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Science and Scientist

WORLD OF REALITY

Srila Bhakti Raksak Sridhar Dev-Goswami Maharaja



Question: Vaisnavism says that this material nature is real as a reflection. But it is not real as the absolute reality of the spiritual world. Could you explain?

Srila Sridhar Maharaja: Reality is composed of unreal substance and real substance. We may see it like that. This is the world of misconception. Misconception means "I think something is mine, but really it is not mine." Everything belongs to the Absolute. Everything belongs to him. But we say "it is mine," and we quarrel with each other. Actually, everything within this world is the property of another. But as a result of misconception, we fight with

Srila Sridhar Maharaja each other and so many reactions result from that fight. The difficulty is that the soul is entangled in this mock fight. Otherwise this world of fighting and misconception has no value. But the dust of spirit, a very infinitesimal part of the spiritual reality, is entangled in this world and concerned with this world of mock fighting. Without the spiritual energy within this world, nothing would remain. A magician's sleight of hand is all based on misconception. It is false. Still we are perplexed by his tactics. That is also true. A magician or hypnotist can show what is not real to be real, and yet while we are under his spell we cannot deny its reality.

Everything, including our own self, belongs to Krishna. But the difficulty arises when we see something other than Krishna. Separate interest. The consciousness of separate interest is the root of all evils. We are one with Krishna, but whenever the seed of separate interest sprouts, and we think we have some separate interest, that we are not included in the interest of Krishna, that is the root of such misconception.

> bhayam dvitiyabhinivesatah syad isad apetasya viparyayo smrtih tan-mayayato budha abhajet tam bhaktyaikayesam guru-devatatma

In this way, the scriptures have given a diagnosis of the disease or concoction of false conception. We are living in a fool's paradise. And the very beginning of material existence that we can trace is at the inception of a separate interest. The first deviation from advaya*jnana* is a conception of separate interest.

Question: How can we know what is actually real?

Srila Sridhar Maharaja: The scriptural name is sraddha, or faith. That is the developed state of sukriti, or spiritual merit. When our faith is developed, it leads us to sadhu sanga, the association of saints. The agents of the divine world, who are in the plane of reality the nirguna wave beyond this world of creation – come to establish some connection with reality in our soul. That is the deepest element. The connection with saints produces faith, Sadhu Sanga and faith can see reality.

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SCIENTIFIC RESULTS CONFIRM THE DIVINE SOURCE OF LIFE

by Srila Bhaktisvarupa Damodara Maharaja (T. D. Singh, Ph.D.)



Let us consider the synthesis of the *E. coli* gene that codes for tyrosine transfer ribonucleic acid (tRNA). This gene has only 126 nucleotides, and commercially synthesized nucleotides are used as the starting materials for the gene's synthesis. The nucleotides are chemically hooked to form di, tri, and tetranucleotides. These units are further chemically assembled into

deoxyribooligonucleotide segments of 10 to 15 units. The segments that possess complementary base sequences are enzymatically connected with DNA ligase to form larger duplexes, which are themselves finally connected enzymatically to complete the synthesis. (It is not a total chemical synthesis, in the sense that the natural enzyme has to be used to join the larger units.)



E. coli bacterium

A gene is taken as a fundamental unit of heredity. According to geneticists, everything from the color of rose petals to the shape and color of human eyes is determined by genes. It has been reported that the functioning of this artificial gene could be detected in a living cell. These findings are quite significant so far as chemical knowledge is concerned. They suggest the possibility that a geneticist will be able to manipulate genes chemically, replacing defective ones with healthy ones. This does not, however, demonstrate that genes are completely responsible for life. Rather, it simply indicates that cells make use of messages coded in chemical form, and that our technology may enable us to take advantage of this medium of information storage.

At this stage of scientific knowledge, all the experimental techniques and tools needed to synthesize most of the chemicals primarily found in living cells (for example, proteins, hormones, lipids, carbohydrates, vitamins and genes) are available. Yet we are nowhere near to constructing a complete "synthetic living cell" in the test tube. The great hope expressed by many molecular biologists about a half century ago (after the historic discovery of the double helical structure of DNA by Watson and Crick) seems to have faded away in the midst of new discoveries.

