

The ABC of Materialist Dialectics

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Dialectic is neither fiction nor mysticism, but a science of the forms of our thinking insofar as it is not limited to the daily problems of life but attempts to arrive at an understanding of more complicated and drawn-out processes. The dialectic and formal logic bear a relationship similar to that between higher and lower mathematics.

I will here attempt to sketch the substance of the problem in a very concrete form. The Aristotelian logic of the simple syllogism¹ starts from the proposition that 'A' is equal to 'A'². This postulate is accepted as an axiom for a multitude of practical human actions and elementary generalisations. But in reality 'A' is not equal to 'A'. This is easy to prove if we observe these two letters under a lens — they are quite different from each other. But, one can object, the question is not of the size or the form of the letters, since they are only symbols for equal quantities, for instance, a pound of sugar. The objection is beside the point; in reality a pound of sugar is never equal to a pound of sugar—a more delicate scale always discloses a difference. Again one can object: but a pound of sugar is equal to itself. Neither is this true—all bodies change uninterruptedly in size, weight, colour, etc. They are never equal to themselves. A sophist will respond that a pound of sugar is equal to itself 'at any given moment'.

¹Syllogism: The historically first form of deduction, which consists of three "terms": Individual, Universal and Particular, arranged in three propositions forming two premises and a conclusion. Fido (Particular) is a dog (Individual). All dogs are quadrupeds (Universal). Therefore, Fido is a quadruped.(conclusion), and each of the statements is called a "Judgment"). Hegel spent a lot of time in the Doctrine of the Notion, developing the relationships between Individual, Universal and Particular, as part of his critique of formal logic. See the section in the Science Logic on the Syllogism. Hegel ridicules the idea of a "logic" which is indifferent to the truth of its premises, but only whether the conclusion follows from the premises: nothing could be deduced from a notion which has no content.

²Something being 'equal to itself' means that despite quantitative change, it still remains what it is, i.e. there is no qualitative change. "Self-identical" in Hegelian terminology means something totally lacking in internal contradictions and vitality.

Aside from the extremely dubious practical value of this 'axiom', it does not withstand theoretical criticism either. How should we really conceive the word 'moment'? If it is an infinitesimal interval of time, then a pound of sugar is subjected during the course of that 'moment' to inevitable changes. Or is the 'moment' a purely mathematical abstraction, that is, a zero of time? But everything exists in time; and existence itself is an uninterrupted process of transformation; time is consequently a fundamental element of existence. Thus the axiom 'A is equal to A' signifies that a thing is equal to itself if it does not change, that is, if it does not exist.

At first glance it could seem that these 'subtleties' are useless. In reality they are of decisive significance. The axiom 'A is equal to A' appears on one hand to be the point of departure for all our knowledge, on the other hand the point of departure for all the errors in our knowledge. To make use of the axiom of 'A is equal to A' with impunity is possible only within certain *limits*. When quantitative changes in 'A' are negligible for the task at hand then we can presume that 'A' is equal to 'A'. This is, for example, the manner in which a buyer and a seller consider a pound of sugar. We consider the temperature of the sun likewise. Until recently we consider the buying power of the dollar in the same way. But quantitative changes beyond certain limits become converted into qualitative. A pound of sugar subjected to the action of water or kerosene ceases to be a pound of sugar. A dollar in the embrace of a president ceases to be a dollar. To determine at the right moment the critical point where quantity changes into quality³ is one of the most important and difficult tasks in all the spheres of knowledge including sociology.

Every worker knows that it is impossible to make two completely equal objects. In the elaboration of baring-brass into cone bearings, a certain deviation is allowed for the cones which should not, however, go beyond certain limits (this is called tolerance). By observing the norms of tolerance, the cones are considered as being equal. ('A' is equal to 'A'). When the tolerance is exceeded the quantity goes over into quality; in other words, the

³Quality and Quantity: Quality is an aspect of something by which it is what it is and not something else; quality reflects that which is stable amidst change. Quantity is an aspect of something which may change (become more or less) without the thing thereby becoming something else; quantity reflects that which is constantly changing in the world ("the more things change, the more they remain the same"). The quality of an object pertains to the whole, not one or another part of an object, since without that quality it would not be what it is, whereas an object can lose a "part" and still be what it is, minus the part. Quantity on the other hand is aspect of a thing by which it can (mentally or really) be broken up into its parts (or degrees) and be re-assembled again. Thus, if something changes in such a way that has become something of a different kind, this is a "qualitative change", whereas a change in something by which it still the same thing, though more or less, bigger or smaller, is a "quantitative change". In Hegel's Logic, quantity and quality belong to Being ... For Engels' explanation of the dialectics of Quantity and Quality, especially in Nature, see the section from Anti-Duhring.

cone bearings become inferior or completely worthless.

