

PERSPECTIVES ON
**Bhaktivedanta
Institute**





A letter from the Director of Bhaktivedanta Institute...

Mayapura Festival, 1979

My dear Godbrothers and Godsisters,

Please accept my humble obeisances. All glories to Śrīla Prabhupāda, our eternal guide and friend, and all glories to the present gurus, who are so faithfully and enthusiastically following in his footsteps.

Although the Bhaktivedanta Institute was established more than two years ago, most devotees remain quite unaware of its programs, its personnel, and even its existence. The reasons for this are manifold, but the main ones are, first, that the Institute's programs are by their very nature long range, and second, that the Institute's staff is the smallest of any major project in ISKCON. Still, as will become clear as you read this booklet, the Institute preaching program--geared toward attracting the intellectual elite to the transcendental message of Vāsudeva--is one of the saṅkīrtana projects most dear to Śrīla Prabhupāda.

This humble publication is an attempt to provide all my dear Godbrothers and Godsisters with some information about the transcendental vision and desires that His Divine Grace, our eternal father, Om Viṣṇupāda 108 Śrī Śrīmad A. C. Bhaktivedanta Swami Prabhupāda had concerning the Institute, as well as some examples of how he preached to the scientists (personally and in his books), some scriptural background revealing a precedent for this type of preaching in the life of Śrī Caitanya Mahāprabhu, and some news of the Institutes activities. This publication is a compilation of a talk between Srila Prabhupada and a scientist, and articles by our Trust members. I am extremely sorry that some of our other members' writings do not appear here, but the booklet would have become too voluminous and expensive. I beg to be forgiven for this omission.

This publication was made possible by the untiring and dedicated effort of Śrīman Draviḍa dāsa prabhu, who edited all the manuscripts and typed most of them. I am also grateful to Śrīman Gajahanta dāsa prabhu for the design and layout, and to others on the staff who helped in various capacities.

Anyone interested in participating in the Institute's programs, in whatever capacity, can write me at: ISKCON, 41-51 West Allens Lane, Philadelphia, PA, 19119.

Yours in the service of
His Divine Grace Srila Prabhupāda,

Swarūpa Dāmodara dāsa
GBC, Director, Bhaktivedanta Institute

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ŚRĪLA PRABHUPĀDA'S INSIGHT INTO THE ISSUES OF MODERN SCIENCE

by Dr. Richard L. Thompson (Sadāputa dāsa)

"Idle talks regarding future development of matter into spirit are actually foolish, because no matter has ever developed the power of seeing or moving in any part of the world" (Śrīla Prabhupāda, purport to Bhāg. 2.2.35).

[One of the primary goals of the Bhaktivedanta Institute is to prove by logic and argument the existence of the Supersoul--a transcendental source of intelligence for the creation and maintenance of the cosmic arrangement, and also for each living entity. In this essay Dr. Richard Thompson (Sadāputa dāsa) bases his argument on one of Śrīla Prabhupāda's extraordinary purports in the Śrīmad-Bhāgavatam.]

At first glance it might seem that the subject matter of the Śrīmad-Bhāgavatam belongs to an antiquated phase of human culture--that it has little relevance to the precise, detailed world view developed over the past two hundred years by the process of investigation employed by materialistic science. The Bhāgavatam introduces many ideas that appear incomprehensible, or even contradictory, to a person accustomed to the categories of modern science. Yet Śrīla Prabhupāda has emphasized that the Bhāgavatam outlines fundamental principles that are realistic and scientific in the truest sense of those terms. Although these principles may superficially appear to belong to a religious doctrine having little connection with practical, experimental observation, a close inspection of the text of the Śrīmad-Bhāgavatam reveals that they actually comprise a consistent system of scientific thought.

Śrīla Prabhupāda has stressed that although the fundamental spiritual and material principles presented in the Bhāgavatam may appear to conflict with currently accepted theories, there is no need for us to adopt some compromise position when presenting Bhāgavata philosophy to the academic community. While these principles are certainly essential for any realistic understanding of the higher spiritual nature of man, when properly understood they also prove to be consistent with the facts of experimental observation. Indeed, to an unbiased student of science, they should provide very fruitful guidelines for the further development of basic scientific theories. In the vision of Śrīla Prabhupāda, the theoretical system of modern science is a relatively undeveloped and tentative description of reality that should be corrected and extended within the broader context of the spiritual science described in the Śrīmad-Bhāgavatam.

