

Consciousness, Soul and Scientific Faith

Dr. N.L. Kachhara

1. Introduction

Science and technology has become a dominating factor in determining our life-styles and interrelationship among nations of the world. The religion, which used to dominate our lives earlier, has gone in the background, but it is still a force to reckon with in determining our social and political environment. The dividing influence of religion in the society has diminished with advancement in science and technology yet we find extremist views in some sections giving rise to unrest, violence and ethnic conflicts in the society. One strong reason of extremist behavior is some personal belief, which is supported by religious systems. In fact such beliefs are often related to aspirations and desires, which are more political than religious and are unfounded scientifically. A scientific basis of religion can greatly reduce conflicts in the society and promote individual peace and happiness. There is a great need today to examine the scientificity of religions and bring spirituality, which concerns more with self-discipline, to the fore. Science can infuse rationality and logic in the religious systems making them suitable for the well being of all.

Understanding the existence of self is the central issue in all religions. Philosophy also aims for search of knowledge especially concerning nature and the meaning of existence. Psychology explores the human behavior and science provides the facts of life. An integration of these disciplines can greatly enhance our understanding and coherence and properly guide our conduct and behavior, reduce differences and conflicts and thus promote peace and harmony.

Our actions and conduct are the results of our thoughts and emotions. The thing, which distinguishes us from innate matter, is consciousness. Consciousness is closely related to our thoughts and emotions and ultimately to our personality and social interaction. A proper explanation of consciousness is eluding the philosophers and scientists. Explaining the nature of consciousness is one of the important and perplexing areas of modern philosophy and science. The concepts of Jain philosophy offer solutions to many of the problems facing philosophers and scientists.

The paper examines the philosophical and scientific base of consciousness and soul and brings out the core elements of a scientific faith. A religion based on scientific faith supports non-violence and is a source of peace and happiness.

2.0 Consciousness

Etymologically, consciousness implies one's ability to know and perceive. Through consciousness, one can have knowledge of the external world or one's own mental state. Perhaps the most commonly used contemporary notion of conscious mental state is captured by Thomas Nagel's famous "what it is like" sense. But how do we understand this? One use of "conscious" is applied to a person's total state. A person is conscious, in the sense, if he or she is in a generalized condition of alertness or arousal: being awake rather than asleep or in a coma. "Awareness" is just an approximate synonym of "conscious", and so is "phenomenal". Attempts at definition might try to define consciousness (semi-) operationally, by reference to the sort of behavior that would provide public or external evidence for consciousness.

There are two broad traditional and competing metaphysical views concerning the nature of mind and conscious mental states: dualism and materialism. While there are many versions of each, the former generally holds that the conscious mind or a conscious mental state is non-physical in some sense. On the other hand, materialists hold that the mind is the brain, or more accurately, that conscious mental activity is identical to neural activity. It is important

to recognize that by non-physical dualists mean something literally outside the realm of physics; that is, not in space at all and undetectable in principle by instruments of physics. Dualists, then, tend to believe that conscious mental states or minds are radically different from anything in the physical world at all.

2.1 Dualism

The most basic form of dualism is substance dualism, which requires that mind and body be composed of two ontologically different substances: the mind is comprised of a non-physical substance, while body is constructed of the physical substance known as matter. The mind is thinking thing that lacks the usual attributes of physical objects: size, shape, location, solidity, motion, adherence to the law of physics, and so on.

According to most substance dualists, mind and body are capable of causally affecting each other. This form of substance dualism is known as Interactionism. Two other forms of dualism are occasionalism and parallelism. The occasionalism holds that mind and body do not interact. According to parallelism, our mental and physical histories are coordinated so that mental events appear to cause physical events (and vice versa) by virtue of their temporal conjunction, but mind and body no more interact than two clocks are synchronized so that one chimes when hands of the other point out the new hour. Another form of dualism is Property Dualism, which claims that mental phenomena are non-physical properties of physical phenomena, but not properties of non-physical substance.

There are, however, some objections to dualism. Paul Churchland has argued that dualism is inconsistent with the facts of human evolution and fetal development. According to this view, we began as wholly physical beings. No one seriously supposes that newly fertilized ova are imbued with minds or that the original cell in the primordial sea was conscious. But from that entirely physical organ, nothing non-physical was later added. Others argue that dualism is scientifically unacceptable because it violates the well-established principle of conservation of energy. Interactionists argue that mind and matter causally interact. But the spiritual realm is continually impinging on the universe and affecting changes; the total level of energy in the cosmos must be increasing or at least fluctuating.