Our scientific thinking is only a part of our general practice including techniques. For concepts there also exists 'tolerance' which is established not by formal logic issuing from the axiom 'A' is equal to 'A', but by the dialectical logic issuing from the axiom that everything is always changing. 'Common sense' is characterised by the fact that it systematically exceeds dialectical 'tolerance'.

Vulgar thought operates with such concepts as capitalism, morals, freedom, workers' state, etc as fixed abstractions, presuming that capitalism is equal to capitalism. Morals are equal to morals, etc. Dialectical thinking analyses all things and phenomena in their continuous change, while determining in the material conditions of those changes that critical limit beyond which 'A' ceases to be 'A', a workers' state ceases to be a workers' state.

The fundamental flaw of vulgar thought lies in the fact that it wishes to content itself with motionless imprints of a reality which consists of eternal motion. Dialectical thinking gives to concepts, by means of closer approximations, corrections, concretisation, a richness of content and flexibility; I would even say 'a succulence' which to a certain extent brings them closer to living phenomena. Not capitalism in general, but a given capitalism at a given stage of development. Not a workers' state in general, but a given workers' state in a backward country in an imperialist encirclement, etc.

Dialectical thinking is related to vulgar in the same way that a motion picture is related to a still photograph. The motion picture does not outlaw the still photograph but combines a series of them according to the laws of motion. Dialectics does not deny the syllogism, but teaches us to combine syllogisms in such a way as to bring our understanding closer to the eternally changing reality. Hegel in his *Logic* established a series of laws: change of quantity into quality, development through contradictions, conflict of content and form, interruption of continuity, change of possibility into inevitability, etc., which are just as important for theoretical thought as is the simple syllogism for more elementary tasks.

Hegel wrote before Darwin and before Marx. Thanks to the powerful impulse given to thought by the French Revolution, Hegel anticipated the general movement of science. But because it was only an *anticipation*, although by a genius, it received from Hegel an idealistic character. Hegel operated with ideological shadows as the ultimate reality. Marx demonstrated that the movement of these ideological shadows reflected nothing but the movement of material bodies.

We call our dialectic materialist, since its roots are neither in heaven nor in the depths of our "free will", but in objective reality, in nature. Con-

sciousness grew out of the unconscious, psychology out of physiology, the organic world out of the inorganic, the solar system out of the nebulae. On all the rungs of this ladder of development, the quantitative changes were transformed into qualitative. Our thought, including dialectical thought, is only one of the forms of the expression of changing matter. There is place within this system for neither God nor Devil, nor immortal soul, nor eternal norms of laws and morals. The dialectic of thinking, having grown out of the dialectic of nature, possess consequently a thoroughly materialist character.

Darwinism, which explained the evolution of species through quantitative transformations passing into qualitative, was the highest triumph of the dialectic in the whole field of organic matter. Another great triumph was the discovery of the table of atomic weights of chemical elements and further the transformation of one element into another.

With these transformations (species, elements, etc.) is closely linked the question of classification, equally important in the natural as in the social sciences. Linnaeus' system (18th century), utilising as its starting point the immutability of species, was limited to the description and classification of plants according to their external characteristics. The infantile period of botany is analogous to the infantile period of logic, since the forms of our thought develop like everything that lives. Only decisive repudiation of the idea of fixed species, only the study of the history of the evolution of plants and their anatomy prepared the basis for a really scientific classification.

Marx, who in distinction from Darwin was a conscious dialectician, discovered a basis for the scientific classification of human societies in the development of their productive forces and the structure of the relations of ownership which constitute the anatomy of society. Marxism substituted for the vulgar descriptive classification of societies and states, which even up to now still flourishes in the universities, a materialistic dialectical classification. Only through using the method of Marx is it possible correctly to determine both the concept of a workers' state and the moment of its downfall.