Science is briefly defined as "the application of reason to the data of sensory perception within the framework of an underlying system of ideas." A system of ideas, or paradigm, is considered to have scientific value insofar as it enables one to integrate a broad range of observed phenomena into a coherent scheme. This power of integration is generally tested by demonstrating the predictive power of the paradigm. Scientists generally attribute great importance to a paradigm if they can use it to anticipate specific discoveries before they actually occur.

By the criterion of predictability, the system of ideas presented in the Śrīmad-Bhāgavatam constitutes an important scientific paradigm, for it sheds light on

many important scientific issues that, in their modern form, have arisen long after the Bhāgavatam's compilation. Śrīla Prabhupāda's description of the Śrīmad-Bhāgavatam as a spiritual science is thus confirmed even within the materially oriented domain of present-day scientific criteria.

To illustrate how scientific the Bhāgavatam is, let's examine one of Śrīla Prabhupāda's purports. We shall choose the purport to the following text from the Second Canto (2.2.35):

*bhagavān sarva-bhūteṣu
lakṣitaḥ svātmanā hariḥ
apśyair buddhy-ādibhir draṣṭā
lakṣanair anumāpakaiḥ*

"The Personality of Godhead, Lord Śrī Kṛṣṇa, is in every living being along with the individual soul. And this fact is perceived and hypothesized in our acts of seeing and taking help from the intelligence."

We shall divide Śrīla Prabhupāda's purport into sections and briefly comment on each section in the light of modern scientific knowledge:

"The presence of Paramātmā in everyone's company is not very difficult to realize, even for the common man. The procedure is as follows:

"One can perceive one's self-identification and feel positively that he exists. He may not feel it very abruptly, but by using a little intelligence he can feel that he is not the body. He can feel that the hand, the leg, the head, the hair, and the limbs are all his bodily parts and parcels, but as such the hand, the leg, the head, etc. cannot be identified with his self. Therefore, just by using intelligence he can distinguish and separate his self from other things that he sees. So the natural conclusion is that the living being, either man or beast, is the seer, and he sees besides himself all other things. So there is a difference between the seer and the seen."

In the 19th century the question of the seer and the seen was largely ignored in physical theories. At that time the world was visualized by many scientists as consisting of a large number of irreducible particles, or "atoms," that interacted with one another in three dimensional space in a strictly deterministic way. The motion of these particles was assumed to obey certain differential equations. Later on, this picture was modified by the addition of electro-magnetic waves that varied in time and space according to another set of differential equations (Maxwell's equations).

According to this mechanistic world view, both seer and seen were to be described as arrangements of particles and waves in space. The process of seeing

was thereby reduced to nothing more than a mechanical interaction between the two arrangements, "seen" and "seer."

Yet even though this picture became widely accepted, it was perceived by many students of science to be incomplete. It omitted the most essential feature of "seeing," namely our direct conscious awareness of the objects of perception. The presentation of a pattern of waves and particles tells us nothing at all about this conscious awareness, even though its existence is the most immediate feature of our day-to-day experience. Thus, as great an advocate of science as T. H. Huxley declared, "There is a third thing in the universe, to wit, consciousness, which... I cannot see to be matter or force, or any conceivable combination of either...."

In the 20th century the previously missing element of consciousness came to assume a much more direct role in physics. With the development of quantum mechanics as the accepted basis for physics, scientists found that they could no longer describe nature in terms of quantities representing the actual physical situations of real objects. Rather, they were forced to deal with systems of probabilities giving the likelihood of different possible observations in a given experimental situation. In the words of Werner Heisenberg, "When we speak of a picture of nature provided by contemporary exact science, we do not actually mean any longer a picture of nature, but rather a picture of our relation to nature" (italics added).

Strange though it may seem, in quantum mechanics it is not even possible to interpret the mathematical formalism of the theory in terms of real entities in three-dimensional space. In the quantum theory one must always presuppose an observer (the "seer") and an object of observation (the "seen") that is distinct from the observer. The theory merely provides predictions of the expected observations.

