

Establishing the New Science of the Concept [1]*

Bhakti Madhava Puri, Ph.D.

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The Physical and the Mental

The physical as contrasted with the mental, is one side of a whole of two antithetical yet intimately related parts. There are three terms here, like two antithetical peas in a pod (the whole). Some may call the antithetical relation that is involved here an object-subject duality (which is originally not a duality because of the integral relation between thesis and antithesis) due to the presumption of the subject as a separately existing agent [ego] of thinking activity opposed to the otherwise reified being of an object. However, because this thinking activity is directed toward comprehending the inner essence or true self (or concept) of the object, the object-subject cannot be considered a mere duality of aspects that are separate, opposed to, and outside of one another. Rather such thinking activity is the conceptual self-development of the object itself (the object's own self).

What Matter is

Modern science with its focus on the physical sciences has adopted the Cartesian duality that opposed the mental (cognition) to the physical (spatially extended bodies), completely ignoring their implicit relation. By differentiating what is originally an integral relation, and then by excluding the mental from the exclusive study of the physical nature, they placed all thinking in a separated subject (the scientist) opposed to, and apart from the object, physical nature. Science, which is a product of thinking reason - the foundation of all science, merely became a study of objects that were presumed to be devoid of any contribution from thinking consciousness, which thus became known as material objects, material entities, or particles.

The Concept

A science that deals with the general analysis of physical nature as if the mental had no contribution is certainly limited in scope, but it is a primitive stage in the development of the concept that may be considered in its immediacy as the Soul of the world. What is merely a stage in development, may not be considered wrong or false, but incomplete, just as a bud may be considered an incomplete development of a flower. As a stage in the complete development of the Concept we must study it carefully in order to know how to progress onward to the next stage of its own living development and ultimately to the result or truth. As the implicit concept of the object, it surpasses or transcends both the first and third person perspectives of modern scientific thought and subjective consciousness.

Theory and Mathematics in science instead of Concepts

A theory is defined as "a supposition or a system of ideas intended to explain something, especially one based on general principles independent of the thing to be explained." Knowing the role of the concept as the integral unity in difference of the subject-object in its conceptual wholeness, we can find the

defect in the theoretical approach of modern science in that the development of such thoughts (theories and principles) remain outside of and "independent of the thing to be explained." It is this externality of thought to its content that leads to the problem of conflicting 'interpretations' that are not part of actual scientific knowledge.

This is especially true of mathematical thinking in general because the logic of mathematics remains valid on its own independent of whatever content it may be externally "applied" to. Thus '2' can refer to any content as it merely refers to quantity independent of the nature of that which it quantifies. Moreover, the relational or ordinal property of numbers and the operations dealing with numbers are concerned with identical units, in which 1 and another 1 are identical, so that $1 + 1 = 2$ holds because any number of 1's are exactly identical with one another. However, this does not hold true in the pure externality that is referred to as Nature, where two exactly identical objects, say apples, are not found. The pure difference of external Nature is intrinsic to it as an implicit externality and its spatially extended bodies. Mathematics as the pure abstraction of thinking from concrete content is thus inadequate to comprehend the concept that determines the contradictory identical but different objects of Nature and its conceptual development. Thus a mathematical theory requires the assistance of an external agent to "assign" its terms to some concrete object of nature which can only be an abstract entity, like an electron, that has no visible existence except by logical inference from experience. This is an incomplete and unsatisfactory way of thinking of or understanding Nature compared to thinking in terms of the content in its interpenetration or determination by its own intrinsic self-concept.

Maya or Illusion

From one angle of vision the world that is presumed by modern physical science consists of material objects without the need for or contribution of consciousness. Such a world clearly does not exist since we live in a world in which consciousness does exist and plays a role in determining the objects of consciousness. When the world without consciousness, WWOC, is considered to be the actual world with consciousness, WWC, we call this an illusion or Maya. The content of the world without consciousness WWOC consists of material particles by definition. To overcome the illusion one must therefore comprehend the actual world with consciousness WWC. In order to do that we may start from the world, WWOC, as conceived by modern science and follow the conceptual development of thought to the world with consciousness WWC. This is called the phenomenological approach, proceeding according to the experience of consciousness from its first distinction from and opposition to its object to its identity-in-difference with the object.

