



G.W.F. Hegel

# Hegel's SCIENCE OF PHILOSOPHY

## Philosophy of Nature

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### HEGEL AND EVOLUTION

by *Mike Marchetti*

Hegel clearly established himself against the concept of a Darwinian-type of evolution, i.e. evolution in the objective sense. We have to be mindful that for Hegel the Concept is the Reality of which Nature is the Appearance. So actual movement occurs in the Concept and is only reflected in Nature. For this reason we could not expect Hegel to ever agree with Darwin's theory. It is not that the evidence and theory were not existing during Hegel's time. He was well aware of the existence of this type of thinking throughout history up until his own time. His disagreement is not based upon religious considerations, or considerations of State or politics. It is based upon the Concept as he explicitly states in the following quote from *Hegel's Philosophy of Nature* (M. J. Petry edition, 1969).

#### § 249

Nature is to be regarded as a system of stages, the one proceeding of necessity out of the other, and being the proximate truth of that from which it results. This is not to be thought of as a natural engendering of one out of the other however, but as an engendering within the inner Idea which constitutes the ground of nature. Metamorphosis accrues only to the Concept as such, for development is nothing but the alteration of the same. In nature the Concept is however partly a mere inner principle, and partly an existence which is simply a living individuality; existent metamorphosis is therefore limited solely to this individuality.

#### Remark

The inept conception in which the progression and transition of one natural form and sphere into a higher is regarded as an outwardly actual production somewhat clarified by being relegated into the murkiness of the past, may be found in both ancient and modern philosophies of nature. It is precisely the externality which allows differences to fall apart and appear as indifferent existence, which is characteristic of nature; it is the dialectical Concept which is the inner principle of the same, and guides its stages forward. Thinking consideration must reject such nebulous and basically sensuous conceptions as for example the so-called emergence of plants and animals out of water, and of the more highly developed animal organizations out of the lower etc.

*Addition.* The view that natural things are useful is true in that it denies that they are absolute purpose in and for themselves. This negativity is not however external to them, but is the immanent moment of their Idea, which brings about their mutability and transition into another existence, but at the same

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time their transition into a higher Concept. As the Concept posits all particularity within existence at once, it does so in a universal manner. To think of the genera as gradually evolving themselves out of one another in time is to make use of a completely empty concept; the time-difference is quite devoid of interest for thought. If it is merely a matter of enumerating the genera in order to show in a convenient way how the series of living being divides itself into general classes, from the simplest to those richer in determinations and content, or the other way about, this will always be of general interest. It is a way of ordering things, as is the division of nature into the three kingdoms, and is better than mixing everything up, which tends to repel the intuitive Concept in general intelligence. But one must not think one makes such a dry series dynamic, philosophical, more comprehensible, or what you will, merely by using the concept of emergence. The animal world is the truth of the vegetable world, which in its turn is the truth of the mineralogical world; the earth is the truth of the solar system. In a system, the most abstract term is the first, and the truth of each sphere is the last; it is at the same time only the first term of a higher stage however. The completion of one stage out of the other constitutes the necessity of the Idea, and the variety of forms has to be grasped as necessary and determinate. A land animal has not proceeded by a natural process out of an aquatic animal, and then flown into the air, neither has the bird returned to the earth again. If we want to compare the stages of nature with one another we are perfectly justified in observing that this animal has one ventricle, while that has two; but we cannot go on to say that parts have been added, as if this had actually taken place. Nor should we use the category of an earlier stage in order to explain a later one; it would be a formal howler to say that the plant constituted the carbon, and the animal the nitrogen pole.