Von Neumann Discovers the "Abstract Ego."

When analyzing the process of observation in quantum-mechanical terms, the mathematician John von Neumann was led to a step-by-step discrimination between the seer and the seen that is very similar to that outlined by Śrīla Prabhupāda. Von Neumann followed the process of perception from the original sense object (in his example, a thermometer) to the eye, the optic nerve, the brain, and so on. Since a separation between seer and seen must be posited at each step, he concluded that the observer must finally be understood as the nonphysical "abstract ego." Thus modern physics has begun to retrace some of the steps outlined long ago in the philosophy of the Śrīmad-Bhāgavatam.

Continuing with the purport:

"Now, by a little use of intelligence we can also readily agree that the living being who sees the things beyond himself by ordinary vision has no power to see or to move independently. All our ordinary actions and perceptions depend on various forms of energy supplied to us by nature in various combinations. Our senses of perception and of action--that is to say, our five perceptive senses of (1) hearing, (2) touch, (3) sight, (4) taste, and (5) smell, as well as our five senses of action, namely (1) hands, (2) legs, (3) speech, (4) evacuation organs, and (5) reproductive organs, and also our three subtle senses, namely (1) mind, (2) intelligence, and (3) ego

(thirteen senses in all)--are all supplied to us by various arrangements of gross or subtle forms of natural energy. And it is equally evident that our objects of perception are nothing but the products of the inexhaustible permutations and combinations of the forms taken by natural energy. As this conclusively proves that the ordinary living being has no independent power of perception or motion, and as we undoubtedly feel our existence being conditioned by nature's energy, we conclude that he who sees is spirit, and that the senses as well as the objects of perception are material."

This passage from Śrīla Prabhupāda's purport can be seen as a further elaboration of the argument developed in a very different context by von Neumann. Von Neumann argued that each stage of the process of perception within the body can be completely analyzed (at least in principle) by means of the known laws of physics. Thus how photons of light impinge on the retina, the chemical processes in the photoreceptor cells, and the transmission of impulses through the neurons of the brain should all be reducible to interactions governed by the differential equations of physics. When this supposition is combined with the conclusion that quantum mechanics always requires an observer separate from the observed system, it follows that the observer must be distinct from the physical

We may note, however, one important additional feature in Śrīla Prabhupāda's presentation. This is his mention of the subtle senses of mind, intelligence, and ego, which are described as combinations of subtle material energy. This indicates that scientists should anticipate the discovery of phenomena involving the actions of mind and intelligence, and following laws as yet unknown to physics and chemistry.

In biology such laws would presently be classed under the category of "vitalism." For some time it has been fashionable among many biologists to relegate all such laws to the realm of fantasy and outmoded superstition. However, we should note that it has not been proven that any particular system of physical laws can account for all of the behavior of living organisms. The well-known difficulties in solving the "n-body problem" in both classical and quantum physics make it impossible in practice to predict the detailed physical behavior of even small molecules (such as H₂O), what to speak of living organisms.

On the other hand, the discoveries of the parapsychologists, which have recently gained increasing scientific recognition, may give us a preliminary indication of the nature of such laws. We might also draw attention to the gap lying between the mysterious phenomenon of consciousness and the known laws of physics. To date all the laws of physics (such as the inverse square law of repulsion between electrons) involve interactions that have little apparent connection with consciousness. Yet consciousness is somehow linked with the world of physical interactions. So it is not unreasonable to anticipate the existence of laws of mind, intellect, and ego that bridge this gap.

Continuing with Śrīla Prabhupāda's purport:

"The spiritual quality of the seer is manifest in our dissatisfaction with the limited state of materially conditioned existence. That is the difference between spirit and matter. There are some less

intelligent arguments that matter develops the power of seeing and moving as a certain organic development, but such an argument cannot be accepted, because there is no experimental evidence that matter has anywhere produced a living entity. Trust no future, however pleasant. Idle talk regarding future development of matter into spirit are actually foolish, because no matter has ever developed the power of seeing or moving in any part of the world. Therefore, it is definite that matter and spirit are two different entities, and this conclusion is arrived at by use of the intelligence."

