

**Frederick Engels**  
**Socialism: Utopian and Scientific**

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**II**  
**[Dialectics]**

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In the meantime, along with and after the French philosophy of the 18th century, had arisen the new German philosophy, culminating in [Hegel](#).

Its greatest merit was the taking up again of dialectics as the highest form of reasoning. The old Greek philosophers were all born natural dialecticians, and Aristotle, the most encyclopaedic of them, had already analyzed the most essential forms of dialectic thought. The newer philosophy, on the other hand, although in it also dialectics had brilliant exponents (e.g. Descartes and Spinoza), had, especially through English influence, become more and more rigidly fixed in the so-called metaphysical mode of reasoning, by which also the French of the 18th century were almost wholly dominated, at all events in their special philosophical work. Outside philosophy in the restricted sense, the French nevertheless produced masterpieces of dialectic. We need only call to mind Diderot's *Le Neveu de Rameau*, and Rousseau's *Discours sur l'origine et les fondements de l'inegalite parmi less hommes*. We give here, in brief, the essential character of these two modes of thought.

When we consider and reflect upon Nature at large, or the history of mankind, or our own intellectual activity, at first we see the picture of an endless entanglement of relations and reactions, permutations and combinations, in which nothing remains what, where and as it was, but everything moves, changes, comes into being and passes away. We see, therefore, at first the picture as a whole, with its individual parts still more or less kept in the background; we observe the movements, transitions, connections, rather than the things that move, combine, and are connected. This primitive, naive but intrinsically correct conception of the world is that of ancient Greek philosophy, and was first clearly formulated by [Heraclitus](#): everything is and is not, for everything is fluid, is constantly changing, constantly coming into being and passing away.<sup>[A]</sup>

But this conception, correctly as it expresses the general character of the picture of appearances as a whole, does not suffice to explain the details of which this picture is made

up, and so long as we do not understand these, we have not a clear idea of the whole picture. In order to understand these details, we must detach them from their natural, special causes, effects, etc. This is, primarily, the task of natural science and historical research: branches of science which the Greek of classical times, on very good grounds, relegated to a subordinate position, because they had first of all to collect materials for these sciences to work upon. A certain amount of natural and historical material must be collected before there can be any critical analysis, comparison, and arrangement in classes, orders, and species. The foundations of the exact natural sciences were, therefore, first worked out by the Greeks of the Alexandrian period [LBI](#), and later on, in the Middle Ages, by the Arabs. Real natural science dates from the second half of the 15th century, and thence onward it had advanced with constantly increasing rapidity. The analysis of Nature into its individual parts, the grouping of the different natural processes and objects in definite classes, the study of the internal anatomy of organized bodies in their manifold forms — these were the fundamental conditions of the gigantic strides in our knowledge of Nature that have been made during the last 400 years. But this method of work has also left us as legacy the habit of observing natural objects and processes in isolation, apart from their connection with the vast whole; of observing them in repose, not in motion; as constraints, not as essentially variables; in their death, not in their life. And when this way of looking at things was transferred by Bacon and Locke from natural science to philosophy, it begot the narrow, metaphysical mode of thought peculiar to the last century.

To the metaphysician, things and their mental reflexes, ideas, are isolated, are to be considered one after the other and apart from each other, are objects of investigation fixed, rigid, given once for all. He thinks in absolutely irreconcilable antitheses. His communication is 'yea, yea; nay, nay'; for whatsoever is more than these cometh of evil." For him, a thing either exists or does not exist; a thing cannot at the same time be itself and something else. Positive and negative absolutely exclude one another; cause and effect stand in a rigid antithesis, one to the other.

At first sight, this mode of thinking seems to us very luminous, because it is that of so-called sound commonsense. Only sound commonsense, respectable fellow that he is, in the homely realm of his own four walls, has very wonderful adventures directly he ventures out into the wide world of research. And the metaphysical mode of thought, justifiable and necessary as it is in a number of domains whose extent varies according to the nature of the particular object of investigation, sooner or later reaches a limit, beyond which it becomes one-sided, restricted, abstract, lost in insoluble contradictions. In the contemplation of individual things, it forgets the connection between them; in the contemplation of their existence, it forgets the beginning and end of that existence; of their repose, it forgets their

motion. It cannot see the woods for the trees.

For everyday purposes, we know and can say, e.g., whether an animal is alive or not. But, upon closer inquiry, we find that his is, in many cases, a very complex question, as the jurists know very well. They have cudgelled their brains in vain to discover a rational limit beyond which the killing of the child in its mother's womb is murder. It is just as impossible to determine absolutely the moment of death, for physiology proves that death is not an instantaneous, momentary phenomenon, but a very protracted process.

In like manner, every organized being is every moment the same and not the same; every moment, it assimilates matter supplied from without, and gets rid of other matter; every moment, some cells of its body die and others build themselves anew; in a longer or shorter time, the matter of its body is completely renewed, and is replaced by other molecules of matter, so that every organized being is always itself, and yet something other than itself.

