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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 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

* 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.

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 Psychological*. 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 dialectical 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 vileness, vulgar ideological baseness, the most dangerous vileness, 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.

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.

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.)

⁴ *LCW* vol. 15 p 474.

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 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

5 *LCW* vol. 34 p 387.

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.

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?

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 thundering 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.

9 LCW vol 15 pp 33-34.

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 Bolshevnik 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 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 materialism, 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 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

10 Berman, Y., *Dialectics in the Light of the Modern Theory of Knowledge*, pp 5-6.

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

11 Berman, *Op. cit.* pp 135-136.

'non-scientific nature' of the principle of the identity of opposites. This the Russian Machists zealously set out to do.

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 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

¹² Berman, *Op. cit.* p 164.

¹³ Berman, *Op. cit.* p 137.

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.

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

14 *Ibid*, p 165.

15 *Ibid*, p 97

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 over-estimation 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 'antimatter' ('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 emotions' 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 irreproachable.

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!’, 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

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.

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 point, Mach and Avenarius, who are by no means Marxists, stand much closer to Marx than the patented Marxist G. V. Plekhanov with his salto-vitale 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 Mars?) 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.

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

18 *Ibid.*, p 69.

19 *LCW* vol 14 p 169.

20 *Ibid.*, p 327.

“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 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

21 *LCW* vol 14 p 328.

22 *Ibid.*, p 170.

23 *Ibid.*, p 170-71.

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 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

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*.

25 Kraft, W. *Wiener Kreis*. Wien – N.Y., 1968, S. 130.

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 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 energeticist 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 conservation 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 established 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.

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*.

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*.

28 Lenin, *Complete Collected Works* vol. 48 p 161.

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 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 administrative (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 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

29 *LCW* vol 26 p 119.

30 *LCW* vol 26 p 117-18.

31 *LCW* vol 26 p 118.

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 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 real. It is the large-scale capitalist enterprise, taken especially from the point of view of its labour technique.

32 LCW vol 26 p 119.

33 Bogdanov, A. *The New World* (Articles 1904-1905). Moscow, 1905, p 89-90.

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 theses 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-Orthodox-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 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 demagogy (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 demagogy 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

³⁴ *Essays in the Philosophy of Marxism*, p 2.

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.

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.

35 *LCW* vol 14 p 251.

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

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 demagogy 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

³⁶ Plekhanov, *Works*, Moscow 1925, vol. 17 p 99.

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

37 *LCW* vol. 14 p 342.

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 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 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

38 *LCW* vol. 14 p 263, 265.

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

39 Lenin. *Complete Collected Works* vol. 18 p 471.

scientific knowledge, positivism turns these concepts into obstacles which the development of science must sweep to the wayside.

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 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

40 *LCW* vol. 14 p 334-35.

41 Berman. *Op. cit.*, pp 7-8.

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 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

42 Berman. *Op. cit.*, p 16.

43 *LCW* vol. 38 pp 471-72.

‘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, 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

44 *LCW* vol. 14 p 251.

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 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

45 Bogdanov, A., *Belief and Science*, Moscow 1910, p 215.

46 *Ibid.*, p 217.

47 *LCW* vol 14. p 303.

48 *Ibid.* p 303.

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 neo-positivism 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.

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

49 *Ibid.*, p 262.

50 *Ibid.*, p 283.

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 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 Empirio-Criticism*, was formulated a bit

⁵¹ *LCW* vol 14. p 302.

⁵² *LCW* vol 14. p 326.

⁵³ *Ibid.*, p 308.

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 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

⁵⁴ c.f. Bogdanov, A., *Essays on Universal Organisational Science*, Samara 1921 p 214.

⁵⁵ *LCW* vol. 14 p 309.

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.

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 '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

⁵⁶ Berman. *Dialectics in the Light ...*, p 74.

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 doctrine 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

57 Bogdanov, A., *Belief and Science*, p 133-34.

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 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.

58 *LCW* vol. 38 p 362.

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.

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 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.

⁵⁹ *LCW* vol. 38 p 359.

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.