Indeed, the findings of the biochemists, far from proving that life is a chemical phenomenon, have strongly demonstrated that present scientific understanding of life is certainly inadequate and further suggests that life is beyond atoms and molecules. In Darwin's time the cell appeared to be little more than a simple bag

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of organic compounds that one might readily hope to describe in chemical terms. The enormous complexity encountered in recent biochemical investigations, however, has shown that this hope is unrealistic. Modern science is, indeed, far from having understood the principles of life.

Szent-Györgyi, the Nobel Prize winning chemist, thus remarked: "In my search for the secret of life, I ended up with atoms and electrons which have no life at all. Somewhere along the line, life has run out through my fingers. So, in my old age, I am now retracing my steps ..."²



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-Szent-Györgyi

This is the basic point we would like to emphasize. Atoms and molecules are lifeless. A gene or a DNA molecule is not life. Similarly, a protein or sugar molecule is not life. Indeed, the author proposes that a mixture of various biomolecules is also not and will never become life. The announcement of Khorana's synthetic gene in 1970 is not different from that of Wöhler's synthesis of urea in 1828 as far as our understanding of life is concerned. On the other hand, all these scientific results seems to confirm the divine source of life as is revealed in different scriptures.

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- 1. Chem. Eng. News, 54 (No. 39), 27 (1976).
- 2. Biology Today. Del Mar, California: CRM Books, 1972, p. xxiv.

MOVEMENT OF THINKING

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Sripad Bhakti Madhava Puri Maharaja, Ph.D.

There are some basics that we have to remember when dealing with the Concept. We are not dealing with what we ordinarily call a concept. It is not to be understood in the ordinary way as what is merely subjective or formal. Hegel is using Concept in a way that is unique and very different from the ordinary usage of that term. To distinguish this unique Hegelian sense we use the capitalized word – Concept.



Therefore when we refer to the Concept it is both form and content, subject and substance. In §54 of the Preface of his *Phenomenology of Spirit* Hegel states, "In general, because, as we put it previously (§17 & 18), substance is in itself or implicitly Subject, all content is its own reflection into itself." Then in §56 we again have, "Precisely because existence is defined as Species, it is a simple thought; *Nous*, simplicity, is substance."

Repeatedly in the Preface Hegel tells us that the substance, the content, the object of thought is subject, i.e. thought itself. Conceptual thinking is thinking about thinking, or what is the same thing, thinking the Concept. The Concept can be nothing more than thought, and conceptual thinking is thinking the thought of the Concept. This thinking is concrete because it is self-differentiated – it produces only itself. It is its own cause, and this is the meaning of substance. It is thinking that comes from thinking, it is thinking about thinking. There is no substance outside of thought itself because thought itself is its own substance.

The Concept is its own Substance and Subject simultaneously

Conceptual thinking is form and content simultaneously. It is not that thinking is going on outside of or external to some fixed material substance. That idea would be formalistic thinking – abstract thinking or material thinking. Hegel calls thinking that goes on in its own realm, outside of that which it is thinking about, reflective thinking or reflection. When you look into a mirror you see your own reflection. A reflection is something that comes back to you – the active agent. Thinking that merely reflects on a particular object never penetrates into the object but just superficially glances off the object and comes back into itself as thinking. Thus reflective thinking is something that goes on only in the subjective mind – it doesn't really ever leave itself and penetrate into the actual object before it. It stays only with itself. Thus in effect it creates a duality between itself as reflective thinking and the object or substance that it is reflecting on.

Conceptual thinking is not like that. Conceptual thinking absorbs itself in the content, object or substance as its own thinking itself. Conceptual thinking is thus both the form and content, subject and object, subject and substance – the thought of thought, or the thinking of thinking. Furthermore conceptual thinking is the activity of the Concept itself, it is not something different from the Concept. The Concept differentiates itself because it is living, thinking or dynamic thought itself. That is why we said that the Concept IS the thing. It is not that there is a Concept and a thing that it is the concept of. Hegel is not a Kantian!

