such difficulties were described with a superb wit in the well-known satirical novel *Les animaux de natures*, by Vercors. In the thickets of a tropical forest a community of strange creatures was discovered. On the basis of some criteria current in modern physical anthropology, they are apes or other primeval people. Apparently, this is a peculiar, hitherto unobserved, transient form that has developed from the animal, or purely biological world to the social, human world. The question is, whether or not the Tropi (the name the author gives his invented herd-tribe) have passed the hardly discernible, but all-important border-line between man and animal.

At first glance, the question is of purely academic significance and may be of concern, it seems, only to a particular biologist or anthropologist. However, before long it transpires that it is inter-twined with the fundamental problems of our age in legal, ethical and political aspects, as well as with philosophical problems. The novel's hero deliberately, with a premeditated intention, murders one of the creatures. This act labels him a murderer, provided the Tropi are human beings. If they are animals the *corpus delicti* is non-existent. The old priest torments himself with the same question. If the Tropi are human beings he is bound to save their souls and subject them to the rite of baptism. If the Tropi are animals, he runs the risk of repeating the sinful deed of St. Mael who made the mistake of

baptising penguins and caused a lot of trouble to the heavens. Yet another factor enters in due to a selfish manufacturing interest which at once identifies the Tropi as ideal labour power. Indeed, an animal easy to tame, and unable to grow into the awareness of either trade-unions, or the class struggle, or any requirements except physiological ones – is not this a businessman's dream?

The argument about the nature of the Tropi involves hundreds of people, dozens of doctrines and theories; it broadens, becomes confused and grows into a debate about entirely different things and values. The characters have to ponder over the criterion whereby a categorical and unambiguous answer could be given. This turns out to be far from simple.

With an emphasis on some 'human feature', Tropi come under the category of humans; on another they do not. An appeal to the sum-total of such features is of little help, for then the question arises about their number. By extending the number of the 'features' which have defined 'human being' thus far and introducing among their number the one feature that sets aside the Tropi from the hitherto known people, the Tropi are left automatically outside the bounds of the human race. By shrinking their number, by confining them to those which are possessed by the previously known Tropi and humans, one arrives at the definition whereby the Tropi are to be included into the human family with all their ensuing rights. The thought is caught within a vicious circle: indeed, to define the nature of the Tropi, it is required that we first clearly define the nature of man. This, however, cannot be done unless it has been decided beforehand whether or not the Tropi are to be approached as a variety of *homo sapiens*.

Moreover, a new argument flares up at once over every one of those 'common features' which have thus far described man. What is meant by 'thought'? What is meant by 'language' and 'speech'? In one sense animals also possess thought and speech, while in another man alone has it. Thus, each human characteristic becomes debated in the same way as the definition of 'man'. There is no end to these debates, while the differences of opinion and back-biting reach the plane of the most general and all-important philosophical, ethical and gnoseological concepts, only to be re-kindled there with renewed vigor and violence.

Indeed, things are far from simple with the lawfully established people, as well. Do all people live and act 'human-like?' Or often do they not

act more horribly than animals? The argument, therefore, evolves into a discussion as to the kind of living that is or is not to be regarded as 'genuinely human'.

All attempts to find this 'common and essential feature' whereby one could unmistakably tell a man from an animal, from a 'non-human', stumble over and over again into the age-old logical problem. The 'common feature' could be abstracted from 'all' the individuals of the given race when and if the set that constitutes the genus has been well-defined. But this is impossible unless there is a general criterion available beforehand for identifying such a 'set', i.e., the very 'common feature' sought-for. Indeed, hot water is easy to tell from cold. But what about warm water? One stone does not make a heap, and neither do two. How many stones will be then required for a 'heap'? Where is the frontier beyond which a balding man becomes bald? And is there any clear-cut frontier at all? Or, on the contrary, is any frontier, any certitude merely an imaginary line to be drawn solely for the purpose of an artificial classification? Where then is it to be drawn? 'It will run where the powers-to-be would choose to draw it', note the novel's characters ruefully. Indeed, the subjectively idealistic theories of thought delegate this kind of decision-making to the powers-to-be. So, the voice of 'the powers' becomes the criterion of truth, and their will the 'universal will' behind which title one can clearly discern unmasked arbitrariness and even individual self-seeking interest.

As we now are conscious from experience that the 'common and essential feature', the determinate and specific distinction of the human race, namely, the concrete-universal definition of 'man' and the 'human' in people, is not as easy to find as they thought it would be from the outset, the characters in Vercors' novel turn for the solution to philosophical and sociological concepts. But where is the latter's criterion of truth? Each criterion claimed for itself universal importance, a monopolistic possession of the universal concept, so that there is really nothing 'common', no agreement between them.

The novel ends with a large question mark, while its hero finds himself in the none-too-enviable position of Buridan's ass, i.e., with the Marxist concept of the 'universal' on the left, and the Christian one on the right; two mutually exclusive concepts of the 'universal'. Unprepared to accept either, Vercors' hero, together with the author, would opt readily for a third alternative, such as would reconcile both teachings, the

‘common’ between them, i.e., the ‘genuine’ understanding of the ‘universal’.

‘Each man is, first of all, a human being, and only after that a follower of Plato, Christ or Marx’, Vercors argues in the post-script to the Russian edition of the novel. ‘I’d think it rather more important at the present moment to show how, on the basis of that criterion, we can find common points between Marxism and Christianity, than to stress their differences’.⁷ Well, from the purely political viewpoint this may be true but does it answer the theoretical problem? It can’t be more true that ‘human nature’, the universal in man, lies not at all in his adherence to a particular doctrine, whether it be that of the author of ‘Capital’, or the Sermon on the Mount. But then where does it lie, – in the proposition that a human being is first of all a human being? That’s the only answer Vercors could give to oppose the ‘lop-sided view’ of Marxists who proceed from the ‘real human relationships in the process of material production’. But any answer, like Vercors’, would push us back to the novel’s beginning, to the starting point of all debates over the essence of man, to the simple naming of the object of contention. To budge from such a standstill, such a tautology, we would have to start all over again.

However, there is one other important conclusion to be made from the Tropi story, which Vercors refuses to make for various reasons, namely, that nothing but tautology can result from the logic with which the novel’s characters seek to resolve the issue, i.e., to find the universal definition of ‘man’ by way of abstraction from the ‘common’, a feature possessed by every individual representative of the human race, every individual as such. Obviously, a logic based on this conception of the ‘universal’ would fail to lead thought out of its impasse, so as a result the notion of ‘man in general’ remains somewhat elusive. The history of philosophical and sociological thinking proves the point with no less clarity than do the mishaps of Vercors’ characters, described above.

Clearly, any attempt to discover the abstract-common feature equally descriptive of Christ and Nero and Mozart and Goebbels and the Cro-Magnon hunter and Socrates and Xantippe and Aristotle, and so on and so forth, hides the cognitively valuable inside itself, and leads nowhere except to an extremely weak abstraction by no means expressive of the heart of the matter. The only way out of this deadlock, as far as we know,

⁷ Vercors, *Ljudi ili zhitvognye?*, Moscow, 1957, p 223.

is to turn to Marx with his reliance on a more sound logic, on a more earnest and specific conception of the problem of the 'universal':

‘... the human essence is no abstraction inherent in each single individual. In its reality it is the ensemble of the social relations.’⁸

Distinctly pertinent here is not only the sociological, but also the logical principle underlying Marx's line of reasoning. If translated into logical language, it would mean the following: universal definitions expressing the essence of a genus, whether human or any other, cannot be effectively searched for amidst abstract, common 'features', such as every particular specimen of the genus possesses.

The 'essence' of human nature in general – and of the human nature of each particular human being – cannot be revealed, except through a science-based, critical analysis of the 'entire totality', the 'entire ensemble' of the socio-historic relationships of man to man, through a case-study approach and apprehension of the regularities which have and are actually governing the process of origination and evolution of human society as a whole, and of a particular individual.

The particular individual represents 'man' in the strict and accurate sense of the word insomuch as he realises – precisely through his individuality – a certain sum-total of historically-developed capabilities (especially human ways of vital activity), a particular fragment of culture which has developed prior to, and independently of himself and which he absorbs through the process of education (self-accomplishment of man). In this sense, the human person can be rightly regarded as the individual embodiment of culture, i.e., the 'universal' in man. Hence, the universal 'essence of man' is only real as a culture, as an historically established and evolutionising aggregate of all specially human forms of vital activity, as the whole of their ensemble. The 'universality' so understood represents, indeed, not the mute generic 'similarity' of the individuals but a reality dismembered within itself many times over and in various ways into 'special' ('particular') spheres complementary to, and essentially dependent on, one another and which are, therefore, held together with the ties of common origin as tightly and flexibly as are the bodily organs of a biological species developed from the same ovule.

⁸ "Theses on Feuerbach," §6, *MECW*, vol. 5 p 3.

In other words, the theoretical-logical definition of ‘the universal in man’, – a concrete generality of human existence, – may and does consist, in view of the above, solely in revealing the extent to which it is necessary for the many and varied forms of specifically human activity, for the social human capabilities and their associated needs to evolve from, and interact with, one another.

Hence in seeking the ‘most common’ definition of the human element in man, the task still cannot be to abstract the formal sameness, or the ‘abstract’ characteristic of each particular individual, but to establish that real and, therefore, special form of human vital activity which is historically and essentially the universal foundation and condition of the emergence of all the rest.

Fully consistent with the data of cultural and physical anthropology and archaeology, the materialistic conception of ‘the essence of man’ envisions this ‘universal’ form of human existence in labor, in the direct remaking of nature (both external and one’s own) as accomplished by social man with the tools of his own creation.

Small wonder then, that Marx regarded with warm sympathy Franklin’s well-known definition of man as a being producing labour tools. Producing labour tools – and for this one reason a being who thinks, speaks, composes music, follows moral norms, etc. No better example illustrative of the Marxist conception of the universal as the concrete-universal, as well as the latter’s attitude to the ‘particular’ and the ‘individual’ can be given than the definition of ‘man in general’ as the ‘being producing labour tools’.

From the standpoint of the canons of the old and traditional formal logic the above definition is too ‘concrete’ to be ‘universal’. It cannot be stretched to cover directly, by means of a simple formal abstraction, such unchallenged representatives of the human race as Mozart or Leo Tolstoy or Raphael or Kant. Formally, the definition bears on a constricted circle of individuals, e.g., employees at manufacturing plants or workshops. Even the workers who are not the producers but the users of these machines will not formally qualify for it. As a result, old logic with its conception of the ‘universal’ will be right in its judgment of the definition as strictly particular rather than ‘universal’, as a definition of a particular human occupation rather than of ‘man in general’.

Nevertheless, Franklin proves to be essentially right in his conflict with this logic since he is led by intuition and the bulk of facts and con-

tentions bearing on the problem of the 'human in man' to assume the viewpoint of a logic a great deal more earnest and profound; the very Logic which has been ripening for centuries on end in the lap of philosophy and in particular, in the logical discourses of Descartes and Spinoza, Leibnitz and Kant, Fichte and Hegel. In fact it has found its concrete scientific application in 'Capital' and Marx's theory of surplus value and the materialistic conception of history and modern times.

This conception of the 'universal' is by no means synonymous with the 'concept' or 'thought' as it appears more or less explicitly in Plato, Hegel, Thomas Aquinas and Carnap who were preoccupied with the 'universal' insofar as the latter had already found its way into the mind, more precisely, into the 'word' called upon to express the mind.

The universal ('concrete-universal') is opposed to the sensuous variety of particular individuals, in the first place as the latter's own substance and the concrete form of their interaction, rather than to intellectual abstraction. *Per se*, the universal embodies in itself, in its concrete certitude 'the total treasure of the particular and the individual', and not only as a possibility, but as the necessity for expansion, that is to say, as the 'real explication' of a simple form into the diversely dismembered reality.

Precisely for this reason 'the universal' is not and cannot be understood here as an abstract identity (similarity) of a broad variety of phenomena which provides the base for the operation of bringing them under the same name or proper name or term. The necessity for the 'self-extension' of the universal, the dynamo of its self-movement is comprised in it in the form of 'the tension of contradiction', i.e., the intrinsic contradiction of form; hence, one is led to understand the universal as something distinguishable also within itself into its own particular moments. The relation among them being that of the identity of contraries, i.e., their living concrete unity, or of their transition into one another.

But this is another subject passing far beyond the limits of the definition of 'the universal as such' in its dialectico-materialistic conception. Nevertheless keeping within the limits of this paper, it should be added that this conception of the 'universal' and the ways in which it is scientifically apprehended, do not constitute a monopolistic possession of philosophical dialectics. Science – indeed, real science rather than its representation in the epistemological and 'logical' constructions of neopositivists – has always proceeded more or less consistently from a similar conception of the 'universal'. Not infrequently, it did so contrary

to the deliberate logical propositions professed by its spokesmen. The trend can be easily traced throughout the entire case-history of the concept of 'value', a general category of political economy.

The abstraction of 'value as such', just as the word used to describe this abstraction, goes as far back into antiquity as market relations themselves. The Greek 'axia', German 'Weyt' and so on, have not been coined by Petty, Smith or Ricardo. A merchant or farmer would at all times apply the name 'value' or 'cost' to all that could be bought and sold, all that 'cost' something. If the theorists of political economy had attempted to develop the concept of 'value as such' from the guidelines of a purely nominalistic formal logic offered science to this day, surely they would never have developed the concept. As a matter of fact, the term 'value' has never from the very beginning been the result of applying an abstract, common element which hackneyed word usage has led some to think belongs to each of the subjects called 'valuable'. If such were the case, it would come to tidying up the ideas that any shopkeeper already has regarding the meaning of 'value': i.e., a simple matter-of-fact enumeration of the 'features' of those phenomena to which the word 'value' is applicable, and that would be the end of the matter. The entire venture would have been, then, to merely clarify the applicability of the term. The crux of the matter, however, is that the classics of political economy treated the question under an entirely different aspect, and in such a way that the answer to it was found in the concept, i.e., an apprehension of real universality. Marx revealed the essence of their formulation of this problem.

William Petty, the first English economist, arrived at the concept of value in the following way:

'If a man can bring to London an ounce of Silver out of the Earth in Peru, in the same time that he can produce a bushel of Corn, then the one is the natural price of the other'.⁹

We would note in passing the absence of the term 'value' in this proposition, although mention is made of 'natural price'. But we are witnessing here precisely the birth of the concept of value fundamental to the entire subsequent science of the production, distribution and accumulation of 'wealth'.

The concept, insofar as it is a real concept rather than a general idea embodied in the term, expresses (reflects) here, just as in Hegel's example

⁹ "Capital" Chapter 2, note, *MECW* vol. 35 p 102.

of the triangle, a real phenomenon given 'in experience' which, though it is a 'particular' among other 'particulars' turns out, at the same time, to be universal, thus representing 'value in general'.

The classics of bourgeois political economy chanced upon this way of defining value in its universal form. However, in an attempt to use it after the concept had been formed, they tried to 'verify' it consistently with the logical canons based upon John Locke's ideas about thinking and the 'universal', and found themselves immediately facing some paradoxes and antinomies. The 'universal', whenever an attempt is made to justify the term through an analysis of its own particular modifications, such as profit or capital, is not at all corroborated, but rather is disproved by contradicting them.

Marx was the one who identified the reason generating the paradoxes and suggested a way out precisely because he was guided by the more profound, dialectical conceptions of the nature of the 'universal' and its interrelationships with the 'particular' and 'individual'. 'The reality of the universal in nature is a law', (Engels), but for all that, a law in reality (a proof of this is modern natural science, particularly micro-cosmic physics). And it is never carried out absolutely as a rule which the movement of each particular particle is expected to follow but only as a tendency manifesting itself in the behavior of some more or less complex ensemble of individual phenomena through a 'violation' or 'negation' of the 'universal' in each one of its particular (individual) manifestations. As a result, the human mind has, in any case, to take this into account.

The universal definitions of value (the law of value) in Marx's *Capital* are worked out in the course of analysis by the direct exchange of one commodity for another, i.e., by taking only one and precisely the earliest, historically, and therefore logically the simplest concretion of value. Marx did this by prescinding from all other particular forms, (evolved on the basis of value) like money, profit, rent, etc. The drawback in Ricardo's analysis of value, as pointed out by Marx, lies precisely in that he 'cannot forget about profit' in approaching the problem of value in its universal form. This makes Ricardo's abstraction incomplete and thereby formal.

For Marx, he seeks to solve the problem in the universal form because all subsequent formations, not only profit but even money, are assumed to be non-existent at this stage of the analysis. What is analysed is only direct, non-money exchange. It transpires at once that this elevation of the individual to the universal differs on principle from an act of

simple formal abstraction. Here the distinctions of the simple commodity form which set it apart specifically from profit, rent, interest and other special 'types' of value, are not thrown overboard as being non-essential. On the contrary, the theoretical description of these distinctions is exactly the one coincident with the definition of value in its general form. The incompleteness and the related 'formality' of Ricardo's abstraction lies precisely in the latter's inability, while constructing it, to abstract from the existence of all other advanced types of 'value', (particularly and especially profit), on the one hand, and on the other, in its being formed through an abstraction from all distinctions, including those of direct commodity interchange. Ricardo's analysis results in another difficulty, namely, that the 'common' appears eventually to be isolated altogether from the 'particular' for which it is no longer a theoretical description. Such is the difference between the dialectical and purely formal conceptions of the 'universal'.

But no less important is Marx's distinction of the dialectico-materialist conception from the interpretation it receives in Hegel's idealistic dialectics. What makes it so important to stress this difference is that in Western literature on philosophy an equality sign is too often placed between Hegel's conception of the universal and that of Marx and Lenin. It is apparent, nevertheless, that the orthodox Hegelian notion of this category, whatever its dialectical merits, coincides at a decisive point with that very 'metaphysical' view which Hegel himself so often rejects. This is revealed with special clarity whenever the principles of Hegelian logic are applied to the analysis of real mundane problems.

Actually, when Hegel comments on his 'speculative' concept versus the purely formal notion of the universal, as he does with the use of geometrical figures, for example with his consideration of a triangle as 'the figure in general', then the resulting impression is that this conception already includes within itself, in ready-made form, the entire logical scheme which enabled Marx to cope with the problem of the general definition of 'value' or 'value as such'. But, it is not as if Hegel's 'genuine universality' as distinct from a meaningless, purely formal abstraction, consisted in his directly-objective meaning or in the fact that the 'genuinely-universal' itself existed in the form of the 'particular', i.e., in the form of 'being for other', or as an empirically existing reality given in time and space (i.e., outside of man's head), and perceived in contemplation.

Although it seems so at first glance, yet Hegel himself insists that the inter-relation between the universal and particular is not by any means to

be likened to that between mathematical (including geometry) images, for such a resemblance would be meaningful only as a figural analogy and is liable to distort and obfuscate the true picture.

According to Hegel, the geometrical image called upon to clarify the logical concept (universal) is bad enough, since it is excessively 'burdened with the sensuous substance' and, therefore, like biblical myths represents only a well known allegory of the Concept at most. As for the 'genuine universal', which he approaches exclusively as a purely logical category, i.e., as the capitalised Concept, it should be conceived as having been totally cleared of all residues of the 'sensuous substance' or 'sensuous matter', and occurring in a refined incorporeal sphere of activity of the 'spirit'. With this as his starting point, Hegel reproached materialists precisely for their approach to the universal, which, he alleged, in effect abolished it 'as such' by transforming it into a 'particular among other particulars', into something limited in time and space; into something 'finite', whereas the universal ought to be specifically distinct in its form of 'internal completeness' and of 'infinite' character.

This is the reason why the 'universal as such', in its strict and accurate sense, exists, according to Hegel, exclusively in the ether of 'pure thinking' and not at all in either the time or space of 'external reality'. In the latter sphere one may encounter only the series of 'particular estrangements', 'embodiments', and 'hypostases', of this 'genuine-universal'.

This would make it altogether unacceptable, 'logically incorrect', for Hegelian logic to define the essence of man as a being producing work tools. For the orthodox Hegelian, just as for any proponent of the purely formal logic criticised by Hegel, (indeed, a very significant unanimity!) the definition by Franklin or Marx is too 'concrete' to be a 'universal'. The production of work tools is seen by Hegel not as the basis of all that is human in man, but as one, even though all-important, manifestation of the latter's thinking self.

In other words, the idealism of the Hegelian interpretation of the universal and of the form of universality leads in practice to the same result as the 'metaphysical' interpretation of this category which he detests so much.

Furthermore, if Hegelian logic in its original form were used to assess the validity of the logical line of reasoning in the early chapters of *Capital*, this entire Marxian development would appear as 'invalid' and 'illogical'. The Hegelian logician would be right from his own viewpoint in criticis-

ing the Marxist analysis of value in the sense that it lacks any definition of this category of the universal. Further, he would say that Marx only 'described' the definition but failed to theoretically 'deduce' any particular form of 'value in general', for 'value in general' like any 'genuinely universal' category of man's vital activity, is a form immanent to man rather than to any 'external being' in which it is merely manifested, or merely objectivised.

This is only to suggest, however, that Hegelian logic, whatever its advantages over formal logic, was and is unacceptable as a weapon for materialistically oriented science unless some major changes have been introduced and all traces of idealism radically eliminated, above all, in understanding nature and the status of the 'universal'. Hegel's idealism constitutes by no means something 'external' with regard to logic, for it only gives direction to a logical sequence of thinking. When commenting on the transitions of opposite categories (including the universal, on the one hand, and the particular, on another), Hegel also assigns a unidirectional character to the scheme of approach. Under the Hegelian scheme, for example, there is no room for the Marxian transition in the definition of value, namely, the transition (transformation) of the individual into the universal. In Hegel, the universal is the only one privileged to 'estrangle' itself from the 'particular' and individual, while the individual appears invariably as merely a product, a 'mode' of universality, exclusively particular and, therefore, poor in its composition.

The real case-history of economic (market) relations testifies, however, in favor of Marx who shows that the 'form of value in general' has not at all times been the universal form of the organisation of production. Historically, and for a rather long time, it remained a particular relation of people and things in production although occurring haphazardly. It was not until capitalism and the 'free enterprise society' came into being that value (i.e., the market form of the product) became the general form of inter-relationships among the component parts of production.

Similar transitions, of the 'individual and accidental' into the universal is not a rarity, but rather a rule in history. In history – yet not exclusively the history of humanity with its culture – it always so happens that a phenomenon which later becomes universal, is at first emergent precisely as a solitary exception 'from the rule', as an anomaly, as something particular and partial. Otherwise, hardly anything could ever be expected to turn up. History would have a rather mystical appearance, if all that is

new in it emerged at once, as something 'common' to all without exception, as an abruptly embodied 'idea'.

It is in this light that one should approach the reconsideration by Marx and Lenin of the Hegelian dialectical conception of the universal. While highly esteeming the dialectical tendencies in Hegel's thought, Marxism furthers his conception in depth and in breadth, and thus, turns the category of the 'universal' into the foremost category of the logic governing the investigation of concrete and historically evolving phenomena.

In the context of the materialistic conception of the dialectics of history and of thinking, the Hegelian formulae have different significance than in the language of their originator, being shorn of the slightest sign of mystical coloring. The 'universal' comprises and embodies in itself 'the entire treasure of particulars' not as an 'Idea', but as a totally real, special phenomenon which tends to become universal and which develops 'out of itself, by force of its intrinsic contradictions new but no less real, phenomena, other 'particular' forms of actual progress. Hence, the 'genuine universal' is not any particular form found in each and every member of a class but the particular which is driven on to emerge by its very 'particularity', and precisely by this 'particularity' to become the 'genuine universal'.

And here there is no trace of the mysticism of the Platonian-Hegelian breed.

The Concept of the Ideal*

Before discussing the *concept* itself we must first consider the *terms* 'ideal' and 'ideality', that is to say, we must first define the range of phenomena to which these terms may be applied, without analysing the essence of these phenomena at this point.

Even this is not an easy task because usage in general, and scientific usage in particular, is always something derivative of that very 'understanding of the essence of the question' whose exposition our definition is intended to serve. The difficulty is by no means peculiar to the given case. It arises whenever we discuss fairly complex matters regarding which there is no generally accepted interpretation and, consequently, no clear definition of the limits of the object under discussion. In such cases discussion on the point at issue turns into an argument about the 'meaning of the term', the limits of a particular designation and, hence, about the formal attributes of phenomena that have to be taken into consideration in a theoretical examination of the essence of the question.

Returning to the subject of the 'ideal', it must be acknowledged that the word 'ideal' is used today mainly as a synonym for 'conceivable', as the name for phenomena that are 'immanent in the consciousness', phenomena that are represented, imagined or thought. If we accept this fairly stable connotation, it follows that there is no point in talking about any 'ideality' of phenomena existing outside human consciousness. Given this definition, everything that exists 'outside the consciousness' and is perceived as existing outside it is a material and only a material object.

At first sight this use of the term seems to be the only reasonable one. But this is only at first sight.

Of course, it would be absurd and quite inadmissible from the standpoint of any type of materialism to talk about anything 'ideal' where no thinking individual ('thinking' in the sense of 'mental' or 'brain' activity) is involved. 'Ideality' is a category inseparably linked with the notion that human culture, human life activity is purposeful and, therefore, includes the activity of the human brain, consciousness and will. This is axiomatic and Marx, when contrasting his position regarding the 'ideal' to Hegel's

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view, writes that the ideal is ‘nothing else than the material world reflected by the human mind, and translated into forms of thought’.¹

It does not follow from this, however, that in the language of modern materialism the term ‘ideal’ equals ‘existing in the consciousness’, that it is the name reserved for phenomena located in the head, in the brain tissue, where, according to the ideas of modern science, ‘consciousness’ is realised.

In *Capital* Marx defines the *form of value in general* as ‘purely ideal’ not on the grounds that it exists only ‘in the consciousness’, only in the head of the commodity-owner, but on quite opposite grounds. The price or the money form of value, like any form of value in general, is *ideal* because it is totally distinct from the palpable, corporeal form of commodity in which it is *presented*, we read in the chapter on ‘Money’.²

In other words, the form of value is *ideal*, although it exists outside human consciousness and independently of it.

This use of the term may perplex the reader who is accustomed to the terminology of popular essays on materialism and the relationship of the material to the ‘ideal’. The ideal that exists outside people’s heads and consciousness, as something completely objective, a reality of a special kind that is independent of their consciousness and will, invisible, impalpable and sensuously imperceptible, may seem to them something that is only ‘imagined’, something ‘suprasensuous’.

The more sophisticated reader may, perhaps, suspect Marx of an unnecessary flirtation with Hegelian terminology, with the ‘semantic tradition’ associated with the names of Plato, Schelling and Hegel, typical representatives of ‘objective idealism’, i.e., of a conception according to which the ‘ideal’ exists as a special world of incorporeal entities (‘ideas’) that is outside and independent of man. He will be inclined to reproach Marx for an unjustified or ‘incorrect’ use of the term ‘ideal’, of Hegelian ‘hypostatisation’ of the phenomena of the consciousness and other mortal sins, quite unforgivable in a materialist.

But the question is not so simple as that. It is not a matter of terminology at all. But since terminology plays a most important role in science, Marx uses the term ‘ideal’ in a sense that is close to the ‘Hegelian’

1 “Capital,” Afterword, *MECW* vol. 35 p 19.

2 “Capital,” *MECW* vol. 35 p 105.]

interpretation just because it contains far more meaning than does the popular pseudo-materialistic understanding of the ideal as a phenomenon of consciousness, as a purely mental function. The point is that intelligent (dialectical) idealism – the idealism of Plato and Hegel – is far nearer the truth than popular materialism of the superficial and vulgar type (what Lenin called silly materialism). In the Hegelian system, even though in inverted form, the fact of the dialectical transformation of the ideal into the material and vice versa was theoretically expressed, a fact that was never suspected by ‘silly’ materialism, which had got stuck on the crude – undialectical – opposition of ‘things outside the consciousness’ to ‘things inside the consciousness’, of the ‘material’ to the ‘ideal’.

The ‘popular’ understanding of the ideal cannot imagine what insidious traps the dialectics of these categories has laid for it in the given case.

Marx, on the other hand, who had been through the testing school of Hegelian dialectics, discerned this flaw of the ‘popular’ materialists. His materialism had been enriched by all the achievements of philosophical thought from Kant to Hegel. This explains the fact that in the Hegelian notion of the ideal structure of the universe existing outside the human head and outside consciousness, he was able to see not simply ‘idealistic nonsense’, not simply a philosophical version of the religious fairy-tales about God (and this is all that vulgar materialism sees in the Hegelian conception), but an idealistically inverted description of the actual relationship of the ‘mind to Nature’, of the ‘ideal to the material’, of ‘thought to being’. This also found its expression in terminology.

We must, therefore, briefly consider the history of the term ‘ideal’ in the development of German classical philosophy from Kant to Hegel, and the moral that the ‘intelligent’ (i.e., dialectical) materialist Marx was able to draw from this history.

It all began when the founder of German classical philosophy, Immanuel Kant, took as his point of departure the ‘popular’ interpretation of the concepts of the ‘ideal’ and the ‘real’ without suspecting what pitfalls he had thus prepared for himself.

It is notable that in his *Critique of Pure Reason* Kant does not formulate his understanding of ‘ideality’, but uses this term as a ready-made predicate requiring no special explanation when he is defining space and time and speaking of their ‘transcendental *ideality*’. This means that ‘things’ possess space-time determinacy only in the consciousness and thanks to the consciousness, but not in themselves, outside and before their ap-

pearance in the consciousness. Here 'ideality' is clearly understood as a synonym for the 'pure' and the a priori nature of *consciousness as such*, with no external connections. Kant attaches no other meaning to the term 'ideality'.

On the other hand, the 'material' element of cognition is achieved by sensations, which assure us of the *existence* (and only that!) of things *outside consciousness*. Thus, all we know about 'things in themselves' is that they 'exist'. The ideal is what exists exclusively in the consciousness and thanks to the activity of the consciousness. And conversely, that which exists only in consciousness is characterised as the 'ideal'. All clear and simple. A perfectly popular distinction. And what it amounts to is that none of the facts we know and are aware of in things – their colour, geometrical form, taste, causal interdependence – may be attributed to the things themselves. All these are merely attributes provided by our own organisation, and not those of the things. In other words, the 'ideal' is everything that we know about the world except the bare fact of its 'existence', its 'being outside consciousness'. The latter is non-ideal and, therefore, inaccessible to consciousness and knowledge, transcendental, alien, and awareness of the fact that things, apart from anything else, also 'exist' (outside the consciousness) adds nothing whatever to *our knowledge* of them. And it is this interpretation that Kant illustrates with his famous example of the talers. It is one thing, he writes, to have a hundred talers in one's pocket, and quite another thing to have them only in one's consciousness, only in imagination, only in dreams (i.e., from the standpoint of popular usage, only 'ideal' talers).

In Kant's philosophy this example plays an extremely important role as one of the arguments against the so-called 'ontological proof of the existence of God'. His argument runs as follows. It cannot be inferred from the existence of an object *in the consciousness* that the object exists *outside the consciousness*. God exists in people's consciousness but it does not follow from this that God exists 'in fact', outside consciousness. After all, there are all kinds of things in people's consciousness! Centaurs, witches, ghosts, dragons with seven heads ...

With this example, however, Kant gets himself into a very difficult position. In fact, in a neighboring country where the currency was not talers but rubles or francs it would have been simply explained to him that he had in his pocket not 'real talers' but only pieces of paper with symbols carrying an obligation only for Prussian subjects. ... However, if one acknowledges as 'real' only what is authorised by the decrees of the

Prussian king and affirmed by his signature and seal, Kant's example proves what Kant wanted it to prove. If, on the other hand, one has a somewhat wider notion of the 'real' and the 'ideal', his example proves just the opposite. Far from refuting, it actually affirms that very 'ontological proof' which Kant declared to be a typical example of the erroneous inferring of the existence of a prototype outside the consciousness from the existence of the type in the consciousness.

"The contrary is true. Kant's example might have enforced the ontological proof", wrote Marx, who held a far more radical atheistic position than Kant in relation to 'God'. And he went on: 'Real talers have the same existence that the imagined gods have. Has a real taler any existence except in the imagination, if only in the general or rather common imagination of man? Bring paper money into a country where this use of paper is unknown, and everyone will laugh at your subjective imagination'.

The reproach aimed at Kant does not, of course, derive from a desire to change the meaning of the terms 'ideal' and 'real' after the Hegelian fashion. Marx bases his argument on realisation of the fact that a philosophical system which denotes as 'real' everything that man perceives as a thing existing outside his own consciousness, and 'ideal' everything that is not perceived in the form of such a thing, cannot draw critical distinctions between the most fundamental illusions and errors of the human race.

It is quite true that the 'real talers' are in no way different from the gods of the primitive religions, from the crude fetishes of the savage who worships (precisely as his 'god!') an absolutely real and actual piece of stone, a bronze idol or any other similar 'external object'. The savage does not by any means regard the object of his worship as *a symbol* of 'God'; for him this object in all its crude sensuously perceptible corporeality is God, God himself, and no mere 'representation' of him.

The very essence of fetishism is that it attributes to the object in its immediately perceptible form properties that in fact do not belong to it and have nothing in common with its sensuously perceptible external appearance.

When such an object (stone or bronze idol, etc.) ceases to be regarded as 'God himself' and acquires the meaning of an 'external symbol' of this God, when it is perceived not as the immediate *subject* of the action ascribed to it, but merely as a 'symbol' of something else outwardly in no

way resembling the symbol, then man's consciousness takes a step forward on the path to understanding the essence of things.

For this reason Kant himself and Hegel, who is completely in agreement with him on this point, consider the Protestant version of Christianity to be a higher stage in the development of the religious consciousness than the archaic Catholicism, which had, indeed, not progressed very far from the primitive fetishism of the idol-worshippers. The very thing that distinguishes the Catholic from the Protestant is that the Catholic tends to take everything depicted in religious paintings and Bible stories *literally*, as an exact representation of events that occurred in 'the external world' (God as a benevolent old man with a beard and a shining halo round his head, the birth of Eve as the actual conversion of Adam's rib into a human being, etc., etc.). The Protestant, on the other hand, seeing 'idolatry' in this interpretation, regards such events as allegories that have an 'internal', purely ideal, moral meaning.

The Hegelians did, in fact, reproach Kant for playing into the hands of Catholic idolatry with his example of the talers, for arguing against his own Protestant sympathies and attitudes because the 'external talers' (the talers in his pocket) were only symbols in the 'general or rather common imagination of man', were only representatives (forms of external expression, embodiment) of the 'spirit', just as religious paintings, despite their sensuously perceptible reality, were only images produced by human social self-consciousness, by the human spirit. In their essence they were entirely ideal, although in their existence they were substantial, material and were located, of course, outside the human head, outside the consciousness of the individual, outside individual mental activity with its transcendental mechanisms.

'Gods' and 'talers' are phenomena of the same order, Hegel and the Hegelians declared, and by this comparison the problem of the 'ideal' and its relationship to the 'real', to the materially substantial world was posited in a way quite different from that of Kant. It was associated with the problem of 'alienation', with the question of 'reification' and 'de-reification', of man's 're-assimilation' of objects created by himself, objects that through the action of some mysterious processes had been transformed into a world not only of 'external' *objective* formations but formations that were also hostile to man.