All this, as we see, contains nothing 'metaphysical' or 'scholastic', as conceited ignorance affirms. Dialectic logic expresses the laws of motion in contemporary scientific thought. The struggle against materialist dialectics on the contrary expresses a distant past, conservatism of the petit-bourgeoisie, the self-conceit of university routinists and ... a spark of hope for an after-life.

The Nature of the USSR

The definition of the USSR given by comrade Burnham, 'not a workers' and not a bourgeois state', is purely negative, wrenched from the chain of historical development, left dangling in mid-air, void of a single particle of sociology and represents simply a theoretical capitulation of pragmatism before a *contradictory* historical phenomenon.

If Burnham were a dialectical materialist, he would have probed the following three questions:

1. What was the historical origin of the USSR?
2. What changes has this state suffered during its existence?
3. Did these changes pass from the quantitative stage to the qualitative? That is, did they create a historically necessary domination by a new exploiting class?

Answering these questions would have forced Burnham to draw the only possible conclusion the USSR is still a degenerated workers' state.

The dialectic is not a magic master key for all questions. It does not replace concrete scientific analysis. But it directs this analysis along the correct road, securing it against sterile wanderings in the desert of subjectivism and scholasticism.

Bruno R. Places both the Soviet and fascist regimes under the category of 'bureaucratic collectivism', because the USSR, Italy and Germany are all ruled by bureaucracies; here and there are the principles of planning; in one case private property is liquidated, in another limited, etc. Thus on the basis of the *relative* similarity of *certain* external characteristics of *different* origin, of *different* specific weight, of *different* class significance, a fundamental *identity* of social regimes is constructed, completely in the spirit of bourgeois professors who construct, categories of 'controlled economy', centralised state', without taking into consideration whatsoever the class nature of one or the other, Bruno R and his followers, or semi-followers like Burnham, at best remain in the sphere of social classification on the level of Linnaeus in whose justification it should be remarked however that he lived before Hegel, Darwin and Marx.

Even worse and more dangerous, perhaps, are those eclectics who express the idea that the class character of the Soviet state 'does not matter', and that the direction of our policy is determined by the 'character of the war'. As if the war were an independent super-social substance; as if the character of the war were not determined by the character of the ruling class, that

is, by the same social factor that also determines the character of the state. Astonishing how easily some comrades forget the ABCs of Marxism under the blows of events!

It is not surprising that the theoreticians of the opposition who reject dialectic thought capitulate lamentably before the contradictory nature of the USSR. However the contradiction between the social basis laid down by the revolution, and the character of the caste which arose out of the degeneration of the revolution is not only an irrefutable historical fact but also a motor force. In our struggle for the overthrow of the bureaucracy we base ourselves on this contradiction. Meanwhile some ultra-lefts have already reached the ultimate absurdity by affirming that it is necessary to sacrifice the social structure of the USSR in order to overthrow the Bonapartist oligarchy! They have no suspicion that the USSR minus the social structure founded by the October Revolution would be a fascist regime.

Evolution and Dialectics

Comrade Burnham will probably protest that as an evolutionist he is interested in the development of society and state forms not less than we dialecticians. We will not dispute this. Every educated person since Darwin has labelled himself an 'evolutionist'. But a real evolutionist must apply the idea of evolution to his own forms of thinking. Elementary logic founded in the period when the idea of evolution itself did not yet exist, is evidently insufficient for the analysis of evolutionary processes. Hegel's logic is the logic of evolution. Only one must not forget that the concept of 'evolution' itself has been completely corrupted and emasculated by university and liberal writers to mean peaceful 'progress'. Whoever has come to understand that evolution process through the struggle of antagonistic forces; that a slow accumulation of changes at a certain moment explodes the old shell and brings about a catastrophe, revolution; whoever has learned finally to apply the general laws of evolution to thinking itself, he is a dialectician, as distinguished from vulgar evolutionists. Dialectic training of the mind, as necessary to a revolutionary fighter as finger exercises to a pianist, demands approaching all problems as processes and not as motionless categories. Whereas vulgar evolutionists, who limit themselves generally to recognising evolution in only certain spheres, content themselves in all other questions with the banalities of 'common sense'.

From A Petit-bourgeois Opposition in the Socialist Workers Party by Leon Trotsky