The Concept is the basis of Hegel's philosophy. Conceptual thinking is the basic methodology and is non-different from the Con-

cept itself because the Concept is a dynamic, alive, spiritual entity. It is thinking actuality. The Concept differentiates itself by its own movement of conceptual thinking. Conceptual thinking is not something that goes on outside the Concept or is not "about" the Concept. Conceptual thinking and the Concept are distinct but inseparable, because the Concept is itself the dynamic movement of conceptual thinking. Without its movement there is no Concept, just as without life there is no living. Life means that there is also inseparably the activity of living, breathing, etc. In the same way the Concept means that there is conceptual thinking going on. What is it thinking? What is the object that it is thinking about? It is thinking about its own thinking. It is thinking about those concepts. A concept is a thought and to think about those concepts is conceptual thinking, i.e. the thought of thought.

I am only going to comment on § 59 briefly.

Argumentative thinking is thinking that remains abstractly within itself. It is stubbornly opposed to the content that is its object. It stays within itself abstractly because it effectively ignores the content. To argue means to reject what is presented, to negate it. Those who have an argumentative temperament refuse to assimilate the content that is being presented. They simply reject it and stick to their own perspective. Conceptual thinking assimilates the content that is before it as a moment of its own thinking -i.e.as its own self. Thinking is an activity - it is called negative activity or the activity of negating. It negates what is before it but in the sense of sublimation not rejection as we have in argumentative thinking. In other words it subsumes it as part of or a moment of its overall movement or activity as thinking. An overall movement is made up of a sequence of moments. When a particular content is taken, not in its static, fixed or enduring sense but as a moment of the total movement of thinking then we sublimate the content and raise it to the fluidity of thinking. The content is thus taken up into the form of thinking, and content and form become unified. Nothing is lost - the content remains as the differentiated aspect of thinking. There is no question of movement if there are no specifically distinct moments for the movement to pass through. In this way thinking and its content are simultaneously unified as the movement of thinking taken as a whole and differentiated as the specific moments or thoughts of that overall movement.

To understand in detail or scientifically how this unification of the continuous and discontinuous occurs requires careful study. We have thus far only given a very general notion of such unification. This is more adequately dealt with in the *Encyclopedia Logic*.

In § 60 Hegel explains in more detail about the movement of thinking involved in the Concept. Hegel presents it in a very general way, I am going to try to simplify it by giving a material example so that we may quickly get the idea and then we can go on and actually apply the same principles to the development of the *Phenomenology of Spirit* in which more general and abstract, nonmaterial thinking will be required.

§ 60 refers to the Subject-Predicate proposition. A material example of a proposition having this from would be:

The swan is white.

"Swan" is the subject and "white" is the predicate. The predicate

is called the accidental because it can arbitrarily happen to be any color without changing the fundamental nature of the swan as such. For instance, there are black swans, etc. The swan, on the other hand, is considered to be the substance. If we changed the substance of the swan it would no longer be a swan but something else. So its substance is not accidental to it – it is vitally necessary to it.



The swan is white

If we look at the above proposition without any prejudice (let's imagine a child who is just learning sentences) what it says is that the swan "is" white. The copula "is" states identity, just as when we say 2 + 2 is 4. This implies that the propositional form of thinking says more than what we mean. We do not mean that the swan is the color white, that the color white and a swan are the same thing. White

can be associated with so many other things besides swans. Swans may also be associated with other colors than white. So what happened is that in the proposition, the subject has "gone over" into the predicate and gets lost there. By saying "the swan is white" the emphasis falls on 'white' and the whole subject falls into the predicate. What has actually "gone over" or "falls into the predicate" is thinking itself. Thinking moves from the subject "swan" to the predicate "white" and converts the predicate into a substance. Then it says, "Wait a minute! This is not what I mean." So the subject is pulled back from the predicate and distinguished from it again by thinking. Thus thinking establishes that the swan is white but it is also still a swan. This is all necessarily going on in thinking but we are not ordinarily conscious of these details. Yet these are essential details of what we are thinking when we say 'the swan is white' although we may not be explicitly aware of it when we say or think it.