Hence comes the following interpretation of Kant's problem: 'The proofs of the existence of God are either mere *hollow tautologies*. Take for

instance the ontological proof. This only means: "that which I conceive for myself in a real way (*realiter*) is a real concept for me", something that works on me. In this sense *all gods*, the pagan as well as the Christian ones, have possessed a real existence. Did not the ancient Moloch reign? Was not the Delphic Apollo a real power in the life of the Greeks? Kant's critique means nothing in this respect. If somebody imagines that he has a hundred talers, if this concept is not for him an arbitrary, subjective one, if he believes in it, then these hundred imagined talers have for him the same value as a hundred real ones. For instance, he will incur debts on the strength of his imagination, his imagination will *work, in the same way as all humanity has incurred debts on its gods*.

When the question was posited in this way the category of the 'ideal' acquired quite a different meaning from that given to it by Kant, and this was by no means due to some terminological whim of Hegel and the Hegelians. It expressed the obvious fact that social consciousness is not simply the many times repeated individual consciousness (just as the social organism in general is not the many times repeated individual human organism), but is, in fact, a historically formed and historically developing system of 'objective notions', forms and patterns of the 'objective spirit', of the 'collective reason' of *mankind* (or more directly, 'the people' with its inimitable spiritual culture), all this being quite independent of individual caprices of consciousness or will. This system comprises all the general moral norms regulating people's daily lives, the legal precepts, the forms of state-political organisation of life, the ritually legitimised patterns of activity in all spheres, the 'rules' of life that must be obeyed by all, the strict regulations of the guilds, and so on and so forth, up to and including the grammatical and syntactical structures of speech and language and the logical norms of reasoning.

All these structural forms and patterns of social consciousness unambiguously oppose the individual consciousness and will as a special, internally organised 'reality', as the completely 'external' forms determining that consciousness and will. It is a fact that every individual must from childhood reckon far more carefully with demands and restrictions than with the immediately perceptible appearance of external 'things' and situations or the organic attractions, desires and needs of his individual body.

It is equally obvious that all these externally imposed patterns and forms cannot be identified in the individual consciousness as 'innate' patterns. They are all *assimilated* in the course of upbringing and education

– that is, in the course of the individual's assimilation of the intellectual culture that is available and that took shape before him, without him and independently of him – as the patterns and forms of *that* culture. These are no 'immanent' forms of individual mental activity. They are the forms of the 'other', external 'subject' that it assimilates.

This is why Hegel sees the main advantage of Plato's teaching in the fact that the question of the relationship of 'spirit' to 'nature' is for the first time posited not on the narrow basis of the relations of the 'individual soul' to 'everything else', but on the basis of an investigation of the universal (social-collective) 'world of ideas' as opposed to the 'world of things'. In Plato's doctrine '...the reality of the spirit, insofar as it is opposed to nature, is presented in its highest truth, presented as the organisation of a state'.

Here it must be observed that by the term 'state' Plato understood not only the political and legal superstructure, but also the sum-total of social rules regulating the life of individuals within an organised society, the 'polis', or any similar formation, everything that is now implied by the broader term 'culture'.

It is from Plato, therefore, that the tradition arises of examining the *world of ideas* (he, in fact, gives us the concept of the 'ideal world') as a stable and internally organised world of laws, rules and patterns controlling the individual's mental activity, the 'individual soul', as a special, supernatural 'objective reality' standing in opposition to every individual and imperatively dictating to the individual how he should act in any given situation. The immediate 'external' force determining the conduct of the individual is the 'state', which protects the whole system of spiritual culture, the whole system of rights and obligations of every citizen.

Here, in a semi-mystical, semi-mythological form was clearly established a perfectly real fact, the fact of the dependence of the mental (and not only mental) activity of the individual on the system of culture established before him and completely independently of him, a system in which the 'spiritual life' of every individual begins and runs its course.

The question of the relationship of the 'ideal' to the 'substantially material' was here presented as a question of the relationship of these stable forms (patterns, stereotypes) of culture to the world of 'individual things', which included not only 'external things', but also the physical body of man himself.

As a matter of fact, it was only here that the necessity arose for a clear definition of the category of 'ideality' as opposed to the undifferentiated, vague notion of the 'psyche' in general, which might equally well be interpreted as a wholly corporeal function of the physically interpreted 'soul', no matter to what organ this function was actually ascribed – heart, liver or brain. Otherwise, 'ideality' remains a superfluous and completely unnecessary verbal label for the 'psychic'. This is what it was before Plato, the term 'idea' being used, even by Democritus, to designate a completely substantial form, the geometrical outlines of a 'thing', a body, which was quite physically impressed on man, in the physical body of his eyes. This usage which was characteristic of the early, naive form of materialism cannot, of course, be used by the materialism of today, which takes into consideration all the complexity of the relationships between individual mental activity and the 'world of things'.

For this reason in the vocabulary of modern materialistic psychology (and not only philosophy) the category of 'ideality' or the 'ideal' defines not mental activity in general, but only a certain phenomenon connected, of course, with mental activity, but by no means merging with it.

'Ideality mainly characterises the idea or image insofar as they, becoming objectivised in words' [entering into the system of socially evolved knowledge which for the individual is something that is given for him. – *E.V.I.*], 'in objective reality, thus acquire a relative independence, separating themselves, as it were, from the mental activity of the individual', writes the Soviet psychologist S. L. Rubinstein.

Only in this interpretation does the category of 'ideality' become a specifically meaningful definition of a certain category of phenomena, establishing the form of the process of reflection of objective reality in mental activity, which is social and human in its origin and essence, in the social-human consciousness, and ceases to be an unnecessary synonym for mental activity in general.

With reference to the quotation from S. L. Rubinstein's book it need only be observed that the image is objectivised not only in words, and may enter into the system of socially evolved knowledge not only in its verbal expression. The image is objectivised just as well (and even more directly) in sculptural, graphic and plastic forms and in the form of the routine-ritual ways of dealing with things and people, so that it is expressed not only in words, in speech and language, but also in drawings, models and such symbolic objects as coats of arms, banners, dress,

utensils, or as money, including gold coins and paper money, IOUs, bonds or credit notes.

‘Ideality’ in general is, in the historically formed language of philosophy, a characteristic of the *materially established* (*objectivised*, materialised, reified) *images of human social culture*, that is, the historically formed modes of human social life, which confront the individual possessing consciousness and will as a special ‘supernatural’ objective reality, as a special *object* comparable with material reality and situated on one and the same spatial plane (and hence often identified with it).

For this reason, purely for the sake of terminological accuracy, it is pointless to apply this definition to purely individual mental states at any given moment. The latter, with all their individually unique whims and variations, are determined in effect by the numerous interconnections of the most diverse factors up to and including transient states of the organism and the peculiar features of its biochemical reactions (such as allergy or colour-blindness, for instance), and, therefore, may be considered on the plane of social-human culture as purely accidental.

This is why we find Kant talking about the ‘ideality of space and time’, but not about the ‘ideality’ of the conscious sensations of weight, for instance, in the muscles of the arm when one is carrying something; about the ‘ideality’ of the chain of cause and effect, but not about the ideality of the fact that a rock with the sun shining on it becomes warmer (although this fact is also consciously perceived). In Kant ‘ideality’ becomes a synonym for the ‘transcendental character’ of universal forms of sensuousness and reason, that is, patterns of cognitive activity that are inherent in every ‘self’ and thus have a completely impersonal character and display, moreover, a compulsive force in relation to each separate (‘empirical’) ‘self’. This is why space and time, causal dependence and ‘beauty’ are for Kant ‘ideal’, while they are not mental states connected with the unique and transitory physical states of the individual’s body. Admittedly, as we have seen in the example of the ‘talers’, Kant does not always adhere strictly to his terminology, although the reason for this is certainly not carelessness (it would be difficult to reproach Kant for that), but rather the dialectical trickiness of the problems that he raises. But despite the instability of the terminological definition of the categories, their objective dialectical content begins to show through – the very content that the Hegelian school provides with a far more adequate definition. The point is that Kant could not fully overcome the notion of

‘social consciousness’ (‘universal spirit’) as the many times repeated individual consciousness.

In Hegelian philosophy, however, the problem was stated in a fundamentally different way. The social organism (the ‘culture’ of the given people) is by no means an abstraction expressing the ‘sameness’ that may be discovered in the mentality of every individual, an ‘abstract’ inherent in each individual, the ‘transcendentally psychological’ pattern of individual life activity. The historically built up and developing forms of the ‘universal spirit’ (‘the spirit of the people’, the ‘objective spirit’), although still understood by Hegel as certain stable patterns within whose framework the mental activity of every individual proceeds, are none the less regarded by him not as formal abstractions, not as abstractly universal ‘attributes’ inherent in every individual, taken separately. Hegel (following Rousseau with his distinction between the ‘general will’ and the ‘universal will’) fully takes into account the obvious fact that in the diverse collisions of differently orientated ‘individual wills’ certain results are born and crystallised which were never contained in any of them separately, and that because of this *social consciousness* as an ‘entity’ is certainly not built up, as of bricks, from the ‘sameness’ to be found in each of its ‘parts’ (individual selves, individual consciousnesses). And this is where we are shown the path to an understanding of the fact that all the patterns which Kant defined as ‘transcendentally inborn’ forms of operation of the individual mentality, as a priori ‘internal mechanisms’ inherent in every mentality, are actually forms of the self-consciousness of *social man assimilated from without* by the individual (originally they opposed him as ‘external’ patterns of the movement of culture independent of his will and consciousness), social man being understood as the historically developing ‘aggregate of all social relations’.

It is these forms of the organisation of social (collectively realised) human life activity that exist *before, outside and completely independently* of the individual mentality, in one way or another materially established in language, in ritually legitimised customs and rights and, further, as ‘the organisation of a state’ with all its material attributes and organs for the protection of the traditional forms of life that stand in opposition to the individual (the physical body of the individual with his brain, liver, heart, hands and other organs) as an entity organised ‘in itself and for itself’, as something ideal within which all individual things acquire a different meaning and play a different role from that which they had played ‘as themselves’, that is, outside this entity. For this reason the ‘ideal’ defini-

tion of any thing, or the definition of any thing as a ‘disappearing’ moment in the movement of the ‘ideal world’, coincides in Hegel with the role and meaning of this thing in social human culture, in the context of socially organised human life activity, and not in the individual consciousness, which is here regarded as something derived from the ‘universal spirit’.

It will readily be appreciated how much broader and more profound such a positing of the question is in comparison with any conception that designates as ‘ideal’ everything that is ‘in the consciousness of the individual’, and ‘material’ or ‘real’, everything that is outside the consciousness of the individual, everything that the given individual is *not conscious of*, although this ‘everything’ does exist in reality, and thus draws between the ‘ideal’ and the ‘real’ a fundamental dividing line which turns them into ‘different worlds’ that have ‘nothing in common’ with each other. It is clear that, given such a metaphysical division and delimitation, the ‘ideal’ and the ‘material’ cannot and must not be regarded as *opposites*. Here they are ‘different’, and that is all.

Hegel proceeds from the quite obvious fact that for the consciousness of the individual the ‘real’ and even the ‘crudely material’ – certainly not the ‘ideal’ – is at first the whole grandiose *materially established spiritual culture of the human race*, within which and by the assimilation of which this individual awakens to ‘self-consciousness’. It is this that confronts the individual as the thought of preceding generations realised (‘reified’, ‘objectified’, ‘alienated’) in sensuously perceptible ‘matter’ – in language and visually perceptible images, in books and statues, in wood and bronze, in the form of places of worship and instruments of labour, in the designs of machines and state buildings, in the patterns of scientific and moral systems, and so on. All these objects are in their existence, in their ‘present being’ substantial, ‘material’, but in their essence, in their origin they are ‘ideal’, because they ‘embody’ the collective thinking of people, the ‘universal spirit’ of mankind.

In other words, Hegel includes in the concept of the ‘ideal’ everything that another representative of idealism in philosophy (admittedly he never acknowledged himself to be an ‘idealist’) – A. A. Bogdanov – a century later designated as ‘socially organised experience’ with its stable, historically crystallised patterns, standards, stereotypes, and ‘algorithms’. The feature which both Hegel and Bogdanov have in common (as ‘idealists’) is the notion that this world of ‘socially organised experience’ is for

the individual the sole 'object' which he 'assimilates' and 'cognises', the sole object with which he has any dealings.

But the world existing before, outside and independently of the consciousness and will *in general* (i.e., not only of the consciousness and will of the *individual* but also of the social consciousness and the socially organised 'will'), the world as such, is taken into account by this conception only insofar as it finds expression in universal forms of consciousness and will, insofar as it is already 'idealised', already assimilated in 'experience', already presented in the patterns and forms of this 'experience', already included therein.

By this twist of thought, which characterises idealism in general (whether it is Platonic, Berkeleyian, Hegelian or that of Popper), the real material world, existing before, outside and quite independently of 'experience' and before being expressed in the forms of this 'experience' (including language), is totally removed from the field of vision, and what begins to figure under the designation of the 'real world' is an already 'idealised' world, a world already assimilated by people, a world already shaped by their activity, the world *as people know it*, as it is presented in the existing forms of their culture. A world already expressed (presented) in the forms of the existing human experience. And this world is declared to be the only world about which anything at all can be said.

This secret of idealism shows up transparently in Hegel's discussion of the 'ideality' of natural phenomena, in his presentation of nature as an 'ideal' being in itself. Underlying what he has to say about certain natural phenomena is their description in the concepts and terms of the physics of his day: '... because masses push and crush each other and there is no vacuum between them, it is only in this *contact* that the ideality of matter in general begins, and it is interesting to see how this intrinsic character of matter emerges, for in general it is always interesting to see the realisation of a concept'. Here Hegel is really speaking not at all about nature as it is, but about nature as it is presented (described) in the system of a definite physical theory, in the system of its definitions established by its historically formed 'language'.

It is this fact, incidentally, that explains the persistent survival of such 'semantic substitutions'; indeed, when we *are talking* about nature, we are obliged to make use of the available language of natural science, the 'language of science' with its established and generally understood 'meanings'. It is this, specifically, which forms the basis of the arguments of

logical positivism, which quite consciously identifies 'nature' with the 'language' in which people talk and write about nature.

It will be appreciated that the main difficulty and, therefore, the main problem of philosophy is not to distinguish and counterpose everything that is 'in the consciousness of the individual' to everything that is outside this individual consciousness (this is hardly ever difficult to do), but to delimit the world of collectively acknowledged notions, that is, the whole socially organised world of intellectual culture with all its stable and materially established universal patterns, and the real world as it exists outside and apart from its expression in these socially legitimised forms of 'experience'.

It is here and only here that the distinction between the 'ideal' and the 'real' ('material') acquires a serious scientific meaning because in practice the two are usually confused. Pointing out the fact that the thing and the form of the thing exist outside the individual consciousness and do not depend on individual will still does not solve the problem of their objectivity in its fully materialistic sense. And conversely, by no means all that people do not know, are unaware of, do not perceive as the forms of external things, is invention, the play of the imagination, a notion that exists merely in man's head. It is because of this that the 'sensible person', to whose way of thinking Kant appeals with his example of the talers, is more often than other people deluded into taking the collectively acknowledged notions for objective reality, and the objective reality revealed by scientific research for subjective invention existing only in the heads of the 'theoreticians'. It is the 'sensible person', daily observing the sun rising in the East and setting in the West, who protests that the system of Copernicus is an invention that contradicts the 'obvious facts'. And in exactly the same way the ordinary person, drawn into the orbit of commodity-money relationships, regards money as a perfectly *material* thing, and value, which in fact finds its external expression in money, as a mere abstraction existing only in the heads of the theoreticians, only '*ideally*'.

For this reason consistent materialism, faced with this kind of situation, could not define the 'ideal' as that which exists in the consciousness of the individual, and the 'material' as that which exists outside this consciousness, as the sensuously perceived form of the external thing, as a real corporeal form. The boundary between the two, between the 'material' and the 'ideal', between the 'thing in itself' and its representation in social consciousness could not pass along this line because, if it

did, materialism would be completely helpless when confronted with the dialectics that Hegel had discovered in the relations between the 'material' and the 'ideal' (particularly, in the phenomena of fetishism of all kinds, from that of religion to that of commodity, and further, the fetishism of words, of language, symbols and signs).

It is a fact that like the icon or the gold coin, any *word* (term or combination of terms) is primarily a 'thing' that exists outside the consciousness of the individual, possesses perfectly real bodily properties and is sensuously perceived. According to the old classification accepted by everyone, including Kant, words clearly come under the category of the 'material' with just as much justification as stones or flowers, bread or a bottle of wine, the guillotine or the printing press. Surely then, in contrast to these things, what we call the 'ideal' is their subjective image in the head of the individual, in the individual consciousness.

But here we are immediately confronted with the trickiness of this distinction, which is fully provided for by the Hegelian school and its conception of the 'materialisation', the 'alienation', the 'reification' of universal notions. As a result of this process which takes place 'behind the back of the individual consciousness', the individual is confronted in the form of an 'external thing' with people's general (i.e., collectively acknowledged) *representation*, which has absolutely nothing in common with the sensuously perceived bodily form in which it is 'represented'.

For example, the name 'Peter' is in its sensuously perceived bodily form absolutely unlike the real Peter, the person it designates, or the sensuously represented image of Peter which other people have of him. The relationship is the same between the gold coin and the goods that can be bought with it, goods (commodities), whose universal *representative* is the coin or (later) the banknote. The coin represents *not itself* but 'another' in the very sense in which a diplomat represents not his own person but his country, which has authorised him to do so. The same may be said of the word, the verbal symbol or sign, or any combination of such signs and the syntactical pattern of this combination.

This relationship of *representation* is a relationship in which one sensuously perceived thing performs the role or function of representative of quite another thing, and, to be even more precise, the universal nature of that other thing, that is, something 'other' which in sensuous, bodily terms is quite unlike it, and it was this relationship that in the Hegelian terminological tradition acquired the title of 'ideality'.

In *Capital* Marx quite consciously uses the term ‘ideal’ in this formal meaning that it was given by Hegel, and not in the sense in which it was used by the whole pre-Hegelian tradition, including Kant, although the philosophical-theoretical interpretation of the range of phenomena which in both cases is similarly designated ‘ideal’ is diametrically opposed to its Hegelian interpretation. The meaning of the term ‘ideal’ in Marx and Hegel is the same, but the concepts, i.e., the ways of understanding this ‘same’ meaning are profoundly different. After all, the word ‘concept’ in dialectically interpreted logic is a synonym for *understanding of the essence of the matter*; the essence of phenomena which are only outlined by a given term; it is by no means a synonym for ‘the meaning of the term’, which may be formally interpreted as the sum-total of ‘attributes’ of the phenomena to which the term is applied.

It was for this reason that Marx, like any genuine theoretician, preferred not to change the historically formed ‘meanings of terms’, the established nomenclature of phenomena, but, while making strict and rigorous use of it, proposed a quite different *understanding* of these phenomena that was actually the opposite of the traditional understanding.

In *Capital*, when analysing money – that familiar and yet mysterious category of social phenomena – Marx describes as ‘ideal’ nothing more or less than the value-form of the products of labour in general (*die Wertform überhaupt*).

So the reader for whom the term ‘ideal’ is a synonym for the ‘immanent in the consciousness’, ‘existing only in the consciousness’, ‘only in people’s ideas’, only in their ‘imagination’ will misunderstand the idea expressed by Marx because in this case it turns out that even capital – which is nothing else but a *value-form* of the organisation of the productive forces, a form of the functioning of the means of production – also exists only in the consciousness, only in people’s subjective imagination, and ‘not in reality’.

Obviously only a follower of Berkeley could take the point in this way, and certainly not a materialist.

According to Marx, the ideality of the form of value consists not, of course, in the fact that this form represents a mental phenomenon existing only in the brain of the commodity-owner or theoretician, but in the fact that the corporeal palpable form of the thing (for example, a coat) is only a form of expression of quite a different ‘thing’ (linen, as a value) with which it has nothing in common. The value of the linen is *represented*,

expressed, 'embodied' in the form of a coat, and the form of the coat is the '*ideal or represented form*' of the value of the linen.

'As a use-value, the linen is something palpably different from the coat; as value, it is the same as the coat, and now has the appearance of a coat. Thus the linen acquires a value-form different from its physical form. The fact that it is value, is made manifest by its equality with the coat, just as the sheep's nature of a Christian is shown in his resemblance to the Lamb of God'.³

This is a completely objective relationship, within which the 'bodily form of commodity B becomes the value-form of commodity A, or the body of commodity B acts as a mirror to the value of commodity A',⁴ the authorised representative of its 'value' nature, of the 'substance' which is 'embodied' both here and there.

This is why the form of value or value-form is *ideal*, that is to say, it is something quite different from the palpable form of the thing in which it is *represented*, expressed, 'embodied', 'alienated'.

What is this 'other', this difference, which is expressed or represented here? People's consciousness? Their will? By no means. On the contrary, both will and consciousness are determined by this objective ideal form, and the thing that it expresses, 'represents' is a definite social relationship between people which in their eyes assumes the fantastic form of a relationship between things.

In other words, what is 'represented' here *as a thing* is the form of people's activity, the form of life activity which they perform together, which has taken shape 'behind the back of consciousness' and is materially established in the form of the relationship between things described above.

This and only this creates the ideality of such a 'thing', its sensuous-supersensuous character.

Here ideal form actually does stand in opposition to individual consciousness and individual will as the *form of the external thing* (remember Kant's talers) and is necessarily perceived precisely as the form of the external thing, not its palpable form, but as the form of another equally palpable thing that it represents, expresses, embodies, differing, however,

3 "Capital," *MECW* vol. 35 p 62.

4 "Capital," *MECW* vol. 35 p 62-3.

from the palpable corporeality of both things and having nothing in common with their sensuously perceptible physical nature. What is embodied and 'represented' here is a definite form of labour, a definite form of human objective activity, that is to say, the transformation of nature by social man.

It is here that we find the answer to the riddle of 'ideality'. Ideality, according to Marx, is nothing else but the form of social human activity represented in the thing. Or, conversely, the form of human activity represented *as a thing*, as an object.

'Ideality' is a kind of stamp impressed on the substance of nature by social human life activity, a form of the functioning of the physical thing in the process of this activity. So all the things involved in the social process acquire a new 'form of existence' that is not included in their physical nature and differs from it completely – their ideal form.

So, there can be no talk of 'ideality' where there are no people socially producing and reproducing their material life, that is to say, individuals working collectively and, therefore, necessarily possessing consciousness and will. But this does not mean that the 'ideality of things' is a product of their *conscious will*, that it is 'immanent in the consciousness' and exists only in the consciousness. Quite the reverse, the individual's consciousness and will are functions of the ideality of things, their comprehended, *conscious ideality*.

Ideality, thus, has a purely social nature and origin. It is the form of a thing, but it is outside this thing, and in the activity of man, as a *form of this activity*. Or conversely, it is the form of a person's activity but outside this person, *as a form of the thing*. Here, then, is the key to the whole mystery that has provided a real basis for all kinds of idealistic constructions and conceptions both of man and of a world beyond man, from Plato to Carnap and Popper. 'Ideality' constantly escapes, slips away from the metaphysically single-valued theoretical fixation. As soon as it is fixed as the 'form of the thing' it begins to tease the theoretician with its 'immateriality', its 'functional' character and appears only as a form of 'pure activity'. On the other hand, as soon as one attempts to fix it 'as such', as purified of all the traces of palpable corporeality, it turns out that this attempt is fundamentally doomed to failure, that after such a purification there will be nothing but phantasmal emptiness, an indefinable vacuum.

And indeed, as Hegel understood so well, it is absurd to speak of 'activity' that is not realised in anything definite, is not 'embodied' in some-

thing corporeal, if only in words, speech, language. If such 'activity' exists, it cannot be in reality but only in *possibility*, only potentially, and, therefore, not as activity but as its opposite, as *inactivity*, as the absence of activity.

So, according to Hegel, the 'spirit', as something ideal, as something opposed to the world of corporeally established forms, cannot 'reflect' at all (i.e., become aware of the forms of its own structure) unless it preliminarily opposes 'itself to itself', as an 'object', a thing that differs from itself.

When speaking of value-form as the ideal form of a thing, Marx by no means accidentally uses the comparison of the mirror: 'In a sort of way, it is with man as with commodities. Since he comes into the world neither with a looking glass in his hand, nor as a Fichtean philosopher, to whom 'I am I' is sufficient, man first sees and recognises himself in other men. Peter only establishes his own identity as a man by first comparing himself with Paul as being of like kind. And thereby Paul, just as he stands in his Pauline personality, becomes to Peter the type of the genus homo'.⁵

Here Marx plainly indicates the parallel between his theory of the 'ideality' of the value-form and Hegel's understanding of 'ideality', which takes into account the dialectics of the emergence of the collective self-awareness of the human race. Yes, Hegel understood the situation far more broadly and profoundly than the 'Fichtean philosopher'; he established the fact that 'spirit', before it could examine itself, must shed its unblemished purity and phantasmal nature, and must itself turn *into an object* and in the form of this object oppose itself to itself. At first in the form of the Word, in the form of verbal 'embodiment', and then in the form of instruments of labour, statues, machines, guns, churches, factories, constitutions and states, in the form of the grandiose 'inorganic body of man', in the form of the sensuously perceptible body of civilisation which for him serves only as a glass in which he can examine himself, his 'other being', and know through this examination his own 'pure ideality', understanding himself as 'pure activity'. Hegel realised full well that ideality as 'pure activity' is not directly given and cannot be given 'as such', immediately in all its purity and undisturbed perfection; it can be known only through analysis of its 'embodiments', through its reflection

⁵ "Capital," *MECW* vol. 35, p 63 note.

in the glass of palpable reality, in the glass of the system of things (their forms and relationships) created by the activity of 'pure spirit'. By their fruits ye shall know them – and not otherwise.

The ideal forms of the world are, according to Hegel, forms of activity *realised* in some material. If they are not realised in some palpable material, they remain invisible and unknown for the active spirit itself, the spirit cannot become aware of them. In order to examine them they must be 'reified', that is, turned into the forms and relations of *things*. Only in this case does ideality *exist*, does it possess *present* being; only as a reified and reifiable form of activity, a form of activity that has become and is becoming the form of an object, a palpable thing outside consciousness, and in no case as a transcendental-psychological pattern of consciousness, not as the internal pattern of the 'self, distinguishing itself from itself within itself, as it turned out with the 'Fichtean philosopher'.

As the internal pattern of the activity of *consciousness*, as a pattern 'immanent in the consciousness', ideality can have only an illusory, only a phantasmal existence. It becomes real only in the course of its reification, objectification (and deobjectification), alienation and the sublation of alienation. How much more reasonable and realistic this interpretation was, compared with that of Kant and Fichte, is self-evident. It embraced the actual dialectics of people's developing 'self-consciousness', it embraced the actual phases and metamorphoses in whose succession alone the 'ideality' of the world exists.

It is for this reason that Marx joins Hegel in respect of terminology, and not Kant or Fichte, who tried to solve the problem of 'ideality' (i.e., activity) while remaining 'inside consciousness', without venturing into the external sensuously perceptible corporeal world, the world of the palpable forms and relations of things.

This Hegelian definition of the term 'ideality' took in the whole range of phenomena within which the 'ideal', understood as the *corporeally embodied form of the activity of social man*, really exists.

Without an understanding of this circumstance it would be totally impossible to fathom the miracles performed before man's eyes by the *commodity*, the commodity form of the product, particularly in its money form, in the form of the notorious 'real talers', 'real rubles', or 'real dollars', things which, as soon as we have the slightest theoretical understanding of them, immediately turn out to be not 'real' at all, but 'ideal' through and through, things whose category quite unambiguously in-

cludes *words*, the units of *language*, and many other 'things'. Things which, while being wholly 'material', palpable formations, acquire all their 'meaning' (function and role) from 'spirit' and even owe to it their specific bodily existence ... Outside spirit and without it there cannot even be *words*, there is merely a vibration of the air.

The mysteriousness of this category of 'things', the secret of their 'ideality', their sensuous-supersensuous character was first revealed by Marx in the course of his analysis of the commodity (value) form of the product.

Marx characterises the commodity form as an *ideal* form, i.e., as a form that has absolutely nothing in common with the real palpable form of the body in which it is represented (i.e., expressed, materialised, reified, alienated, realised), and by means of which it 'exists', possesses 'present being'.

It is 'ideal' because it does not include a single atom of the substance of the body in which it is represented, because it is the form of quite *another body*. And this other body is present here not bodily, materially ('bodily' it is at quite a different point in space), but only once again 'ideally', and here there is not a single atom of its substance. Chemical analysis of a gold coin will not reveal a single molecule of boot-polish, and vice versa. Nevertheless, a gold coin represents (expresses) the value of a hundred tins of boot-polish precisely by its weight and gleam. And, of course, this act of representation is performed not in the consciousness of the seller of boot-polish, but outside his consciousness in any 'sense' of this word, outside his head, in the space of the market, and without his having even the slightest suspicion of the mysterious nature of the money form and the essence of the price of boot-polish. ... Everyone can spend money without knowing what money is.

For this very reason the person who confidently uses his native language to express the most subtle and complex circumstances of life finds himself in a very difficult position if he takes it into his head to *acquire consciousness* of the relationship between the 'sign' and the 'meaning'. The consciousness which he may derive from linguistic studies in the present state of the science of linguistics is more likely to place him in the position of the centipede who was unwise enough to ask himself which foot he steps off on. And the whole difficulty which has caused so much bother to philosophy as well lies in the fact that 'ideal forms', like the value-form, the form of thought or syntactical form, have always arisen,

taken shape and developed, turned into something objective, completely independent of anyone's consciousness, in the course of processes that occur not at all in the 'head', but most definitely outside it – although not without its participation.

If things were different, the 'idealism' of Plato and Hegel would, indeed, be a most strange aberration, quite unworthy of minds of such calibre and such influence. The *objectivity* of the 'ideal form' is no fantasy of Plato's or Hegel's, but an indisputable and stubborn fact. A fact that such impressive thinkers as Aristotle, Descartes, Spinoza, Kant, Hegel and Einstein, not to mention thousands of lesser spirits, racked their brains over throughout the centuries.

'Idealism' is not a consequence of some elementary mistake committed by a naive schoolboy who saw a terrible ghost that was not there. Idealism is a completely sober statement of the objectivity of ideal form, that is, the fact of its existence in the space of human culture independently of the will and consciousness of individuals – a statement that was, however, left without an adequate scientific explanation.

This statement of the fact without its scientific materialist explanation is what idealism is. In the given case materialism consists precisely in the scientific explanation of this fact and not in ignoring it. Formally this fact looks just as it was described by the thinkers of the 'Platonic line' – a form of movement of physically palpable bodies which is objective despite its obvious incorporeality. An incorporeal form controlling the fate of entirely corporeal forms, determining whether they are to be, or not to be, a form, like some fleshless, and yet all-powerful 'soul' of things. A form that preserves itself in the most diverse corporeal embodiments and does not coincide with a single one of them. A form of which it cannot be said *where exactly* it 'exists'.

A completely rational, non-mystical understanding of the 'ideal' (as the 'ideal form' of the real, substantially material world) was evolved in general form by Marx in the course of his constructive critical mastering of the Hegelian conception of ideality, and particularised (as the solution to the question of the form of value) through his criticism of political economy, that is to say, of the classical labour theory of value. The ideality of value-form is a typical and characteristic case of ideality in general, and Marx's conception of it serves as a concrete illustration of all the advantages of the dialectical materialist view of ideality, of the 'ideal'.

Value-form is understood in *Capital* precisely as the reified form (represented as, or 'representing', the thing, the relationship of things) of social human life activity. Directly it does present itself to us as the 'physically palpable' embodiment of *something 'other'*, but this 'other' cannot be some physically palpable matter.

The only alternative, it appears, is to assume some kind of *bodiless substance*, some kind of 'insubstantial substance'. And classical philosophy here proposed a logical enough solution: such a strange 'substance' can be only activity – 'pure activity', 'pure form-creating activity'. But in the sphere of economic activity this substance was, naturally, decoded as *labour*, as man's physical labour transforming the physical body of nature, while 'value' became *realised labour*, the 'embodied' act of labour.

So it was precisely in political economy that scientific thought made its first decisive step towards discovering the essence of 'ideality'. Already Smith and Ricardo, men fairly far removed from philosophy, clearly perceived the 'substance' of the mysterious value definitions in *labour*.

Value, however, though understood from the standpoint of its 'substance', remained a mystery with regard to its 'form'. The classical theory of value could not explain why this substance expressed itself as it did, and not in some other way. Incidentally, the classical bourgeois tradition was not particularly interested in this question. And Marx clearly demonstrated the reason for its indifference to the subject. At all events, deduction of the form of value from its 'substance' remained an insuperable task for bourgeois science. The *ideality* of this form continued to be as mysterious and mystical as ever.

However, since the theoreticians found themselves in direct confrontation with the mysterious – physically impalpable – properties of this form, they had recourse again and again to the well-known ways of interpreting 'ideality'. Hence, the idea of the existence of 'ideal atoms of value', which were highly reminiscent of Leibniz's monads, the immaterial and unextended quanta of 'spiritual substance'.

Marx, as an economist, was helped by the fact that he knew a lot more about philosophy than Smith and Ricardo.

It was when he saw in the Fichtean-Hegelian conception of *ideality as 'pure activity'* an abstractly mystifying description of the real, physically palpable labour of social man, the process of the physical transformation of physical nature performed by man's physical body, that he gained the theoretical key to the riddle of the ideality of value-form.

The value of a thing presented itself as the reified labour of man and, therefore, the *form of value* turned out to be nothing else but the reified *form* of this labour, a form of human life activity.

And the fact that this is by no means *the form of the thing as it is* (i.e. the thing in its natural determinateness) but a *form of social human labour* or of the form-creating activity of social man embodied in the substance of nature – it was this fact that provided the solution to the riddle of *ideality*. The ideal form of a thing is not the form of the thing ‘in itself’, but a form of social human life activity regarded as *the form of a thing*.

And since in its developed stages human life activity always has a purposeful, i.e., consciously willed character, ‘ideality’ presents itself as a *form of consciousness and will*, as the law guiding man’s consciousness and will, as the objectively compulsory pattern of consciously willed activity. This is why it turns out to be so easy to portray the ‘ideal’ exclusively as a form of consciousness and self-consciousness, exclusively as the ‘transcendental’ pattern of the psyche and the will that realises this pattern.

And if this is so, the Platonic-Hegelian conception of ‘ideality’ begins to appear as merely an impermissible projection of the forms of consciousness and will (forms of thought) on to the ‘external world’. And the ‘criticism’ of Hegel amounts merely to reproaches for his having ‘ontologised’, ‘hypostatised’ the purely subjective forms of human mental activity. This leads to the quite logical conclusion that all categories of thought (‘quantity’, ‘measure’, ‘necessity’, ‘essence’, and so on and so forth) are only ‘ideal’, that is, only transcendental-psychological patterns of the subject’s activity and nothing else.

Marx, of course, had quite a different conception. According to him all the logical categories without exception are only the *idealised* (i.e. converted into forms of human life activity, activity that is primarily external and sensuously objective, and then also ‘spiritual’), universal forms of existence of objective reality, of the external world. And, certainly, not projections of the forms of the mental world on to the ‘physical world’. A conception, as can easily be seen, which is just the reverse in the sequence of its ‘theoretical deduction’.

This interpretation of ‘ideality’ is in Marx based, above all, on the materialist understanding of the specific nature of the social human relationship to the world (and the fundamental difference between this and the animals’ relationship to the world, the purely biological relationship): ‘The animal is immediately one with its life activity. It does not distinguish

itself from it. It is *its life activity*. Man makes his life activity itself the object of his will and of his consciousness'.⁶

This means that the animal's activity is directed *only* towards external objects. The activity of man, on the other hand, is directed *not only* on them, but also on his own forms of life activity. It is activity directed *upon itself*, what German classical philosophy presented as the specific feature of the 'spirit', as 'reflection', as 'self-consciousness'.