Here Śrīla Prabhupāda alludes to the theory that life emerged spontaneously by the combination of non-living chemicals and then evolved gradually into higher and higher forms. This theory is generally divided into two parts: the theory of chemical evolution, dealing with the combination of simple chemical compounds to form the first living cells; and the neo-Darwinian theory of the evolution of plant and animal species. Even though these theories are very popular at the present time, their foundations are extremely weak, both in basic theoretical principles and in observed evidence. As this is a vast subject, we will only make a few brief remarks here to illustrate this point.

Weaknesses of the "Life-from-Matter" Theory

First of all, it is taken for granted in these theories that life is "nothing but" a combination of molecules interacting according to the laws of physics and chemistry. If one recognizes the nonphysical nature of consciousness and the possible existence of unknown material laws and principles, then the attempt to formulate a theory of life's origin within this framework is clearly premature. In fact, the very existence of the highly complex forms of living organisms provides strong evidence for the operation of explicitly life-oriented laws in nature. Mathematical arguments can be formulated showing that a given system of mathematical laws can give rise to such forms only if the patterns for the forms are, in a certain sense, "built into" the laws.

Attempts to develop a specific step-by-step account of the chemical origin and evolution of life have thus far been subject to many shortcomings. For example, in paleontology the recent work of Eldridge and Gould has cast serious doubts upon the existence of the many intermediate forms between species--forms required by Darwin's theory of gradual evolution. Prominent geneticists like Richard Goldschmidt have concluded that mutations of the kind observed in the laboratory cannot account for the transformation of one species into another. In biochemistry the effort to synthesize life from nonliving constituents has not been successful, even though some exaggerated claims have been made. From these and many similar considerations we can conclude that the origin of life from the interaction of matter is very far from being established.

Śrīla Prabhupāda continues:

"Now we come to point that the things which are seen by a little use of intelligence cannot be animate unless we accept someone as the user of or director of the intelligence. Intelligence gives one direction like some higher authority, and the living being cannot see or move or eat or do any-

thing without the use of intelligence. When one fails to take advantage of intelligence, he becomes a deranged man, and so a living being is dependent on intelligence, or the the direction of a superior being. Such intelligence is all-pervading. Every living being has his intelligence, and this intelligence, being the direction of some higher authority, is just like a father giving direction to his son. The higher authority, who is present and residing within every individual living being, is the Superself.

"At this point in our investigation, we may consider the following question: On the one hand we realize that all our perceptions and activities are conditioned by arrangements of material nature, yet we also ordinarily feel and say, 'I am perceiving' or 'I am doing.' Therefore, we can say that our material senses of perception and action are moving because we are identifying the self with the material body, and that the superior principle of Superself is guiding and supplying us according to our desire. By taking advantage of the guidance of Superself in the form of intelligence, we can either continue to study and to put into practice our conclusion that 'I am not this body,' or we can choose to remain in the false material identification, fancying ourselves to be the possessors and doers. Our freedom consists in orienting our desire either toward the ignorant, material misconception or the true, spiritual conception.

"We can easily attain to the true, spiritual conception by recognizing the Superself (Paramātmā) to be our friend and guide and by dovetailing our intelligence with the superior intelligence of Paramātmā. The Superself and the individual self are both spirit, and therefore the Superself and the individual self are both qualitatively one and distinct from matter. But the Superself and the individual self cannot be on an equal level, because the Superself gives direction, or supplies intelligence, and the individual self follows the direction, and thus actions are performed properly. The individual is completely dependent on the direction of the Superself, because in every step the individual self follows the direction of the Superself in the matter of seeing, hearing, thinking, feeling, willing, etc."

Here Śrīla Prabhupāda describes the link between the nonphysical observer and the active physical body. Since the time of Descartes, attempts in the West to formulate a theory of the interaction between spirit and matter have generally failed to provide a satisfactory account of this link. Some scholars, such as T. H. Huxley, have proposed that consciousness is an "epiphenomenon" that is affected by matter (in the process of perception), but that does not affect matter in turn. Yet, as Śrīla Prabhupāda points out here, it hardly makes sense to suppose that our conclusions about consciousness are being generated by a nonconscious process, while consciousness itself does nothing.