The correlation and dependence argument against dualism begins by noting that there are clear correlations between certain mental events and neural events (say, between pain and a-fiber or c-fiber stimulation). Also, as demonstrated in such phenomena as memory loss due to head trauma or wasting disease, the mind and its capacities seem dependent upon neural function. Descartes defends dualism by illustrating the following example: a virtuous violinist cannot manifest his or her ability if given an instrument in deplorable or broken condition. So, if the brain is in a severely diseased or injurious state, the mind cannot demonstrate its abilities; they of necessity remain private and unrevealed.

Some philosophers, such as Hume, have objected that supposing that the mind is a thinking thing is not warranted since all we apprehend of the self by introspection is a collection of ideas but never the mind that purportedly has these ideas. All we are therefore left with is a stream of impressions and ideas but no persisting, substantial self to constitute personal identity. Kant, too, denied that the mind is a substance. Mind is simply the unifying factor that is the logical preliminary to experience.

2.2 Materialism

Some form of materialism is probably much more widely held today than in centuries past. No doubt part of the reason for this has to do with the explosion in scientific knowledge about the working of the brain and its intimate connection with consciousness, including the close connection between brain damage and various states of consciousness. Indeed, materialism often seems to be a working assumption in neurophysiology. The idea is that science is showing us the conscious mental states, such as visual perceptions, are simply identical with certain neuro-chemical brain processes.

There are, however, a number of much discussed and important objections to materialism most of which question the notion that materialism can adequately explain conscious experience. Joseph Levine coined the expression "the explanatory gap" to express the difficulty for any materialistic attempt to explain consciousness. David Chalmers

similarly points to “the hard problem of consciousness”, which basically refers to the difficulty of explaining just how physical processes in the brain give rise to subjective conscious experiences, or experience an emotion. Chalmers usefully distinguishes the hard problem of consciousness from what he calls the “easy problem” of consciousness, such as ability to discriminate and categorize stimuli, the ability of a cognitive system to access its own internal states, and the difference between wakefulness and sleep. The easy problems generally have more to do with the functions of consciousness, solving them does not touch the hard problem of phenomenal consciousness.

Another objection to materialism is the knowledge argument, forwarded by Thomas Nagel and Frank Jackson. The general pattern of each argument is to assume that all the physical facts are known about some conscious mind or experience. Yet not all is known about the mind or experience. It is then inferred that the missing knowledge is non-physical in some sense, which is surely an anti-materialist conclusion in some way.

Despite the plethora of materialist responses, vigorous debate continues as there are those who still think that something profound must always be missing from any materialist attempt to explain consciousness: namely, that understanding subjective phenomenal consciousness is an inherently first-person activity which cannot be captured by any objective third-person scientific means, no matter how much scientific knowledge is accumulated. Some knowledge about consciousness is essentially limited to first-person knowledge. Perhaps consciousness is simply a fundamental or irreducible part of nature in some sense.

Religious beliefs have always held that there is an intelligent cause for origin of life. The design argument assumes that the order we see in the world around us bears an analogy to the kind of order exhibited by human artifacts. Since the two kinds of order are similar, the cause of one must be similar to the cause of the other. The order in human artifacts is the result of human intelligence. Therefore, the order in the world must be the result of an intelligent being. DNA is considered the identifying mark of a living system. In recent years, scientists have applied information theory to biology, and in particular to the genetic code.

The discovery that life in its essence is information inscribed on DNA has greatly narrowed the question of life's origin. With the insights from information theory we need no longer argue from order in a general sense. Order with low information content does arise by natural processes. However, there is no convincing experimental evidence that order with high information content can arise by natural process. Indeed, the only evidence we have is that it takes intelligence to produce the second kind of order. If we want to speculate on how the first informational molecules came into being, the most reasonable speculation is there was some form of intelligence around at that time. Even the simplest form of life, with their store of DNA, is characterized by specified complexity. Therefore life itself is prima facie evidence that some form of intelligence was in existence at the origin of DNA code. The claim that DNA arose by material forces is to say that information can arise by material forces. However, the material base of a message is completely independent of the information transmitted. The material base could not have anything to do with the messages' origin. The information within the genetic code is entirely independent of the chemical makeup of the DNA molecule. To accept a material cause for the origin of life actually runs counter to the principle of uniformity.