In the above passage quoted from Marx's early works he does not emphasise sufficiently the fundamentally important detail that distinguishes his position from the Fichtean-Hegelian interpretation of 'reflection' (the relationship to oneself as to 'another'). In view of this the passage may be understood to mean that man acquires a new, second plane of life activity precisely because he possesses *consciousness and will*, which the animal does not possess.

But this is just the opposite of the case. Consciousness and will appear in man only because he already possesses a special plane of life activity that is absent in the animal world – activity directed towards the mastering of forms of life activity that are specifically social, purely social in origin and essence, and, therefore, not biologically encoded in him.

The animal that has just been born is confronted with the external world. The forms of its life activity are inborn along with the morphology of its body and it does not have to perform any special activity in order to 'master' them. It needs only to *exercise* the forms of behaviour encoded in it. Development consists only in the development of instincts, congenital reactions to things and situations. The environment *merely corrects* this development.

Man is quite a different matter. The child that has just been born is confronted – outside itself – not only by the external world, but also by a very complex system of culture, which requires of him 'modes of behaviour' for which there is genetically (morphologically) 'no code' in his body. Here it is not a matter of *adjusting ready-made patterns of behaviour*, but of *assimilating* modes of life activity that do not *bear any relationship at all* to the biologically necessary forms of the reactions of his organism to things and situations.

⁶ "Estranged Labour," *MECW* vol. 3, p 276.

This applies even to the 'behavioural acts' directly connected with the satisfaction of biologically inborn needs: the need for food is biologically encoded in man, but the need to eat it with the help of a plate, knife, fork and spoon, sitting on a chair, at a table, etc., etc., is no more congenital in him than the syntactical forms of the language in which he learns to speak. In relation to the morphology of the human body these are as purely and externally *conventional* as the rules of chess.

These are pure forms of the external (existing outside the individual body) world, forms of the organisation of this world, which he has yet to convert into the forms of his individual life activity, into the patterns and modes of his activity, in order to become a man.

And it is this world of the forms of social human life activity that confronts the newborn child (to be more exact, the biological organism of the species *Homo Sapiens*) as the objectivity to which he is compelled to *adapt* all his 'behaviour', all the functions of his organic body, as the object towards assimilation of which his elders guide all his activity.

The existence of this specifically human object – the world of things created by man for man, and, therefore, things whose forms *are reified forms of human activity* (labour), and certainly not the forms naturally inherent in them – is the condition for the existence *of consciousness and will*. And certainly not the reverse, it is not consciousness and will that are the condition and prerequisite for the existence of this unique object, let alone its 'cause'.

The consciousness and will that arise in the mind of the human individual are the direct consequence of the fact that what he is confronted by as the object of his life activity is not nature as such, but nature that has been transformed by the labour of previous generations, shaped by human labour, nature in the forms of human life activity.

Consciousness and will become necessary forms of mental activity only where the individual is compelled to control his own organic body in answer not to the organic (natural) demands of this body but to demands presented from outside, by the 'rules' accepted in the society in which he was born. It is only in these conditions that the individual is compelled to distinguish *himself from his own organic body*. These rules are not passed on to him by birth, through his 'genes', but are imposed upon him from outside, dictated by culture, and not by nature.

It is only here that there appears the *relationship to oneself* as to a *single representative of 'another'*, a relationship unknown to the animals. The human

individual is obliged to subordinate his own actions to certain 'rules' and 'patterns' which he has to assimilate as *a special object* in order to make them rules and patterns of the life activity of his own body.

At first they confront him *as an external object*, as the forms and relationships of things created and recreated by human labour. It is by mastering the objects of nature in the forms created and recreated by human labour that the individual becomes for the first time a man, becomes a representative of the 'human race', whereas before this he was merely a representative of a biological species.

The existence of this purely social legacy of forms of life activity, that is to say, a legacy of forms that are in no way transmitted through the genes, through the morphology of the organic body, but only through education, only through assimilation of the available culture, only through a process in the course of which the individual's organic body changes into a representative of the *race* (i.e., the whole specific aggregate of people connected by the ties of social relationships) – it is only the existence of this specific relationship that brings about consciousness and will as specifically human forms of mental activity.

Consciousness only arises where the individual is compelled to *look at himself as if from the side* – as if with the eyes of *another person*, the eyes of *all other people* – only where he is compelled to correlate his individual actions with the actions of another man, that is to say, only within the framework of collectively performed life activity. Strictly speaking, it is only here that there is any need for *will*, in the sense of the ability to forcibly subordinate one's own inclinations and urges to a certain law, a certain demand dictated not by the individual organics of one's own body, but by the organisation of the 'collective body', the collective, that has formed around a certain common task.

It is here and only here that there arises the *ideal* plane of life activity unknown to the animal. Consciousness and will are not the 'cause' of the manifestation of this new plane of relationships between the individual and the external world, but only the *mental forms of its expression*, in other words, its *effect*. And, moreover, not an accidental but a necessary form of its manifestation, its expression, its realisation.

We shall go no further in examining consciousness and will (and their relationship to 'ideality') because here we begin to enter the special field of psychology. But the problem of 'ideality' in its general form is equally significant for psychology, linguistics, and any socio-historical discipline,

and naturally goes beyond the bounds of psychology as such and must be regarded independently of purely psychological (or purely politico-economic) details.

Psychology must necessarily proceed from the fact that between the individual consciousness and objective reality there exists the 'mediating link' of the historically formed culture, which acts as the prerequisite and condition of individual mental activity. This comprises the economic and legal forms of human relationships, the forms of everyday life and forms of language, and so on. For the individual's mental activity (consciousness and will of the individual) this culture appears immediately as a 'system of meanings', which have been 'reified' and confront him quite objectively as 'non-psychological', extra-psychological reality.⁷

Hence interpretation of the problem of 'ideality' in its purely psychological aspect does not bring us much nearer to a correct understanding of it because the secret of ideality is then sought not where it actually arises: not in space, where the history of the real relationships between social man and nature is enacted, but in the human head, in the material relationships between nerve endings. And this is just as absurd an undertaking as the idea of discovering the form of value by chemical analysis of the gold or banknotes in which this form presents itself to the eye and sense of touch.

The riddle and solution to the problem of 'idealism' is to be found in the peculiar features of mental activity of the subject, who cannot distinguish between *two fundamentally different and even opposed categories of phenomena* of which he is sensuously aware as existing outside his brain: the natural properties of things, on the one hand, and those of their properties which they owe not to nature but to the social human labour embodied in these things, on the other.

This is the point where such opposites as crudely naive materialism and no less crudely naive idealism directly merge. That is to say, where the material is directly identified with the ideal and vice versa, where all that exists outside the head, outside mental activity, is regarded as 'material' and everything that is 'in the head', 'in the consciousness'; is described as 'ideal'.

⁷ This question is examined in greater detail in A. N. Leontyev's article 'Activity and Consciousness'. — *EVI*.

Real, scientific materialism lies not in declaring everything that is outside the brain of the individual to be 'primary', in describing this 'primary' as 'material', and declaring all that is 'in the head' to be 'secondary' and 'ideal'. Scientific materialism lies in the ability to distinguish the fundamental borderline in the composition of palpable, sensuously perceptible 'things' and 'phenomena', to see the difference and opposition between the 'material' and the 'ideal' *there* and not somewhere else.

The 'ideal' plane of reality comprises only that which *is created by labour* both in man himself and in the part of nature in which he lives and acts, that which daily and hourly, ever since man has existed, is produced and reproduced by his own social human – and, therefore, purposeful – transforming activity.

So one cannot speak of the existence of an 'ideal plane' in the animal (or in an uncivilised, purely biologically developed 'man') without departing from the strictly established philosophical meaning of the term.

Man acquires the 'ideal' plane of life activity only through mastering the historically developed forms of social activity, only together with the *social* plane of existence, only together with *culture*. 'Ideality' is nothing but an aspect of culture, one of its dimensions, determining factors, properties. In relation to mental activity it is just as much an *objective* component as mountains and trees, the moon and the firmament, as the processes of metabolism in the individual's organic body. This is why people often confuse the 'ideal' with the 'material', taking the one for the other. This is why idealism is not the fruit of some misapprehension, but the legitimate and natural fruit of a world where things acquire human properties while people are reduced to the level of a material force, where things are endowed with 'spirit', while human beings are utterly deprived of it. The objective reality of 'ideal forms' is no mere invention of the idealists, as it seems to the pseudo-materialists who recognise, on one side, the 'external world' and on the other, only the 'conscious brain' (or 'consciousness as a property and function of the brain'). This pseudo-materialism, despite all its good intentions, has both feet firmly planted in the same mystical swamp of fetishism as its opponent – principled idealism. This is also fetishism, only not that of the bronze idol or the 'Logos', but a fetishism of a nervous tissue, a fetishism of neurons, axons and DNAs, which in fact possess as little of the 'ideal' as any pebble lying on the road. Just as little as the 'value' of the diamond that has not yet been discovered, no matter how huge and heavy it might be.

'Ideality' is, indeed, necessarily connected with consciousness and will, but not at all in the way that the old, pre-Marxist materialism describes this connection. It is not ideality that is an 'aspect', or 'form of manifestation' of the conscious-will sphere but, on the contrary, the conscious-will character of the human mentality is a form of manifestation, an 'aspect' or mental manifestation of the *ideal* (i.e., socio-historically generated) *plane of relationships between man and nature*.

Ideality is a characteristic of *things*, not as they are determined by nature but as they are determined by *labour*, the transforming and form-creating activity of social man, his *purposeful*, sensuously objective activity.

The ideal form is the form of a thing created by social human labour. Or, conversely, the form of labour realised in the substance of nature, 'embodied' in it, 'alienated' in it, 'realised' in it and, therefore, presenting itself to man the creator as *the form of a thing* or a relationship between things in which man, his labour, has placed them.

In the process of labour man, while remaining a natural being, transforms both external things and (in doing so) his own 'natural' body, shapes natural matter (including the matter of his own nervous system and the brain, which is its centre), converting it into a 'means' and 'organ' of his purposeful life activity. This is why he looks upon 'nature' (matter) from the very first as material in which his aims are 'embodied', and as the 'means' of their realisation. This is why he *sees* in nature primarily what is suitable for this role, what plays or may play the part of a means towards his ends, in other words, what he has already drawn into the process of his purposeful activity.

Thus at first he directs his gaze at the stars exclusively as a natural clock, calendar and compass, as *instruments* of his life activity. He observes their 'natural' properties and regularities only insofar as they are properties and regularities of the material *in which his activity is being performed*, and with these 'natural' features he must, therefore, reckon as a completely objective *component of his activity* which is in no way dependent on his will and consciousness.

But it is for this very reason that he takes the results of his transforming activity (the forms and relations of things given by himself) as the forms and relations of things as they are. This gives rise to fetishism of every kind and shade, one of the varieties of which was and still is *philosophical idealism*, the doctrine which regards the ideal forms of things (i.e., the forms of human activity embodied in things) as the eternal, primor-

dial and 'absolute' forms of the universe, and takes into account all the rest only insofar as this 'all the rest', that is to say, all the actual diversity of the world has already been drawn into the process of labour, already been made the means, instrument and material of realisation of purposeful activity, already been refracted through the grandiose prism of 'ideal forms' (forms of human activity), is already presented (*represented*) in these forms, already shaped by them.

For this reason the 'ideal' exists *only in man*. Outside man and beyond him there can be nothing 'ideal'. Man, however, is to be understood not as one individual with a brain, but as a real aggregate of real people collectively realising their specifically human life activity, as the 'aggregate of all social relations' arising between people around one common task, around the process of the social production of their life. It is 'inside' man *thus understood* that the ideal exists, because 'inside' *man thus understood are all the things* that 'mediate' the individuals that are socially producing their life: *words, books, statues, churches, community centres, television towers*, and (above all!) *the instruments of labour*, from the stone axe and the bone needle to the modern automated factory and the computer. It is in these 'things' that the ideal exists as the 'subjective', purposeful form-creating life activity of social man, embodied in the material of nature.

The ideal form is a form of a thing, but a form that is outside the thing, and is to be found in man as a form of his dynamic life activity, *as goals and needs*. Or conversely, it is a form of man's life activity, but outside man, in the form of the thing he creates. 'Ideality' as such exists only in the constant succession and replacement of these two forms of its 'external embodiment' and does not coincide with either of them taken separately. It exists only through the unceasing process of the transformation of the *form of activity – into the form of a thing and back – the form of a thing into the form of activity* (of social man, of course).

Try to identify the 'ideal' with any one of these two forms of its immediate existence – and it no longer exists. All you have left is the 'substantial', entirely material body and its bodily functioning. The 'form of activity' as such turns out to be bodily encoded in the nervous system, in intricate neuro-dynamic stereotypes and 'cerebral mechanisms' by the pattern of the external action of the material human organism, of the individual's body. And you will discover nothing 'ideal' in that body. The form of the thing created by man, taken out of the process of social life activity, out of the process of man-nature metabolism, also turns out to be simply the material form of the thing, the physical shape of an external

body and nothing more. *A word*, taken out of the organism of human intercourse, turns out to be nothing more than an acoustic or optical phenomenon. 'In itself' it is no more 'ideal' than the human brain.

And only in the reciprocating movement of the two opposing 'metamorphoses' – forms of activity and forms of things in their dialectically contradictory mutual transformations – *does the ideal exist*.

Therefore, it was only *dialectical* materialism that was able to solve the problem of the ideality of things.

Reflections on Lenin's book: "Materialism and Empirio- Criticism"*

Introduction

Over the past seventy years since the time of publication of Lenin's book, *Materialism and Empirio-Criticism*,¹ the ideological battles have become neither less intense nor less significant for the fate of people who are united in the same warring parties as at the beginning of the century. The names change, the strategy and tactics of the struggle improve, becoming ever more refined, but its essence remains the same. As before, the issue remains just as Lenin posed it in 1908: either consistent (dialectical) materialism – or helpless wandering about in theory, wandering about fraught with sad and finally tragic consequences. Beginning in what would appear to be abstract spheres, these wanderings sooner or later reach their conclusion on this sinful earth.

'Does the lecturer acknowledge that the philosophy of Marxism is dialectical materialism?' Lenin stubbornly demanded, seeking a straight answer from Bogdanov one day in May 1908, by emphatically stressing the last two – key – words.²

Not simply materialism, and not simply dialectics, for materialism without dialectics nowadays remains only a wishful desire and proves to be not so much the slayer as the slain, and dialectics without materialism inevitably turns into the purely verbal art of turning inside out generally

* Written in 1979 and translated into English and published by New Park Publications as "Leninist Dialectics and the Metaphysics of Positivism. Reflections on Lenin's book: 'Materialism and Empirio-Criticism'" in 1982.

1 "Materialism and Empirio-Criticism," written in 1908 constitutes volume 14 of Lenin's Collected Works in English (*LCW*) and references to *LCW* in footnotes are from the English Fourth Edition. Citations from *Complete Collected Works* refer to the Russian Fifth edition.

2 *LCW* vol. 14 p 15.

accepted words, terms, concepts and assertions, long since known by the name of sophistry. It turns into a means of verbally distorting the ideas at hand. And only materialist dialectics (dialectical *materialism*), only the organic unity of dialectics with materialism arms the cognition of man with the means and ability to construct an objectively-true image of the surrounding world, the means and ability to reconstruct this world in accordance with the objective tendencies and lawful nature of its own development.

Here was contained the pivotal thought of Lenin's entire understanding of philosophy which he consistently developed in his book.

The significance of the book *Materialism and Empirio-Criticism* for the intellectual history of our century is far from exhausted by the fact that it put an end to 'one reactionary philosophy' and its pretensions to the role of 'the philosophy of contemporary natural science' and of all 'contemporary science'. Much more important is the circumstance that in the course of polemicising with it, Lenin distinctly outlined his own positive understanding of the problems placed before philosophy by the grandiose events in all spheres of human life. In economics, politics, science, technology and art, he clearly and categorically formulated the fundamental principles of the resolution of these problems, and outlined the logic of their resolution.

We must insist on this for the very reason that frequently the content and significance of this highly polemical work is interpreted too narrowly and one-sidedly, and consequently incorrectly. And not only by open enemies of revolutionary Marxism, but also by some of its 'friends'.

Thus the French revisionist philosopher Roger Garaudy (he is neither the only one nor the first) in his booklet Lenin condescendingly acknowledges the services of *Materialism and Empirio-Criticism* in presenting the fundamentals of materialism in general, which are neither characteristic of Marxist materialism nor related in any way to dialectics; this, he says, is 'kindergarten materialism' and nothing more. Lenin supposedly first became interested in dialectics only later – at the time of the *Philosophical Notebooks*. The same thing was confirmed by still another representative of philosophical revisionism – Gajo Petrović from 'Praxis', who added that the study of Hegel's works forced Lenin to introduce substantial corrections in his characterisation of materialism, idealism and dialectics, forced him to seriously limit the activity of the principle of reflection (such is the way that he explains Lenin's sentence: 'man's consciousness

not only reflects the objective world, but also creates it'), etc., etc. This statement already represents a direct lie with regard not only to Lenin's understanding of materialism, but also to Lenin's understanding of dialectics.

In essence, such an incorrect interpretation of Lenin's position also serves as the basis of statements according to which the definition of matter developed in *Materialism and Empirio-Criticism* is justified only by the special conditions of the argument with one of the varieties of subjective idealism, and therefore is declared to be insufficient, incomplete and incorrect beyond the bounds of this argument. Hence far-reaching conclusions are frequently drawn about the need to 'broaden' or 'supplement' Lenin's definition of matter and the philosophical conception of materialism (as supposedly narrowly epistemological) by means of the so-called 'ontological aspect'.

The meaning of similar attempts is the same: to portray *Materialism and Empirio-Criticism*, this classic work on the philosophy of dialectical materialism, which elucidated in general form all the major contours and problems of this science, as a book devoted only to one 'side of the matter', only to 'epistemology', only to that supposedly narrow circle of problems which were thrust on Lenin by the specific conditions of a polemic with one of the minor schools of subjective idealism. Explained in such a way, *Materialism and Empirio-Criticism* is robbed of its general philosophical significance beyond the bounds of this special argument; the significance is lost of a book which completely exposes every kind of idealism, not only and exclusively subjective idealism.

All this and much else forces us once again to return to an analysis of Lenin's polemic with the empirio-critics in order better to understand the actual reasons behind its origin and hence its actual meaning, its essence and significance for the ensuing history of the ideological and theoretical struggle in the ranks of Russian and international Social Democracy; we will better understand its significance for contemporary disagreements, arguments and ideological struggles, since only in such a broad context will the 'philosophical subtleties' which are dealt with in the book become clear.

Let us begin by recalling a few well-known historical facts.

Let us open a book, published in 1908. We read:

A great and formidable revolution is sweeping our country.
The unfolding struggle is carrying away a colossal mass of

forces and victims. Everyone who wishes to be a real citizen of a great people is devoting the entire energy of his thought and will to this struggle.

The proletariat is marching in the front ranks of the revolution, bearing the full brunt. On the party of the proletariat lies the greatest historical responsibility for the course and outcome of this struggle.

In such an epoch shouldn't everyone who is devoted to the cause of the proletariat, or even if only to the cause of the revolution in general, resolutely say to himself: 'now is not the time for philosophy!' – shouldn't everyone place to the side this very book for what may be years on end?

Such an attitude to philosophy has now become common. It is very natural under the given circumstances: but that doesn't prevent it from being very mistaken ...

These are the words of a participant and eyewitness of events which provided the conditions under which Lenin's polemic with Machism flared up. The words are true and sincere. Their author is A. Bogdanov. The same Bogdanov. This is a quotation from his introductory article to the Russian edition of Ernst Mach's book, *The Analysis of Sensations*. The same Ernst Mach. And the same book of his which became the bible of Machism – the same philosophy which was classified as reactionary by the author of *Materialism and Empirio-Criticism*. (And as an explanatory note to the article quoted by us: "The present article by A. Bogdanov was translated into German and published under the title "Ernst Mach and Revolution" in issue No. 20, February 14 1908, of the journal *Die Neue Zeit*, as a jubilee article commemorating the 70th birthday, February 18 1908, of Ernst Mach.)

We have quoted almost a whole page from a book, on the cover of which appears: 'E. Mach. *The Analysis of sensations and the Relation of the Physical to the Psychical*. G. Kotlyar's authorised translation from the manuscript of the 5th expanded German edition, with a foreword by the author to the Russian translation and an introductory article by A. Bogdanov. Second edition. Publisher, S. Skirmunt. Moscow. 1908'.

An edition, boosted by the name of a man who at this time was known as a comrade-in-arms of Lenin, as one of the fighters against the opportunism of the Mensheviks headed by their theoretical leader, G.V. Plekhanov ... Try as you might, such paradoxes just don't happen.

Let us investigate the essence of these paradoxes in a bit more detail; let us try to understand why the Bolshevik 'V.I. Ilyin' argued so sharply and irreconcilably against the Bolshevik 'A. Bogdanov' (his real name was A. A. Malinovsky), after openly declaring moreover that, in the realm of philosophy, he expressed his solidarity with G.V. Plekhanov, with the acknowledged leader of the Menshevik fraction.

Why did he declare that the boundary-line in the realm of philosophical problems by no means coincides with the line-up of differing views on immediately political questions, or on problems of the strategy and tactics of the revolutionary struggle albeit that there is a connection between them, a very profound connection, and this connection cannot be overlooked, especially in the light of the perspective of future events.

Once he had decided that it was absolutely necessary to speak out in the press sharply, categorically and urgently against Machism, Lenin remained fully aware of the entire, complicated, confused context in which he was forced to enter the 'philosophical brawl'. The situation was not easy and was not at all as it appeared on the literary surface of the struggle which took place.

Plekhanov was considered to be (and was) one of the few Marxists, in the ranks not only of Russian, but of the whole of international Social Democracy, who sharply and steadfastly came out against philosophical revisionism. He showed the reader that Machism in general, and its Russian variety in particular, represented chiefly by Bogdanov and Lunacharsky, is nothing more than the renovated and terminologically disguised archaic philosophy which was a novelty at the beginning of the 18th century – the system of views of Bishop George Berkeley and the 'sceptic-freethinker' David Hume, the classic representatives of subjective idealism. Plekhanov subtly, sarcastically and ironically exposed the pretensions of Machism when they claimed to represent the most modern scientific philosophy, and even more so, the philosophy of the social forces which were rising to the struggle for socialism – the philosophy of the proletariat.

Insofar as it was none other than Bogdanov and Lunacharsky who came forward as the most talented and outstanding opponents of Plekhanov in the given situation, the reader was given the impression that their philosophy was the 'philosophy of Bolshevism'. And Plekhanov, of course, didn't let slip the chance to reinforce such an impression by trying to portray Bolshevism as a current which had as its source not the dialectic-

tical materialism of Marx and Engels, but the muddled philosophy of Mach, Bogdanov and Lunacharsky.

Already by the beginning of 1908 Lenin understood once and for all that it was impossible to remain silent any more. Further silence in the realm of philosophy would only be of use to the Mensheviks and their tactical line in the revolution, even more so given the regrouping of forces which had already begun in the party (as well as the entire country) as a result of the ebbing of the revolutionary wave, the onset of political and ideological reaction, and the dashing of hopes for an expected imminent revolutionary-democratic solution to the crisis which had long since been in painful gestation.

It was necessary to declare distinctly, clearly and unequivocally, not only to the party but to the country and the entire international workers' movement: it is only Bolshevism, as a strategic and tactical line in the revolution, that has as its theoretical foundation the philosophy of Marx and Engels. It is therefore Bolshevism, and not the fraction of Plekhanov, which is the direct continuation of the cause of the founders of Marxism, both in the field of politics and political economy, as well as the field of philosophy. And most of all in philosophy, for here, as in a seed, or as in genes, are concealed the still undeveloped, but sufficiently clear contours and features of future positions (and disagreements) concerning the most stirring problems not only of today, which have already taken shape, but of tomorrow, which have barely begun to show in outline.

The task was unbelievably difficult. It was necessary not only to thoroughly expose the essence of the Machist-Bogdanovist revision of the philosophical views of Marx and Engels (Plekhanov had partially done this), but to counterpose to this revision a clear and integral exposition of these views; to show the truly Marxist resolution of those fundamental problems, which had been so difficult to solve that in the course of trying Bogdanov, Lunacharsky and Bazarov 'slid off the rails into idealism'. And these were talented literary men who were able to drag along after them even such a man, such an artist as Maxim Gorky ...

To perform this task, Lenin had to rummage through mountains of literature devoted to questions which he had previously not studied, and most of all in literature about 'modern physics', from which the Machists extracted the arguments for the use of their 'modern philosophy'. And Lenin fulfilled this most difficult task, what is more, in a very short space of time – from February to October 1908. (It should not be overlooked

that parallel with the writing of *Materialism and Empirio-Criticism* Lenin also wrote such journalistic masterpieces as 'Marxism and Revisionism', 'An Evaluation of the Russian Revolution', 'The Agrarian Question in Russia toward the end of the 19th century', 'The Agrarian Programme of the Social Democracy in the Russian Revolution', and 'Leo Tolstoy as a Mirror of the Russian Revolution', not to mention the carrying out of a mass of other duties connected with his role and obligations as theoretician and leader of the Bolshevik fraction of the RSDLP.)

This can be explained in only one way: Lenin had been writing his book not only during these months, but throughout his entire preceding life. Prior to the day when he actually set pen to paper, he had already endured and suffered over this book. Throughout long winter months in Shushenskoe, where, according to the memoirs of N.K. Krupskaya, he studied the classics of world philosophy, including Hegel and his *Phenomenology of Spirit*; over long conversations with Plekhanov; throughout the correspondence with Lengnik and Bogdanov, in the course of which Lenin's letters (which, alas, have been lost) grew into 'whole long treatises on philosophy' measuring 'three notebooks' ... And, finally, the last meeting with Bogdanov and his friends on Capri in April 1908, which once again convinced him of the urgent and inescapable necessity of giving open, final and decisive battle to Machism.

And even more, there was that state of 'fury' to which he had finally been led by the propaganda of positivism which had been spreading day by day inside the ranks of the RSDLP. This state of fury was dictated by a precise understanding of the damage inherent in Machism both for the party and for the fate of the revolution. And understanding that the best form of defence is a good offence, Lenin declared war on Machism.

Maxim Gorky tried in vain to reconcile Lenin with Bogdanov and persuaded him to come from afar to Capri. Lenin arrived, played chess with Bogdanov, argued with him for a long time, and left in an even sterner frame of mind. A reconciliation had not taken place, and the saddened Gorky waved his hands in puzzlement, unable to understand a thing. Especially the intensity of Lenin's irreconcilability.

Could this really be just because of a few philosophical terms? 'Substance', 'matter', 'complex of elements' ... But what's the matter with you, good gentlemen and comrades, is it really possible to break off your friendship over this? And as for this god-seeking ... After all, Anatoly Vasilievich is hardly building the old god, is he? Surely he understands it

in the same manner that Benedict Spinoza did – as just a word. He isn't naming a church authority with this term. He is seeking and building a high moral ideal of the new man, he wants to ennoble the revolution with high moral values so that it won't commit unnecessary stupidities and acts of cruelty ... And these terms, such as god, are clearer and closer to our Russian peasant and to the proletarian who comes from the peasantry ... You can't expect him to read Spinoza. Of course that would be useful, but only when he's able! You're acting in vain, in vain, Vladimir Ilyich. And in a most inappropriate way ...

And indeed Lenin left Capri not only in an extremely troubled state of mind (for he knew well that it is foolish to wear out one's nerves for nothing, to waste one's time on useless conversations with these 'thinkers!'), but also filled with the resolve to settle accounts with the entire business once and for all, in his own way. Enough was enough. The time had passed for notebooks and discussions. There was nothing more harmful than excessive softness now! War was inevitable. This war would rapidly finish teaching those who had not yet 'made an investigation'.

'What kind of reconciliation can there be, my dear Alexei Maximich? Please, it's ludicrous even to hint at this. Battle is *absolutely* inevitable ...

'Indeed, herein lies the harm, the tragedy, if even you, a great artist and an intelligent man, have not yet understood what kind of swamp it is they'll crawl into – dragging other people after them – all these god-builders, empirio-critics, empirio-monists and empirio-symbolists! Is it really so difficult to comprehend that behind the entire heap of their bombastic phrases there actually stands, at full height, the terrible figure of the international petit-bourgeoisie with its "complex of ideas", born of the dull oppression of man by external nature and class repression? Is it really so unclear that no matter what beautiful words are used to express this "complex of ideas", it was and remains the most inexpressible vile-ness, vulgar ideological baseness, the most dangerous vile-ness, the most vulgar "infection"?!'

'And you want to persuade me to collaborate with people who are preaching such things. I'd sooner have myself drawn and quartered'. ... When it was still the summer of 1906, Lenin studied Bogdanov's *Empirio-Monism* and 'flew into an unusual rage and frenzy'. He then tried, in a friendly fashion, controlling his rage, to drive home to him – both orally and in writing – where, why and how his homespun 'empirio-monistical' logic was diverting him from the main path of revolutionary Marxism. It

was in vain. The stubborn Alexander Alexandrovich took the bit between his teeth. And then – one after another – there appeared the *Studies in the Philosophy of Marxism*, the ludicrous booklets of Berman and Shulyatikov, Bogdanov's articles about Mach, the devil knows what else ... A whole flood.

As he was reading the *Studies*, article by article, Lenin, in his own words, 'immediately flew into a rage of indignation'. These, of course, were not inoffensive literary amusements, they were far worse, much, much worse ... Now they had organised on Capri a whole literary factory, with open pretensions about playing the role of the brain centre of the entire revolutionary Social-Democracy, the role of the philosophical and theoretical general staff of the Bolshevik fraction!³

And this was just when the foremost task of every thinking revolutionary Marxist had become the comprehension of all those profound – and largely still unclear, still unfinished – shifts which had occurred and were continuing to occur in the social organism of the land, in the system of contradictory relations between classes and their fractions, between fundamental social forces and the parties representing their interests, as a result of the cataclysm which tragically unfolded from 1905 to 1907. Precisely then, when the entire country was painfully trying to understand: what exactly had happened, why had the long-awaited revolution choked in a sea of blood, for what reasons had it been unable to shatter the rotten foundations of the stupid Romanov-Dubasov monarchy, why had this monarchy proved to be stronger than all the many-millioned democratic forces of a gigantic country? Indeed, before deciding what the party must do next, it was necessary to thoroughly analyse the events which had taken place and their results, to abstract all the lessons from the dramatic experience of the lost battle, to make a clear Marxist diagnosis, to take into account the complexity of the new circumstances and the arrangement of class forces, and to help the revolutionary forces overcome all those political illusions, prejudices and utopian hopes which had caused so much harm and had produced a lack of co-ordination in word and in action.

³ This monologue of Lenin is in its entirety simply passages joined together from his letters, especially to A.M. Gorky from February 25, March 16, April 16 and 19 1908, and to A. I. Lyubimov from September 1909. (*LCW*, Vol. 34, pp. 387, 393, 394, 401-402.)

Lenin tried to explain this to Bogdanov, Lunacharsky and their friends on Capri in April 1908. ‘... At that time I proposed that they use their common resources and efforts for a *Bolshevik history of the revolution*, as opposed to the Menshevik-liquidators’ history of the revolution, but the Caprians rejected my proposal, since they wanted to occupy themselves not with common Bolshevik matters, but with the propaganda of their particular philosophical views ...’ Lenin recalled about a year later (in the letter to students of the Capri party school, from August 30 1909).⁴

The point was, of course, not only and not so much that this attraction to philosophy had diverted a group of undoubtedly talented writers and propagandists from matters of primary importance. There were plenty of people in these difficult times who fell by the wayside, abandoning not only Bolshevism but the revolution as a whole. With those sort of people it was wiser to sadly wave one’s hand and forget about them.

Here the matter was different. Lenin clearly understood that those ‘particular philosophical views’ which Bogdanov, Bazarov, Lunacharsky, Suvorov and their co-thinkers were so insistently and ever more actively trying to thrust on the party, were making the heads of the people who had come to believe them absolutely unfit for precisely that more important ‘common Bolshevik matter’, for the scientific Marxist comprehension of the lessons of the defeated revolution. The discussion centred not on trifles, not on details of understanding, nor on personal tactical disagreements, but on the most profound fundamentals of Marxist cognition, on the logic of the analysis of reality.

I am abandoning the newspaper because of my philosophical binge: today I will read one empirio-critic and use vulgar language, tomorrow I will read another and use obscene words. And Innokenty scolds me, for the cause, for my neglect of *The Proletariat*. Things are out of whack. But it couldn’t be otherwise.⁵

I wouldn’t have raised a storm, had I not become unconditionally convinced (and I am becoming more convinced of this each day as I become more acquainted with the sources of the wisdom of Bazarov, Bogdanov and Co.) that their book is ludicrous, harmful, philistine and priestly in

⁴ *LCW* vol. 15 p 474.

⁵ *LCW* vol. 34 p 387.

its *entirety*, from beginning to end, from its branches to its roots, to Mach and Avenarius. Plekhanov was *completely* correct against them in essence, only he wasn't able or he didn't want, or he was too *lazy* to say this *concretely*, in detail, simply, without unnecessarily cowing the public with philosophical subtleties. And whatever happens, I want to say this in *my own way*.⁶

Once he returned from Capri, Lenin plunged headlong into philosophy, pushing aside everything else, no matter how much more important they seemed. 'Never before have I neglected my newspaper so much: I read these wretched Machists for days on end, yet I write articles for the newspaper with incredible haste'.⁷

This 'philosophical binge' provoked bewilderment among many people, especially among those who made up Lenin's closest circle. Later, after Vladimir Ilyich's death, M.N. Pokrovsky recalled:

When the argument between Ilyich and Bogdanov on the question of empirio-monism began, we threw up our hands ... The moment was critical. The revolution was receding. The question arose as to some kind of sharp change of tactics, and at this time Ilyich buried himself in the National Library, sat there for days on end, and as a result, wrote a philosophical book ... When all was said and done, Ilyich proved to be right.⁸

In what way and why did he prove to be right; what was not understood, and why, not only by Bogdanov, Lunacharsky and Bazarov, but by all of that time's acknowledged theoreticians in the Social-Democracy, headed by Kautsky (and what was partially understood only by Plekhanov) – this is what we will try to investigate, trying as well not to intimidate the reader with 'philosophical subtleties'. Subtleties become clear when the main, decisive and determining features are clear.

What is this mystical empirio-monism (Machism, empirio-criticism, the latest positivism, etc., it had a multitude of names), which provoked such a 'furious' reaction in Lenin?

6 *Ibid.*, p 151. *LCW* vol. 34 p 388.

7 *Ibid.*, p 154.

8 *Under the Banner of Marxism*, 1924, No. 2, p 69. *LCW* vol. 34 p 391.

What was the argument actually about?

1. Marxism against Machism as the Philosophy of Lifeless Reaction

If we proceed from that oversimplified conception, that Lenin was simply defending the general truths of every type of materialism (i.e. the thesis according to which outside our head, outside our brain, outside our consciousness there exists a real world of natural and socio-historical phenomena, events, and everything that in philosophical language is called matter – the sun, stars, mountains, rivers, cities, factories, statues, tables, chairs, etc., etc.), then the sharpness of the disagreements which arose between Lenin and Plekhanov, on the one side, and Bogdanov, Lunacharsky, Yushkevich and other Machists on the other side, would indeed remain strange and inexplicable.