*Evolution and emanation* are the two forms in which the progressive stages of nature have been grasped. The course of evolution begins with what is imperfect and formless, such as humidity and aquatic formations, leads on to what emerged from water, such as plants, polyps, mollusca, and fishes, progresses to land animals, and arrives finally at man, as he emerges out of animals. This gradual alteration is said to be an explanation and comprehension of nature. The doctrine is derived from the philosophy of nature, and is still widely prevalent. Although quantitative difference is easy enough to understand however, it explains nothing. The course of emanation is peculiar to the oriental world, where it is regarded as a series of degradations, beginning with the perfection and absolute totality of God. God has created, and fulgurations, flashes, and likenesses have proceeded from Him, so that the first likeness most resembles Him. The first production is supposed, in its turn, to have given birth to something less perfect than itself, and so on down the scale, so that each thing begotten is in its turn procreative down as far as the negative, which is matter, or the acme of evil. In this way emanation ends in the complete absence of form. Both these progressions are one-sided and superficially and postulate an indeterminate goal, but the progress from the more to the less perfect has the advantage of holding up the prototype of a perfect organism, which is the picture that must be in our mind's eye if we are to understand stunted organizations. That which appears to be subordinate within them, such as organs with no functions, may only be clearly understood by means of the higher organizations in which one recognizes the functions they perform. If that which is perfect is to have the advantage over that which is imperfect it must exist in reality, and not only in the imagination.

In the concept of metamorphosis there is also a fundamental idea which persists throughout all the various genera as well as the individual organs, so that they are merely transfigurations of the form of one and the same prototype. One speaks for example of the metamorphosis of an insect, in which the caterpillar, the chrysalis and the butterfly are one and the same individual. In individuals it is certainly true that the development takes place in time, but this is not so in the genus. If the genus exists in a particular way, the other modes of its existence are also posited. If water is posited, air and fire are also etc. It is important to maintain identity, but not less important to maintain difference, which is pushed into the background if only quantitative change is considered. It is here that the simple concept of metamorphosis shows itself to be in-sufficient.

This leads on to the concept of a series of natural things, and in particular, of living things. The desire to understand the necessity of such a development makes us look for a law governing the series, or a basic determination which, while positing variety, recapitulates itself within it, and so simultaneously engenders a new variety. But to augment a term by the successive addition of uniformly determined elements, and only to see the same relationship between all the members of the series, is not the way in which the Concept determines. It is in fact precisely this conception of a series of stages and so on, which has hindered advances in the recognition of the necessity of formations. It turns out to be a hopeless task to attempt to arrange the planets, metals or chemical bodies in general, as plants, and animals, into a series, and to look for a law governing such a series, because nature does not distribute its formations into series and member, and the Concept distinguishes according to qualitative determinateness, making leaps in the process. The old saying, or law as it is called, 'non datur saltus innatura' is by no means adequate to the diremption of the Concept. The continuity of the Concept with itself is of an entirely different nature.

Just as one would not expect to be able to explain the movement of an image in a mirror on the basis of the molecules of the mirror, so too the appearance of Spirit in Nature can never be described on the basis of purely natural considerations. Some indication of Spirit's nature can be found by empirical observation, and corroborated by the same. However, Nature, as thoroughly implicit Reason, i.e. as other than explicit Reason, has its moment of independence from Spirit, but it is not completely determined in that moment. Rather it is ultimately inseparable from Spirit (just as the North pole of a magnet is inseparable from its South pole), and certainly has no intrinsic movement independent of it. In fact, Nature is entirely ossified (the world as 'petrified intelligence' for Shelling or the 'statue of the intellect' for Proclus) with respect to Spirit, and this is a fact established even in the most fundamental principles of physics: there is no fundamental or absolute principle of movement found in physics. It only takes as a given fact that there is movement and then tries to describe it. This is what provoked Wittgenstein's use of the term "simply placed matter." In all the formulae of physics we find particles, however elementary they may be, simply placed in time and space - movement itself is nowhere derived. At most it can be only postulated as absolute movement in terms of Planck's constant, i.e. as a result of calculation or observation, but not derivation. Therefore the origin of movement is not explained in physics, and it cannot be. Evolution, which is basically alteration, can therefore never be accounted for on a purely material basis. The problem of the Prime Mover of nature has simply been ignored and glossed over by modern science.

In conjunction with evolution is the theory of the original creation of the world from the "big bang." Although Nature has a history in the sense that there is a past, a present and a future - as is true for all finite existence - we must not take this in an absolute sense. The absolute belongs to the realm of the infinite. As Hegel says, "The world is created, is now being created, and always has been created; this becomes apparent in the conservation of the world." (§ 247 Addition) So there is no origin of the world in the sense that the astro-physicsits try to explain. Modern science attempts to explain too much when it enters into areas that are the domain of philosophy. The blame, however, is not to be placed on the physicists and scientists. Philosophy itself has to bear the responsibility of clearly determining its domain and its distinction from and corroboration with science.