Some philosophers argue that we are simply not capable of solving the problem of consciousness. The “mysterians” believe that the hard problem can never be solved because of human cognitive limitations; the explanatory gap can never be filled. Some argue that we are “cognitively closed” with respect to this problem much like a rat or dog is cognitively incapable of solving, or even understanding, calculus problems. McGinn claims that we are cognitively closed as to how brain produces conscious awareness. He concedes that some brain property produces conscious experience, but we cannot understand how this is so or even know what that brain property is. Our concept forming mechanism simply will not allow us to grasp the physical and causal basis of consciousness. We are not conceptually suited to be able to do so. McGinn observes that we do not have a mental faculty that can access both consciousness and the brain. We access consciousness through introspection or the first-person perspective, but our access to the brain is through the use of outer spatial senses (e.g., vision) or more third-person perspective. Thus we have no way to access both the brain and consciousness together, and therefore any explanatory link between them is forever beyond our reach.

3.0 Unconscious Mind

Freud divided mind into three parts, Id, Ego, and Super Ego. The Id comprises the unorganized part of the personality structure that contains the basic drives. The Id is unconscious by definition; it is the storehouse of instinctual desires, needs, and psychic actions. While past thoughts and memories may be deleted from immediate consciousness, they direct the thoughts and feelings of the individual from the realm of the unconscious. The Ego comprises the organized part of the personality structure, which includes defensive, perceptual, intellectual-cognitive, and executive functions. Conscious awareness resides in the Ego, although not all of the operations of the ego are conscious. Consciousness, in Freud's topographical views was a relatively thin perceptual aspect of mind, whereas the subconscious was that merely autonomic function of the brain. The Super-Ego comprises that organized part of the personality structure, mainly but not entirely unconscious, that includes the individuals' ego ideals, spiritual goals, and psychic agency (commonly called 'conscience') that criticizes and prohibits his or her drives, fantasies, feelings and actions. Although the id is unconscious by definition, the ego and super ego are both partly conscious and partly unconscious. Unconscious thoughts are not directly accessible to ordinary introspection, but are supposed to be capable of being "tapped" and "interpreted" by special methods and techniques such as random association, dream analysis, and verbal slips examined and conducted during psychoanalysis.

Today, there are still fundamental disagreements within psychology about the nature of the unconscious mind. There is a great controversy over the concept of an unconscious in regard to its scientific or rational validity and whether the unconscious mind exists at all. Given the lack of evidence of many Freudian hypotheses, some scientific researchers proposed the existence of unconscious mechanisms that are very different from Freudian ones. In modern cognitive psychology, which is more materialistic, many researchers have sought to strip the notion of the unconscious from its Freudian heritage, and alternative terms such as 'implicit' or 'automatic' have come into currency. Cognitive research has revealed that automatically, and clearly outside of conscious awareness, individuals register and acquire more information than what they can experience through their conscious thoughts

4.0 Jaina Dualism

The dualism in Jain philosophy is of a special kind. Besides a non-physical soul and material body there is a third unit of a subtle body comprising past memory and the mental states. The subtle body is physical but is made of fine matter known as *vargana*, which are invisible and mass less. The subtle body consists of two parts, one containing long-term memory, up to thousands of years, known as karma body, and the other called luminous (*tejas*) body contains thoughts and short-term memory. Another important function performed by the luminous body is to attract *prana* energy from the cosmos, *prana* are essential requirements of both the luminous body and material body. The composite subtle body can be compared to mind containing memory, emotions and thoughts.

The karma body is made of karma *vargana*, which are attracted from the cosmos by the soul on account of attachment and aversion that are generally associated with physical, mental, and emotional activities. The karma bound through karma *vargana* carry the impression, good or bad, typical of action performed, in the form of memory that can last life after life for thousands of years. There is a scientific evidence to suggest that karma body may be composed of coherent electromagnetic field that emits bio photons, which are supposed to regulate chemical activity in cells. The luminous body is assigned two important functions (1) management of body functions, and (2) to support and provide control on the physical body. *Prana* energy is essential to discharge these functions. The luminous body is supposed to comprise of plasma like matter. Both the non-physical soul and physical mind are coextensive with the material body. There are scientific observations that there is something like a cluster of light which remains intact after the clinical death of body. The Soviet scientists have endorsed the philosophical doctrine of 're-birth' or the cycle of births. They assert with certainty, "There exists a subtle energy or an invisible body in the form of cluster of light, which covers the physical body in all living beings, we have obtained a proof for that."

Freud said that the unconscious mind is the storehouse of instinctual desires but he did not clearly mention the source of these desires. The animal like instincts in human beings indicate to

his animal history when the impressions in form of karma were formed that produce the animal instincts in human beings. Thus the karma body containing long-term memory can be compared to unconscious mind and the luminous body containing mental states and thoughts to conscious mind.