That outside and independent of our head there exists a real world of things which we sensuously perceive, of objects and phenomena which we see, touch, hear and smell, and which are linked together into a certain enormous whole (into the real world) – does this really need special proof? Doesn't every sensible man who is in a sober state think exactly that? Doesn't he understand that his individual 'I' with its consciousness was not only born at some point, but that sooner or later it will disappear, while the earth and the sun, the cities and villages, the children and grandchildren living under the sun will remain, although they too, in their own time, will give way to other suns and stars, to other people or beings who resemble people?

Could it really be that A. Bogdanov didn't understand this? Could it be that this was not understood by the professor of physics, Ernst Mach, whose name is immortalised in the units of velocity now known to every pilot of a jet-liner? If such is the case, then Lenin's entire polemic with the Machists can indeed be shown to have been an empty waste of time and energy.

But only a naive person who has poorly investigated the essence of the dispute could think that Lenin in his book is defending truisms, self-evident assertions, banalities and trivialities, which are clear to everyone, even the totally uneducated man. But that is precisely how the book is approached by such present-day commentators as Garaudy and Petrović, and during Lenin's time by not only those who were described by M.N. Pokrovsky, but also by the universally recognised theoretical leaders of

the Social-Democracy, the official guardians of the theoretical heritage of Marx and Engels. Kautsky generally never attributed any serious significance to philosophical arguments, and therefore published in his journal – without any reservation – all kinds of positivists and empirio-critics. Plekhanov, who had perfectly well scrutinised all the childish helplessness which Bogdanov, Lunacharsky and their co-thinkers had revealed in philosophy, and who had even exposed, in a series of brilliant pamphlets, the ridiculousness of their pretensions to innovation in this area, nevertheless simply didn't see the full danger of the Machist revision of the philosophical foundations of Marxism (as well as the full depth of the roots which had nourished this revisionism).

In his eyes all these 'epistemological amusements' remained as relatively secondary (although, of course, not harmless) quirks on the periphery of the Marxist world outlook, as the fruits of the childish babble of those who are half-educated in philosophy. Hence that condescendingly ironical tone which is consistent throughout his pamphlets – the tone of an acknowledged master who finds it a bit awkward to argue with kindergarten pupils. With people who are unable to distinguish Berkeley from Engels, and Marx from Avenarius. On the purely theoretical plane, these muddlers really didn't deserve any attitude other than: 'A, B, C, D, E, F, G. Now we learn our ABCs ...' This is where Plekhanov placed the period in his polemic with them.

Lenin looked at the situation not only from this angle, but also from another, to which 'Plekhanov didn't pay any attention': he saw the full danger which was present for the fate of the revolution in Russia – and not only in Russia – in the Russian variation of the positivist revision of the philosophical foundations of revolutionary Marxism.

The philosophy of dialectical materialism, materialist dialectics, the logic of the development of the entire Marxist world outlook, the logic of cognition by virtue of which *Capital* had been written, and finally the strategy based on *Capital* of the political struggle of the revolutionary movement of the international working class – that is what this revisionism was directed against. So the discussion was not at all about abstract 'epistemological research', but about that 'aspect of the matter' upon which, in essence, depended all the remaining 'aspects' of the Marxist world view, the direction and paths of development of all its remaining component parts. And such an 'aspect of the matter' is called, in competent philosophical language, the essence of the matter.

And history very rapidly showed all the theoretical far-sightedness of Lenin. This was shown to everyone, but most of all to the revolutionary workers of Russia, or, to be more precise, to their most conscious and most advanced representatives, who made up the nucleus of the Bolshevik Party and for whom he wrote his magnificent book. And secondly, it was shown to all the truly advanced representatives of the scientific and technological intelligentsia in Russia (and then throughout the entire world), upon whom the specifically positivist variety of idealism was designed to have a special influence. ('Designed' does not mean that there was a conscious and perfidious intent, an ill-intentioned 'calculation'. The point is that if religion, or religious superstition, objectively, regardless of the good or evil intentions of the priests in their cassocks, was, is, and will remain 'the opium of the people', then positivism of the 20th century, whether it calls itself 'primary', 'secondary' or 'logical', whether it attaches to its name the prefix 'neo' or anything else, or whether or not it even changes its name completely – it remains idealism and in the final analysis will lead to the very same religion.)

Yes, the discussion centred on exceedingly important things: on the damage that had been done by direct or indirect disciples of Mach and Bogdanov, by the willing or unwilling followers of this philosophy. These were people who had not assimilated the main thing – materialist dialectics as the logic and theory of scientific cognition, and, consequently, who had not mastered the ability to think in a scientific manner about contemporary reality, and who were unable to resolve the enormous and difficult problems of our century in a scientific way, on the level of real science of the 20th century.

This was the main topic of Lenin's book. Of course, there still remain in it some 'ABCs'. For without 'ABCs' it is impossible to understand anything else. But in no way is it only 'ABCs', and there are even not so many of them.

And as for the conversations about how Lenin supposedly still wasn't thoroughly acquainted with dialectics when he wrote *Materialism and Empirio-Criticism*, these are out-and-out falsehoods which could only appear to be true to someone with a very limited (and highly dubious) conception of dialectics itself.

In 1908 Lenin was not only the political leader of the Bolsheviks, but their theoretical leader as well; he not only knew, but understood and used genuine dialectics in resolving all the challenging problems, both of

a broadly theoretical and immediately practical nature which arose daily and even hourly before the entire country, and before the working class and the peasantry during the stormy epoch of the grandiose revolutionary upsurge in 1905. A masterful command of materialist dialectics as the real logic of revolutionary cognition was a characteristic of Lenin as the leader of Bolshevism, which was the sole viable force in the ranks of the Social-Democracy at that time.

Lenin knew superbly well the highest historical form of dialectics which had been the 'soul of Marxism' – the dialectics of *Capital*, dialectics as the logic of cognition of Marx and Engels, materialist dialectics. It was this, and not 'dialectics in general', which he defended in *Materialism and Empirio-Criticism*.

The same thing applies to the assertions that Lenin at this time still was not acquainted with Hegelian dialectics and became interested in this only later, when he was writing the conspectus which is known as the *Philosophical Notebooks*. He turned to a special, critical investigation of Hegelian dialectics later. This is true. But it was by no means in the *Philosophical Notebooks* that he first studied and became familiar with it. As a mature Marxist he had already read Hegel's *Logic* and *Lectures on the History of Philosophy*; here, in the course of a critical analysis of them he had simply sharpened, polished and refined the details of the formulae of his understanding of dialectics, which had already been developed and tested in the fires of practice. He refined his materialist understanding of dialectics, preparing to write (as Marx had been preparing in his own time) a brief and clear outline of the fundamentals of dialectics which would be understandable to every literate person.

But he had perfectly well grasped the essence of Hegelian dialectics even earlier. We know that while he was at Shushenskoe he became familiar with the *Phenomenology of Spirit*, a work where this essence comes through the text much more clearly, vividly and concretely than in the texts of the *Science of Logic* or the *Lectures on the History of Philosophy*. The fact that the notes from this period were not preserved, of course, by no means serves as support for the interpretations of Garaudy and Petrović.

While preparing to write a materialistic *Science of Logic* by retaining everything in Hegel which is truly scientific and not of passing value, and by rigorously purging the Hegelian logic of everything in it connected with idealism, he studied, made notes, and commented on the Hegelian texts at the same time that the cannons of the first world war were thun-

dering in Europe and the great October Revolution was reaching maturity.

In 1908 he defended the rightness of the dialectics of *Capital*, and he defended its interests in the front lines of the battle for it – along the border which then divided (and now divides) the materialist dialectics of Marx and Engels from the surrogates which resemble it on the surface, including belated Hegelianism. This includes idealism in general as well as the idealist version of dialectics.

Lenin had no doubts that the Machist diversion in the rear lines of revolutionary Marxism was the direct continuation of the attack on materialist dialectics begun earlier by E. Bernstein. This is shown in his note to the article ‘Marxism and Revisionism’, which concludes the section of this article devoted especially to philosophy.

This section is worth reproducing in its entirety:

In the realm of philosophy revisionism tailed after bourgeois professorial ‘science’. The professors went ‘back to Kant’ – revisionism dragged itself along after the neo-Kantians, the professors repeated for the thousandth time the banalities they had been told by the priests against philosophical materialism, and, with condescending smiles, the revisionists muttered (copying the latest handbook word for word) that materialism had long since been ‘refuted’; the professors turned their backs on Hegel as a ‘dead dog’, and, while they themselves preached idealism, albeit a thousand times more petty and banal than Hegelian idealism, they scornfully shrugged their shoulders when it came to dialectics – and the revisionists crawled after them into the swamp of the philosophical vulgarisation of science, exchanging ‘cunning’ (and revolutionary) dialectics for ‘simple’ (and tranquil) ‘evolution’ ...

It isn’t necessary to talk about the actual class significance of such ‘corrections’ of Marx – the matter is quite clear by itself. We would simply note that Plekhanov was the only Marxist in the international Social-Democracy who, from the standpoint of consistent dialectical materialism, made a criticism of those unbelievable banalities which were repeated at length here by the revisionists. It is all the more necessary to stress this firmly because nowadays, profoundly mistaken attempts are being

made to bring forward the old and reactionary philosophical rubbish under the flag of criticising Plekhanov's tactical opportunism.

And in the note to this:

Cf. the book, *Studies in the Philosophy of Marxism*, by Bogdanov, Bazarov and others. Here is not the place to investigate this book, and I must limit myself for the time being to the declaration that in the very near future I will show in a series of articles or in a special pamphlet that *everything* said in the text about the neo-Kantian revisionists applies in essence as well to these 'new' neo-Humist and neo-Berkeleyan revisionists.⁹

This 'special pamphlet' was the book *Materialism and Empirio-Criticism*, which Lenin was writing at that time and in which he showed that Machism is the No. 1 enemy of revolutionary Marxism, the 'philosophy of lifeless reaction', and the philosophical foundation of every type of reaction – both in social life and in science.

But then still another question arises. Why was it that A. Bogdanov, who was personally an irreproachable and selfless man, as well as being a Bolshevik at that time, not only took this philosophy for the genuine philosophy of 'modern science', and moreover for the philosophical foundation of the means of the socialist renewal of the earth, for the 'philosophy of the proletariat', but even became a passionate propagandist of this philosophy?

How could this have happened? How could this philosophy have attracted such people as Bogdanov, Lunacharsky and Gorky?

Lenin's book could very well have been given a slightly different title: *Materialism and Idealism*. And not only in general, but with the addition: *In Our Time*. Where is the clear-cut dividing line between them, that line where every man must make a choice? What is philosophical idealism and what is philosophical materialism? How do you recognise what you are dealing with, which of these two points of departure is determining the direction of all your thought, regardless of the subject of your reflection: major things or minor, the fate of the earth or the fate of one's country, the problems of genes or quarks, quantum mechanics or the foundations

⁹ *LCW* vol 15 pp 33-34.

of mathematics, the mysterious origins of personality or the mysterious origins of life on earth?

Here, then, is the question: take your thought, your consciousness of the world, and the world itself, the complex and intricate world which only appears to be simple, the world which you see around you, in which you live, act and carry out your work – whether you write treatises on philosophy or physics, sculpt statues out of stone, or produce steel in a blast furnace – what is the relationship between them?

Here there is a parting of the ways, and the difference lies in whether you choose the right path or the left, for there is no middle here; the middle path contains within itself the very same divergences, only they branch out within it in ever more minute and discrete proportions. In philosophy the ‘party of the golden mean’ is the ‘party of the brainless’, who try to unite materialism with idealism in an eclectic way, by means of smoothing out the basic contradictions, and by means of muddling the most general (abstract, ‘cellule’) and clear concepts.

These concepts are matter and consciousness (psyche, the ideal, spirit, soul, will, etc. etc.). ‘Consciousness’ – let us take this term as Lenin did – is the most general concept which can only be defined by clearly contrasting it with the most general concept of ‘matter’, moreover as something secondary, produced and derived. Dialectics consists in not being able to define matter as such; it can only be defined through its opposite, and only if one of the opposites is fixed as primary, and the other arises from it.

The difference and opposition of materialism and idealism is thus very simple, which, on the part of the idealists of various shades, serves as the basis for reproaches directed at materialism, such as ‘primitivism’, ‘grade-school sophistication’, ‘non-heuristic nature’, ‘banality’, ‘being self-evident’, etc. (Such a reproach was directed at Lenin as soon as his book was published: ‘In general, even if one acknowledges as correct the materialist propositions of Mr Ilyin about the existence of an external world and its cognoscibility in our sensations, then these propositions can nevertheless not be called Marxist, since the most inveterate representative of the bourgeoisie hasn’t the least doubts about them’, wrote M. Bulgakov in his review of *Materialism and Empirio-Criticism*.)

Lenin’s position isn’t formulated here very precisely. It doesn’t consist in the simple acknowledgment of ‘the existence of an external world and its cognoscibility in our sensations’, but in something else: for mate-

rialism, matter – the objective reality given to us in sensation, is the basis of the theory of knowledge (epistemology), at the same time as for idealism of any type, the basis of epistemology is consciousness, under one or another of its pseudonyms (be it the 'psychical', 'conscious' or 'unconscious', be it the 'system of forms of collectively-organised experience' or 'objective spirit', the individual or collective psyche, individual or social consciousness).

The question about the relationship of matter to consciousness is complicated by the fact that social consciousness ('collectively-organised', 'harmonised' experience, cleansed of contradiction) from the very beginning precedes individual consciousness as something already given, and existing before, outside, and independent of individual consciousness, just as matter does. And even more than that. This social consciousness – of course, in its individualised form, in the form of the consciousness of one's closest teachers, and after that, of the entire circle of people who appear in the field of vision of a person, forms his consciousness to a much greater degree than the 'material world'.

But social consciousness (Bogdanov and Lunacharsky take precisely this as the 'immediately given', as a premise not subject to further analysis and as the foundation of their theory of knowledge), according to Marx, is not 'primary', but secondary, derived from social being, i.e. the system of material and economic relations between people.

It is also not true that the world is cognised in our sensations. In sensations the external world is only *given* to us, just as it is given to a dog. It is *cognised* not in sensations, but in the activity of thought, the science of which is after all, according to Lenin, the theory of knowledge of contemporary materialism.

Logic as the philosophical theory of cognition is defined by Lenin, following after Marx and Engels, as the science of those universal laws (necessary, independent both of man's will and consciousness), to which the development of the entire aggregate knowledge of mankind is objectively subordinated. These laws are understood as the objective laws of development of the material world, of both the natural and socio-historical world, of objective reality in general. They are reflected in the consciousness of mankind and verified by thousands of years of human practice. Therefore logic as a science borders on and tends to coincide with development theory, but not in its readily given form. Logic, however, according to Bogdanov (Berman, Mach and others) is the collection

of 'devices', 'means', 'methods' and 'rules', to which the thinking of each individual is consciously subordinated, while being fully self-aware. At its base (at the base of its theoretical conception) lie all those old principles of formal logic which are taught in school – the law of identity, the denial of contradiction, and the law of the excluded middle.

What is after all 'thought'? To this question, philosophy mainly since times immemorial has searched an answer (and for a long time having developed in its depths into psychology trying to explain what is individual psyche, 'the spirit').

If thought is only 'speech without sound', as Bogdanov suggests (and this is the pivotal line of thought of all positivism), 'mute speech' or the process of development of language systems, then positivism is correct. And here lies the path to idealism.

Another line of thought proceeds from Spinoza. He understands thinking to be an inherent capability, characteristic not of all bodies, but only of thinking material bodies. With the help of this capability, a body can construct its activities in the spatially determined world, in conformity with the 'form and disposition' of all other bodies external to it, both 'thinking' and 'non-thinking'. Spinoza therefore includes thinking among the categories of the attributes of substance, such as extension. In this form it is, according to Spinoza, characteristic also of animals. For him even an animal possesses a soul, and this view distinguishes Spinoza from Descartes, who considered that an animal is simply an 'automaton', a very complex 'machine'.

Thought arises within and during the process of material action as one of its features, one of its aspects, and only later is divided into a special activity (isolated in space and time), finding 'sign' form only in man.

A completely different picture arises when, proceeding from individual experience, it is precisely the verbally formed world which is taken as the starting point in the theory of knowledge. It is all the more easy to yield to such an illusion, since in individual experience, words (and signs in general) are in actual fact just as much given to sensual contemplation as are the sun, rivers and mountains, statues and paintings, etc. etc. Here are the roots of idealism in its 'sign-symbolic' variation. If one proceeds from individual experience, making it the point of departure and basis of the theory of knowledge, then idealism is inevitable. But it is also inevitable if one relies on 'collective experience', if the latter is interpreted as

something independent of being, as something existing independently, as something primary.

Thus it turns out that the question of the relationship between consciousness and matter is by no means as trivial as several of Lenin's critics have tried to show. Of course this is true only when the basic question of philosophy is understood in its actual content, and not as a question of the relationship of consciousness to the brain. It is an indisputable fact that such a 'wording' of the basic question of philosophy has frequently arisen in the past and occurs in the present.

Meanwhile it is by no means the relationship of consciousness to the brain which is discussed by both Engels and Lenin, but the relationship of consciousness to nature, to the external world, to objective reality which is given to us in sensation. The question about the relationship of consciousness to the brain is a question which is resolved scientifically and with full concreteness not at all by philosophy, but only by the joint efforts of psychology and the physiology of the brain.

And it is by no means this question which has divided philosophers into materialists and idealists. That man thinks precisely with the help of the brain, and not the liver, was equally clear to Feuerbach, Hegel, Fichte, Spinoza, Descartes, Aristotle and Plato. Descartes even indicated the 'exact place' in the brain where consciousness is located, the conical gland, and Fichte investigated in the most assiduous manner the peculiarities of the human body, thanks to which it became an organ of consciousness and will.

None of the classical idealists had any doubts that man thinks with the aid of the brain, and not any other part of the body. Therefore, they had no such problem, no such question. It was only with the Machists that such a question arose and even turned into an insoluble problem for their philosophy.

Thus when Lenin demands a straight answer from the Machists to the question, 'Does man think with the help of the brain?', then this question is purely rhetorical: it is the equivalent to driving a person into the corner by forcing him to answer directly, 'Do you agree that you walk with the aid of your legs and not your ears?' If the answer is 'yes', then, all the unintelligible constructions of the Machists collapse. If you insist on defending them, you are forced to say 'no', i.e. to express an absurdity which is obvious to everyone (and to you yourself).

For it was not the relationship of consciousness to the brain, but the relationship of consciousness to the external world which made up the question around which the Machists themselves began to quarrel. The relationship of consciousness to the brain is also a very important question, but it is resolved by concrete neuro-psychological research, by psychophysiology.

Lenin states: everything that occurs within the human body, inside the brain, nervous system and sense organs, is the monopoly of natural scientists. But it sometimes begins to occur to them that the resolution of the question about the relationship of consciousness to the brain and to the human body as a whole is also the resolution of the basic question of philosophy, the question about the relationship of all consciousness to the entire external world (external in relationship to consciousness).

It is philosophy which investigates this question. In philosophy discussion is, was and shall be precisely about the relationship of consciousness to the material, objective world of natural and socio-historical phenomena, existing outside the thinking brain. This is the very question which will be answered by no variety of psychophysiology, no matter how refined it is. For the simple reason that it has never studied this question.

In addition, in philosophy the discussion by no means centres exclusively (or even to a great degree) on the relationship of individual consciousness 'to all the rest', but chiefly on the relationship of social consciousness (jointly and consecutively realised in history by millions of thinking brains) – of consciousness in general – to the world outside it.

The whole infinite totality of things, events, and processes which exist in nature and history is called in philosophy objective reality (existing outside the subject and independent of it) or, more succinctly, matter, the material world.

This material world is counterposed equally to the individual thinking brain and to the collective 'thinking brain of mankind', i.e. to 'thinking in general', to 'consciousness in general', to 'the psyche in general', and to the 'spirit in general'. As far as the resolution of the basic question of philosophy is concerned, consciousness, psyche, thinking and spirit are all nothing more than synonyms.

Social consciousness, which develops from generation to generation, differs in principle from 'individual consciousness'. It is impossible to imagine the collective consciousness of people (i.e. that which philosophy

means by 'consciousness') as a 'molar unit' (single psyche, single consciousness) which has been repeated over and over again and thereby simply increased in its proportions. The historically developing whole – the entire spiritual culture of mankind – that is what most of all interests the philosopher, that is what is signified in philosophy by the term 'consciousness', and not simply the consciousness of separate individuals. Spiritual culture is formed by a multitude of dialectically-contradictory interactions between them. From similar individual 'psyches' there can develop as a result two, not only different, but directly contradictory psychical formations.

This circumstance was already perfectly well understood by Hegel, although he expressed it in his own way. The collective psyche of people (and not the psyche of the solitary individual with his brain) – developing from century to century – the psyche of mankind, the consciousness of mankind, the thinking of mankind, appears with Hegel under the pseudonym of the 'absolute spirit'. And the separate (individual) psyche is called the 'soul'. This he interprets as a 'particle of the spirit'.

The 'nomenclature' which was accepted in his era contains a great deal of truth within it. But grandiose illusions are connected with it as well. The collective psyche of mankind (spirit), which has already been developing for thousands of years, is actually primary in relation to every separate 'psychic molecule', to every individual consciousness (soul). An individual soul is born and dies (in contrast to Kant, Hegel caustically and ironically ridiculed the idea of the immortality of the soul), but the aggregate – 'total' – spirit of mankind lives and has been developing for thousands of years already, giving birth to ever newer and newer separate souls and once again swallowing them up, thereby preserving them in the make-up of spiritual culture, in the make-up of the spirit. In the make-up of today's living spirit live the souls of Socrates, Newton, Mozart and Raphael – herein lies the meaning and essence of Hegel's – dialectical – interpretation of the immortality of the spirit, notwithstanding the mortality of the soul. One comes into being through the other. Through its opposite.

With all that, Hegel always remains inside the sphere of the spirit, within the bounds of the relationship of the soul to the spirit. All that lies outside this sphere and exists completely separate from it the material world in general – interests him just as little as it interests Mach or any other idealist. But his idealism is much more intelligent, much broader,

and for that reason much more dialectical, than the petty, vulgar and narrow idealism of Mach.

For he is concerned with consciousness in its actual dimensions, while Mach is only concerned with individual consciousness. Mach doesn't even think about social consciousness (while science is precisely concerned with it). Therefore, the question of science – what it is, where it comes from and why, according to what laws it develops – generally lies outside his field of vision. As do politics, law, art and morality. Mach never studied the laws of development of these universal forms of consciousness.

In philosophy he is interested only in the relationship of individual consciousness to the brain and sense organs. Therefore he invariably appeals exclusively to the psychic experience of the separate individual. Hence the illusory 'persuasiveness' of his arguments.

It goes without saying that the actual thinking of a physicist or anyone else, especially a great scientist, and the understanding which he has about this cognition, differ essentially from each other. Thus it turns out that the thinking of the very same Mach, in the form as it actually comes into being, by no means resembles the description of this thinking by Mach-the-philosopher, with his pretensions about creating a general theory of consciousness.

Lenin, therefore, had good reason to call Mach a great scholar in the realm of physics, a petty and reactionary philosopher, i.e. a pseudo-specialist in the area which investigates consciousness (the psyche, thinking, the spiritual culture of mankind) and the laws of its origin and development.

If Mach had adopted the same positions in his own field as he had in epistemology, he would have been obliged in that case to look condescendingly upon Newton, Faraday and Maxwell, just as he looked down upon Hegel, Marx and Engels in the field of epistemology. And in physics he would have to have based himself only on personal experience, taken by him as the standard of 'the experience of every physicist', and not on the history and experience of physics as a science.

Lenin proves all this. To think well in his own narrow field – in physics – still doesn't mean that one also thinks well in the realm of the science of thought, consciousness and the psyche. Here it is necessary to know the facts not only according to one's personal experience, but according to the experience of all humanity. It is also necessary to know

the history of their investigation not according to personal experience (or to be more precise, not according to personal experience alone), but according to the major landmarks of the development of experience common to all mankind, i.e. according to the history of this science.

A person who allows himself to make judgements about consciousness without having bothered to study what people have already been studying for thousands of years, without becoming acquainted with what is already rather well known and understood in this field, without having studied Spinoza, Kant, Hegel, Marx or Engels – such a person fully deserves the assessment which Lenin made of Mach-the-philosopher.

A physicist is by no means obliged to devote himself professionally to philosophy. Einstein, for example, was and remained a physicist, and he didn't pretend to create philosophical conceptions, much less to publish 'philosophical treatises'. For he understood – and more than once he spoke publicly on this – that the problem of consciousness for him was a thousand times more difficult than his own particular problems, and therefore he wouldn't presume to judge in this area. He made a clear statement about this once to the psychologist Jean Piaget when he became familiar with the problems which Piaget was studying. Einstein was able to understand this, but Mach was not. And that is how he has gone into the history of philosophy. Just as Lenin saw him.

Lenin was therefore indignant when Bogdanov, Bazarov and Lunacharsky entered into a bloc on this with the Mensheviks Valentinov, Yushkevich and others, and began to appeal to Russian Social-Democracy to learn how to think from Mach and according to Mach, and even more so in the field of social science, i.e. precisely where the philosophy of Mach had fully revealed its patent emptiness and reactionary nature.

That is why Lenin came forward so decisively and sharply (both in essence and in tone) against Machism. His intervention was concerned with the fate of a new wave of revolution in Russia. 1905 had not resolved a single one of the fundamental problems which confronted the nation. Whether the new revolution would be victorious, or once again be drowned in a sea of blood – this is actually what the argument was about.

Lenin clearly understood that if the Bolsheviks would think according to Marx, i.e. materialistically and dialectically, then they would be able

to lead the proletariat of Russia to a decisive victory, to the actual resolution of the fundamental contradictions of the country's development.

Hence it is clear that it was not simply philosophical materialism in general that Lenin defended in his book. He defended scientific (i.e. materialist) dialectics. Dialectics as the logic and theory of knowledge of contemporary materialism. People who don't understand this evidently do not know certain indisputable facts concerning the essence of the ideological struggle of the days when Lenin was writing his book. These facts should be recalled.

Let us introduce a rather extensive excerpt (it can't be helped!) from a book which appeared a year before *Materialism and Empirio-Criticism*: 'Among the antiquated parts of the well-proportioned edifice, raised by the efforts of the genial author of *Capital*, which undoubtedly need repair, and major repair at that, are, first and foremost, we are profoundly convinced, the philosophical foundations of Marxism, and, in particular, the celebrated dialectics'.

Let us interrupt the excerpt with a brief commentary. The author who is cited here was 'also' a Marxist and also belonged at one time to the Bolsheviks, just like A. Bogdanov. After the October Revolution he acknowledged the correctness of Lenin, entered the ranks of the RCP and even taught philosophy until the end of his days, as a professor at the Y.M. Sverdlov Communist University. This was Y. Berman, author of the book *Dialectics in the Light of the Modern Theory of Knowledge* (Moscow, 1908). He participated as a co-author of the same book, *Essays in the Philosophy of Marxism*, which Lenin renamed for all time as the *Essays Against the Philosophy of Marxism*.

Let us continue the quotation; it very effectively throws light on the situation in philosophy during those days, for it allows us to understand what it was that attracted not only Berman, but Bogdanov and Lunacharsky, to Mach. '... The need to investigate the founding principles of doctrine, the need to reconcile the points of departure of Marxist philosophy with the latest scientific conquests' – this is how Berman himself explains the motive of his work in philosophy. After all, the motive itself is a worthy one. But why exactly was it that while acting in the spirit of this noble motive Berman suddenly began to attack the dialectic? What was dialectics guilty of in his eyes?

Dialectics was guilty of not only 'not agreeing' with the latest scientific achievements (and at that time, these were the achievements of

Mach, Einstein, Ostwald, Poincaré, and other no less outstanding natural scientists), but it was also because (so it appeared to Berman and his co-thinkers) it was none other than dialectics which was to blame for all the catastrophes which began to occur in the ranks of the Social-Democracy after the death of Engels. This includes both the failures and consequent victims of the 1905 Revolution, and the theoretical errors which led to these failures.

Hegel was to blame for all this, with his pernicious influence on Marx and Engels, which was then passed on, like an infection, to their disciples – to Kautsky, Plekhanov and Mehring. And Berman sincerely wonders, ‘Why is a revolutionary attracted to the “trinkets of Hegelian verbiage”, when there is such clear, “genuinely scientific” thinking as the thought of Ernst Mach?’ It is with Mach’s guidance that a revolutionist must rid himself of the illness of Hegelian dialectics, of the anaemia of dialectical categories. ‘No matter what was said by Messrs. Plekhanov, Mehring and others, no matter how passionately they assured us that we would find in the works of Hegel, Marx and Engels all the information necessary for the resolution of our doubts in the field of philosophical thought; that, moreover, everything that has been done *after* them is eclectic nonsense or, in the best instance, only a more or less successful paraphrase of the philosophical ideas of Hegel, we cannot and should not cut ourselves off with a Chinese wall from all the attempts to illuminate the basic problems of thought in a way other than Marx and Engels had done’.¹⁰

In the field of scientific thinking we must equal the method of thinking which Ernst Mach uses in his field (in physics) and explains in a popular way (this he does as a philosopher). Such was the conclusion and sincere conviction not only of Berman, but Bogdanov and Lunacharsky. ‘The philosophy of Mach expresses the most progressive tendencies in one of the two basic areas of scientific cognition in the field of the natural sciences. The philosophy of Mach is the philosophy of contemporary natural science’, writes A. Bogdanov in his introductory article to the book, *The Analysis of Sensations*, by E. Mach. The Mensheviks come to the same conclusion, despite the opinion of their leader Plekhanov who was also infected by the antiquated ‘Hegelianism’. Therefore, in the realm of philosophy it was expedient to immediately form a pact with them. It was both possible and necessary to write a collective work ‘on the philosophy

¹⁰ Berman, Y., *Dialectics in the Light of the Modern Theory of Knowledge*, pp 5-6.

of Marxism' with them – with Valentinov, Yushkevich and others. It was possible and necessary, as the fundamental task of this collective work, to discredit dialectics, which was preventing people from assimilating 'the most revolutionary' method of thinking of Ernst Mach and Richard Avenarius. They, and not Marx and Engels, should become the classical philosophers of revolutionary Social-Democracy, of *revolutionary* Marxism.

Such were the basic spirit and fundamental idea of this 'collective work', of the book *Essays in the Philosophy of Marxism*; such was the basic thought which united this authors' collective of ill repute. For Bogdanov, Berman and Lunacharsky, the objective reality of the 'external world' was a matter of little consequence, little interest, and little importance. In any case, 'in the interests of the Social-Democracy and contemporary science', it was generally possible to pay no attention to it, to brush it aside. Was the discussion really about 'objective Reality'? Could the argument really be about whether or not the sun and stars actually exist? The argument centred on a much more important question: about which method of thinking revolutionary democracy in Russia would henceforth profess – the method of the Marxists, derived from the 'Hegelian', or the 'scientific' method, derived from Mach.

And as to whether the sun and stars actually exist, and even more so, just as we see them – as shining dots on the black dome of the sky – in the final analysis what difference does it make? We can even agree that the stars, as we see them, are simply complexes of our visual sensations, projected by our imagination on a screen of celestial space. It makes no difference whatsoever: we will see them just as before. But then we would at last be thinking about them 'scientifically'. And not only about them, i.e., in natural science, but also in the field of the social sciences, political economy, law and politics.

Such was the logic which led the Russian empirio-critics Bogdanov, Bazarov, Lunacharsky and Berman, along with Valentinov and Yushkevich to the positions which they outlined as a joint philosophical platform in the *Essays in the Philosophy of Marxism*.

And all this was under conditions when the issue of particular importance was a clear and distinct orientation of theoretical thinking, which is given by the materialist dialectics of Marx and Engels. Lenin was able to use it, understanding perfectly well that the one scientific – dialectical – logic of theoretical thought demands first of all an absolutely precise and strict analysis of the *contradictions* which had matured in Russia. In all their

objectivity. And then the working out of the most skilful means of their resolution, means which are absolutely concrete.

But Mach and the Machists taught people to look upon all contradictions (as well as all the other categories connected with contradiction, especially negation) as simply a state of discomfort and conflict within the organism (or brain), as a purely subjective state which the organism wants to escape from as soon as possible, in order to find physical and spiritual 'equilibrium'.

Could it have been possible to invent something more counterposed to Marxist dialectics and more hostile to it than such an understanding of contradiction? But this was precisely the understanding taught not only by Mach and Avenarius, but by Bogdanov and Berman.

Here is how Berman explained the problem of contradiction. During the process of an organism's adaptation to surroundings, inside the organism there sometimes arise strivings in opposite directions; a conflict arises between the two ideas and, consequently, between the utterances which express them. According to Berman, contradiction is a situation in which speech collides against speech, the spoken word against spoken word, and nothing else. This situation occurs only in speech, and any other understanding of contradiction is, he says, anthropomorphism of the purest water, or the 'ontologisation' of a strictly linguistic phenomenon. 'Undoubtedly', writes Berman, "'identity", "contradiction", and "negation", designate nothing more than processes *taking place solely in the realms of ideas, abstractions and thinking*, but by no means in things ...'¹¹

The relationship of conflict between two psychophysiological states of the organism, expressed in speech – this is what contradiction is for Berman. And this is the general position of all Machists. They found completely unacceptable the position of materialist dialectics about the objectivity of contradiction, as the identity of opposites, or as the meeting point of extremes in which these opposites pass into each other. All these elements of Marxist logic appeared to them to be the pernicious verbal garbage of 'Hegelianism', – and nothing more. The logic of contemporary scientific thinking had to be thoroughly cleansed of any similar 'verbal garbage', which first of all required that they prove the 'non-scientific nature' of the principle of the identity of opposites. This the Russian Machists zealously set out to do.

¹¹ Berman, *Op. cit.* pp 135-136.

For them, this principle of the identity of opposites was the sophists' way of turning scientific concepts inside out. Scientific concepts, insofar as they are scientific, are subordinated in the strictest manner to the principle of identity: $A = A$. 'To declare contradiction to be a fundamental principle of thinking, just as lawful as the principle which is its opposite, is the equivalent therefore to an act of spiritual suicide, to a renunciation of thinking ...'¹² Berman stated in summarising his reasoning on this subject.

Such is the orientation of the Machists – to forbid the comprehension of objective contradictions. And this ban – in the name of 'modern science' – was imposed on thinking at precisely the moment when such comprehension was particularly necessary. Materialist dialectics orientated scientific thinking toward a concrete analysis of the country's class contradictions in all their objectivity. But the Machist understanding of scientific thinking in actual fact, even if despite the will of some of its adherents, led to a renunciation of the comprehension of these contradictions. This was the inevitable consequence of the sharply negative attitude of the Machists toward dialectics.

But in order to ground their particular understanding of thinking, they needed a corresponding philosophical base. Materialism, and the dialectic indissolubly connected with it, didn't suit them at all. As the basis for their 'scientific method' they had to introduce something else – empirio-criticism.

Science (the scientific understanding of reality), according to this philosophy, is a system of pronouncements combining into one non-contradictory complex of elements of 'our experience' and sensation. The non-contradictory complex of symbols, bound together in accord with the requirements and prohibitions of formal logic. These requirements and prohibitions, in the opinion of the Machists, reflect nothing in objective reality. They quite simply are the requirements and norms of working with symbols, and logic is the accumulation of the methods of this work. Logic, therefore, is a science which reflects nothing in objective reality, but which simply gives a sum of rules regulating the work with symbols of any type.