Further, we find upon closer investigation that the two poles of an antithesis, positive and negative, e.g., are as inseparable as they are opposed, and that despite all their opposition, they mutually interpenetrate. And we find, in like manner, that cause and effect are conceptions which only hold good in their application to individual cases; but as soon as we consider the individual cases in their general connection with the universe as a whole, they run into each other, and they become confounded when we contemplate that universal action and reaction in which causes and effects are eternally changing places, so that what is effect here and now will be cause there and then, and vice versa.

None of these processes and modes of thought enters into the framework of metaphysical reasoning. Dialectics, on the other hand, comprehends things and their representations, ideas, in their essential connection, concatenation, motion, origin and ending. Such processes as those mentioned above are, therefore, so many corroborations of its own method of procedure.

Nature is the proof of dialectics, and it must be said for modern science that it has furnished this proof with very rich materials increasingly daily, and thus has shown that, in the last resort, Nature works dialectically and not metaphysically; that she does not move in the eternal oneness of a perpetually recurring circle, but goes through a real historical evolution. In this connection, Darwin must be named before all others. He dealt the metaphysical conception of Nature the heaviest blow by his proof that all organic beings, plants, animals, and man himself, are the products of a process of evolution going on through millions of years. But, the naturalists, who have learned to think dialectically, are few and far between, and this conflict of the results of discovery with preconceived modes of thinking,

explains the endless confusion now reigning in theoretical natural science, the despair of teachers as well as learners, of authors and readers alike.

An exact representation of the universe, of its evolution, of the development of mankind, and of the reflection of this evolution in the minds of men, can therefore only be obtained by the methods of dialectics with its constant regard to the innumerable actions and reactions of life and death, of progressive or retrogressive changes. And in this spirit, the new German philosophy has worked. Kant began his career by resolving the stable Solar system of Newton and its eternal duration, after the famous initial impulse had once been given, into the result of a historical process, the formation of the Sun and all the planets out of a rotating, nebulous mass. From this, he at the same time drew the conclusion that, given this origin of the Solar system, its future death followed of necessity. His theory, half a century later, was established mathematically by Laplace, and half a century after that, the spectroscope proved the existence in space of such incandescent masses of gas in various stages of condensation.

This new German philosophy culminated in the Hegelian system. In this system — and herein is its great merit — for the first time the whole world, natural, historical, intellectual, is represented as a process — i.e., as in constant motion, change, transformation, development; and the attempt is made to trace out the internal connection that makes a continuous whole of all this movement and development. From this point of view, the history of mankind no longer appeared as a wild whirl of senseless deeds of violence, all equally condemnable at the judgment seat of mature philosophic reason and which are best forgotten as quickly as possible, but as the process of evolution of man himself. It was now the task of the intellect to follow the gradual march of this process through all its devious ways, and to trace out the inner law running through all its apparently accidental phenomena.



That the Hegelian system did not solve the problem it propounded is here immaterial. Its epoch-making merit was that it propounded the problem. This problem is one that no single individual will ever be able to solve. Although Hegel was — with Saint-Simon — the most encyclopaedic mind of his time, yet he was limited, first, by the necessary limited extent of his own knowledge and, second, by the limited extent and depth of the knowledge and

conceptions of his age. To these limits, a third must be added; Hegel was an idealist. To him, the thoughts within his brain were not the more or less abstract pictures of actual things and processes, but, conversely, things and their evolution were only the realized pictures of the "Idea", existing somewhere from eternity before the world was. This way of thinking turned everything upside down, and completely reversed the actual connection of things in the world. Correctly and ingeniously as many groups of facts were grasped by Hegel, yet, for the reasons just given, there is much that is botched, artificial, labored, in a word, wrong in point of detail. The Hegelian system, in itself, was a colossal miscarriage — but it was also the last of its kind.

It was suffering, in fact, from an internal and incurable contradiction. Upon the one hand, its essential proposition was the conception that human history is a process of evolution, which, by its very nature, cannot find its intellectual final term in the discovery of any so-called absolute truth. But, on the other hand, it laid claim to being the very essence of this absolute truth. A system of natural and historical knowledge, embracing everything, and final for all time, is a contradiction to the fundamental law of dialectic reasoning.

This law, indeed, by no means excludes, but, on the contrary, includes the idea that the systematic knowledge of the external universe can make giant strides from age to age.

