

**Part Two – Problems of the Marxist-Leninist Theory of
Dialectics**

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 affirmation 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.

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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.

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

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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".'

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 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

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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 ...'

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 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 'condition' 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'.

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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 ‘epistemology’ 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

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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 uncontrovertible 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,

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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 – *EVI*), logic coincides with the *theory of knowledge*. This is in general a very important question.'

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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 psychology 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.'

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

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of ‘modern science’, on Humean-Berkeleian 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; 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.⁶ 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*.'

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.'

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 determinations 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.'

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

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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 objectivity 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

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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'. 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 relationship 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 reflexion 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

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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

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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, 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.

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 subject to object, being tested in practice and arriving through this test at truth.' '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)." The *movement* of scientific cognition, Lenin said, was the nub.

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 sandpies. 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

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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.' 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.' '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. 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 Š [summation Ed.] of its individual parts, from its beginning to its end.