Work with symbols. In the name of what? What end does this work pursue? Where do its norms come from? The Machists also have a ready

¹² Berman, *Op. cit.* p 164.

answer to this. 'If the norms of law have as their goal the upholding and preservation of a given socioeconomic structure, then the norms of thought must have as their final goal the adaptation of the organism to its surroundings'.¹³

From the requirements of the organism (i.e. from the requirements of man interpreted in an entirely biological way) the Machists derive their understanding of thought. From the need of equilibrium, from the supposedly innate need to eliminate all contradictions of any type. 'Of course, thinking which is absolutely free from contradictions is only an ideal to which we must come as close as possible; but the fact that we have been very far from this, both in past thought as well as in the present, by no means signifies that we should turn away from the struggle with contradiction ...'¹⁴

Thinking, as well as all the other psychical functions of man, is directly explained here as an activity directed toward the preservation of equilibrium (or the restoration of destroyed equilibrium) as the immanent goal located in the organism of every individual.

'Every organism is a dynamic system of physico-chemical processes, i.e. a system in which the separate processes support each other in a state of equilibrium'.¹⁵ Equilibrium, understood as the absence of any states of conflict whatsoever within the organism, proves here to be the supreme principle of thinking, of logic as a system of rules, the observance of which guarantees the achievement of this goal. The goal is to reach a state where the organism feels no needs whatsoever, but exists in a steady state of rest and immobility.

It is easy to see how unfit for the thinking of a revolutionist the logic is which is derived from such an understanding of thought. This logic made any mind which was subordinated to it absolutely blind with regard to the contradictions of reality standing before it; blind to the contradictions of the most realistic facts in the sphere of material (economic) relations between classes. This logic blinded the mind with regard to the very essence of the revolutionary crisis which had matured in the land, in the system of relations between people.

13 Berman, *Op. cit.* p 137.

14 *Ibid*, p 165.

15 *Ibid*, p 97

The materialist dialectic of Marx directed the thinking of the revolutionist toward an analysis of these contradictory relations. The idealist metaphysics of Mach turned his attention away from such an analysis.

Lenin clearly saw that a revolutionist who had adopted such a logic of thought would inevitably be transformed from a revolutionist into some kind of capricious creature ignoring the real contradictions of life and trying to foist his own arbitrary will upon it. He therefore began to explain to Bogdanov, Lunacharsky and all their co-thinkers the nature of the philosophy to which they had fallen prisoner, and the terrible nature of the infection which had entered their brains. He had to explain this not only to them, but to the whole party and to all those worker-revolutionists who had been imprudent enough to believe the scientific authority of Bogdanov, Bazarov, Berman and Lunacharsky. He had to decisively rescue them from this pestilence, impede the further dissemination of the Machist infection and at the same time cut short the Menshevik slander that Machism had been adopted by the Bolsheviks as their philosophical ideology, that Machism was the logic of Bolshevism, and consequently the root of its departure from the traditions of the Second International and the source of its break with Plekhanov.

Lenin declared firmly and clearly: the philosophical banner of Bolshevism was and remains materialist (yes, materialist, and not Hegelian!) dialectics, the dialectics of Marx and Engels.

Mach's scheme of thinking is the scheme (logic) of thinking of an empiricist in principle who is trying to turn the peculiarities of an historically limited mode of thinking into a universal definition of thinking in general. This scheme corresponds as much as possible to the frame of mind of the petty-bourgeois philistine who is alarmed by the revolution and concerned with one thing – how to preserve the equilibrium inside his little universe or how to restore this equilibrium if it has been upset, how to restore his lost comfort, both material and spiritual, by eliminating from it all the contradictory elements. By any means and at any price.

It is a catastrophe if the scheme of this thinking penetrates the mind of a revolutionist and begins to be his guide. The philistine who has finally lost his equilibrium then becomes transformed into an enraged petty-bourgeois, into a 'pseudo-left', while the revolutionist who has become like him turns into the leader of such 'lefts'. Or, having lost his balance, he begins to look for a way out not in a 'r-r-revolutionary'

frenzy, but in the quiet lunacy of religious seekings, in the search for a kind little god.

Bogdanov, for instance, was (very sincerely) a man of indomitable revolutionary will, which was both unbending and irreconcilable. But this energy was always looking for an outlet which was a bit more direct and straightforward. He never wanted to recognise any detours to his goal, and he wasn't able to seek them out. Once he had seen in Mach's schemes of thinking the 'philosophical confirmation' of the correctness of these positions, he began to think and act in their spirit in an ever more convinced and consistent way. And this rapidly led him away from Lenin, from Bolshevism, and from the conscious acceptance of materialist dialectics.

Another pole within Russian Machism was Lunacharsky. This highly educated intellectual and humanist possessed a character that was much softer than Bogdanov's; he had a much less iron-like will. He was much more inclined to making declamations on a moral-ethical plane, or to constructing ideals, and he found in Machism the philosophical justification of precisely this weakness. He ardently began to seek and build 'an earthly revolutionary equivalent to God'. But the searches for a god on this earth were no more fruitful than the searches for him in heaven, and Lenin tried to explain this.

Mother-history, who is the true mother of philosophical, political and all other ideas, confirmed the correctness of Lenin and showed the incorrectness of his opponents. And she continues her confirmation.

History, as Hegel often used to say, is a truly terrifying judge. A judge who in the final analysis makes no mistakes, as opposed to many other judges and courts of law. But here she has already passed her sentence, which is final and subject to no appeal. Lenin proved to be correct, and Bogdanov, Bazarov, Lunacharsky, and Berman were incorrect. After Lenin's book, no one among the Bolshevik ranks dared to openly declare and defend his Machist frame of mind.

There were, it is true, those who sympathised with Mach and Bogdanov, but now they had to do this in silence. And Bogdanov, who wasn't able or willing to investigate theoretically the interconnections of the material (economic) contradictions within the country (interconnections which were moreover very dynamic), finally became muddled in politics as well.

When he had finally become convinced that he was helpless in politics, Bogdanov devoted himself to that which he understood, to biology, medicine, and the life of a physician. He died in 1928 while conducting a risky medical experiment with his own blood. A long obituary was published about him along with his portrait in the journal *Under the Banner of Marxism*, treating him as a hero of medicine and as a man of crystalline purity.

But his disciples who accepted his views as ‘genuine scientific philosophy’ turned to experiments far from the medical field. These were the vagaries of the Proletcult in art. These were the risky experiments in the country’s economics during the 1920s, which were based on the mechanical ‘theory of equilibrium’, directly descended from Avenarius and Mach.

Lenin, of course, did not and could not foresee all this in all its concreteness at that time. But he clearly saw that great misfortunes were concealed in Machism for revolutionaries and for the revolution itself.

The objection can be made: isn’t this somewhat of an idealist overestimation of the strength and power of philosophy in general, and not only the philosophy of Mach?

Of course, the thinking of people is formed first of all not by teachers and philosophers, but by the real conditions of their lives.

As Fichte said, the kind of philosophy you choose depends upon the type of person you are. Everyone is attracted to a philosophy which corresponds to the already formed image of his own thinking. He finds in it a mirror which fully presents everything that earlier existed in the form of a vague tendency, an indistinctly expressed allusion. A philosophical system arms the thinking (consciousness) of the individual with self-consciousness, i.e. with a critical look at oneself as if it were from the side, or from the point of view of the experience common to all mankind, of the experience of the history of thinking.

Within the bounds of the experience which Bogdanov and his co-thinkers possessed, no room could be found for a subject such as a country which was involved in the process of capitalist development, in a process which had deposited its own, new and specific, contradictions of development on the old, well-known and still unresolved contradictions of before. The mind which had been formed on an analysis of particular scientific and technical problems, and which had been directed toward

the resolution of these problems, gave up and was lost before the picture that was so complex, extremely differentiated, and yet unified.

In particular, this was patently revealed when the problem on the agenda was the drawing of the lessons from the defeat of the Revolution of 1905-1907. In order to draw the true lessons of the defeat – and only those could be useful for the future – what was most of all needed was the strictest theoretical analysis of the course of the revolution, beginning with its causes and ending with an analysis of the strengths and weaknesses of the classes which had collided in this revolution. An analysis was required which was absolutely sober, absolutely objective, and which was made, besides, in the interests of the revolution. The materialist dialectics of Marx and Engels was directed precisely at such an analysis, demanded it unconditionally, and armed one's thinking with the corresponding logic.

The heads of the future Machists were not prepared to carry out such a task. They then began to search for some kind of instrument which was a bit more simple and a 'bit more effective'. Machism was precisely suited for such ends.

When the revolution had been drowned in blood, the demand for Machist philosophy grew much stronger. Of course, not only Machist philosophy was in demand. So were open mysticism, and pornography. Times of reaction are very difficult for one's mental health. The disappointment of revolutionary hopes is a terrible thing.

The hopes for progress and for democratic transformation begin to appear to be impossible illusions of ideals which are alluring but which can never be realised in the real world. The heroes of 1905 who tried to bring them into being 'here and now' seem to be naive utopians or, even worse, self-sufficient adventurers ...

And so, as he thought about the future, Bogdanov wrote a science fiction novel which deals with socialism.

2. The Positive Programme of Russian Positivism

This novel – *Red Star* – is hardly an accidental phenomenon as far as the fate of Russian Machism is concerned. Let us examine it more closely; it will provide answers to many of the questions which interest us at this time – including A. Bogdanov's attitude towards the teachings of Karl Marx. We will discover the essence of the philosophy which he (unlike Lenin) uses as a prism to begin his examination of socialism. A socialism 'critically purified' in the light of Mach's principles, in the light of the 'successes and achievements of modern natural science', in the light of the 'latest philosophy' which he was now preaching together with Bazarov and Yushkevich, Lunacharsky and Valentinov, Berman and Suvorov.

In *Essays in the Philosophy, of Marxism* he joined them in outlining his 'new philosophy'. In the same year, 1908, he also published *Red Star* in which this philosophy is applied to the rethinking of socialism and its perspectives.

The effect achieved is very interesting. The more that A. Bogdanov tries to defend the socialist ideal, the more elegant and lofty it becomes in the author's eyes, more and more (and this is not Bogdanov's fault, just his misfortune) it begins to remind one of a worn out, sterile and anaemic icon, which is rather unflattering for a live human being.

Here it is very clear how his thought takes the road going in just the opposite direction from Marx and Engels, the road away from science to utopia. But Bogdanov feels that nothing has changed; he thinks that he is going forward both in philosophy and in the explanation of social and economic problems.

The novel not only includes numerous passages from *Empirio-Monism*. The entire structure of images is organised by the ideas of this philosophy, and for this reason *Red Star* is simply an artistic equivalent of Bogdanov's theoretical constructions and his epistemology.

From an artistic point of view, the novel is of little interest; it is boring and didactic. It obviously never joined the golden treasury of science fiction. But it helps us to understand much in Bogdanov's philosophy, in its real, earthly equivalents.

The novel as a whole is a long and popular exposition of Mach's (empirio-monist) interpretation of the teaching of Marx. Heroes of the book frequently present quotations from *Empirio-Monism* and try to explain their 'actual meaning' as clearly as possible to the reader. The text of *Empirio-Monism* is cut up into pieces and commissioned for delivery to the engineer Menny, the physician Netty and the revolutionary Leonid N.

The novel begins quite realistically. Leonid N. sits down to agonise over the lessons of the defeat of the 1905 Revolution, as well as the reasons behind his breaking up with his beloved woman. And suddenly it appears that he is not the only one who is thinking about these two subjects.

It turns out that the events of 1905-1908 and his personal fate are being studied with close attention by ... beings from another planet. Strangers from Mars.

Their egg-shaped spacecrafts have been hovering over the barricades of Krasnaya Presnya and over Stockholm, where the heated discussions between the supporters of Lenin and the supporters of Plekhanov had been taking place. They know everything. Even the reasons why Leonid N. and Anna Nikolaevna have separated. Their omniscient eye probes the depths of all earthly secrets. In addition they are very intelligent, exceedingly shrewd, and they understand everything much better than the sinful earthlings. Their attention to earthly matters is not without a definite motive, but the aims of their visit they hold in secret. Only later will it reveal itself to Leonid N.

The only person with whom they finally establish contact is Leonid N. Why has he been chosen? Because their psycho-physiologists have determined that on the entire earthly globe he is the one human specimen who is the closest to them. Both physiologically and psychologically. Only with him can they hope to achieve mutual understanding.

The alien beings explain to Leonid: through a study of him, they want to thoroughly investigate the psychology of an inhabitant of Earth, and of its 'best variant' besides, in order then to decide whether it would be risky for them to help the Russian revolutionary Social-Democracy; indeed, they could arm it with a super-weapon – with a bomb made from fissionable radioactive elements.

But could they be entrusted with such a superweapon? Were they sufficiently reasonable for this?

With this goal in mind they arrange an excursion to Mars for Leonid N. There he sees for himself all the wonders of super-science and super-technology. Flying devices with engines working on the energy of 'anti-matter' ('matter with a minus sign') are just as common as buses are for the residents of Moscow or London. But it is not the technical wonders that interest Leonid N. the most. More important for him are the social structure of Mars, the people, and their inter-relations. On Mars there is socialism. Or to be more precise, the fully realised 'ideal model' of socialism.

Private ownership of the means of production and of its product have long since been liquidated and forgotten. Production is carried out according to a strictly calculated plan (using gigantic calculating machines). Minor and accidental deviations from the plan are swiftly and easily eliminated. Personal needs are satisfied in full and are not regulated, for every Martian is reasonable enough not to want anything superfluous. Here there is complete equilibrium, without any contradictions or conflicts.

The state has long since disappeared, as well as all organs of violence. There is no need for them since all normal Martians are intelligent and modest. Of course, there are exceptions, but only among uneducated children and abnormal people (the insane). They are easily dealt with by physicians and teachers, who are authorised to use force that is also not regulated in any way. Right up to the painless killing of those who are incurable or unyielding. The physicians and teachers are intelligent and goodhearted, and there is no reason to fear any abuses.

Labour is neither difficult nor burdensome. Machines do everything for the people. People only supervise them. A few hours of work where it is needed for society as a whole (indicated by figures on brilliant scoreboards), and you are free.

What do Martians do after work? Who knows ... Leonid N. (here they call him Lenny) isn't allowed to look into this. Perhaps they devote themselves to love, perhaps art, perhaps intellectual self-improvement. But these are everyone's private matters, and, on Mars it is not acceptable to poke one's nose into private matters.

Thus, within society, in the sphere of relations between people, there reigns a full, almost absolute, equilibrium. All contradictions have disappeared, and differences are on the verge of disappearing. They have been reduced to a necessary minimum. Even differences between the sexes

(Lenny is long unable to understand that Netty, the young physician who is treating him, is in actual fact a young woman who has fallen in love with him).

In Lenny's eyes, all Martians look alike. In each one he only sees one and the same general type which has been multiplied over and over: a large-headed being with large impassively-attentive eyes and a weak, anaemic body, which is concealed beneath the same style of rationally designed clothing. We have been created in this way by nature, the Martians explain to Leonid N., by the nature of Mars. Here, solar energy is less intense and the force of gravity is half as strong as it is for you on Earth. Therefore we are not as emotional as the inhabitants of Earth, but on the other hand, we are more sensible. Hence our psychic is more balanced than yours, and all the other details are bound up with this. And we have constructed socialism at an earlier date.

Lenny begins to feel uneasy and disturbed. He tries to find out, isn't it boring to live in this geometrically balanced and sterilely uncontradictory new world? The Martians look at him with a sad and condescending smile: your very question gives you away as an alien being, as a newcomer from Earth. It betrays the degree to which the remnants of capitalism remain strongly embedded in your consciousness, and the degree to which bourgeois individualism remains strong within you.

Lenny is sadly forced to agree with this diagnosis. His reason understands and accepts everything, but his emotions continue to rebel. His reason is still not strong enough to crush these irrational emotions, and Lenny begins to feel extremely despondent. Martian psychiatrists are forced to place him in a hospital and restore his disturbed mental equilibrium with the help of drugs. For a time, the remnants of capitalism in his consciousness cease to torture him. The chemicals have suppressed them.

But only for a while, since Lenny's psychophysiology has retained its earthly and imperfect characteristics. He sees everything as before with the eyes of an inhabitant of Earth, and his 'narrowly patriotic' interests prevent him from completely rising to the level of interplanetary interests. They prevent him from looking at the world from the point of view of the interests of interplanetary socialism. Hence, with his reason he understands everything correctly, especially the fact that Martian socialism is a much higher and more perfectly developed form of interplanetary socialism than those forms which have matured on the Earth. This he understands clearly as long as his 'bourgeois and individualistic earthly emo-

tions' lie dormant these 'remnants of capitalism in his consciousness' which have taken root in his earthly flesh.

They can be suppressed with the help of drugs. But as long as they simply lie dormant, but have not been eradicated, the main reason for the lack of understanding between Lenny and Martian socialism remains intact. What lingers is their obvious psychophysiological incompatibility, which is based on the biological incompatibility of two different races of inter-planetary mankind.

Bogdanov was by no means trying to lampoon socialism, on the contrary he was devoted to it. A different matter altogether is what Marxian socialism looked like when he began to look at it through the distorting lenses of Machist philosophy, through the prism of his empirio-monism, through the conceptual framework of this philosophy. Here is how its 'optics' work. When examined through its lenses, the doctrine of Marx is at first insignificantly distorted, it is only schematised.

In the image of the future which is outlined by Marx, those features and contours are then abstractly singled out which characterise socialism exclusively from the point of view of political economy (moreover from a very narrow understanding of the political economy).

These are all the features which were seen by the hero of Bogdanov's novel on the Red Star. Socialised property and the planned organisation of production, the regulated balance between production and consumption, between socially necessary time and free time, etc., the absence of legal and state coercion, the high level of consciousness of the participants in social production – all this is correct, all these are necessary and important characteristics of socialism which Bogdanov sees.

But, aside from the features of socialism which are indicated, nothing else is visible through the Machist spectacles. The economic framework of Marx has remained, but only as a framework, as a skeleton, while the flesh and blood, the concrete reality of the Marxist conception of the socialist future, has been cast aside and replaced by the Machist fantasy. As a result you see before you the same picture which the hero of Bogdanov's novel saw with his 'own eyes' on the planet Mars. Marx's doctrine, examined through the prism of Machist philosophy, couldn't look otherwise.

Bogdanov's economic framework is Marxian, but its realisation (i.e. the structure of all the remaining spheres of social life – morality, artistic culture, the political and legal superstructure) is, no longer according to

Marx, but to Mach. Or to be more precise, it is according to Bogdanov, for he 'creatively developed' and concretised the philosophy of Mach in conformity with the interests and goals of the socialist organisation of the world.

Let us return once again to the 'Martian' heroes of the novel and let us see what further befell them on Mars. This is doubly interesting, for the author himself makes no secret of the fact that under the guise of Martian events he is describing future events here on Earth; events that he 'calculates' according to the formulae of empirio-monism.

Thus, Lenny's biopsychic incompatibility with Martian socialism is established in a strictly scientific manner – it is verified by Martian psycho-physiologists and recognised by Lenny himself. He therefore agrees to be cured. The treatment is the most radical kind. They themselves determine the degree of the efficiency of treatment. He trusts them unconditionally. But of course, their medicine (like their psychology, like all of their mighty culture) occupies the same heights which will be reached on Earth after many centuries, or even thousands of years.

Thus reasons the hero of the novel after he has run into 'real' socialism on Mars. This is the way the Martians reason as well. Indeed, they think according to the same iron logic of empirio-monism, only raised by them to the highest level of perfection. And the conclusions which are made with the help of this implacable logic are mathematically strict and irrefragable.

Here are the premises:

1) The natural resources on Mars are poor and will soon begin to run out. Mars is faced with two inexorable alternatives: either its socialist civilisation will enter a phase of degeneration i.e. take the path to its destruction, or it will save itself at the expense of the widened exploitation of the natural resources of other planets. Already in 35 years the shortage of resources will adversely affect it.

2) There is no choice. What is necessary is the immediate colonisation of Earth and Venus. Earth would be preferable; there may not be enough time and energy for Venus. But Earth is populated by the human race, with whom it is impossible to reach a peaceful agreement because of biopsychic incompatibility – this was shown by the experiment on Leonid N.

3) Strictly logical calculation shows (as one of the heroes of the novel says) that sooner or later, 'after long hesitation and the fruitless and

agonising squandering of our energy, the matter will inevitably lead to the same formulation of the problem which we, as conscious beings who foresee the course of events, should accept from the very beginning: the colonisation of Earth requires the complete extermination of earthly mankind ...'

The conclusion: if the Martian – higher – form of socialism is to survive and flourish, it must sacrifice the lower – earthly – form of life.

It is true, they say, that we can try to forcibly re-educate the earth's human race, we can carry out by force the socialist cultural revolution in its consciousness. But it really isn't worth it, there would be many troubles and it would drag on for a long time. And time doesn't wait. Therefore there is only one way out – extermination. This is much less complicated, more economical, and consequently more rational. 'And there will be no cruelty in our actions, because we are able to carry out this extermination with much less suffering for them than they continuously inflict upon each other!'

Thus it is the economy of thinking, the economy of effort, and the economy of suffering of the victims themselves ... In the end, the Martians spared both the human race and Lenny. They spared them despite the fact that in a fit of his recurrent mental disorder, Lenny committed murder (he murdered the same theoretician who substantiated the necessity of exterminating life on Earth). They simply expelled him from their planet.

And it was love which accomplished this miracle of mercy ... But, if you will, while there may be love here, how is it able to withstand the iron logic of Martian reason? Very simply. The appeal to love and other lofty and noble, albeit rather irrational emotions is generally characteristic for positivism, which continually finds itself at an impasse in its arguments. And despite rational thinking, which is as precise as the results of a calculating machine, and just as soulless as this device, there arises a strange yearning – insofar as it is not confined to the usual logic – for human warmth, love and sympathy. When fetishised science and scientific thinking lead to immoral conclusions, to the justification of violence and cruelty, evoking horror even among the adherents of this thinking, then the scientist sheds a tear and begins to seek salvation in abstract and empty, but 'humane' ideals, placating his romantic, but, alas, absolutely barren nobility.

For this reason then Bogdanov found no other means of saving the earth's inhabitants except through love. The same female Martian, whom Lenny for a long time took for a young man, had fallen in love with him and therefore understood the essence of the matter better than the theoretician of extermination. Netty passionately spoke out against the plan of extermination and in favour of an alliance with this semi-barbaric earthly civilisation with its intellect which was still weak. Yes, they are weaker and lower than we are, but they are other beings. Let us love them, brother Martians, such as they are!

'The unity of life is the highest goal, and love is the highest reason!'⁷, pathetically explains Netty. Thereupon she sets out towards Earth after the exiled Lenny in order to take part personally in the revolution there.

Let us leave Mars for a while and return to an analysis of *Essays in the Philosophy of Marxism* and other works by Bogdanov and his co-thinkers.

The reader has probably already managed to notice how often and persistently the magical word *equilibrium* is repeated in the quotations from those texts. Yes, here we are dealing not simply with a word, but a genuine symbol – a symbol of faith, a fundamental and key category of the logic of their thinking. No matter where their arguments originate, or where they lead to, they inevitably begin with equilibrium and end with equilibrium.

From their works the reader discovers that equilibrium is not simply or solely an equal balance on the scales with which everyone is familiar from personal experience, but it is something much more important and universal, something metaphysical.

It turns out that this magical concept contains within it both the secret of life and the secrets of the functioning of social organisms, and even the mysteries of all cosmic systems and events. It turns out that all these mysteries, secrets and enigmas are simple and easy. One only has to apply to them the magical 'lock pick' – and they become transparent and simple.

It turns out that the entire infinite Universe strives to achieve equilibrium. Thus the history of mankind, the history of social organisms (people, lands, states and civilisations), is directed towards and yearns for equilibrium.

Immediately, everything becomes clear: both the condition of economic and political relations and the organisational principle of the living body of the frog, and the direction of the evolution of the solar system.

It is remarkable that in not one of the works of the Machists will we find an intelligible explanation of the meaning of this word. They all prefer to explain it by means of examples. But throughout the entire system of such examples, the actual meaning of this 'empirio-symbol' clearly shines through: it is first of all a state of inviolable rest and immobility. It is the absence of any noticeable changes or deviations, the absence of motion.

Equilibrium means the absence of any state of conflict, of any contradictions whatsoever, i.e. of forces which pull in different, contradictory directions. And where is this seen? You will never see such a state, even in the shop, even in the example of the scales. Even here equilibrium is only a passing result, an ephemeral effect, which is achieved at precisely that moment because two opposing forces are directed at each end of the lever: one presses upward, and the other presses downward.

In the Russian language, equilibrium means: 'A state of immobility, of rest, in which a body is under the influence of equal and opposing forces'. But according to the logic of Machism, the presence of opposing forces exerting pressure at one point (or on one body) is already a bad state of affairs. It resembles the state which is designated in Hegelian language as contradiction, as 'a body's state of discomfort', in which two opposing forces exert pressure, either squeezing the body from two opposite sides or tearing it in half.

Such an understanding of equilibrium is therefore unacceptable for the Machists. How could it possibly be that equilibrium turns out to be only the passing and quickly disappearing result of contradiction, the result of the action of opposites applied at one point, i.e. the very state which every living organism tries to escape as soon as possible, and by no means the state which it supposedly is striving to achieve.

Here then arises the concept of equilibrium which the Machists want to counterpose to contradiction, which is the presence of two opposing forces. It is a state in which two opposing forces have ceased to exist and therefore no longer squeeze or tear apart the ideal body (or the equally ideal point of their application). The forces have ceased to exist and have disappeared, but the state which they have established at a given point still remains. Equilibrium is a state of this kind. A state characterised by the absence of any opposing forces whatsoever, be they internal or external, physical or psychic.

In this form, equilibrium is the ideal. It is the ideal model of the cosmos and the psychics, the fundamental philosophical category of Machism, and the starting point of Machist arguments about the cosmos, about history, and about thinking. The aspiration to escape once and for all from all contradictions whatsoever from whatever kind of opposing forces, is the striving for equilibrium.

In addition to all the rest, equilibrium finds under these conditions all the characteristics which ancient philosophy describes with the words 'inner goal', 'objective goal', and 'immanent goal'. According to Machist logic, equilibrium is by no means a real state, given in experience, even if in passing, but only the ideal and the goal of nature, man, and being in general.

Such an equilibrium is static, complete, disturbed by nothing, an equilibrium of rest, an equilibrium of immobility, a state of 'suspension in the cosmic void'. It is the ideal model of the Machist Bogdanovian concept of equilibrium.

This is the first 'whale' of Russian Machism.¹⁶ The second 'whale', its second logical foundation is *economy* as the supreme principle of the cosmos and of thinking.

And if, for the Machists, equilibrium is the ideal and goal of the entire world process, then economy turns out to be the sole and universal means of its achievement: "The forms of mobile equilibrium, which from time immemorial called forth the idea of objective expediency (the solar system, the cycles of the Earth's phenomena, the process of life), take shape and develop precisely by virtue of the conservation and accumulation of their inherent energy, by virtue of their internal economy".¹⁷

This was written by 'Comrade Suvorov' (Lenin demonstratively calls this thinker 'comrade', showing his ironical attitude towards Plekhanov and Bogdanov; in criticising Bogdanov's Machism, Plekhanov had in a similarly demonstrative fashion called him 'Mister Bogdanov', and the latter was very offended). And 'Comrade Bazarov' explains in the same *Essays*: "The principle of 'the least expenditure of energy' lies at the base of the theory of knowledge of Mach, Avenarius and many others, and is therefore an unquestionably 'Marxist' tendency in epistemology. On this

16 According to an old Russian myth, Earth is supported by three whales. — *Tr.*

17 *Essays in the Philosophy of Marxism*. A Philosophical Miscellany. St Petersburg, 1908, p 293.

point, Mach and Avenarius, who are by no means Marxists, stand much closer to Marx than the patented Marxist G. V. Plekhanov with his saltovitale epistemology'.¹⁸

Where does this 'closeness' lie? It's all very simple: "There is "economy" in Marx; there is "economy" in Mach. But is it indeed "unquestionable" that there is even a shadow of resemblance between the two',¹⁹

Lenin comments on the argument. In addition he patiently explains to Bazarov and, Suvorov (having in mind, of course, not so much them, as their readers) that if there actually is a 'shadow of resemblance' here, then it is exhausted by the word, by the term 'economy'. The 'resemblance' here is purely verbal and only verbal.

In his evaluation of the 'logic' which helped the Russian Machists make their discoveries, Lenin was categorical and merciless. After citing Bogdanov's tirade: *'Every act of social selection represents an increase or decrease of the energy of the social complex concerned ...'* . etc., Lenin sums up: 'And such unspeakable nonsense is served out as Marxism! Can one imagine anything more sterile, lifeless and scholastic than this string of biological and energeticist terms that contribute nothing, and can contribute nothing, in the sphere of the social sciences? There is not a shadow of concrete economic study here, not a hint of Marx's *method*, the method of dialectics ...'²⁰

Idle talk, playing with words, terms and symbols – there is not even a trace of anything else here. All the more so, there is none of that 'philosophical deepening' of the Marxist doctrine to which Bogdanov and his friends lay claim.

There is economy everywhere, at all times, and in all things: not only economy with money, but economy with the efforts of thought, and (remember Marx?) economy with the suffering of the victims of a war of extermination. In such a 'generalised, philosophical' sense, the term 'economy' is turned into a simple label which can calmly be attached to any phenomenon, to any process, without worrying in the slightest about the investigation of this concrete phenomenon or process.

18 *Ibid.*, p 69.

19 *LCW* vol 14 p 169.

20 *Ibid.*, p 327.

This type of philosophising, with its pretensions to a 'genuine, scientific synthesis of all particular generalisations', provoked a rage in Lenin which he had great difficulty in controlling: 'Bogdanov is not engaged in a Marxist enquiry at all; all he is doing is to reclothe results already obtained by this enquiry in a biological and energeticist terminology. The whole attempt is worthless from beginning to end, for the concepts "selection", "assimilation and dissimilation" of energy, the energetic balance, and so on and so forth, when applied to the sphere of the social sciences, are *empty phrases*. In fact, an *enquiry* into social phenomena and an elucidation of the *method* of the social sciences cannot be undertaken with the aid of these concepts'.²¹

But it is not simple verbiage. It is consciously counterposed to the fundamental principles of materialist dialectics. For if equilibrium is first of all the Machist anti-concept of the category of contradiction, then economy is counterposed in the most unequivocal manner to the dialectical materialist understanding of truth.

Economy, when it is transformed into a principle of scientific thinking, into an epistemological principle, is called the principle of the 'least expenditure of energy', or sometimes, the principle of 'simplicity'. This principle is even more convenient since it can be remembered when it is convenient, and forgotten when circumstances prohibit its use.

Lenin makes a brief and precise diagnosis: '... if the principle of economy of thought is really made "*the basis of the theory of knowledge*", it can lead to *nothing but* subjective idealism. That it is more "economical" to "think" that only I and my sensations exist is unquestionable, provided we want to introduce such an absurd conception into *epistemology*.

'Is it "more economical" to "think" of the atom as indivisible, or as composed of positive and negative electrons? Is it "more economical" to think of the Russian bourgeois revolution as being conducted by the liberals or as being conducted against the liberals? One has only to put the question in order to see the absurdity, the subjectivism of applying the category of "economy of thought" here'.²²

Ernst Mach himself, when he is thinking as a physicist, 'explains' his principle in such a way that there is essentially nothing left of it. 'For

²¹ *LCW* vol 14 p 328.

²² *Ibid.*, p 170.

instance, in the *Wärmelehre* Mach returns to his favourite idea of “the economical nature” of science (2nd German edition, S.366). But he at once adds that we engage in an activity not for the sake of the activity (366; repeated on 391): “the purpose of scientific activity is the fullest ... most tranquil ... picture possible of the world” (366) ... To talk of *economy* of thought in *such* a connection is merely to use a clumsy and ridiculously pretentious word in place of the word “correctness”. Mach is muddled here, as usual, and the Machists behold the muddle and worship it!²³

For the Russian Machists, the ‘economy of thought’ is the supreme achievement of ‘the philosophy of modern natural science’, which must be rigorously applied to the analysis of social phenomena. Then this analysis will be ‘precise’ and infallible.

In order to conclude the discussion of this principle, let us introduce the authoritative testimony of the staff-chronicler of positivist wanderings in this question, the apologist of the ‘Vienna Circle’, Victor Kraft. In discussing the latest attempts of Karl Popper to ‘give a “precise formulation” of the concept of simplicity’, he states: ‘Simplicity plays a decisive role in all hitherto existing empiricism, starting with Kirchhoff, appearing with Mach and Avenarius in the form of “economy of thought”, as well as in the conventionalism which begins with Poincaré. It should determine the choice between hypotheses and theories. However, all the attempts which have taken place before now to explain what exactly this simplicity is, as well as to establish a criterion for simplicity, have not been crowned with success. That which is characterised as the simple appears to be so partly from a practical²⁴ point of view (as the “economy of thought”), partly from an aesthetic point of view, and in any case, from an extra-logical point of view. What must be understood as simplicity in the logical sense Popper tries to define with the help of a degree of adulteration. From his brief explanations in this respect, it is impossible

²³ *Ibid.*, p 170-71.

²⁴ The reader should keep in mind that in the positivist lexicon the ‘practical point of view’ means something far different from what it means in the dictionary of Marxism. For the positivists, a ‘practical’ view of things signifies a narrowly pragmatic, immediate view, having no relation whatsoever to a theoretical view and never able to coincide with it. Here this means: from the point of view of today’s ‘benefit’ or ‘use’, we have the right to consider something simple, which from the theoretical (logical) point of view is complex or even super-complex. And vice versa, of course. – *EVI*.

to understand clearly enough how widely applicable such a concept of simplicity actually is: here a careful inquiry lies still in the future ...²⁵

More than one hundred years have passed, but the 'philosophy of modern natural science' has thus been unable to intelligibly explain to people what must be understood by 'economy of thought' (or by 'simplicity'). This 'simplicity' of theirs has turned out to be not very simple.

The only definition which, given the desire, one can extract from the works of Mach and his successors in this respect, is in actual fact not at all complex: 'simplicity' should be understood as whatever comes into your head. In ancient philosophical language this was always defined as extreme subjectivism. When translated into the natural Russian language, it means the completely arbitrary use of words and terms.

Such is the celebrated principle of the 'economy of thought'; this is the second 'whale' of Russian Machism.

Before we speak about the third 'whale', we would like to turn our attention to those methods and to that logic which are used to construct the founding principles ('the whales') of Russian Machism.

This is an extremely simple mechanism, and Bogdanov's Netty very clearly and in a popular fashion explains its uncomplicated structure. 'Of course', said Netty, 'every philosophy is an expression of the weakness and fragmented nature of cognition, the inadequacy of scientific development; it is an attempt to give a unified portrayal of being, filling in the gaps of scientific experience with speculations; philosophy will therefore be eliminated on Earth as it has been eliminated for us by the monism of science'. And how is such a goal achieved? By the pure and simple accumulation of 'scientific information', which is hauled in from all directions and combined into a single whole with the help of conversations about what it is these pieces of 'scientific information' have in common with each other. That's all. In this is contained the whole of empirio-monism.

The word 'empirio' simply stands for 'experience' or 'experimental'. It is a key word, a catchword. It supposedly serves notice: in a philosophical system with this label there is nothing that is fabricated, nothing that is speculative – there is only experience, only the facts of experience, 'critically purified' of everything which is alien, of everything which is not

25 Kraft, W. *Wiener Kreis*. Wien – N.Y., 1968, S. 130.

given in this experience, of all ‘things-in-themselves’, of everything ‘transcendent’ and of everything that is ‘above experience’.