Consciousness is the concept of itself.

Here, what is called consciousness, in its abstraction or separation from the object, is identified with the subject as opposed to an object. Ultimately we will come to understand that consciousness is the concept of itself. Just as Plato explained that 'chairness' represents the concept of a chair, so too it may be understood that consciousness is the concept of itself as the conscious or intelligible being of the object. In this sense it is a pure abstraction to think of consciousness as existing without an object of

consciousness, or a concept without its content. As Kant simply explained it, concept without content is empty, while content without concept is blind (indeterminate).

Origination of the Scientist

Modern science, like most of modern philosophy, begins at the stage most clearly enunciated by Descartes, where the subject (as cognitive thinking) is considered in its independence from the object. When this abstraction from the original integral unity-in-difference of subject and object, is determined in its separate identity as the singular agent of thinking or cognition, it is called ego, and the manifold content or object of such cognition is called the World, when the sensuous or physical is its concern, or Mind, when the mental or cognition itself is made object of its knowing. Furthermore, when the Whole or Spirit or God becomes object of its own knowing, it becomes Absolute Truth or the Idea.

Because modern science begins with thinking that is presumed to be outside the object of such thought, conducted by an agent of thinking or ego called a scientist, in which the scientific agent and her thought are considered independent of the object, and the object is considered independent of the scientist. The abstract thinking subject or consciousness at the level or form of the sensuous apprehends the object as an immediate being there [*Dasein*]. This is the first determination that consciousness gives to the object - it is, or being. First it established that it is - this is the function of consciousness at the level of the senses. It also determines what it is, this is the level of perception.

Consciousness in the form of sense certainty

Mere being, the object of the senses, is indeterminate. To state the something is, tells us nothing more than that since everything is. It does not give us any information about what it is, i.e. what its specific determinations are. Determination is the negation of its indeterminate being. As a negation it is not the annihilation of being but the determination of its specific qualities. Such determinations belong to the object being determined. They are not supplied by the thinking subject (consciousness) to the object, but are the implicit determinations of the object itself. Thus salt, for example, is considered crystalline, white, tart, hard, and so on. These predicates or determinations of the object are considered intrinsic to the object even though they are presumed to be attributed by a separate independent subject external to the object. This presents a contradiction: how is it possible for a subject that is outside the object present what belongs to the object which lies outside of the subject?

Consciousness in the form of Perception

The cognitive acts of an individual subject which determines predicates of an object external to itself raises this contradiction. This external assignment of predicates or determinations to an object is called judgement. For example, 'this salt is white.' First the senses apprehend the indeterminate being of an object [implied by the demonstrative 'this'], then its perception or judgement as being 'salt' is made. Next this perception is judged as being white, tart, and so on. These judgements about the object are collectively called understanding. They apparently seem to be made by a subject outside of and different from the object but they pertain only to the inner essence of the object, and are thus the determinations of the inner self or concept of the object in and of itself. When these predicates or

determinations are comprehended to be properties or matters belonging to the object's own self, they are known to be moments of the object's own self-developing concept. However, when such predicates are considered in their separate existence as matters that constitute the object, rather than as moments of the self or concept of the object, then we again have the result of the abstract understanding producing separate particles constituting or composing the object. The object is thus conceived as a compound of such particles.

Consciousness in the form of abstract Understanding

Because modern scientific thinking is thus based on this type of abstract understanding - abstract because it separates into fixed opposed sides that which is originally an integral dynamic unity of differences, and understanding because it poses sub-stances, that which stands under objects or composes them, rather than comprehending them as dynamic moments constituting the subject-object integrity or unity-in-difference of the subject-object whole as concept. The unity of Concept and its objectivity is called Idea as explained by Hegel. [2]

Summary

The objective body of the scientist belongs to the natural world which is the object of modern physical science. Identifying thinking consciousness with the ego of the scientist set over and against the world (which has its own World Self or concept), represents an abstraction that finitizes the scientific thinker as a subjective consciousness and opposes it to the physical and mental world or God as the Whole. This division into subjective and objective spirit represents a real difference in spiritual development but it is not complete without comprehending its further development to the dynamic synthesis that is also intrinsic to their differences. The method of abstract understanding that characterizes the mode of modern scientific thinking petrifies the dynamic development of conceptual thinking and establishes reified substances as objects, abstracted from their movement, in place of the moments or actuality of the concept of such objects.