The subject (which is substance) goes over into the predicate (which is its accident) to become the predicate (as the substance). In other words, the predicate 'white' was supposed to be the accidental property but the copula 'is' implies that 'white' is the substance into which the 'swan' is completely absorbed. Thus 'white' becomes the emphasized substance. The swan is swallowed up by the 'white.' Realizing that it lost the swan like this thought pulls back out of the substantialized predicate to reinstate its original substance in the Subject. This going forth out of itself into its predicate, feeling a loss of itself in its substantialization of the predicate, and then coming back to itself are all essential moments for the Subject. These various moments and the overall movement form a whole. There are still other elements involved, but "the truth is the whole"

(§ 20) begins to takes on its full significance here. We will get to the other elements in the another lesson.

With this knowledge of the specific movement of thinking let's take a look back at text §36 for a moment. Hegel explained in §35 that we are starting with Spirit in its immediacy, i.e. as consciousness. This is why the Phenomenology is the **first part** of his overall Science of Philosophy, since a start always implies immediate existence. As a start, however, it is only a moment in the overall movement that is Science. At the same time, since it is

immediate existence it is to be distinguished from the rest of the Encyclopedia. Let us look into what this means.



Hegel

Consciousness contains two moments: (1) knowing or subject and (2) the known or object. Knowing is the negation of the object (since determination is negation). This antithesis between knowing and its object will be retained in the various moments that appear in the development or exposition of the *Phenomenology of Spirit*. These different appearances are called shapes (*Gestalt*) of consciousness.

The comprehension of this pathway that consciousness goes through in its development is called the Science of the experience of consciousness.

What are the various shapes that consciousness takes on? These are: Sense-certainty, perception, understanding, stoic, skeptic, unhappy, reason, etc. Each of these will represent a shape which consciousness takes at different stages in the progress of analysis. Consciousness only knows or experiences what is present to it within itself as consciousness. Because consciousness is Spirit in it immediacy, whatever experiences it has within itself, whatever is contained within itself is therefore spiritual substance – and this is its object. In other words, consciousness has only itself in its various shapes as its own object and substance. Thus Spirit has become object to itself or other to itself in order to know itself in what is other to it, i.e. in effect to suspend or sublimate otherness as such in recognizing itself therein. Experience is the name we give to this **movement**. Thus whatever first appears as one shape of consciousness is considered immediate, unmoved and therefore unexperienced or abstract. The immediate shape may be either in the form of merely being there or as abstract thought. Spirit identifies itself with that particular shape and becomes alienated from itself in what is other to it. Only when it recognizes itself therein does it return to itself from this alienation and make what is other a property of consciousness. [Compare this with the Subject-predicate proposition above, where Spirit is Subject and the specific form of consciousness is the predicate.]

§37 In general, what exists as a disparity or difference between "I" and the substance that is object to it may be termed the negative. But this negative, or what the object is not, is just as much what the subject is not or what they are lacking. In other words the subject is what the object is not, and the object is what the subject is not. Change one and you change the other. Whatever change the subject undergoes to fulfill this lack is therefore just as much a change in the object. Generally we may think that only the subject undergoes change, but we now see that the object also undergoes a correlated change – or it becomes a new object. Thus what seems to be an activity outside the object directed against it is really what object is doing itself. Thus Substance is as active as Subject and when their identity is completely established Spirit has made itself identical with its being and the first immediate separation between itself as knowing and its object as truth has been annulled. As absolutely mediated Being it is the Concept. When this stage is reached where knowing and Being are both within the identity of knowing, their movement or necessary development taken as a whole is the Idea or the True. This organized development is the Logic of Hegel's Encyclopedia of Philosophical Science.

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