‘Scientific monism’ means that works bearing this name will deal exclusively with what has been firmly established by science, by physics, chemistry, physiology, psychophysiology and political economy. Here discussion will centre only on what is guaranteed by science, and whatever is ‘doubtful’ will be carefully – and ‘critically’ – eliminated and subjected to ridicule.

There are X-rays, energy, into which matter is transformed, mathematically proven relativity, conditioned reflexes, and so on and so forth. From these experimental facts, from scientific data, there will be compiled, as if from a mosaic, a picture of the world as a whole – a unified picture of being, as it is described ‘from the point of view of the successes and achievements of modern natural science’.

But in order that such a picture doesn’t disintegrate into its component parts, into separate and individual ‘experimental data’, these pieces must somehow be joined and cemented together. But in what way? It is necessary to find out what it is that all these pieces, taken separately, have in common. How are they alike? One must find the ‘general law’, the ‘general principle’ to which all the ‘experimental facts’ are similarly subordinated. What is there in common that, given the effort, can be seen between two such dissimilar things and events as the flight of Bleriot across the English Channel, and conditioned reflexes; between energetist theories about substance and the law of the growth of the productivity of labour?

‘Let us discover that which is in common’ means ‘let us discover that universal law to which the “entire world process” is subordinated’. It means, ‘let us create a unified (“monistical”) and “thoroughly scientific” picture of the world as a whole, a “unified picture of being” ...

Suvorov writes: “In the gradation of the laws that regulate the world process, the particular and complex become reduced to the general and simple, and all of them are subordinate to the universal law of development – *the law of the economy of forces*. The essence of this law is that *every system of forces is the more capable of conservation and development the less its expenditure, the greater its accumulation and the none effectively expenditure serves accumulation*. The forms of mobile equilibrium, which long ago evoked the idea of objective purposiveness (the solar system, the cycle of terrestrial phenomena, the process of life), arise and develop by virtue of the con-

servation and accumulation of the energy inherent in them – by virtue of their intrinsic economy. The law of economy of forces is the unifying and regulating principle of all development – inorganic, biological and social”...

‘With what remarkable ease do our “positivists” and “realists” concoct “universal laws”!’²⁶

The last sentence, the ironical assessment of Suvorov’s argument which has been cited above, belongs of course to Lenin.

Yes, these ‘universal laws’ are indeed concocted swiftly and easily. Only one thing is required for this – the ability to see what it is that two things which seem to be so different from each other have in common; let us take, for instance, the radioactivity of radium and the exertions of labour.

This way the ‘whales’ of Russian Machism turn out.

And now about the third ‘whale’ – ‘*organisation*’. With this ‘principle’, things are a bit different. If, with regard to equilibrium and economy, the Russian Machists were and remained the diligent pupils of their western teachers, then it was here that they displayed the maximum independence of thought.²⁷ Machism proceeds from the proposition, according to which all phenomena of ‘our experience’ are clearly divided into two categories: on the one hand – ‘Great Chaos’, and on the other – the countervailing ‘Organisational Principle’. According to Mach, ‘Great Chaos’ is the entire, unorganised mass of interwoven and flickering sensations, which descend upon the individual from the very first moments of his appearance on the Earth; it is an unregulated stream of sensations, impressions, and feelings, making up the form in which the real world presents itself to this amorphous individual. But the ‘Organising Principle’, which imposes its order, its laws and rules upon the world, is nothing else but thinking (consciousness).

This is the origin of Bogdanov’s socially organised experience, the origin of the empirio-monist, unified picture of being, which is estab-

²⁶ *LCW* vol 18 pp 331-32.

²⁷ It should be noted that, in addition to later developing his problematic conception of universal organisational science (*tektology*), A. Bogdanov also anticipated, as a number of modern enquiries have shown, certain ideas of cybernetics and general systems theory. – *New Park Editors*.

lished by thought out of the chaos of elements of the originally unorganised experience of separate individuals. Naive people then accept this picture as the real world, as the world of things-in-themselves as they exist before, outside of, and independent of their own organising activity.

The theoretical basis of this conception is the self-same logic of empiricism, which is primarily concerned with mechanical systems. The investigation of such systems is reduced to singling out the steadily repeating types of reciprocal action between parts, and correspondingly, to an orientation of thinking directed not towards a process, but towards a state. The result of cognitive activity here consists in fixing abstract general definitions of the object which are suitable only for the needs of classification, and for practical, utilitarian use. The logic of empiricism, or, what is the same thing, the logic of reproducing in thought the practical design of mechanical systems, is quite efficient and yields great practical results and benefits. But only insofar as the theoretician and practitioner are dealing with a mechanical system. This type of thinking, which is limited by the bounds of object science, develops in Bogdanov's eyes into a universal framework for thinking in general, into a framework of Logic with a capital L. All other types and methods of thinking begin to be seen as backward forms of the given (empirical) logic.

And for Bogdanov, the most adequate type of this kind of logic appears to be the thinking and activity of the construction engineer. Indeed, it is he who organises ready-made parts into some kind of system which is able to serve the completion of one or another goal. Such a construction engineer looks upon people just as naturally as he looks upon the parts which go into a structure which he is building. As such, its elements interest him only insofar as they can be (or cannot be) adapted to the job, to the small or large machine under construction, to the mechanism, or to the system of machines.

The explanation of the objective properties of those parts and materials, from which he must build (organise) his unit – is not his concern. This is done by physicists, chemists, physiologists, and so forth, and he always looks upon their data, gathered in the appropriate handbooks, as a semi-finished product of his own, special construction-engineer's activity, as the raw material of his organising activity. His chief concern is to devise, invent, design, organise, select and assemble, unscrew and then screw ready-made parts into new complexes, to fit parts into complexes, to polish them with such precision that they will easily take their place in

the construction which has been readied for them, and so on and so forth.

Bogdanov's philosophy is therefore like no other in holding on to those specific illusions of our century which have come to be called technocratic. The secret of these illusions is the idolisation of technology – technology of every type – from the technology of rocket design to the technology of dentistry, bomb-dropping or sound-recording. And with such an approach, the engineering and technological intelligentsia begin to resemble – both in their own eyes and in the eyes of others – a special caste of holy servants of this new divinity.

Bogdanov paints an inspired and poeticised portrait of these 'demi-gods' – the organisers and creators of progress – in his novel which is called *Engineer Menny*.

This is the same novel about which Lenin wrote to M. Gorky: 'I have read his *Engineer Menny*. The same Machism equal to idealism, hidden in such a way that neither workers nor the foolish editors of *Pravda* understood. No, this is an inveterate Machist ...'²⁸

Yes, in writing his novel, Bogdanov tried to 'conceal' his Machism, expressing his views not in the language of theoretical essays, but in the language of artistic images. Only rarely is Machism offered here openly in words. But then what comes to the forefront is the propagation of the utopian conception about the role of engineers in the development of history and about the great advantages of their method of thinking over all other forms and methods of thinking.

The engineer Menny is endowed in the novel with all the characteristics of God-incarnate – completely in the spirit of the god-building tendencies of Russian Machism. This is the personified ideal of the super-engineer, the engineer-organiser. Bogdanov spares no colours in trying to portray the superhuman power of his brain, his superhuman will, and his absolute selflessness. But most of all, his organisational genius.

The first edition of the novel is dated 1912, and for understanding the evolution of Bogdanov's philosophy, it gives us no less material than *Red Star*.

In the novel we meet with the already familiar Leonid N. 'After the events described in my book *Red Star*', he says, 'I am once again living

²⁸ Lenin, *Complete Collected Works* vol. 48 p 161.

among my Martian friends, and I am working for the cause which is dear to me – the bringing together of our two worlds’.

‘The Martians have decided for the near future to refrain from any direct and active intervention in the Earth’s affairs; they intend to limit themselves for the time being to its study and to the gradual familiarisation of the Earth’s human race with the more ancient culture of Mars ... Within the Martian colonisation association there was formed a special group for the dissemination of the new culture on Earth. Inside this group I took upon myself the most appropriate role, that of translator ...’

To start with, this secret society for the dissemination of super-scientific knowledge chose, for translation into the languages of the Earth ‘an historical novel ... a novel from the epoch which approximately corresponds to the present period of the Earth’s civilisation – the last phases of capitalism. It portrays relations and types which are similar to our own, and therefore relatively clear for the Earthly reader’.

The historical novel opens with a scene describing the session of the all-Martian government where engineer Menny outlines his grandiose plan for the building of the Great Canals. After describing the technological and financial sides of the project, engineer Menny puts into service the most persuasive argument for those who are present: ‘Besides all this, I am able to point out one more important reason for all the financiers and employers to support this project. You know that, from time to time over the last century and a half, with different intervals, there have been severe financial and industrial crises when credit suddenly collapses and commodities find no market; in addition to this, thousands of businesses are ruined and millions of workers are left without work ... A new crisis of this type, more powerful than all those previously, will follow after one to two years, only if there is no expansion of the market, which at this point, evidently, is not expected’.

After a certain amount of hesitation, the all-Martian government, which is the supreme council of employers and financiers, invests engineer Menny with the full powers necessary for him to carry out the project.

With this development, early capitalism with its anarchy of production gives way to state capitalism, and engineer Menny becomes the Great Dictator. Otherwise the building of the Great Canals would be impossible.

The cunning financiers and employers agree to this because they understand that he is not encroaching upon their power: 'To be a minister, or president of the Republic – this doesn't interest him ... He wouldn't even want to be financial master of the world ... He has the ambition of the gods'. Let us look more closely into the further development of events on Mars, into this 'science fiction' prognosis by Bogdanov regarding the 'most economical' ways for mankind to achieve socialism on Earth.

Invested with dictatorial powers, engineer Menny launches the gigantic building of the Great Canals. The market immediately expands and unemployment disappears as if by magic. The phase of super-capitalism has begun.

But even with super-capitalism, classes still remain. The two 'pure' classes are the super-capitalists and the proletariat. The peasantry – an intermediate class has vanished here; it became polarised and was therefore no longer cause for any concern.

It turns out that Engineer Menny is in a ticklish position – the difference between class interests is continuously disturbing him. The super-capitalists steal, and the proletarians, who are suffering from this thievery, go on strike, and this hinders to an extreme degree, the realisation of the great plans of the engineer. What is to be done? The engineer is unable to find a radical solution, for even his genial mind has still not fully overcome the remnants within it of the psychology of early capitalism: egoism and individualism.

The solution is found by his illegitimate son, engineer Netty, who inherited his papa's brilliant organiser's brain, while from his mother, the beautiful and kind-hearted Nelly who had been raised in a simple worker's family, he inherited a love for the proletariat.

Father and son conduct philosophical and sociological discussions in connection with the immediate problems of building the canals. They discuss the plundering of resources by representatives of the class of super-capitalists, and the strikes by the workers, in which they both see the same misappropriation of the workers' time, which is of no use to the building of the canals ... But the son defends the workers and condemns the capitalists. The father meanwhile condemns them both.

The father can't fully understand the correctness of his son's attitude, but he senses some kind of inexplicable advantages in the latter's position. He therefore, in the end, decides to transfer to his son the supreme

powers of Organiser of the Great Works. To be sure, he is rather afraid that his son will adopt a 'one-sided' position in support of the workers and thus do harm to the work.

But the son, to the great surprise of the father, doesn't want to take into his hands the sceptre of the Great Dictator, the personal Organiser of the Common Cause ... He accepts with pleasure the leadership of all the technical aspects of the job, but the 'administrative' (i.e. political) leadership he agrees to transfer into the hands of a representative of the all-Martian government.

He feels that such dual power is the most reasonable way out of the situation that has been created, and he introduces arguments in his own favour which are borrowed directly from the philosophical works of Mach and Bogdanov. Here Bogdanov doesn't even try to conceal his Machism, but presents it in open form:

Menny arose, and for a few minutes walked around the room in silence. Then he stopped and said:

'It's obvious that such a discussion is leading us nowhere. How are we to proceed? Do you agree to share the full powers with another assistant in such a way that all technical control will belong to you, and all administrative control – to him?'

He glanced rather uneasily at his son.

'Very readily', he answered, 'that's the most suitable way to proceed'.

'I give you my thanks', said Menny, 'I feared your refusal'.

'In vain', Netty retorted. 'Full administrative powers would have placed me in a difficult and slippery position. To be the official representative of one side, and with all my sympathies and interests belonging to the other side – that is the type of dual position in which it is not easy, and perhaps even impossible, to maintain equilibrium. To be true to oneself, to retain a clear and integral frame of mind, demands the avoidance of contradictory roles'.

Menny began to think and after a short silence said:

'You are consistent in your own peculiar brand of logic, that I can never deny you'.

It cannot be denied that his logic is truly peculiar. They offer complete power to a defender of socialism – both technical and administra-

tive (political) – with the proviso that he should not act openly on the side of one class against the other (on the side of the proletariat against the bourgeoisie), that he try to establish ‘equilibrium’ between them, and make sure that the interests of one are preserved as much as the other. But he doesn’t agree to this condition, alluding to the fact that ‘administrative control’, once it had fallen into his hands, would oblige him to act against his class sympathies and would compel him to fulfil the functions of a representative of the class of super-capitalists.

That this ‘administrative control’, taken into his hands, could be and would have to be finally used in the interests of socialist transformation, somehow never enters into his head. This role appears to him to be contradictory.

If you choose to be a functionary of the super-capitalist state, then carry out your functions honourably – this is what Bogdanov suggests to the reader through the image of engineer Netty. That is precisely why he sees the best solution to be the handing over of the functions of ‘administrative control’ (i.e. the resolution of all political problems connected with the grandiose building) to a lackey of the super-capitalists, while retaining for himself purely technical leadership, the resolution of purely engineering tasks.

The sagacious Martian super-engineers understood what no one on Earth is able to understand. They understood that all so-called social problems are in actual fact, fundamentally, engineering and technological problems. And they should be solved by engineers, representatives of the scientific-technological elite, for only they are truly capable of investigating them in a qualified manner.

From this follow all the further things. Those ‘fetishes’ which are considered to be objective forms of the external world – such as space, time, value, capital, and so forth – are only the ‘fetishised’ (deified) forms of collectively organised experience. They are the fixed forms of a conservative consciousness. Not the consciousness of the individual ‘I’ – no! – but consciousness with a capital c, the consciousness of all people without exception. Forms which have crystallised in social consciousness and which are reinforced by force of habit and tradition.

Outside of consciousness there is neither time, nor space, nor value, nor surplus value. These are only ‘stable complexes of our sensations’, the schemas of their ‘association’ as part of a unified picture of the world as a whole, shared by all. In order to ‘scientifically understand’ these

complexes, it is necessary to analytically break them down into 'elements' (sensations), and then once again assemble them into new 'complexes', but only according to new, mathematically uncontradictory schemas, algorithms of construction, according to carefully thought-out recipes of rational organisation.

It is according to this schema that the super-engineers Menny and Netty organised first the consciousness of the proletariat and the bourgeoisie, and then the system of economic, administrative and cultural life corresponding to it.

This was by no means a simple form of literary amusement: in *Engineer Menny* Bogdanov 'artistically' interpreted the situation which had developed in the land and 'tried out' those roles which had been prepared for the supporters of socialism in the near future. The conception of future events which he describes in the novel explains the positions taken by the advocates of his philosophy in 1917.

The essence of their position is as follows. February established in the land a political regime of bourgeois democracy, and solved the main problem of 1905. Period. The Russian proletariat is not only weak and small in numbers, but also uncultured and little-educated. Therefore all talk of seizing power and using it in the interests of the socialist transformation of the land is utopian and unrealistic. Power ('administrative functions') must be left in the hands of the 'bourgeois democracy' (in actuality – in the hands of Kerensky, Guchkov, and Miliukov), and we must worry about whether this all-Russian government guarantees the rapid growth of the productive forces, and leads the country on to the path of scientific and technological progress. We must help it with all the means at our disposal, putting to work all our scientific and technological knowledge, thereby making possible the growth of the productive forces and the proletariat.

By using the 'democratic rights' that have now been granted to it, the proletariat must grow culturally, master the sciences and mentally prepare itself for the moment when it will be granted the levers of power and the carrying out of 'administrative functions'. Then, and not earlier, there can be serious talk about socialism in Russia.

Until that time, there is only one road – state capitalism, which is seen to be the most 'balanced system', corresponding to all the necessary criteria: the minimum of contradictions, and the maximum of equilibrium and economy.

The earthly human race, however, has clearly not wanted to develop according to the plans of the 'Martian' road to socialism. The Russian people, led by the proletariat despite all its 'smallness in numbers' and 'lack of education', carried out the October Revolution, took into its own hands the full powers of the 'administrative functions' as well as the 'scientific and technological leadership', and set about the socialist transformation of the country.

Lenin proved to be the leader of this process. His method of thinking guaranteed a clear and objective understanding of the concrete, historical situation which had arisen, and of the necessary tendencies of its evolution. It allowed him to confidently orient himself amidst the real contradictions of the development of the country and the world, to draw truly rational conclusions from the experience of the class struggle and to find the roads leading forward to socialism. Lenin's party therefore proved to be at the head, and not at the tail, of the revolutionary torrent of events which had spontaneously been unleashed.

And Bogdanov's (Machist) philosophy? It revealed its uselessness. its 'incommensurability with the real course of the historical process. Complete perplexity, complete inability to understand where the stream of events was leading – whether forward or backward, whether to the right or to the left – this was the state in which the Russian Machists spent the entire time from February to October 1917.

In characterising the position of the newspaper *New Life* (which at this time proved to be the refuge of Bogdanov, Bazarov, and many other of their co-thinkers), Lenin defined it in the following manner: '... there is no trace of economic, political or any other meaning whatever in it': '... only the lamentation of people who have become distressed or frightened by the revolution'.²⁹

Turning to 'the writers of *New Life*', Lenin advised them:

Stick to your 'plans', my good citizens, for this is not politics, and it is not the cause of the class struggle, and here you may be of use to the people. Your newspaper has a great number of economists. join forces with the kind of engineers and other people who are ready to begin work on the problems of the regulation of production and distribution, devote a supplementary page of your large 'apparatus' (newspaper) to

²⁹ *LCW* vol 26 p 119.

the businesslike working up of precise facts about the production and distribution of produce in Russia, about banks and syndicates, and so on and so forth – this is how you will be of use to the people, this is how your sitting between two stools will not take a particularly harmful toll, and this is the type of work in connection with ‘plans’ which will evoke not ridicule, but the gratitude of workers.³⁰

You are unable to, you don’t want to, you don’t have the courage to unite within yourselves the functions of ‘technological leadership’ with the functions of the ‘administrative’ (i.e. political) leadership of the land? That’s your choice; no one is forcing you. But don’t get tangled up around the legs of those who clearly see the essence of the concrete historical situation which has developed in the country, and who therefore lay claim to complete power.

The proletariat will do the following when it takes power: it will place economists, engineers, agronomists and others *under the control* of workers’ organisations for the working out of a ‘plan’, for its verification, for the searching out of the means to economise labour through centralisation, for the seeking of measures and the methods of the simplest, cheapest, most convenient and most universal control. For this we will pay economists, statisticians, and technicians good money, but ... but we won’t allow them to eat if they will not fulfil this work conscientiously and completely *in the interests of the workers*.³¹

This is Lenin’s alternative to the position of engineer Menny – and of the very real engineer with whom Lenin had a completely real conversation ‘not long before the July days’. Lenin didn’t give his name, but we can say with complete confidence that this was one of the very real heroes of 1905 who served as the prototypes for Bogdanov’s Leonid N.:

The engineer was once a revolutionary, he had been a member of the Social-Democratic and even the Bolshevik Party. Now he is either completely frightened, or angry at the raging and indomitable workers. ‘If only these were the type of workers you have in Germany’, says he (an educated man, who has spent time abroad). – ‘I, of course, understand in

³⁰ *LCW* vol 26 p 117-18.

³¹ *LCW* vol 26 p 118.

general the inevitability of the socialist revolution, but with us, under the conditions of the lowering of the level of workers which was brought on by the war ... this isn't a revolution, it's the abyss'.

He would have been prepared to acknowledge the socialist revolution if history had only led up to it as peacefully, quietly, smoothly and punctually as a German express train approaches the station. The proper conductor opens the doors of the car and proclaims: 'Station of the Socialist Revolution. *Alle aussteigen* (everyone out)!' For some reason at that time, he didn't want to make his way from the position of engineer under the 'Tit Tityches' to the position of engineer under the workers' organisation.³²

Yes, this was he, the very same Leonid N., the very same Lenny, whom Bogdanov saw, when he was writing *Red Star*, as the ideal representative of Russian Social-Democracy. The very same engineer in whose image of thought A. Bogdanov carved out his 'philosophy'.

In 1905 he expressed this ideal engineer's basic principle of thinking in the following manner:

Fully harmonious development which is devoid of inner contradictions – for us this is only a *borderline conception*, expressing the tendency which we know from experience will free the processes of development from the contradictions associated with it. To therefore give a clear representation of the harmonious type of development can only be done by means of counterposing the concrete instances which come closest to it, to those in which the lack of harmony stands out clearly.

In today's society, an example of a highly-organised, flexible life system which is rich in content could be the large-scale capitalist enterprise, taken especially from the point of view of its labour technique.³³

Such is the 'ideal model' according to which Bogdanov dreamed of rebuilding the world and creating a 'new world'. The model is extremely

³² *LCW* vol 26 p 119.

³³ Bogdanov, A. *The New World* (Articles 1904-1905). Moscow, 1905, p 89-90.

real. It is the large-scale capitalist enterprise, taken especially from the point of view of its labour technique.

Naturally, when you try, with the aid of this 'philosophy', to think about something else besides a ready-made mechanical construction, you will achieve nothing but confusion.

For investigating the real process of development (be it in nature, in society or even in the sphere of ideology), which takes place at all times and everywhere through contradictions, through their coming into being and their subsequent concrete resolution, this logic is, of course, absolutely worthless. 'Development devoid of inner contradictions'. It never enters into Bogdanov's head that this is just as unrealisable, and, therefore just as inconceivable an absurdity, as a 'round square'. Nevertheless, it is precisely this absurdity which serves as the foundation of his theoretical constructions. He is for development, but against the fact that within this development there may exist even a hint of any kind of contradictions.

He therefore understands socialism not as an historically developed method of resolving real class contradictions, not as a revolutionary means of resolving material, objective contradictions between the proletariat and the bourgeoisie, but as a certain type of mathematically uncontradictory schema which is imposed from without (i.e. by a powerful will) on the 'chaos' of actual relations between people.

It goes without saying that, from the point of view of such a conception both of socialism and the road which leads to it, absolutely nothing could be understood in the events of 1917. And it couldn't have been otherwise, since, in general, the Machist (empirio-monist) theory of knowledge and logic, doesn't allow any material (here read: economic) contradictions of any kind to be seen, investigated or formulated in precise scientific conceptions. How could it be otherwise if it declares a priori that all contradictions are facts which have their place exclusively in the sphere of social consciousness or, as it is called here, in 'collectively organised experience' in 'ideology', and if this 'ideology' is further interpreted as a verbally formulated system of ideas, as a 'system of stock phrases' (as it was called by Gorky's Klim Samgin)?

Let us imagine for a second a man who has come to believe in this 'latest philosophy' under the conditions of 1917 and who is trying to choose his life's course based on the axioms of this philosophy and with the aid of the logic of thinking dictated by it. Naturally, the problem of

choosing his life's course turns into this: which 'system of ideas' do I prefer? That which is more logical? That which is psychologically more convincing? That which is more beautiful? That which is powerful?

But that's up to you – choose what you like. Machist philosophy neither offers nor recommends any other criteria for your selection. Or rather, it does make a recommendation. The very system which is most capable of harmoniously coordinating, in a non-contradictory way, all the ideas of every sort and kind into one 'complex'. The very system which is able to look for what is 'in common' between all the systems which actually conflict and come into collision with each other. The system which is obtained after removing all the disagreements and contradictions, after eliminating the differences between them. This would be a system which is common to all. This would be a system expressing the rational kernel, which is equally invariant and equally indisputable and objective, which 'boils down' in the kettle of seething disagreements.

And all talk about how the best of these 'systems' is that which corresponds to objective reality in its necessary development, to a system of historically developing facts which exist outside of and independent of any consciousness whatsoever these are 'philosophically illiterate' conversations. Indeed, the conception of a reality existing outside of and independent of the verbally organised system of experience (i.e. a reality which is objective in the materialist sense of the word), as well as the conception of the objective contradictions contained within it – all this is a pernicious ideological fetish. And the concise symbol which is connected with this ideological fetish/idol is the symbol/term 'matter'. This must be resolutely banished from social consciousness, from ideology, and from scientific conceptions. Then it will finally be possible to construct, organise, and erect the type of 'system' which will rightfully be called 'proletarian ideology', the 'science of the proletariat', and the science of the universal principles of word-building.

And until the time comes when such a science is constructed and mastered by the proletariat, it would be better for workers to refrain from any independent political actions and to leave the 'administrative' leadership of the country to those people whose command of the system of skills associated with such leadership is far better than that of the proletariat.

Similar notions about the paths of historical development were included in the Machist (empirio-critical, empirio-monist, empirio-symbolic

and so forth) outlook which was outlined in 1908 by the author's collective of the *Essays in the Philosophy of Marxism*.

This was already clearly seen by Lenin in 1908 a circumstance which must always be kept in mind when reading his book. Only in the broad historical context which we tried to outline above is it possible to truly understand the meaning of his whole system of arguments, the significance of his burning polemic against the Machists, the meaning (and precision) of Lenin's understanding of such fundamental categories in genuinely Marxist philosophy as matter, reflection, truth, and objective truth. Only then will we understand the absolute and the relative in cognition as a whole, and in scientific and theoretical cognition in particular.

Yes, if you will, the discussion here centred most of all on the explanation and defence of the axiomatic basis of the philosophy of dialectical materialism. Connected with this is the fact that the main accent is placed here on materialism. But it would be a profound mistake to therefore draw the conclusion that the book is devoted to an outline of only those positions which are related to materialism in general, i.e. to any historical form of materialism, and therefore by no means describes the specific characteristics of dialectical materialism. This would be an untruth, a profound falsehood, a mistake in principle. A falsehood which not only doesn't help, but directly impedes a faithful ('adequate') reading of the text of the book. It is a falsehood which severs the organic ties between *Materialism and Empirio-Criticism* and the *Philosophical Notebooks*. It is an untruth which leads to a false understanding of the *Philosophical Notebooks* and to a false conception of the meaning and content of these directly concerned with the essence of materialist dialectics.

3. Dialectics – The logic of revolution. Philosophy and natural science

The development of the revolutionary process from 1908 to 1917 completely demolished the pretensions of the Russian Machists in the realm of social and political thought. On the basis of their philosophy they proved to be incapable of creating any influential fraction in the revolutionary movement, not to mention a party which was theoretically and politically able to lead this movement. Not a single one of the progressive forces in the country – and most of all, of course, the revolutionary proletariat – took their philosophy seriously.

The course of events most clearly of all showed that the logic of their thinking was merely the logic of those who had completely lost their heads; a logic dooming them to impotence, without giving or being able to give a scientifically grounded political orientation.

But it was precisely the pretension to being scientific which was the essence of Bogdanov's position as well as that of the other Russian disciples of Mach. They seriously believed that their philosophical constructions were the 'philosophy of 20th century natural science', that it was distinguished by the 'force of strict and consistent scientific methods', and that the genuine Marxist point of view consists of an orientation toward a 'scientific method' and its application to the cognition of social life.

Their appeal to the authority of natural science was the main line of their argumentation. 'One can learn a great deal from Mach. And in our stormy times, in our country which is drowned in blood, the most valuable lesson that he teaches is: a tranquil steadiness of thought, strict objectivism of method, ruthless analysis of everything accepted on faith, and the unsparing extermination of all the idols of thought' – proclaimed Bogdanov and his cothinkers at every step.

Therefore, no matter how formally irreproachable Plekhanov's criticism of Machism as terminologically disguised Berkeleianism was, it made virtually no impression upon the Machists. 'Who cares', they would say, 'that our philosophy doesn't correspond to the criteria of "Baron Holbach" or the "verbal trinkets of Hegel"? This upsets and disturbs us not in the slightest – our strength lies in our agreement with the principles of contemporary scientific thought'.

It is not surprising that Bogdanov considered it sufficient to simply brush Plekhanov and his supporters aside with one phrase from all their criticism – he didn't even want to examine their 'polemical ploys' against Mach which accused him of idealism and even solipsism. 'All this', he said, 'is nonsense, having nothing to do with the essence of the argument, which is that Mach teaches mankind "the philosophy of 20th century natural science," while Plekhanov has stayed behind with the "philosophy of 18th century natural science, as contained in the formulations of Baron Holbach"'.

'Modern natural science', 'the logic of thinking of contemporary natural scientists' – this was the basic 'beach-head' for the Russian positivists in their war against materialist dialectics. And as long as they held on to this beach-head, no 'philosophical' argumentation had any effect upon them. And it was precisely this which neither Plekhanov nor his disciples understood. Or to be more precise, they didn't understand the importance of this circumstance, for it was impossible not to notice the fact – the Machists themselves in all their writings loudly proclaimed that their philosophy was the 'philosophy of modern science', the philosophical generalisation of its successes and achievements.

But Plekhanov passed by this aspect of the matter in silence, which the Machists joyfully interpreted as an argument in their favour. They described Plekhanov's position as the position of a reactionary who was hindering the process of 'enriching' Marxism 'with the methods of exact or so-called "positive" science'.³⁴

Thus until Lenin joined the polemic, to a reader who had not thoroughly investigated the essence of the argument, the situation looked something like this: on the one hand there was the 'school' of Plekhanov-Orthodoks-Deborin, who neither knew nor cared to know and apply in politics 'the methods of exact science' and who were stubbornly trying to reinforce archaic concepts and fetishes in Marxism which had supposedly been thoroughly refuted by 20th century natural science; an equals sign was placed between Plekhanov's school as it was thus described and materialist dialectics.

On the other hand there was the group that was attacking this 'conservative school' – Bogdanov, Bazarov, Suvorov, Lunacharsky, Yushkevich, Valentinov, Berman and Helphond – who were calling for the

³⁴ *Essays in the Philosophy of Marxism*, p 2.

union of Marxism with natural science and fighting for a revolutionary, active trend of thought both in natural science and in politics. Mach played here the role of an authoritative symbol of the revolution in natural science, the role of a fully empowered and universally recognised leader of revolutionary philosophical thinking in the sphere of understanding nature.

Such a portrayal of the essence of the argument, in which there was a fairly good dose of demagoguery (frequently involuntarily, for the Machists themselves sincerely believed their arguments), was able to win over and actually did win the sympathies of those people who were of a revolutionary frame of mind but who were not very well versed in philosophy; they were won over to the side of empirio-criticism and its variations. There were quite a few of these people both among the workers and among the scientific-technological intelligentsia. And it was for their minds that the philosophical battle was waged.

Plekhanov's silence on this point – in the debate over the question about the relationship between dialectical materialist philosophy and 20th century natural science – the Machists joyfully interpreted as direct and irrefutable proof of their correctness and their advantage over Plekhanov (over materialist dialectics).

Therefore Plekhanov's silence, as well as the loud demagoguery of the Machists, could have made and actually did make an impression upon the reader which was highly unfavourable for the authority of materialist dialectics. In addition, the Machists very assiduously tried to discover in Plekhanov's writings even insignificant inaccuracies regarding the special problems of natural science and the terminology of its specialised fields. They played these up with malicious joy, but they rejoiced even more at the definite vagueness which Plekhanov sometimes allowed in his formulations of extremely serious propositions of philosophical materialism; this is the well-known slovenliness which is often encountered in Plekhanov's writings but which he evidently did not consider very significant. For instance, the definition of sensations as a special kind of 'hieroglyph'.

In the context of the discussion of the problem as a whole, these inaccuracies and vagueness were perhaps not all that terrible, but when they were torn out of this context, they gave cause for malicious back-biting concerning the 'consistency' and 'principled nature' of his position.

But these, of course, were only minor details. The main deficiency in Plekhanov's position was that he ignored what was actually the central

question raised by the Machists: the relationship of the philosophy of Marxism – dialectical materialism, materialist dialectics – to the events which had taken place in natural science, i.e. to the improvements which had been made in the logic of the thinking of natural scientists. This was the central point of the question, and only Lenin understood at that time the full significance of this fact for the philosophy of Marxism.

And only he was able to examine this extremely complex question on a truly principled level. It was on such a level that even now, 70 years later (and what years!), it remains a standard for any Marxist who ventures to examine the problems of the relationship between philosophical dialectics and developing natural scientific thought or theoretical science.

Of course, the chapter in Lenin's book *The Latest Revolution in Natural Science and Philosophical Idealism* struck a crushing blow at Machism as the most typical variety of positivism in general, which had until then portrayed itself as the only philosophy having the supposed right to lay down the law in the name of 20th century natural science, in the name of modern science. This blow proved to be so crushing to the Machists because it was unexpected: the empirio-critics had grown too accustomed to considering that they had a monopoly on the philosophical problems of natural science. They did not expect Lenin's blow to come from this direction. But the blow proved to be not only well-aimed, but irrefutable.

The chief advantage of Lenin's criticism of the Russian Machists over Plekhanov's consisted of the fact that while Lenin agreed with Plekhanov in his assessment of Machism, he tried to examine the roots of this philosophy. That is, he struck his blow not at the effects, but at the causes. He did not proceed to pluck off the tops of the flowers; he tore out the roots. This is the main significance of Lenin's chapter about the 'revolution in natural science'. And in this lies the fundamental and timely instructiveness of Lenin's method of struggle against idealism for us today.

Let us try to briefly formulate the main principles in Lenin's struggle against the Russian Machists, which show how this struggle radically differs from Plekhanov's defence of materialism.

... One cannot take up any of the writings of the Machists or about Machism without encountering pretentious reference to the new physics, which is said to have refuted materialism, and so on and so forth. Whether these assertions are well-founded is another question, but the connection between the

new physics, or rather a definite school of the new physics, and Machism and other varieties of modern idealist philosophy is beyond doubt. To analyse Machism and at the same time to ignore this connection – as Plekhanov does, is to scoff at the spirit of dialectical materialism, i.e., to sacrifice the method of Engels to the letter of Engels.³⁵

This ‘scoffing at the spirit of dialectical materialism’ by Plekhanov is shown by the fact that during the debate with the Machists, because of a number of considerations (among them Lenin noted the desire to inflict moral and political damage on the Bolsheviks by portraying ‘Bogdanovism’ as the philosophy of Bolshevism) he limited his task to demonstrating that the philosophy of dialectical materialism and Bogdanov’s philosophy are two different things. He set out to prove that dialectics and materialism are integral components of Marxism and by no means the verbal atavism of Hegelian and Feuerbachian philosophy, as Bogdanov’s supporters had tried to suggest to the reader.

Plekhanov fulfilled this task with serious knowledge of the matter. He contrasted the system of the philosophical (epistemological) views of Marx and Engels with the system of Bogdanov’s psychophysiological phraseology and demonstrated that these were different things which had nothing in common. There was either Marxism, which is inconceivable and impossible without dialectical materialist philosophy, without materialist epistemology and dialectical logic, or there was the epistemology and logic of Machism, which are fundamentally hostile to Marxism and destructive to it – this was the truth which Plekhanov demonstrated, and here Lenin was in complete solidarity with him.