Thinking in Modern science as the form of abstract understanding

The practice of abstract understanding which attempt to establish substances that sub-stand or stand under more immediate substances, leads to an infinite regress. This was concisely stated by Sir Arthur Eddington when he remarked that "something unknown is doing we know not what - that is our concept of the electron." Establishing substances, as modern science tends to think, cannot be the way to genuine knowledge that can only be obtained by comprehending the unity in difference of the Concept.

Why modern science works and also fails

Modern science works because it does grasp the abstracted moments of the concept even though it fails to comprehend them in their dynamic unity. Thus it deals with the molecular particles of a living organism but does not understand how to bring them together in an external fashion to form such life. This is because as moments of a concept they are not externally related to each other in the way modern biology conceives them as isolated entities externally connected to each other by physical and

chemical forces. Life is a concept, and concepts are not to be misunderstood as abstract products of subjective thought, but are actual concrete living entities whose content is penetrated by an actualized concept. When the concept or soul is separated from the body it reverts to a molecular system of chemical and physical nature in which the conceptual bond is lost, and with it the life is also gone.

While the scientist maintains the role of the concept in mechanical systems, such as the solar system, in a living system the concept is implicit or embodied in what is called the teleological unity that binds the various members of the living whole into the unity of the life of the organism as a whole. This life, however, does not merely belong to the single organism in its isolation and independence. It is part of the population and species in general. The Darwinian and neo-Darwinian theories do not take into account this conceptual nature of Life and therefore fail to explain the proper relation of species and speciation by limiting their viewpoint to the objective features of organisms and their mutations, while failing to recognize and include the conceptual nature of life in the development and formation of species.

Why Darwinian evolution fails to explain speciation

The neo-Darwinian theory of genetic random mutation and natural selection, does nothing to explain speciation because it completely ignores the role of the epigenetic portion of the cell, what to speak of the influences from the population of organisms of which the individual cell is a dependent member.

"[S]election has never led to formation of a new species, as Darwin postulated. No matter how morphologically and behaviorally different they become, all dogs remain members of the same species, are capable of interbreeding with other dogs, and will revert in a few generations to a common feral dog phenotype if allowed to go wild." [3] Thus "natural selection" has come under even more critical scrutiny in recent times than it has already received from scientists in its contested history since Darwin first proposed the idea. [4]

If natural selection, which presupposes the existence of an already stable species, occurs by random mutations at the genomic level within a given population, becomes problematic because the experimentally observed fact is that such mutations are generally always fatal to the individual organism. In the case of the auto-immunity that develops in bacterial colonies, as is often raised in defense of neo-Darwinism, it has been found that a certain range of adaptability is already pre-existing in the population that does not require the creation of anything new. Furthermore, it is no longer just about mutations within a simple replication mechanism, as presumed by the original neo-Darwinian hypothesis, but it is now known to involve such epigenetic factors as intrinsic editing and error correcting during DNA transcription, as well as such unforeseen factors such as horizontal gene transfer (HGT), and other numerous processes that were unknown to the originators of the neo-Darwinian theory. [5] Thus it would be truthful to say that biology does not have a theory of evolution, does not know how species originate (speciation) and that Darwin, despite the title of his book, *The Origin of Species*, never explained what that title claims.

The Bhagavat Vedanta conception of Science

The Bhagavat Vedanta concept rejects the objective theory of evolution as not only misconceived but an impediment to the actual scientific comprehension of Nature. The Vedantic conception of Life is a fully differentiated one that displays its determinations in and as a dynamic organic whole that integrates subject and object, or thesis and its antithesis, within their original synthesis as Spirit, which as dynamic is not to be misunderstood as a paralyzed stasis or monism but the ever restless and living movement that characterizes Spirit. Organic holism is a conception that has its inception as far back as the writings of *Sri Isopanishad*, where the invocation states: *om purnam adhah purnam idam, purnat purnam udachyate*. [6] The Organic Whole produces organic wholes. An organic whole cannot arise from parts that have to be assembled. That process can only produce inorganic, mechanical machines or chemical processes, not living organisms. [7]