Empiric science involves thought much more than it is willing to admit. Thought, for instance, is the essence of "force" or "law," concepts that it employs freely. More than that, it is the essence of "difference" or "comparison," which fact is completely undetected and unaccounted for in science. This, however, is the domain and nature of empiric science. It is basically the domain of the "thought of existence." This is the unspiritual or material level of awarness, the ordinary consciousness of understanding. Science has moved beyond the ordinary consciousness only in the sense of the abstract mathematical formulations which it has developed to explain physical phenomena. One might also say that it has moved beyond ordinary consciousness in the sense that it no longer deals with objects as they appear to the senses, but instead treats them as, for example, swarms of atoms, electrons, etc.

Philosophy deals with the "thought of thought." This is also not a field which is observable to the ordinary consciousness, or to the senses. It is not accessible to the understanding either. It is the realm of Reason or Pure Thought that holds immediacy in its vanishing essence only, i.e. is pure movement itself. This is what we are studying in the *Phenomenology* and in our *Introduction to Hegel* courses. If one wants to understand Hegel there is no way to do this except by learning how to think conceptually or speculatively - at the level of Reason. This may sound mysterious at first, but it is a matter of training and learning how and what the Concept and conceptual thinking is. This is the skill of a philosopher, and because we have not listened to what Hegel has given us 200 years ago we still have to learn that before we can expect to make further progress. For many reasons we have failed to earnestly take up the hard task of learning what Hegel has presented and in the process philosophy has fallen into the second-rate classification it holds in our modern world. Genuine philosophy has a prominent place in human culture but, just as in any discipline, that place has to be deserved by effort befitting such prominence.

In order to make this distinction between philosophy and science a little more clear, we may mention the controversy involving the interpretation of the theory of Quantum Mechanics, which has been called the most exact scientific theory that has ever been developed. There are basically two schools of thought here. The Copenhagen school, headed by Neils Bohr, one of the founding fathers of quantum mechanics, holds that QM only tells us about our "knowledge of the world" rather than about the world itself. The Einstein, Podolsky, Rosen school insists that we can know about the world itself through science. This school is headed by the famous Albert Einstein, himself. Basically, we can say that QM deals with "probability" functions called wave functions. Wave functions are not observable. They are

mathematical functions of particles such as electrons, including time and space variables, etc. They are defined so that the square of such functions describes the probability distribution of any particular observable, such as location, momentum, etc. The main point for our purposes is that they deal with probabilities, which have to do with the expectations of an observer. In the world itself, we do not speak of probabilities. Probabilities are only meaningful for an observer who is expecting some result. So immediately we have brought in the expectation of the observer as the fundamental determinant principle in QM, just by speaking in terms of probabilities. This means that QM is dealing more with our subjective expectations than with any direct objective physical description of the world. This is the way I would describe the basic argument of the Copenhagen interpretation. Einstein, on the other hand, held that the world acted according to fixed laws of its own, and not according to any absolute probabilistic formulation, and that we were ultimately able to discover such laws. He posited that there were "hidden variables" that would enable us to get beyond the probabilistic interpretation and trace the exact movements of the world in itself. In other words, Einstein actually and basically lost the argument!

This is a good example where we can see a clear distinction between philosophy and science. The efforts of science are directed toward a world as it is experienced directly by the senses and ordered by the understanding into laws, forces, etc. In this sense Einstein was being a true scientist. Bohr, on the other hand, took the more philosophical position because he accounted for our knowledge itself as playing a role in what we can observe about the world. However, he was not a philosopher because he did not formulate the problem at a higher level beyond understanding where he could explicitly integrate the world (the known) our knowledge, and thinking agency (the knower) into a coherent system. And this is the work of the philosopher.

I have only given a brief survey of the problem here. Extensive study is required to understand fully what is being presented. I think that these problems can be resolved using Hegel's philosophy as a starting point. I consider this to be the philosophy for the 21st century if we have the determination to investigate it. It will be the task of our site to promote and encourage such study.

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