But the limited character of the task which Plekhanov assigned himself resulted in weakening his argumentation against the Machists. And they lost no time in exploiting this weakness. That is: in demonstrating the fundamental incompatibility of the Machists’ epistemology with the genuine understanding of philosophical problems by Marx and Engels, Plekhanov naturally chose first of all to contrast the philosophical texts of one side with the other, ‘the letter of Engels and Marx’ with the ‘letter of Bogdanov’. He made such a comparison in a masterful fashion, proving to the reader, as surely as two times two makes four, that here there was the inexorable alternative; either/or.

35 *LCW* vol 14 p 251.

For some time, the followers of Bogdanov did not even argue with this proof. More than that, they saw perfectly well themselves, and openly admitted that the 'letter' of their philosophical constructions differed from everything Marx and Engels had said and written about philosophy, materialism and dialectics. Moreover, they looked upon this as their chief virtue and advantage over the Plekhanov 'school'. He, they would say, stubbornly clings to the 'letter', to every utterance from Marx and Engels, while we are 'creatively developing' the philosophy of Marxism. We will bring it into agreement and correspondence with the latest successes and achievements of natural science.

And the more clearly it was that Plekhanov demonstrated the incompatibility of their innovations with the system of philosophical views of Marx and Engels, the louder they talked about the conservatism and dogmatism of Plekhanov's attitude towards the 'letter' of the classics, about Plekhanov's attempts to deliver up propositions formulated at a different time and under different conditions as eternal truths, as absolutes, or as fetishes, appropriate for all times and for any circumstances.

This argument was able to make an impression upon many people, especially since, in the area of the sharpest problems of the socio-political plane, Plekhanov by 1905 had actually already begun to display (and the later it was, the more this showed) a definite conservatism, a tendency to freeze the development of Marxist thought. This circumstance gave the Machists cause to declaim about how Plekhanov was sacrificing to the 'letter' of the philosophy of the classics the true essence, the actual logic of their thought.

The argument raged, therefore, not over the concrete positions or statements of Marx and Engels, but over the method of thinking with the aid of which they extracted, elaborated, formulated and derived the scientific truths of the communist world view and scientific socialism.

Was this mode (method) of scientific thinking and scientific investigation materialistic dialectics? Or was it actually something else? The Machists were convinced, and tried to convince others, that all the statements and all the utterances of Marx and Engels were simply the phraseological (purely verbal, purely terminological and formal) heritage of that philosophical tradition, in the atmosphere of which was formulated the scientific thought of the classics, and nothing more. And the scientific method which was used, they said, during the creation of the theory of scientific socialism, including most of all its foundation – the political

economy of Marxism, *Capital* – has nothing in common, and never has had anything in common, they would say, with discussions about materialist dialectics. This, they said, is the most ‘common’ scientific method, which is used to obtain results by any modern science, and particularly, it goes without saying, by physics.

It is easier and most expedient (most ‘economical’) to learn from this ‘genuinely scientific’ method from modern physics, or, more concretely, from Ernst Mach, one of its acknowledged leaders. They insisted that Mach discloses in his writings the secrets of the ‘genuine’ method of thinking of modern science. At the same time he reveals the ‘truly scientific’ aspects of the method of thinking of *Capital's* author, cleansed of the rubbish of the antiquated Hegelian phraseology and terminology.

It was this aspect of the argumentation of the Machists in the Social-Democracy that was not touched upon by Plekhanov’s mode of criticism. And it was precisely for this reason that Plekhanov’s attack on Machism fell short of its goal.

Indeed, if the mode (method) of thinking based on Mach’s theory of knowledge is actually the method which modern physics has used to obtain all its successes and achievements, then what difference does it make whether it is called materialist or idealist? In other words, if the epistemology and logic of Mach-Bogdanov is actually the theory of knowledge and logic of modern science, modern physics, mathematics, and so forth, then Bogdanov is essentially correct as opposed to Plekhanov, although he differs from the ‘letter of Engels’ which is only defended by Plekhanov.

This then was the heart of the argument. And it was precisely here that Plekhanov proved to be not at his best. With absolute precision he had classified Machist philosophy as idealist. He showed how it was therefore reactionary in its socio-political consequences, insofar as ‘bourgeois theoretical reaction, which is now wreaking genuine havoc in the ranks of our leading intelligentsia, occurs in our midst under the banner of philosophical idealism ...’ Moreover, ‘we are threatened with particular harm by those philosophical doctrines which are idealist in all their essence, but which at the same time pass themselves off as the latest word in natural science ...’³⁶

36 Plekhanov, *Works*, Moscow 1925, vol. 17 p 99.

Plekhanov was, of course, correct, that they only presented themselves 'as the last word in natural science' without actually having anything in common with it at all. But this needed to be demonstrated. To simply say that they had no right to be speaking in the name of modern natural science and to then place a period, without even trying to expose this pretension, meant, under the conditions of that time, the making of an unforgivable concession to his opponent. The effort of the Machists to portray themselves as the spokesmen of the 'spirit' of modern natural science was, of course, an illusion, self-deception, and demagoguery of the purest sort. But it was, alas, an illusion which was far from groundless. It was an illusion of the same kind as other naturalistic illusions of bourgeois consciousness. It was an objectively conditional semblance, or appearance, as a result of which the purely social (that is, what historically comes into existence and historically passes away) properties of things were taken for their natural (and therefore eternal) qualities and for the definitions of the things themselves – for their scientific characteristics.

The Machists not only portrayed their teachings 'as the last word in natural science', they unfortunately took as the basis for similar illusions the numerous utterances of the natural scientists themselves, including even the greatest scientists; they based themselves on those philosophically helpless conclusions which the scientists had drawn from their own discoveries.

The real source of nourishment for 'Bogdanovism' as one of the many varieties of idealism was the philosophical incompetence of many representatives of modern science, their confusion when faced with the difficult philosophical problems which arise before them in the course of their work.

In the given instance this confusion emerged in the form of a lack of knowledge about materialist dialectics, i.e. about the actual logic and theory of knowledge of modern materialism, and about modern scientific cognition of the surrounding world. This was accompanied by a false conception of materialist dialectics as idealist philosophical speculation. As was perfectly well shown in *Materialism and Empirio-Criticism*, ignorance of dialectics was the catastrophe leading to the degeneration of the spontaneous materialism of natural scientists – their 'natural' epistemological position – into the most vulgar and reactionary varieties of idealism and clericalism, which was diligently encouraged by professional philosophers, the conscious or spontaneous allies of clericalism.

Hence Lenin derived his entire subsequent strategy of many years regarding the majority of scientists: stubborn, consistent work to win them over to his side. It meant then and means today – to win them to the side of dialectical materialism, to the side of the materialist dialectics. Otherwise it is impossible to overcome idealism, the idealistically reactionary interpretation of the successes and achievements of modern science and technology.

Until the majority of scientists understands and is able to consciously apply materialist dialectics as the logic and theory of knowledge in their own field, idealism will grow out of the development of natural science itself. The credit and trust of people will be used by those very reactionary idealist schools, one of which is 'Bogdanovism'.

The strength of Machist (and more widely – positivist) idealist philosophy lies in the philosophical weakness of many modern scientists. It was Lenin who found the courage to tell them this truth which they found so unpleasant, to say it directly, without any diplomacy, while perfectly well recognising that this bitter truth might wound their self-esteem. To publicly make such a diagnosis required quite a bit of moral courage: especially to tell the greatest modern day scientists to their face that they had not yet learned how to think in a truly scientific manner when it came to the theory of knowledge and to logic!

But the central point was not only Lenin's personal moral courage, but also the intellectual courage which was unquestionably demanded by the principles of the philosophy which he defended on every page of *Materialism and Empirio-Criticism*. He proceeded from the fact that what people find to be the most bitter and unpleasant truth is in the long run more 'useful' for them than the most pleasant and flattering lie and falsehood. He was committed to this view by materialism itself.

Consistent materialism, i.e. the essential and consciously thought-out philosophical foundations of the Marxist world view, stubbornly requires a critical attitude toward everything that is said and written in the name of modern natural science; including statements by its greatest authorities, the representatives of the 'new physics'.

In 1908 there were, for instance, Ernst Mach and Henri Poincaré – stars of the first magnitude in the heavens of theoretical physics of that day.

It was about them, and not about the petty muddlers in science, that Lenin felt it was necessary to say:

Not a single one of these professors, who are capable of making very valuable contributions in the special fields of chemistry, history or physics, *can be trusted one iota* when it comes to philosophy. Why? For the same reason that *not a single* professor of political economy, who may be capable of very valuable contributions in the field of factual and specialised investigations, can be trusted *one iota* when it comes to the general theory of political economy. For in modern society the latter is as much a *partisan* science as is epistemology.³⁷

Actually, not a single word of theirs can be trusted when it comes to the theory of knowledge, logic, or the method of scientific thinking, for they professionally do not know this field and therefore they become confused, and stagger at every step, continually stumbling into idealism, i.e., into a philosophical position which is essentially anti-scientific and hostile to science in general, including their own specialised science. And even under these conditions they continue to be leading theoreticians in their own, specialised field of thought.

A paradox? Yes, the same type of paradox which fills the pages of history in general and the history of science in particular. And on the basis of a careful philosophical and theoretical analysis Lenin shows the essence of this paradox. He shows how such an unnatural combination becomes possible. The combination of scientific thinking which is realised by scientists who are physicists and specialists (chemists, biologists, mathematicians, and others) with an inadequate awareness or false knowledge of the essence of their work, an anti-scientific ('pseudo-scientific') understanding of the actual laws of their own thinking, i.e. of those objective laws of cognition to which are finally subordinated – whether individual scientists want it that way or not, whether they are conscious of it or not – the movement both of cognition as a whole and in its separate fields.

In actual fact, scientists are continually and at every step thinking in defiance of the logic and theory of knowledge which they consciously profess, for they are compelled to do this by the powerful pressure of the accumulation of facts and of the indisputable authority of experimental data i.e. by the force and power of the fully material conditions of thought and its laws. People who are really engaged in the process of

³⁷ *LCW* vol. 14 p 342.

cognising nature (including Mach, Duhem, Pearson and others) continuously are forced to execute the type of mental moves and 'operations with concepts' which, from the standpoint of the logic and theory of knowledge that they consciously profess, are not only inexplicable, but quite simply not according to the law, or even against the law.

According to materialism, i.e. the clear and consistent materialist theory of knowledge, such situations present nothing enigmatic. They only graphically demonstrate that without exception, all progress, evolution and revolutions which occur within consciousness (within social consciousness), are determined and explained by the fact that this consciousness – despite all the illusions which it can create on this account – is forced in its own development to subordinate itself, as if to a higher authority, to the power of 'Mister Fact'. Or to be more precise, to that concrete accumulation of facts, independent of consciousness (psyche, spirit, thinking, however they are further described in detail) and existing outside of it, which in the language of philosophy is called the material world or, for the sake of brevity, simply matter.

In reality, while research is actually being carried out, the thinking of any serious scientist is governed by precisely this epistemological orientation and remains scientific only as long as it is actually governed by it. Lenin was therefore fully justified in insisting upon the fact that natural science has adopted the standpoint of the materialist theory of knowledge in the past and continues to do so today.

Another matter is the verbal (terminological) form which different scientists give to the fundamental principles of their work. For a whole variety of reasons this verbal form now and then proves to be philosophically inexact, inadequate or incorrect. And philosophical idealism immediately clings to this kind of verbal imprecision.

Philosophical materialism (the materialist theory of knowledge, logic which is materially understood) is orientated toward a strict, critical differentiation between what scientists actually do in their specialised fields and how they speak and write about it. Idealism, on the other hand (and this is especially characteristic of 20th century positivism), is always orientated only toward the words and utterances of scientists, as the 'initial data' of their specialised analysis and their philosophical work.

Idealists concentrate, of course, not just upon any words, but upon those which can best be used to reinforce the idealist reconstructions of the real process of cognising nature and to interpret this process in an

idealist way. As a result, those assertions which, in the mouths of the scientists themselves, were terminologically incorrect descriptions of real events in the path of cognition, are presented as the precise expression of their essence and as conclusions drawn from natural science.

And such assertions are no rarity, especially since the idealist-positivists are precisely engaged in trying to arm natural scientists with philosophically inexact, muddled and incorrect terminology, given out as the last word in modern philosophy. It becomes a closed circle. Thus the image is created that it is natural science which refutes both materialism and dialectics, while the 'philosophy of natural science' (as positivism prefers to call itself) is simply and unpretentiously summing up the true epistemological positions of natural science.

To create this image the positivists instil in scientists a muddled conception both of matter and of consciousness. Meanwhile they try to discredit the simple, clear and carefully considered definitions of the primary concepts of materialist philosophy with labels that are primitive, naive, non-heuristic and antiquated.

As a result, 20th century positivists have managed to achieve considerable success insofar as the whole environment in which the majority of scientists for the time being live and work, 'estranges them from Marx and Engels and throws them into the embrace of vulgar official philosophy'. Hence, 'the most outstanding theoreticians are handicapped by a complete ignorance of dialectics'.³⁸

These words of Lenin's which were spoken more than 70 years ago remain absolutely true even today in relation to the capitalist world and the situation of the scientist in it.

Moreover, the assault of bourgeois ideology on the minds of scientists, which had as its basic goal then and still has it now the discrediting of materialism and dialectics, has nowadays become much more concentrated, much more persistent and much more refined in its methods.

Modern positivism has elevated the creation of ever newer and more artificial terms to such an art, that the Machism of Bogdanov's times seems positively dilettantish in this regard. In 1908 this style had just barely come into vogue and it had only managed to yield the first, rather timid shoots in the field of positivist thought, but Lenin already felt that

38 *LCW* vol. 14 p 263, 265.

it was necessary to have done with it, for this was no innocent linguistic amusement or some simple play with words, but something far worse. He saw in it the tendency to create a special jargon in which it was convenient and easy to express patently idealist lies in such a verbal form that you could not immediately recognise them.

Such a jargon was created and 'perfected' in a very simple manner – by studiously imitating the specialised language of one or another of the natural sciences: either physics or mathematics or biology. This was accomplished by imitating the external peculiarities of the language of scientists – often by simply borrowing from them not only separate terms but whole blocks of words which slowly took on a different meaning. The philosophical (i.e. epistemological) constructions of the positivists would therefore appear to be quite understandable to the scientist, insofar as the available concepts of natural scientists, the expressions to which he was accustomed, served as the basic material here as well.

The very word 'element' – a key word in Machism – has such an origin. Indeed, if a physicist or chemist in Mach's times were told straightforwardly: your field of science is actually involved in investigating 'complexes of your sensations', he would not accept this wisdom as the expression of the essence of his work. Or even more so as a conclusion drawn from his own research. When, however, he is told that he is investigating 'complexes of elements' (even though this is secretly understood to be sensations), he immediately accepts this phrase as a matter of course, since he has long since grown accustomed to using the word 'element' to mean hydrogen or radium, the electron or the atom. He accepts the language of this 'clear' and flattering philosophy, grows accustomed to it, and continues to speak in it even when he is no longer discussing hydrogen or the electron, but the process of the scientific cognition of hydrogen or the electron.

It was precisely in this manner that the lamentably famous expression arose, that 'matter has disappeared'. The first to use this phrase was a physicist, not a philosopher. Why? Following what logic? The logic was very simple. First of all the 'philosophy of natural science' instilled in him its understanding of the word 'matter', after investing it with the meaning borrowed from modern physics, i.e. after placing an equals sign between matter and the available conceptions of the physicists.

The physicist took a step forward and said farewell to his previous conceptions for the sake of new ones. In the language which he had been

taught by the 'philosophy of natural science', this was expressed with absolute logic in the following way: he said farewell to the concept of matter. The progress of the physicist's knowledge had 'refuted' the concept of matter, and matter had disappeared, for what had been discovered in place of the former could no longer be called matter.

Such a phrase could not come from the mouth of a physicist who knew the correct, but not the positivist, definition of matter. But from a physicist who agreed with the 'positivist-scientific' definition of matter, it would not only be natural, but even formally correct.

But if when used by the physicist this phrase was an inadequate verbal formulation of an actual fact – of a real step forward on the path of cognising physical reality (the physicist here had simply used the word 'matter' out of place) when used by the philosopher-idealist the phrase takes on a very different meaning. From the inexact expression of a real fact it has become transformed into the 'exact' expression of a state of things which does not exist and which has been dreamed up by idealists.

In such a situation (or any like it) the task of the philosopher-Marxist, according to Lenin, consists in bringing to light the real fact which is poorly and unclearly expressed in the words of the scientist, and expressing it in philosophically correct and epistemologically irreproachable language. This means making this fact philosophically clear for the scientist himself and helping him to realise this fact correctly. Lenin's attitude was completely different toward the specialist-philosopher who consciously gambled on the carelessness and gullibility of the scientist-non-philosopher, and on his lack of knowledge in the field of epistemology. Here the tone of the conversation was something else.

To brand the scientist as an idealist is just as mean and stupid as to make the worthless (and damaging for the revolution) public indictment of an illiterate peasant who is praying that God grant him rain, by calling him an ideological accomplice of the petty-bourgeois bureaucratic order and an ideologist of reaction. With a priest, it is a different matter. And not the wretched little village priest who shares the peasants' naive beliefs, but the educated priest who knows Latin, the writings of Thomas Aquinas, and even Kant, who is the professional enemy of materialism and the revolution, living as a parasite on ignorance and superstition.

What remains highly instructive to this day is Lenin's ability to draw a clear boundary line between philosophically incorrect expressions which

are continually found among the greatest scientists, and the way which these expressions are used in the works of the positivists.

If there were no such expressions among the natural scientists, the idealists would find it very difficult to refer to science. But as long as these instances are not rare, idealism will have a formal and verbal basis for portraying itself as the philosophy of modern natural science, the philosophy of 20th century science. 'The idealist philosophers', writes Lenin, 'pick up on the slightest mistake, the slightest confusion in the expressions of the great scientists, in order to justify their own renovated defence of fideism.'³⁹

Thus the slightest carelessness on the part of the scientist in using specialised philosophical 'words' (which immediately causes no particular harm to the course of scientific reasoning, that is why the natural scientist is not inclined to regard this too seriously), potentially conceals within itself great harm even for natural science.

While he is inclined to search for the rational kernel even in such phrases of the natural scientists as 'matter has disappeared', i.e. to bring to light those real facts which stand behind them, Lenin does not spare similar expressions when they are repeated from the philosophical chair. Here he never looks for the rational kernel, no matter how tiny it may be. With Mach the philosopher it is a different question than with Mach the physicist. For this very reason Lenin generally says nothing about the merits or deficiencies of Mach's purely physical views – physics and the physicists have to pass judgement here. But Mach as the author of *Analysis of Sensations* and *Knowledge and Error* deserves the most severe judgement on the basis of an entirely different set of laws.

But if Mach somehow remains under these conditions a good physicist, his philosophical disciples have no relationship with physics or with any other field of actual scientific cognition. Whatever physics they know is only through its idealistically distorted image in the crooked mirror of Mach's philosophy, only from the words of Mach himself and his adherents who blindly and slavishly believe in his words. By fatally linking all philosophical concepts with the available (and therefore, naturally, transitory) , state of scientific knowledge, positivism turns these concepts into obstacles which the development of science must sweep to the wayside.

39 Lenin. *Complete Collected Works* vol. 18 p 471.

Such an attitude toward philosophical concepts is organically linked to the positivist conception of philosophy itself, of its subject, role, and function in scientific understanding. According to these notions, ‘modern’ philosophy – as distinguished from the former, ‘metaphysical’ philosophy – is nothing but the generalised summation, aided by hindsight, of everything that has been achieved by the labours of the other sciences; it is the accumulation of results which have been brought together in one aggregate whole. It is the abstractly expressed current state of scientific knowledge, nothing more, a ‘general theory of being’. This is the self-same ‘scientific monism’ which was dealt with earlier and which Lenin so ruthlessly criticised!

Listen to this: ‘... This law of social economy is not only the principle of the internal unity of social science (can you make anything of this, reader?), but also the connecting link between social theory and the general theory of being’ ... Well, well, here we have the ‘general theory of being’ discovered anew by S. Suvorov, after it has already been discovered many times and in the most varied forms by numerous representatives of scholastic philosophy. We congratulate the Russian Machists on this new ‘general theory of being’! Let us hope that their next work will be entirely devoted to the substantiation and development of this great discovery!⁴⁰

Characteristic of all the Russian Machists, by the very nature of the problem, is the desire to present a unified picture of being, or, to use the words of S. Suvorov, ‘a general theory of being’, which is constructed exclusively out of the facts of modern science and the data of scientific experimentation, and which is carefully cleansed of all vestiges of the old, ‘unscientific’ and ‘pre-scientific’ philosophy. ‘Only when we resolve, in final form, the task’, writes Berman, ‘of working out the criticism by which we could distinguish scientific truth from error, will we be able to get to work resolving the problems which comprise the true object of philosophy, the problem of what the world is as a whole’.⁴¹

It was for the sake of carrying out an assignment of this sort that the Machists undertook a review of the Marxist resolution of the problem

⁴⁰ *LCW* vol. 14 p 334-35.

⁴¹ Berman. *Op. cit.*, pp 7-8.

concerning this very same 'criterion'. But such a review was simply epistemological propaedeutics, and its goal was the creation of a 'general theory of being', a unified picture of being, and a theory about what the world is as a whole.

Epistemology for them was only a means, an instrument or a tool for constructing a picture of the world as a whole. This tool must be made in advance and sharpened, since they all believe that no such instrument exists as a part of Marxism. Dialectics is not taken by these people to be such an instrument. Here, they say, is where not only Marx and Engels, but all their disciples, made their mistake. 'Isn't it strange that with not only a theory of dialectics which is fully thought out in the scientific sense, but even a somewhat precise basis for those ideas which taken together they call dialectics',⁴² Berman continues to express his view.

Analogous reasoning about the subject of philosophy in A. Rey's book provokes sharp epithets on Lenin's part. Here is the path of this reasoning: 'Why should not *philosophy, therefore, in the same way, be a general synthesis of all scientific knowledge*, an effort to represent the unknown as a function of the known, in order to aid in discovering it and keep the scientific spirit in its true orientation?' (Next to this passage in the margins of the book stands the expressive: "blagueur!", i.e. braggart, liar). 'It would differ from science only in the greater generality of the hypothesis; instead of being the theory of a group of isolated and very circumscribed facts, philosophical theory would be the theory of the totality of the facts that nature presents us with, the system of nature, as it used to be called in the 18th century, or at any rate a direct contribution to a theory of this kind'.⁴³ (Next to these words, underlined by Lenin, stands the word: "fool!").

His evaluation is so angry because Lenin sees all too clearly: Rey's ideas about the subject and tasks of philosophy have as their source the same 'classic' as the ideas of Bogdanov. Both are a rehash of the axioms of Mach and Avenarius.

Such an understanding of the tasks of philosophy naturally condemns it to the simple summing up of the results obtained by natural science. Lenin felt that it was very important and necessary to inform the reader about the latest scientific facts in physics and chemistry, about the

⁴² Berman. *Op. cit.*, p 16.

⁴³ *LCW* vol. 38 pp 471-72.

structure of matter, i.e. to offer him precisely that generalised compendium of all the latest scientific knowledge and all the modern achievements of science and technology. Lenin, however, neither considered nor called this understanding philosophy. Moreover, he was immediately upset when it was offered in place of the philosophy of Marxism, and even under the title of the 'latest' philosophy.

Lenin was absolutely clear and unequivocal when he raised the questions about the relationship between the 'form' of materialism and its 'essence', and about the inadmissibility of identifying the former with the latter. The 'form' of materialism is made up of those concrete scientific ideas about the structure of matter (about 'the physical world', about 'atoms and electrons') and those natural-philosophical generalisations of these ideas, which inevitably prove to be historically limited, changeable, and subject to reconsideration by natural science itself. The 'essence' of materialism consists of the recognition of objective reality existing independently of human cognition and reflected by it. The creative development of dialectical materialism on the basis of the philosophical conclusions drawn from the latest scientific discoveries' Lenin sees neither the revision of the 'essence' itself, nor in the perpetuation of scientists' ideas about nature and about 'the physical world' aided by natural-philosophical generalisations, but in deepening our understanding of 'the relationship of cognition to the physical world', which is tied to new ideas about nature. The dialectical understanding of the relationship between the 'form' and 'essence' of materialism, and between 'ontology' and 'epistemology' constitutes the 'spirit of dialectical materialism'.

'Hence', writes Lenin in summing up the genuinely scientific interpretation of the question of creatively developing dialectical materialism, 'a revision of the "form" of Engels' materialism, a revision of his natural-philosophical propositions is not only "revisionism", in the accepted meaning of the term, but, on the contrary, is an essential requirement of Marxism. We criticise the Machists not for making such a revision, but for their purely revisionist trick of betraying the essence of materialism under the guise of criticising its form ...'⁴⁴

While mercilessly castigating Bogdanov's and Suvorov's conception of philosophy, Lenin consistently and at every point counterposes to it the conception which had crystallised in the works of Marx and Engels,

⁴⁴ *LCW* vol. 14 p 251.

and develops this conception further. Philosophy, in the system of the Marxist (dialectical materialist) world view, exists and develops by no means for the sake of constructing global or cosmic systems of abstractions in which each and every trace of difference or contradiction disappears. Just the opposite is the case. It exists for the truly scientific and concrete investigation of the problems of science and life, for the genuine augmentation of our knowledge of history and nature. In the system of views of Marx and Engels philosophy serves such a concrete cognition of nature and history. Here universality and concreteness are not excluded, but presuppose each other.

The materialism of this philosophy is contained in the way it orients scientific thinking towards an ever more precise understanding of the phenomena of nature and history in all their objectivity and concreteness, with all their contradictions (i.e. with all their dialectical characteristics), and with all their independence from the will and consciousness of people, or from the specific structure of their body, their brain, their sense organs, their language or any other subjective peculiarities. 'Philosophy', however, in its Machist and Bogdanovian variation gives scientific thinking precisely the opposite orientation. It directs man's thinking toward the creation of the 'utmost abstractions' in whose 'neutral' embrace all differences, all contradictions, and all opposites have died out. This is direct evidence of the idealism of its epistemological axioms. Indeed, 'elements of the world', 'logical frameworks', 'abstract objects', 'systems in general', 'God' and 'the absolute spirit' – all these are only pseudonyms concealing one and the same thing: the idealistically mystified consciousness of man.

The main, link in the entire strategy of the Machists' campaign against the philosophy of Marxism consisted of the attempt to sever the living unity between materialist dialectics as a theory of development and as a theory of knowledge and logic, first by isolating 'ontology' from 'epistemology', and then by counterposing one to the other, thereby destroying the essence of dialectics as a philosophical science. The design was simple: having made such a separation it would be easiest of all to identify the materialist world outlook with any sort of concrete and historically limited scientific 'picture of the world', with the 'physical', and then ascribe the flaws and errors of this 'ontology' to all materialism. On the other hand, the same operation could be performed with materialist epistemology by identifying it with whatever was the latest scientific conception of the 'psychical'. By identifying philosophy as the generalised

summation of scientific facts, claims could be made that natural science itself gives birth to idealism. To destroy what distinguishes philosophy, its system of concepts and its approach to phenomena, meant to ascribe idealism to natural science itself. Lenin unmasked these schemes by giving a clear demonstration of what constitutes 'the fundamental materialist spirit' of modern natural science, which gives birth to dialectical materialism.

According to Lenin, the latest results of science, in themselves, or the 'positive facts', as such, are by no means subject to philosophical generalisation (and consequently, to inclusion in the system of philosophical knowledge). Rather what is subject to philosophical generalisation is the *development* of scientific knowledge, the dialectical process of the ever more profound, all-sided and concrete comprehension of the dialectical processes of the material world, so that it cannot be excluded that even tomorrow natural science itself will re-evaluate its results in a 'negative' manner. While interpreting the revolution in natural science from the standpoint of dialectical materialist philosophy, Lenin draws generalised conclusions about how the objective content of scientific knowledge can be fixed and evaluated only from the standpoint of the dialectical materialist theory of knowledge which reveals the dialectics of objective, absolute and relative truth. He shows how 'ontology' is just as inseparably connected with 'epistemology', as the categories expressing the dialectical nature of truth are connected with objective dialectics. To include the 'negative' in the conception of the 'positive', without losing the unity of opposites (and this is what constitutes dialectics) is impossible without an 'epistemological' approach to the 'ontology' of scientific knowledge. Genuinely scientific philosophical generalisation must consist, according to Lenin, of the 'dialectical reworking' of the entire history of the development of cognition and practical activity, and of the interpretation of the achievements of science in the context of its integral historical development. From such a position Lenin broached the question of the relationship between philosophy and natural science. The Machists, however, were precisely counting on discrediting materialism by tearing its true content out of this historical context.

From an analogous position, positivism looks upon the theory of knowledge (epistemology). Its scheme is to counterpose epistemology as a 'strict and exact science' to materialist dialectics as a philosophical science, and then to criticise dialectics in the light of such an 'epistemology'. This plan is even reflected in the title of Berman's book, *Dialectics in*

the Light of the Modern Theory of Knowledge. In essence, however, this is not a theory of knowledge at all, but once again the accumulation of 'the latest facts' from research in psychology, psychophysiology, the physiology of the sense organs, and so forth. The interpretation and application of these facts in isolation from 'ontology', from the universal laws of development of nature and society, made it possible to counterpose 'epistemology' to dialectics.

Lenin clearly shows the incompatibility of the scholastic 'epistemology' of the Machists with the genuinely-scientific theory of knowledge – with the theory of the investigation of the real world by actual man (and not the fictitious 'epistemological subject') and with the actual logic of the development of science. And if the theory of knowledge and logic (the theory of thinking) are understood in a dialectical materialist way, then there is no reason to fear that consistently advancing the idea of the concurrence of dialectics, logic and the theory of knowledge will lead to 'an underestimation of the significance of philosophy as a world view' or of its 'ontological aspect'. This is correctly feared by those who understand epistemology and logic to be sciences which are locked into a study of the facts of consciousness or the 'phenomena of consciousness as such' (regardless of whether this is individual or 'collectively organised' consciousness), and which direct their attention at the external world only insofar as it is already represented in this consciousness.

At the beginning of the century, Lenin was the only Marxist who understood and appreciated the enormous philosophical significance of dialectics as epistemology and logic. This was a significance which was neither understood nor appreciated at that time by either Kautsky or Plekhanov, not to mention other Marxists.

Here there is an inexorable choice. Either materialist dialectics is understood (and developed) in this plan as the logic and theory of man's knowledge of the material world, and as the theory of its reflection in the historically developing consciousness of both individual man and the human race, or it is inevitably transformed into a 'sum of examples' which are borrowed (often in an absolutely uncritical way) from the most varied fields of knowledge and which only illustrate ready-made and previously-known, universal formulae of dialectics 'in general'.

Such a method is still good enough for the popularisation of general formulae, but for their creative development – it is not. It fails to deepen by one millimetre either the comprehension of those general formulae of

dialectics which are 'confirmed' by examples (even the most modern), or the comprehension of those examples which are used for the 'confirmation'. Such a procedure benefits neither philosophy nor natural science. But it does do harm since it creates and nourishes the illusion that philosophy is not a science, but simply the abstract knocking together of ready-made, concrete scientific facts which are uncritically retold in an abstractly philosophical language, and nothing more. But by the same token, materialist dialectics itself is reinterpreted (or actually misinterpreted) in a typically positivist manner. And insofar as the natural scientist does not need dialectics of this type, in his eyes it is transformed into empty word-spinning, into abstract fiction, or into the subsuming of whatever one likes under abstract and universal schemas. This of course discredits philosophy in the eyes of the natural scientist, teaches him to look upon it with disdain and condescension, and thereby undermines Lenin's idea about the alliance of dialectical materialist philosophy with natural science.

Therefore the transformation of materialist philosophy (of dialectics) into a 'sum of examples' contradicts the interests of such an alliance and, as the saying goes, 'adds grist to the mill' of positivism.

The alliance of philosophy with natural science, according to the way Lenin thought, can be enduring and voluntary only if it is mutually productive and if it mutually excludes any attempt to dictate or force any ready-made conclusions, both on the part of philosophy and on the part of natural science. Such an alliance for the sake of cognising the world is possible only with Lenin's conception of philosophy. But the positivist conception immediately pushes both philosophy and natural science into a mode of dictating to each other, into mutually incompetent hectoring and sentences without appeal. When conceived of as a system of absolutely universal truths, philosophy not only has the right but the obligation to bless those scientific theories which formally (i.e. according to their verbal form) agree best of all with its dogmatically fixed formulations. On the other hand it is obligated to fulminate against and prohibit those theories which are poorly in accord with its letter, even though the former may be based on fictitious facts, while the latter may be based on real facts which are well established by experiment and which only suffer from being incorrectly expressed philosophically. Philosophical approval and support are given here to the theoretician who most skilfully uses the terminology and phraseology of the ontology which is accepted at the given time.

The theory of knowledge as Lenin understood it (and as it was understood by Marx and Engels, with whom Lenin is in full agreement when he formulates his views) is by no means the celebrated 'epistemology' which was the speciality of Mach, Bogdanov, and others, nor it is the dilettantish rummaging around in the psychophysiology of the brain and sense organs or in the subtleties of the vocabulary or syntax of language; it is a totally different science, with a different subject.

Its real subject is the entire historically (dialectically) developing process of social man's objective cognition of the material world of both natural and socio-historical phenomena), the process of the reflection of this world in the consciousness of individual man and mankind. The process whose result and goal is objective truth. The process which is realised by billions of people in hundreds of successive generations. The process which at every step is verified by practice, experiment, and facts, which comes into being in the results of the entire totality of the concrete ('positive') sciences, and which is materially embodied not only and not even so much in the neuro-physiological mechanism of the brain, but in the form of technology and industry and in the form of the real, social and political conquests consciously made by revolutionary forces under the leadership of their avant-garde – the party.

As far as the positivist conception of the logic of thinking is concerned, the fundamental task is seen as the reconstruction, in general form, of those methods of research which are applied in practice by people connected with the sciences. Such a reconstruction is accomplished primarily according to those descriptions which are accepted as the absolutely precise and adequate portrayal of the logic of scientific development, but which may diverge very far from this logic.

Under the powerful influence of 'Mr Fact', scientists continually are thinking not only not in accordance with the accepted rules, but directly in defiance of them, often without realising it themselves or else, after the fact, trying to force a description of their actions under the aegis of one or another cliché which explains nothing. And in those instances where logical clichés clearly will not do, they rely on intuition, or guesswork; on revelation, etc.

A motif of that type – 'scientists are more aware of how they think' – distinctly reverberates in Bogdanov's work, *Belief and Science* (on V I Ilyin's book, *Materialism and Empirio Criticism*), where he tries to defend his philosophical positions from Lenin's criticism. In it Bogdanov defends

his view of philosophy as ‘the impotent attempt’ ‘to connect that which has been broken, to give people a unified and integral outlook of the world, to destroy the partitions which have isolated human experience in locked cells, to fill up the chasms of thought and to erect a bridge reaching from it to being, which is mysterious and threatening in its infinite complexity. It is obviously inconceivable to do all this within the framework of any speciality’.⁴⁵

Proceeding from such ideas about philosophy, Bogdanov counterposes to Lenin’s epistemological analysis only loud declamations, which from the beginning reject Lenin’s criticism of his positions as incompetent insofar as this criticism, he says, proceeds from ‘the philosophical erudition of the workshop’. Bogdanov does not wish to listen to ‘people, who understand the study of philosophy to be the reading of books, and philosophical work to be the writing of new books of this type on the basis of those which have been read. Marxists must renounce such a naive conception with the least difficulty’, they must ‘know very well that philosophy is an ideology, i.e. “a superstructure”, or something derived, and that it is ridiculous therefore to construct it out of itself. One must begin with an explanation of the “base”, i.e. study the productive forces, which is done by the science of technology and by natural science ...’