Those who embrace the metaphysics of materialism believe that the mechanistic atomic, molecular and evolutionary conceptions of physics and chemistry can explain not only the physical but also the mental life that exists in the universe. Despite the partial successes of science as currently developed within such philosophical constraints, it is unable to demonstrate how a mechanical system can effectively explain, much less produce, a single living cell or a simple blade of grass. But philosophical knowledge as developed in ancient and modern times has never established that the concept of life can be comprehended as a mechanical system. Reason or rational thought recognizes that a living entity is the very embodiment of an internal cause or teleological end (purpose), which Kant termed *Naturzweck*, or natural purpose as distinguished from externally or contingently imposed purpose. Living entities are naturally constituted to maintain themselves for their own survival. Such a teleological wholes may have many parts or members but they are unified, mutually integrated and held together by an internal bond or purpose. [8] This individual [literally, un-dividable] whole is considered simple [9] because it cannot be reduced any further without breaking the teleological unity that would disrupt it as a unified [differentiated yet integrated] whole or individual. [10] This unity in difference is what is essential to life as a whole, which is not comprehended by either an abstract monism (oneness), or a purely differentiated atomic or molecular aggregate mechanically held together by external forces, or a dualism of unity and difference, but a unity that is intrinsic to difference – a unity in difference, that is neither a monism nor dualism, but a synthetically dynamic unity of both. This unity which overarches and permeates the whole in its differentiated determinations may be more properly referred to as the soul or Concept.

Therefore, to understand life, its origin, its purpose and biodiversity we need a wider, more inclusive and integrated approach for the advancement of science beyond its present stage. The ancient philosophy of *Vedānta-sūtra* advises that one will have to continue the search, *athāto brahma jijñāsā*, until one reaches brahman – Spirit, the underlying spiritual source, *janmādyasyayatah*, the fountainhead where all inquiry will satisfy its purpose. Then beyond knowledge *Śrīmad-Bhāgavatam* will guide us to the ultimate goal of our search – *rasovaisah*, the search for highest fulfillment, sweetness and love. The ‘Science and Scientist’ annual conference series is mainly focusing on the complete conception of the true reality of the Sweet Absolute, which is the ultimate goal of science, philosophy, religion and art.

Footnotes

* Original PDF of this article at http://mahaprabhu.net/satsanga/?download=Science_of_the_Concept.pdf

[1] As expounded by G.W. F. Hegel, *Science of Logic*, A. V. Miller (Translator), Humanities Press, NJ (1990); and G.W.F. Hegel, *Encyclopedia of the Philosophical Sciences*. A. V. Miller (Translator), OUP, (1975).

[2] G.W. F. Hegel, *Encyclopedia of the Philosophical Sciences,(Part One-The Logic)*, OUP, (1975); p.274., § 213.

[3] J. A. Shapiro, "*Evolution: A view from the 21st century*". Upper Saddle River, NJ: FT Press, 2011, p. 121.

[4] The Scientific Revolution in Evolution, *Science and Scientist* (Jan-Mar 2008). Bhaktivedanta Institute. http://www.scienceandscientist.org/Science_and_Scientist-2008_Issue-1.pdf

[5] J. A. Shapiro, "Bacteria are small but not stupid: cognition, natural genetic engineering and socio-bacteriology." *Studies in History and Philosophy of Biological and Biomedical Science*, 38 (2007) 807-819.

[6] A.C. Bhaktivedanta Swami Prabhupada, "*Sri Isopanisad*." Bhaktivedanta Book Trust (1969).

[7] Hannah Ginsborg, *Journal of the History of Philosophy*, 42(1) (2004) 33-65.

[8] Refer: https://groups.google.com/d/msg/online_sadhu_sanga/2b_Q69z8x-c/jszVf-1eBwAJ

[9] Refer: https://groups.google.com/d/msg/online_sadhu_sanga/2b_Q69z8x-c/kSp77K9EDQAJ

[10] Refer: https://groups.google.com/d/msg/online_sadhu_sanga/2b_Q69z8x-c/jZLIMmE6BAAJ

[11] Refer: https://groups.google.com/d/msg/online_sadhu_sanga/nKEkJn-6SF0/FGpvxZAbCAAJ

[12] Refer: https://groups.google.com/d/msg/online_sadhu_sanga/QdFGdOgjkdw/pNf8PGjDBAAJ