On the other hand, we clearly have very little (if any) power to determine events consciously. The Vedic conclusion, presented here by Śrīla Prabhupāda, is that the material energy is being directed by the Super-

consciousness, or Paramātmā. The individual conscious beings, such as ourselves, desire various material results, and these desires are perceived and translated into action by the Paramātmā. The standard arrangements and operating procedures of the Paramātmā constitute the various natural phenomena and laws, both subtle and gross.

In scientific terms, the "theory" of Paramātmā constitutes a bold hypothesis that explains the relationship between the body and the self. It is therefore interesting to note that, as with any good hypothesis, it predicts the existence of certain definite phenomena, and its predictions are confirmed by observation. Specifically, it predicts that individuals should sometimes receive large amounts of information, or "guidance," that cannot be accounted for as coming from any known source. This is to be expected if Paramātmā possesses unlimited knowledge.

Much evidence confirming these unaccountable bursts of information is to be found in the direct experience of scientists and other creative workers. An especially interesting exposition of this evidence is given by the French mathematician Jacques Hadamard. Hadamard describes how mathematical "creations," such as the discovery of proofs of difficult theorems, generally are not made by a deliberate conscious process. Rather, they spring fully developed into the consciousness of a person who has strongly desired them. Such a discovery was described by the mathematician Carl Gauss in the following words: "I succeeded not on account of my painful efforts, but by the grace of God. Like a sudden flash of lightning, the riddle happened to be solved. I myself cannot say what... connected what I previously knew with what made my success possible."

In the remainder of the purport to the *Bhāgavatam* verse, Śrīla Prabhupāda reveals that the scientific considerations we have been discussing thus far (under the heading of "common sense") form only the most rudimentary foundation for the real subject matter of Vedic science. But this foundation must be properly laid if the further developments of the subject are to be successfully pursued. For this reason Śrīla Prabhupāda has stressed the importance of establishing a valid scientific understanding of the nature of life.

Continuing with the purport:

"As far as common sense is concerned, we come to the conclusion that there are three identities, namely matter, spirit, and Superspirit. Now, if we go to the *Bhagavad-gītā*, or the Vedic intelligence, we can further understand that all three identities--namely matter, individual spirit, and the Superspirit, are all dependent on the Supreme Personality of Godhead. The Superself is a partial representation, or plenary portion, of the Supreme Personality of Godhead. The *Bhagavad-gītā* affirms that the Supreme Personality of Godhead dominates all over the material world by His partial representation only. God is great, and He cannot be simply an order supplier of the individual selves; therefore, the Superself cannot be a full representation of the Supreme Self, Puruṣottama, the Absolute Personality of Godhead.

Realization of the Superself by the individual self is the beginning of self-realization, and by the progress of such self-realization one is able to realize the Supreme Personality of Godhead by intelligence, by the help of authorized scrip-

tures, and, principally, by the grace of the Lord. The *Bhagavad-gītā* is the preliminary conception of the Personality of Godhead Śrī Kṛṣṇa, and the *Śrīmad-Bhāgavatam* is the further explanation of the science of Godhead. So if we stick to our determination and pray for the mercy of the director of intelligence sitting within the same bodily tree, like a bird sitting with another bird (as explained in the *Upaniṣads*), certainly the purport of the revealed informations in the Vedas becomes clear to our vision, and there is no difficulty in realizing the Supreme Personality of Godhead, Vāsudeva. The intelligent man, therefore, after many births of such use of intelligence, surrenders himself at the lotus feet of Vāsudeva, as confirmed in the *Bhagavad-gītā* (7.19)."

Thus we can see how the science of God-realization presented by Śrīla Prabhupāda in the *Śrīmad-Bhāgavatam* and other literatures is much more consistent, complete, and far-reaching than anything imagined in the laboratories of today's universities and research centers. The task now before the Bhaktivedanta Institute is to present the Vedic science in such a way that the first stirrings of transcendental awareness within the scientific community (represented by the introspections of von Neumann) can fructify into a full-fledged appreciation of *Bhāgavata* philosophy. Following as best we can in Śrīla Prabhupāda's footsteps, taking guidance from his extraordinary literatures, and always praying for "the mercy of the director of intelligence sitting within the same bodily tree," we shall try to eradicate the *nirviṣeṣa-sūnyavādi* now rampant in the halls of academe.

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