‘For this reason’, continues Bogdanov, ‘a rather well-educated expert “on the productive forces”, i.e. an expert in the field of technology and natural science, is generally fully justified in not considering the arguments of a representative of special philosophical “learning”, because as far as philosophical work is concerned, he is incomparably better prepared than the dusty epistemologist-specialist’.⁴⁶

This, then, is the leitmotif of positivism in its war against materialist dialectics as the genuine epistemology and logic of modern materialism; that is, against Lenin’s understanding of philosophy, its subject, its role and its function in the development of a scientific world outlook.

Bogdanov says this after Lenin has shown, on the basis of the most painstaking analysis, that the Machists’ references to modern natural science are thoroughly false, that positivism has absolutely no right to refer to ‘conclusions drawn from natural science’, that a ‘double falsity pervades all the talk about Mach’s philosophy being “the philosophy of

45 Bogdanov, A., *Belief and Science*, Moscow 1910, p 215.

46 *Ibid.*, p 217.

20th century natural science”, “the recent philosophy of the sciences”, “recent natural-scientific positivism” and so forth ... Firstly, Machism is ideologically connected with only *one* school in *one* branch of modern natural science,⁴⁷ which is precisely the so-called ‘new physics’, and only that branch, and therefore it has no right whatsoever to speak in the name of all natural science, and especially in the name of all natural science of the 20th century. ‘Secondly, and *this is the main point*, what in Machism is connected with this school *is not what distinguishes it from all other trends and systems of idealist philosophy, but what it has in common with philosophical idealism in general*’.⁴⁸

As far as the above-mentioned school of ‘new physics’ is concerned, to which the Machists refer with certain foundation, in reality it ‘strayed into idealism, mainly because the physicists did not know dialectics’.⁴⁹

We have introduced the principal position of Lenin’s work which retains its critical significance even today, when the defenders of neopositivism are also setting up their gnoseology (epistemology) and logic, and like the Machists at the beginning of the century, are leaning on the epistemologically inexact expressions of various representatives of the latest physics and mathematics.

Yes, and today the source of such imprecision remains the same – ignorance of materialist dialectics as the logic and theory of knowledge of contemporary materialism, the materialism of Marx, Engels and Lenin.

Yes, and today ‘the idealist philosophers seize on the minutest error, the slightest vagueness of expression on the part of famous scientists in order to justify their refurbished defence of fideism’.⁵⁰

In 1908 they searched for and seized upon such ‘vagueness of expression’ on the part of Heinrich Hertz. Now they are just as diligently seizing upon sentences they find useful from Einstein, Bohr, Born, Heisenberg, Schrödinger, and Wiener, and they are just as diligently suppressing their other statements which speak in favour of both materialism and dialectics.

47 *LCW* vol 14, p 303.

48 *Ibid.* p 303.

49 *Ibid.*, p 262.

50 *Ibid.*, p 283.

No Marxist philosopher who is writing books criticising today's positivism can ignore this particular circumstance. This criticism only proves to be effective when it is based on an analysis of the actual state of things in contemporary natural science: in quantum mechanics, cybernetics, mathematics, and so forth. And not on the utterances of the self-same physicists, mathematicians and cyberneticists regarding the methods of thinking employed by them in their specialised fields.

In order to equal Lenin, and not Bogdanov, then it is necessary not to re-examine materialist dialectics 'in the light of the latest achievements of natural science and technology', but, on the contrary, to critically analyse the logic of comprehending those contradictions, the objectively effective resolution of which leads to its latest achievements. And such an analysis is possible only in the light of a clearly, strictly and consistently applied materialist dialectics as the logic and theory of knowledge of modern materialism.

Whenever anyone begins to 'creatively develop' logic and the theory of knowledge in the light of completely uncritically accepted statements by representatives of science and technology, then he turns away from the road of Lenin on to the crooked pathway of Bogdanov.

It was precisely as a result of an uncritical attitude toward what was said at the beginning of the century in the name of modern natural science and in the name of the 'new physics', that Bogdanov and his philosophical friends fell into the most primitive subjective idealism: 'As in philosophy, so in physics, our Machists slavishly follow the *fashion*, and are unable from their own, Marxist, standpoint to give a general survey of particular currents and to judge the place they occupy'.⁵¹

It was the inability to make an independent, Marxist, i.e. dialectical-materialist, epistemological analysis of modern changes in the body of knowledge of physics, in its theoretical part, the inability to see behind the physicist's statement 'matter has disappeared' the real fact, the real change in the concepts of physics, which is, philosophically, incorrectly expressed, and by no means the a priori predilection of Bogdanov and others for philosophical idealism which led them into the camp of reaction and clericalism (which Lenin was forced to call 'fideism' out of censorship considerations). The inability to think in a dialectical way was

51 *LCW* vol 14, p 302.

one of the main reasons why Bogdanov, as representative of the 'new physics', slipped into idealism.

Lenin insistently demonstrated the most important truth: in our time, a time of abrupt revolutionary changes (both in politics and in natural science), without dialectics, i.e. without the ability to think dialectically, it is impossible to hold on to the positions of materialism. Even with a subjective loathing toward clericalism, i.e. toward idealism and reaction, which was characteristic, undoubtedly, of Bogdanov. 'Bogdanov personally', – wrote Lenin – 'is a sworn enemy of reaction in general and of bourgeois reaction in particular'.⁵²

Without dialectics, materialism invariably proves to be not the victor (or a militant), but the vanquished, i.e. it inevitably suffers a defeat in the war with idealism, Lenin repeats a bit later in his philosophical testament, the article 'On the Significance of Militant Materialism'. This is a fundamental idea with Lenin. Moreover, this idea is not simply stated in the form of a thesis, but proven by a meticulous analysis of the crisis-ridden state of affairs in physics, and by a meticulous, critical analysis of those concepts, the non-dialectical explanation of which led to 'the slipping of the new physics into idealism'.

Among them belongs the principle (concept) of the relativity of our knowledge, including scientific knowledge, a principle 'which, in a period of abrupt breakdown of the old theories, is taking a firm hold upon the physicists, and which, *if the latter are ignorant of dialectics*, inevitably leads to idealism'.⁵³

As for 'philosophers' who write today as if Lenin was not interested in dialectics when he was working on *Materialism and Empirio-Criticism* but was simply defending the 'universal ABC's of all materialism', it must be that they just have not carefully read this chapter of his book. Or, what is also possible, they have a conception of dialectics which is essentially different from Lenin's and about which he speaks not only here, but in all his subsequent works on philosophy including the *Philosophical Notebooks* and the article '*On the Significance of Militant Materialism*'.

The conception of dialectics as the logic and theory of knowledge of modern materialism, which permeates the entire text of *Materialism and*

⁵² *LCW* vol 14, p 326.

⁵³ *Ibid.*, p 308.

Empirio-Criticism, was formulated a bit later – in the *Philosophical Notebooks*. But ‘implicitly’ it is the essence of Lenin’s position in 1908 as well. Moreover, it is realised in the form of his analysis of concrete phenomena in physics and in philosophy. Lenin reflects upon and writes about materialist dialectics, and not purely and simply materialism throughout the entire book, especially in the chapter about the recent revolution in natural science. Here he investigates in particular, the dialectic contained in the concept of objective truth, the dialectical relationship between the relative and the absolute (the unconditional, which is established definitively and for all time) which constitutes objective knowledge. It is precisely this dialectic which Bogdanov was not able to manage; here he became completely muddled.

Once he had seen the relativity of knowledge – and it was impossible not to see it – he directed all of his enthusiasm toward the unmasking of every absolute, against the fact of the presence in knowledge of a content which indeed depends neither on a particular man nor on mankind, but which is consequently already ‘removed’ out from under the control of those conditions of space and time under which it was derived. It was derived, therefore, not only once, but once and for all. This, then, is what Bogdanov, or any other positivist, is fundamentally incapable of imagining or digesting. And he was incapable of imagining this because of his fundamental rejection of dialectics.

Yes, here there is a strict alternative: either acknowledge that as a result of scientific cognition, a content is obtained which mankind will never be compelled to repudiate, knowledge which we can fully guarantee to be a conquest for all time; or declare that any knowledge obtained by science is a purely subjective construct which the first new fact may well overturn.

In other words, without acknowledging the organic unity and the indissoluble interconnectedness of the relative and absolute within scientific knowledge, you do not have to speak about the objectivity or universality of this knowledge whatsoever. Any possibility of distinguishing truth from a subjective idea is destroyed, the experimental and practical verification of the knowledge is impossible. There is not and cannot be anything objective among our ideas (concepts, or theories).

Bogdanov disassociates himself from what he finds to be the unpleasant dialectic of the relative and the absolute in the development of scientific knowledge by means of diatribes against ‘all absolutes’, although

along with these 'absolutes' he is forced to fulminate against the thesis of the very possibility of objective truth.

This question by no means centres on whether this or that concrete truth is objective. The central point being discussed is about the fundamental possibility of objective truth in general. According to Bogdanov, any truth is either objective or purely subjective; no third is given. The attempts to search for this third by way of investigating the development of cognition, the transformation of the objective into the subjective and vice versa, is for him, as well as for Berman, only an insidious fabrication of Hegelian speculation. For this reason his conception precludes the very posing of the question about the relationship of the object to the subject and the subject to the object.

Within the framework of his epistemology, the object as such can be discussed only insofar as it already finds representation in the subject (in one or another 'organised experience', i.e. in consciousness, in people's state of mind). In the end, this means only insofar as this object already occurs in speech, in language, in the system of sentences about it, since thinking is understood to be exclusively 'mute speech' which is 'internal' and 'inaudible to others'.⁵⁴

Such a conception of thinking is already clearly formed in his *Empirio-Monism*, when the word appears as the primary and fundamental, sensuously perceived instrument of 'the organisation and harmonisation of collective experience' (as Mach understood it, as a synonym for the physiologically explained psyche of people). By way of the word, there arises the self-same 'collectively organised experience', or the 'collective psyche'. In the word, and only in the word, they exist strictly, as some kind of 'sensuously perceived fact', as a 'subject of investigation'.

Therefore, in Bogdanov's schema there is subsequently no place for the material relations between people – for the economic relations between people and classes. He is forced to interpret them as the externally expressed psychical relations between classes, as the ideological schemas of the organisation of class experience. (Later this is expressed in ventures to create 'a proletarian interpretation of the theory of relativity' and other Proletcult extravagances.) And all this began with an inability to unite in the theory of knowledge such opposites as the relative and the

54 c.f. Bogdanov, A., *Essays on Universal Organisational Science*, Samara 1921 p 214.

absolute. It must be either one or the other. Bogdanov never acknowledged any other logic.

With facts in hand, Lenin meanwhile shows that the genuinely difficult problem of the relativity of knowledge can only be dealt with by a person who is armed with materialist dialectics, the dialectics of Marx and Engels.

As a matter of fact, the only theoretically correct formulation of the question of relativism is given in the dialectical materialism of Marx and Engels, and ignorance of it is bound to lead from relativism to philosophical idealism. Incidentally, the failure to understand this fact is enough by itself to render Mr Berman's absurd book *Dialectics in the Light of the Modern Theory of Knowledge*, utterly valueless. Mr Berman repeats the old, old nonsense about dialectics, which he has entirely failed to understand. We have already seen that in the theory of knowledge all the Machists, at every step, reveal a similar lack of understanding.⁵⁵

Lenin also 'at every step' – in every chapter and paragraph, concerning each problem of the theory of knowledge – counterposes to them this dialectics, working it over and demonstrating it in application to the problems not only of sensation, but of the image, concept, truth and sign-symbol. We will not enumerate all the problems of the theory of knowledge which are resolved in a dialectical materialist way in the course of Lenin's polemic with the Machists. 'The Register' would prove to be too long.

In his book, Lenin says: here is the materialist dialectic in the theory of knowledge and in logic, in the resolution of absolutely concrete epistemological problems. Here is epistemology, elaborated with the dialectical materialist method, as well as the science of thinking – logic. This is the logic of the actual cognition of objective reality, of the ideal reproduction (reconstruction) of the material world, the world of material facts and the relations between material facts. Logic which assisted the creation of *Capital* (by means of its conscious and consistent application), the foundation of the theory of scientific socialism, and the elaboration of the strategy and tactics of the struggle for socialism.

⁵⁵ *LCW* vol. 14 p 309.

The entirety of Marxism from top to bottom was established by means of the dialectical materialist method. In literally any work of Marx and Engels it is therefore both possible and necessary to study the logic of their thinking and the theory of knowledge which they consciously employed – dialectics. This must be studied not only in their writings, but in the real logic of the political struggle which they conducted throughout their entire lives. For dialectics is the logic not only of research, and not only of the unity of scientific works; it is also a logic of real causes which comes to life and enters into battle, finding realisation in whatever are the truly real causes changing the face of the surrounding world.

Neither Bogdanov nor Berman understood the real dialectics of Marx and Engels; they simply did not see it. And they only began to search for it (in order to refute it) among the statements about dialectics which can be found in the writings of the classics. This meant first of all, of course, among those fragments by Engels where he popularly explains the ABCs of dialectics, the most general propositions.

Berman's entire 'criticism of dialectics' for example, is reduced to demonstrating that the 'examples', which Engels introduces in order to illustrate the correctness of dialectics, can easily be restated in different terms, without using 'specifically Hegelian' terminology. Berman proves nothing else. In general there is no mention in his book of any actual dialectics, either Hegelian, or much less Marxism. His book deals exclusively with words and terminology which, he says, Engels and Marx unwisely copied from Hegel.

By rummaging around in the 'Hegelian' lexicon and diligently explaining what is meant in pre-Hegelian and post-Hegelian logic by the terms 'identity', 'contradiction', 'negation', 'opposition', and 'synthesis', Berman triumphantly proves that 'Hegel and his imitators use these terms in an extremely unscrupulous and completely uncritical manner', i.e. 'in various meanings' and 'in different contexts'.⁵⁶ All this, he says, is because 'Hegel treated formal logic with contempt', 'continuously lumped together' contrary and contradictory judgements, and so forth. After he had calculated that 'with Hegel the term "contradiction" has six different meanings', Berman triumphantly decrees the 'one solitary sense' in which this term must henceforth be used. That is nonsense and nothing else. Whosoever uses this term in any other sense (and particularly in the

⁵⁶ Berman. *Dialectics in the Light ...*, p 74.

‘ontological’ sense!) will be excommunicated from Marxism and from ‘modern science’ in general by the Machist logic and theory of knowledge.

Let the reader judge for himself whether this ‘absurd little book by Mr Berman, which sets forth such old, old nonsense’, deserved special and serious refutation on Lenin’s part.

Lenin felt that it was neither necessary nor even possible to specially examine and refute Berman’s arguments against dialectics for the simple reason that the latter generally never dealt with any actual dialectics whatsoever. For Lenin, dialectics was the method of scientifically cognising objective reality, while Berman was concerned with the verbal expression of the psychophysiological states (‘experiences’) of any biological organism, i.e. he was not dealing with the same thing. To get involved with him in a debate over the details of his argumentation would mean to reach a prior agreement with him regarding the very subject of the argument, its boundaries, and limits, i.e. with all those general Machist premises from which he proceeded.

But Lenin had after all already smashed to smithereens these self-same premises by counterposing to them the dialectical materialist form, as it is concretely applied to the examination of epistemological problems.

Lenin counterposes to the Machist diatribes about logic and the theory of knowledge, the dialectical materialist (and not simply materialist) conception of the essence of those problems which genuine scientific cognition runs up against. He shows that dialectics with elemental force intrudes upon the thinking of scientists precisely as the logic of thought which alone allows them to find and grope their way to a truly radical escape from the crisis embracing natural science, the cognition of nature, and physics in particular. Lenin sees the task which the 20th century has placed before philosophy to be the careful elaboration of dialectics as the logic of scientific thought and as the genuinely scientific theory of knowledge capable of helping natural science to find its way out of its crisis-ridden state.

The Machist logic and theory of knowledge suggest to natural science only imaginary and purely verbal means of resolving the disagreements, conflicts and contradictions that have arisen within it. This is because the Machists see the actual presence of contradictions only within the verbal, terminological formulation of knowledge, but not within the very essence

of the make-up of this knowledge, not within the attributes of concepts (for a concept in the language of dialectical philosophy is not the 'meaning of a term', but the understanding of the essence of the matter).

For this reason materialist dialectics orients the thinking of the scientist toward a sharp and clear explanation of contradictions and thereby directs the search for a completely concrete way to resolve them in a new and more profound (i.e. more objective) knowledge.

Machist logic is nothing more than the purely formal 'harmonising' of the verbal expression of whatever knowledge is at hand; it is incapable of pushing it on. Its way is purely nominal 'elimination' of contradictions which have already appeared in concepts, at the expense of the verbal manipulation of 'signs', 'symbols', 'hieroglyphs', and at the expense of forcible changes in the historically developed names of things in science.

Positivism is unsuccessfully working on the technique of such an 'elimination' of contradictions even to this day. As a theory of knowledge and logic, positivism has therefore played and continues to play what is essentially a retrograde role in the development of science. At best, this has been a conservative role, but more frequently it has been out and out reactionary, because the formal apparatus which it elaborates is fine for many things, but not for a critical analysis of the modern (i.e. that which has been achieved to this day) level of knowledge, and not for revealing the contradictions (and still unresolved theoretical problems) contained within this knowledge.

The attitude of every form of positivism toward the current state of scientific knowledge is essentially and fundamentally apologetic. Where an actual crisis has matured in the development of knowledge, where concepts, schools and tendencies (but not 'terms') are essentially coming into collision, positivism sees only uncontradictory peace and tranquillity, only the 'movement forward'. It has neither the ability nor the desire to examine this movement in all its real and dramatic complexity, with all its contradictions and zig-zags, with all its roundabout and often even backward manoeuvres and evolution.

For this reason the positivists are so fond of speaking in the name of modern natural science and even in the name of all modern science, although they actually always speak only for one or another kind of tendency, current or school, which they accept and portray as the universal standard of science in general. And at all times, their orientation is not toward the essence of the matter, but toward the terminology which is

peculiar to it and to the manner of expression. They orient toward the literary or verbal form which has come into vogue, toward the fashionable style of thinking. But never, in any case, toward the science which is represented in Marx's *Capital*.

Conclusion

When, in his *Philosophical Notebooks*, Lenin sharply and categorically formulates his views on materialist dialectics, views which have been polished to the point of becoming aphorisms, he formulates them by no means as simply (and even not so much) as conclusions derived from the new critical review of the works of Hegel which he had undertaken. He presents them more (and even primarily) as the results of his entire struggle over many years in the realm of philosophy. He had to wage this struggle with the Machists, with the defenders of 'subjective sociology', with the 'legal Marxists', and with those tendencies toward a dogmatic ossification of Marxist thought which became distinct among the theoreticians of the Second International (particularly among Plekhanov and his disciples).

To try to understand and explain the formulations in the *Philosophical Notebooks* which are devoted to dialectics merely as the alternatives and antitheses of the formulations of Hegelian philosophy, merely as the materialistically reworked positions of Hegel, means to understand them from the very beginning in a much too narrow and formal manner (i.e. in a manner which is ultimately incorrect).

Similarly, it is impossible to understand the content of *Materialism and Empirio-Criticism* if the general philosophical positions developed here are seen only to be the result of the polemic with the subjective idealism of the Machists, if they are seen only in the context of this argument. In such a case, the documents which represent two crucial stages in the development of Lenin's philosophical thought appear in a false light. Hence arises the legend, according to which in *Materialism and Empirio-Criticism* Lenin defended only the general axioms of all materialism (while supposedly not paying any particular attention to dialectics), while in the *Philosophical Notebooks* he conducted a special study of the problems of dialectics. And that is why the basic propositions of these two crucial philosophical works must be considered only within the framework and boundaries of the corresponding investigation. Outside of these limits, Lenin's fundamental positions prove to be not only insufficient, but even inexact.

For instance, the concept (conception) of matter which is elucidated in *Materialism and Empirio-Criticism* is supposedly 'one-sided' and 'only in its epistemological aspect'. Within the limits of the debate with the

Machists, it is said, such a conception would be fully sufficient, insofar as the Machists concentrated exclusively on epistemology, and here it would be sufficient to counterpose to them only the epistemological aspect. If, however, the problem of matter is examined more broadly, without limiting oneself to the task of refuting subjective idealism alone, then Lenin's definition supposedly must be considered to be too narrow. This definition must be 'broadened', by including within it the particular 'ontological aspect'. The same goes for the conception of reflection. Thus arose the version whereby in *Materialism and Empirio Criticism* we are simply dealing with 'the one-sidedly epistemological' aspect of the philosophy of Marxism, or simply epistemology. Hence is derived the necessity to 'complete' Lenin's definitions with their particular 'ontological' complement.

On the other hand, when reference is made to the *Philosophical Notebooks*, to the propositions which are clearly formulated on its pages, then they, too, in their own turn, are interpreted as propositions which are correct exclusively within the context of the special polemic with Hegel, and apart from this context are supposedly 'one-sided', 'incomplete' and 'insufficient'. In other words, they, too, cannot be taken 'literally' as general philosophical truths of Marxism. It turns out that at no point which is concerned with the materialist dialectic can Lenin be understood 'literally'. He must be understood only 'figuratively', only with reservations which impart to his theses an opposite meaning.

Lenin's monolithic solution of the problem stretched out over many years and actually was a continuation of the same struggle in 1908, in 1914, and 1922 (the year he published the article '*On the Significance of Militant Materialism*'); yet it disintegrates before somebody's eyes into a multitude of utterances which not only have no mutual ties, but which directly contradict each other. The task of reconstructing Lenin's genuine views of materialist dialectics becomes transformed into a purely formal job of co-ordinating (harmonising) his various statements concerning this subject. This is what happens when Lenin's actual conception of the essence of materialism and dialectics is detected in neither *Materialism and Empirio Criticism* nor the *Philosophical Notebooks*. At one time Berman and Bogdanov read corresponding statements in *Anti-Dühring* and *Capital*, but they were unable to tie them together within the framework of a unified and consistent conception, for they saw formal logical contradictions between these statements. In addition they had earlier driven into their heads an anti-dialectical understanding of logic which is reduced to the

fact that logic is the science of the 'specific' forms and laws of thinking, which in turn is understood as a purely subjective process, immediately given to the logician in the form of the movement of words, terms, and sign-symbols.

If it is precisely this which is understood by the term 'logic', and all other 'meanings of the term' are declared a priori to be illegitimate and incorrect, then, yes, Lenin's propositions, in which the given term is used, do indeed prove to 'contradict' one another.

However, Lenin understood logic to be something else and never considered the interpretation described above to be the only correct explanation.

Following Engels and Marx as opposed to Mach and Berman, Lenin always understood logic both as the science of the forms and laws of development of the actual thinking accomplished by mankind and as the subject of investigation by the specialised logician who was resisting him, in the form of the history of all human culture – science, technique, law, art, and so forth. In other words, as an investigation in the form of the historically developed forms of collective (social) consciousness (cognition, test, these are synonyms). Laws which are independent of will and consciousness and which act in cognition with the force of objective necessity, while finally forcing a way through into individual thinking – these laws are for Lenin his logic laws and logical forms. These are not those methods which are consciously applied in practice by this or that person, this or that historically given association of thinking individuals, not those specific laws of thinking which are by no means studied either in philosophy or in dialectics, but most of all in psychology.

But in reading Lenin, all the words he uses must be understood precisely as Lenin understood them. And if they are read in that way, then the propositions, according to which dialectics is both the logic and the theory of knowledge of modern materialism i.e. of Marxism, are the most precise terminological expression of Lenin's position, which runs throughout the entire text of *Materialism and Empirio Criticism*, and the *Philosophical Notebooks*, as well as the article '*On the Significance of Militant Materialism*'.

The theory of knowledge, if it pretends to be a science, i.e. a conception of the forms and laws of development of cognition and not simply a description of psycho-physiological, linguistic or psychological conditions of cognition (i.e. circumstances which change not only from century to

century, but from country to country and even from individual to individual), also must be nothing but a science of the universal laws of development of general spiritual culture. But in this conception, the theory of knowledge also coincides with the science of thinking, and thereby with dialectics. The latter is both historically and essentially nothing but the totality of the universal (and therefore objective) laws reflected in the course of development of mankind's spiritual culture. Dialectics is also the totality of the forms of natural and socio-historical development in its universal form. For this reason the laws of dialectics are laws of development of things themselves, the laws of development of the self-same world of natural and historical phenomena. These laws are realised by mankind (in philosophy) and verified as to their objectivity (their truth) by the practice of transforming both nature and socio-economic relations.

Logical 'parameters' of thinking are the name for those schemas, and laws to which the process of thinking is subordinated – regardless of whether we want it or not. This happens even despite our wishes, and even independent of whether we are conscious of them or not, whether we understand them correctly or not, whether we put them into words precisely or not.

However there is a big difference: whether we subordinate ourselves to these laws in our conscious thinking or whether they act in this thinking in spite of the norms and laws which we consciously apply. In the first instance, the logical (dialectical) laws are realised by us freely, orienting our cognition toward the reflection of the dialectics of the external world, and in the second instance they impose themselves on us forcefully, breaking our consciously applied methods and rules, compelling us to subordinate ourselves to the dialectical laws against our will, under the powerful pressure of facts, experimental data, material interests and other circumstances which are external to our conscious will.

In analysing the crisis of physics, Lenin demonstrated the extreme importance of the fact that, in their own field, at every step, scientists (and especially those who, like Mach are inclined to philosophical reflection) are forced to think not only in disagreement with the logic and theory of knowledge which they consciously advocate, but in direct opposition to all its axioms and postulates. And, as long as he is thinking as a physicist, even Mach forgets all about the principles of the 'economy' and 'simplicity' of thought, about the 'ban on contradiction' and so forth. Through this gap between consciously advocated epistemological doc-

trine and the real logic of thinking, dialectics spontaneously (i.e. despite will and consciousness) works its way and penetrates into scientific thinking.

Hence a paradoxical phenomenon arises: dialectics becomes the actual logic of the development of physics even under conditions where an individual physicist in his conscious logical orientation remains a positivist, i.e. an anti-dialectician. Forced, indeed, to think dialectically, he does this, however, with extreme reluctance, resisting, showing opposition and even trying to 'justify' the involuntary course of thinking in their own (as before anti-dialectical) terminology, in the positivist system of logical and epistemological ideas.

Lenin proves that to be consciously guided in cognition and in practice by dialectics which is understood precisely as logic, as the theory of knowledge and practice, is preferable and more 'useful' for natural science than, after long opposition to it and against one's will, to subordinate oneself to this logic as if to the elemental force of the process into which we are all drawn and in which we all participate – whether according to our own free will or against it.

Lenin understood perfectly well that this is the same relationship which exists between the spontaneous workers movement, which is 'pushed slightly' in the direction of socialism, by the powerful pressure of the entire accumulation of objective circumstances, and the theory of scientific socialism, which is actively introduced into the consciousness of the working class from without, by theoretical consciousness.

This conception, which both 'economism' and Menshevism lacked, has the most direct relationship to Lenin's resolution of the question about the relationship of the theory of knowledge to that real cognition which is carried out by the natural sciences.

In his attempts to defend Machist positions in the theory of knowledge from Lenin's criticism, Bogdanov recalls 'one episode from the polemic between two political fractions of the Russian Marxists. The Bolshevik N. Lenin once said in the book *What Is To Be Done?* that the working class is *incapable*, independently, without the help of the socialist intelligentsia, of raising itself above the ideas of trade unionism and arriving at the socialist ideal. This phrase escaped completely by accident, in the heat of the polemic with the "economists". It had no organic ties with the fundamental views of the author. This did not prevent the Menshevik writers from concentrating their exultant polemic over the

next three years on Lenin's statement, with which he supposedly proved for all time the antiproletarian character of Bolshevism. I even vaguely recall – perhaps I am mistaken? – that they wanted to erect a monument to Lenin for the fact that he had “buried Bolshevism among the Russian workers” ...⁵⁷

Isn't this clear? Lenin's position, which fundamentally separated revolutionary Marxism from all forms of 'tail-ism', is considered by Bogdanov to be an 'accidental phrase'. But it is most noteworthy that he makes his assessment precisely in the context of the argument over the relationship of a clearly conceived theory of knowledge (and philosophy in general) to the spontaneous development of this self-same knowledge (science).

Everywhere, he says, there is the same 'accidental' (and fundamentally 'incorrect') statement, for according to Bogdanov, the working class is capable, 'on its own', of elaborating 'a truly proletarian world view', without the active assistance of 'any of the intelligentsia there', and natural science is also capable 'on its own', from a self-analysis of its 'methods', to elaborate a 'scientific epistemology' without the assistance of 'dusty epistemologists'. He gives the example of Mach as the model of such a 'genuinely scientific epistemology' and theory of knowledge.

In his theory of the workers' movement, Bogdanov objectively draws nearer to what Lenin aptly and precisely designated as the position of 'tailism' in the workers' movement and as the propagation of the advantages of spontaneity over a theoretically conscious foundation. The Russian Machist preached the same thing in discussing the role of the theory of knowledge in the development of knowledge. Here we find the purest 'tailism' in philosophy, condemning it to the role of a vehicle for natural science. And a very heavy vehicle besides, which, because of its 'lack of manoeuvrability', hinders the offensive of the natural sciences against the secrets of nature. In the same way, the political 'tailism' of Plekhanov and Bogdanov in 1917 clearly showed that it could play no other role than that of heavy chains on the legs of the revolutionary proletariat. Here the analogy is perfect.

Precisely because of his Machist view of consciousness and cognition, Bogdanov was forced to set his hopes on the fact that natural science, by virtue of its own objectively necessary striving, would develop

⁵⁷ Bogdanov, A., *Belief and Science*, p 133-34.

by itself, without the assistance of philosophers, a theory of knowledge, and do this even better than the philosophers. Here the connection between his political and philosophical 'tailism' (i.e. positivism) is evident.

On the other hand, what is also evident is the organic interconnection which exists between Lenin's basic line of argumentation in *Materialism and Empirio-Criticism* and his aphorisms about dialectics which appear in the *Philosophical Notebooks*.

When Lenin writes there that 'dialectics is the theory of knowledge of (Hegel and) Marxism: this is the "aspect" of the matter (it is not "an aspect" but the *essence* of the matter) to which Plekhanov, not to speak of other Marxists, paid no attention',⁵⁸ then this is by no means an 'accidental statement', but an extremely precise expression of the author's basic positions, the essence of his views on dialectics, the same 'essence of the matter' which Lenin defends in *Materialism and Empirio Criticism*.

It is there that he both criticises Bogdanov and his co-thinkers for their complete ignorance of this essence, and that he reproaches Plekhanov for the fact that, although he correctly defends materialism, he 'turns no attention' to dialectics specifically as a theory of knowledge (about dialectics 'in general', Plekhanov wrote a fair amount, but about dialectics specifically as a theory of knowledge and a logic – he wrote almost nothing). The general inability to pose the question about the relationship of dialectics to 'the recent revolution in natural science', for which Lenin reproached Plekhanov, has its roots precisely here – in the ignorance of dialectics as the theory of knowledge and the logic of modern materialism.

Hence the inability of Plekhanov to counterpose the materialist theory of knowledge to Machist epistemology, and to develop a genuinely positive counter-conception to the Machist ideas about the bonds between philosophy and natural science. His criticism of Machism remains, in essence, purely negative and destructive, without suggesting anything in place of what has been destroyed.

In place of the Machist conception of cognition which he demolishes, and in the course of this 'destruction', Lenin gives an explanation of dialectics as the genuine theory of knowledge and logic of Marx and Engels. This is the advantage of Lenin's criticism of Machism over Plekhanov's.

⁵⁸ *LCW* vol. 38 p 362.

The *Philosophical Notebooks* continue the same line. It is here that the following is written: ‘This aspect of dialectics (e.g., in Plekhanov) usually receives inadequate attention: the identity of opposites is taken as the sum-total of *examples* (“for example, a seed”, “for example, primitive communism”). The same is true of Engels. But it is “in the interest of popularisation ...”) and not as a *law of cognition* (and as a law of the objective world.)’⁵⁹

Ever newer and newer examples, confirming the correctness of universal dialectical propositions about development, can be introduced without end, but the essence of the matter consists in revealing dialectics as the system of the laws of motion of cognition, which reflect the universal laws of the objectively developing world. Dialectics is not the totality of purely subjective methods and rules applied in cognition by any scientist.

The scientist actually knows the methods and rules of scientific cognition better than any specialist in epistemology. The scientist need not learn these methods and rules from philosophy. From the materialistically explained theory of knowledge he can on the other hand learn something else: the dialectical conception of the logic of scientific thought, which, according to Lenin, is a synonym for dialectics.

The reader who has not understood from the very beginning that *Materialism and Empirio Criticism* deals specifically with this question, will understand virtually nothing in this work (or else he will understand things incorrectly, he will misunderstand them).

In their conception of logic, Bogdanov and Berman therefore remained with the positions of formal logic, interpreted in a subjective idealist manner as the sum of ‘norms and postulates’ which ‘reflect nothing in reality’, and are nothing more than artificial ‘rules’, which we must observe if we ‘want’ to obtain the Machist ideal of scientific cognition – the elimination of all contradiction among statements of any type. Both men (and all subsequent positivism) therefore remain, in their conception of the theory of knowledge within the system of ideas of introspective psychology, i.e. with the notions, essentially, of archaic psychology translated into the language of physiological terms.

Of course, after such a verbal translation ‘from one language to another’ these notions appear just as before to be subjective even though

⁵⁹ *LCW* vol. 38 p 359.

they find the verbal form of 'materialistically' and 'objectivity' interpreted ideas. A similar method remains the immutable 'conquest' of every type of positivism even to this day.

For this reason *Materialism and Empirio-Criticism* now continues to be the most timely Marxist work in the field of philosophy where until now the front lines have run in the war of Marxism-Leninism for materialist dialectics, for the logic and theory of knowledge of modern-scientific, intelligent, dialectical materialism. This is the war for militant materialism, without which there is not and cannot be a Marxist-Leninist world outlook.

Revolution is revolution, regardless of whether it occurs in the socio-political 'organisms' of an enormous country or in the 'organism' of contemporary scientific development. The logic of revolutionary thinking and the logic of revolution are one and the same thing. And this logic is called materialist dialectics.

Materialism and Empirio Criticism teaches this above all else if it is read in the light of the entire subsequent history of the political and intellectual development in Russia and the entire international revolutionary movement of the working class. History has clearly shown where the path of Lenin has led and is leading. It has also shown the crooked pathways of revising the principles of the logic of revolution from the point of view of positivism.

Nowadays matters are far different from the beginning of the century, when very many scientists were hypnotised by positivist demagogy. Now an enormous number of scientists, and not only in our country, have become conscious allies of Leninist dialectics. This alliance is broadening and growing stronger, despite all the attempts of the ideologists of positivism (which cannot be ignored even today) to prevent this. Such an alliance is invincible, and the duty of philosophers is to widen and strengthen it. This is the heart of Lenin's testament, and the main lesson of his brilliant book.

From this point of view it is necessary to read and re-read it. It is alive, just as the scientific cognition of nature and society is alive and will continue to live, just as the international communist movement is alive and will continue to live, bringing scientific socialism into realisation throughout the world.