The perception of the the fundamental contradiction in German idealism led necessarily back to materialism, but — *nota bene* — not to the simply metaphysical, exclusively mechanical materialism of the 18th century. Old materialism looked upon all previous history as a crude heap of irrationality and violence; modern materialism sees in it the process of evolution of humanity, and aims at discovering the laws thereof. With the French of the 18th century, and even with Hegel, the conception obtained of Nature as a whole — moving in narrow circles, and forever immutable, with its eternal celestial bodies, as Newton, and unalterable organic species, as Linnaeus, taught. Modern materialism embraces the more recent discoveries of natural science, according to which Nature also has its history in time, the celestial bodies, like the organic species that, under favorable conditions, people them, being born and perishing. And even if Nature, as a whole, must still be said to move in recurrent cycles, these cycles assume infinitely larger dimensions. In both aspects, modern materialism is essentially dialectic, and no longer requires the assistance of that sort of philosophy which, queen-like, pretended to rule the remaining mob of sciences. As soon as each special science is bound to make clear its position in the great totality of things and of our knowledge of things, a special science dealing with this totality is superfluous or unnecessary. That which still survives of all earlier philosophy is the science of thought and its law — formal logic and dialectics. Everything else is subsumed in the positive science of Nature and history.

Whilst, however, the revolution in the conception of Nature could only be made in proportion to the corresponding positive materials furnished by research, already much earlier certain historical facts had occurred which led to a decisive change in the conception of history. In 1831, the first working-class rising took place in Lyons; between 1838 and 1842, the first national working-class movement, that of the [English Chartists](#), reached its height. The class struggle between proletariat and bourgeoisie came to the front in the history of the most advanced countries in Europe, in proportion to the development, upon the one hand, of modern industry, upon the other, of the newly-acquired political supremacy of the bourgeoisie. facts more and more strenuously gave the lie to the teachings of bourgeois economy as to the identity of the interests of capital and labor, as to the universal harmony and universal prosperity that would be the consequence of unbridled competition. All these things could no longer be ignored, any more than the French and English Socialism, which was their theoretical, though very imperfect, expression. But the old idealist conception of history, which was not yet dislodged, knew nothing of class struggles based upon economic interests, knew nothing of economic interests; production and all economic relations appeared in it only as incidental, subordinate elements in the "history of civilization".

The new facts made imperative a new examination of all past history. Then it was seen that *all* past history, with the exception of its primitive stages, was the history of class struggles; that these warring classes of society are always the products of the modes of production and of exchange — in a word, of the *economic* conditions of their time; that the economic structure of society always furnishes the real basis, starting from which we can alone work out the ultimate explanation of the whole superstructure of juridical and political institutions as well as of the religious, philosophical, and other ideas of a given historical period. Hegel has freed history from metaphysics — he made it dialectic; but his conception of history was essentially idealistic. But now idealism was driven from its last refuge, the philosophy of history; now a materialistic treatment of history was propounded, and a method found of explaining man's "knowing" by his "being", instead of, as heretofore, his "being" by his "knowing".

From that time forward, Socialism was no longer an accidental discovery of this or that ingenious brain, but the necessary outcome of the struggle between two historically developed classes — the proletariat and the bourgeoisie. Its task was no longer to manufacture a system of society as perfect as possible, but to examine the historico-economic succession of events from which these classes and their antagonism had of necessity sprung, and to discover in the economic conditions thus created the means of ending the conflict. But the Socialism of earlier days was as incompatible with this materialist conception as the conception of Nature of the French materialists was with

dialectics and modern natural science. The Socialism of earlier days certainly criticized the existing capitalistic mode of production and its consequences. But it could not explain them, and, therefore, could not get the mastery of them. It could only simply reject them as bad. The more strongly this earlier Socialism denounced the exploitations of the working-class, inevitable under Capitalism, the less able was it clearly to show in what this exploitation consisted and how it arose. but for this it was necessary —

to present the capitalistic mode of production in its historical connection and its inevitableness during a particular historical period, and therefore, also, to present its inevitable downfall; and

to lay bare its essential character, which was still a secret. This was done by the discovery of *surplus-value*.

It was shown that the appropriation of unpaid labor is the basis of the capitalist mode of production and of the exploitation of the worker that occurs under it; that even if the capitalist buys the labor power of his laborer at its full value as a commodity on the market, he yet extracts more value from it than he paid for; and that in the ultimate analysis, this surplus-value forms those sums of value from which are heaped up constantly increasing masses of capital in the hands of the possessing classes. The genesis of capitalist production and the production of capital were both explained.

These two great discoveries, the materialistic conception of history and the revelation of the secret of capitalistic production through surplus-value, we owe to Marx. With these discoveries, Socialism became a science. The next thing was to work out all its details and relations.

### **Next: [Historical Materialism](#)**

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## **Notes**

[\[A\]](#) Unknown to the Western world until the 20th-century, the Chinese philosopher Lao Tzu was a predecessor of or possibly contemporary to Heraclitus. Lao Tzu wrote the renowned [Tao Te Ching](#) in which he also espouses the fundamental principles of dialectics.

[\[B\]](#) The Alexandrian period of the development of science comprises the period extending

from the 3rd century B.C. to the 17th century A.D. It derives its name from the town of Alexandria in Egypt, which was one of the most important centres of international economic intercourses at that time. In the Alexandrian period, mathematics (Euclid and Archimedes), geography, astronomy, anatomy, physiology, etc., attained considerable development.

China also began development in natural sciences in the third century B.C.E.

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