The non-physical soul is immortal and is embodied due to his karma. The soul transcends from one body to another in accordance with his karma. During migration from one material body to other the mind comprised of subtle karma body and luminous body remains united with the soul. Thus there is a continuity of mundane existence and the past karmas determine the present life of the soul. The soul is supposed to contain innumerable parts mathematically (otherwise it is an indivisible unit) and so is the karma body. Each part of the karma body contains the total and identical memory information. In the transition from one body to another perhaps only a few parts of karma body are carried forward by the soul, the remaining parts may dissociate as *vargana* and be united with the cosmos. The next life beginning with a single cell starts with a miniature karma body, which then multiplies with cells. The structure of the luminous body does not contain parts like karma body and assuming that only a fraction of it migrates the mental states and thoughts are not carried to next life. We therefore do not consciously remember our past. The soul has a free will, but this is influenced by karma making our behavior, and conduct subjective. So the soul actually has a relative free will limited by karma.

The interaction between mind and body is physical taking place through radiations known as *adhyvasaya* and *lesya*. This interaction is both ways, that is mind and body mutually influence each other. The interaction between soul and karma body is non-physical and can be compared to parallelism. The non-physical soul undergoes continuous transformation and change in modes in a subtle way due to thoughts and actions being performed. There is a corresponding change in the karma body by the principle of reflection. This change is either in the form of new karma being bond or fruition of existing karma. There is always an exact correspondence between the state of the soul and the state of the karma body; a change in one causes a corresponding and equal change in the other. The fruition of karma produces radiations, which influence the conscious mind and also the chemical and electrical activity in the body. The DNA in every cell is identical but each cell performs differently, this kind of selective function of DNA can be assigned to karma. There is laboratory evidence that DNA is influenced and reprogrammed by radio and light frequencies. It must be karma radiations, which regulate the non-protein making part of genes through a process of selection, and determine different functions of cells suitable to their location in the body. In this manner the performance of the physical body at the cell level is regulated by the soul through karma.

The main property of the soul that distinguishes it from matter is *cetna*. *Cetna* is not just consciousness as is generally known to philosophers but much more than that. Philosophers hold that consciousness is “awareness” or “experience” in the conscious state, it is supposed to be absent in unconscious or in coma state. *Cetna* being property of the soul is always present, it manifests explicitly in the conscious state and implicitly in the unconscious or coma state. Without *cetna* no life is possible. The manifestation of *cetna* takes place in various ways, the principal ways being knowledge, conation, bliss (pleasure and pain), and will power. Jain philosophy assigns infinite capabilities to soul, which are fully realized when all the karma are destroyed by special efforts through activities like austerity, penance, meditation etc. There are eight main types of karma, which are grouped in two classes, psychical (*ghati*) karma and biological (*aghati*) karma. Psychical karma obstructs and limits the main properties of the soul, knowledge, conation, bliss, and will power and determines the conduct and behavioral performance in the mundane state. The biological karma can be compared to the subconscious mind, which is supposed to concern with the autonomic functions and also growth, development, structure, and maintenance of the body. In the normal case the soul makes contact with the object through psychical karma (and physical sense organs), which impose limits on its powers. A state known as omniscience can be attained if an individual is able to annihilate the psychical karma. In such a state the individual experiences the (super) natural powers of the soul having infinite knowledge, conation, bliss and will power. In this state the sensory organs and mental states are bypassed and the soul makes direct contact with the object, knowing and perceiving the nature in its full reality. Only the sub conscious part of unconscious mind remains in existence in the omniscient state. The soul being non-physical the limitations of space and time also vanish and the entire cosmos, living and non-living, past, present, and future, is reflected in the soul in the omniscient state.

We now consider the question what is knowledge? Knowledge is the property of the soul and it does not belong to the object. The soul possesses infinite knowledge but this is limited by “knowledge obscuring karma.” It means that the “knowledge obscuring karma” do not allow the knowledge faculty of the soul to manifest itself fully in the mind and brain. Reduction in knowledge obscuring karma, by means of methods cited above, results in increased explicit knowledge of an individual. The knowledge in the presence of knowledge obscuring karma is relative (to karma) and an individual is not able to perceive the object in all its reality. This is the reason the principles, theories and

explanations advanced by imperfect individuals, possessing knowledge obscuring karma, are vulnerable to change. A perfect person, an omniscient, free of knowledge obscuring karma, knows the object in its absolute reality and is able to describe the nature as it exists.

The knowledge in the common sense view refers to the information of the object acquired by the soul on account of its knowledge ability. The object is the auxiliary cause of knowledge, as it stimulates the soul to collect the information; the main cause is the soul himself. The information is stored in the brain and is operated upon by the mind, both conscious and unconscious. The difference in knowledge obscuring karma is the reason for difference in intelligence by birth in individuals. The intuition is also a property of the soul and exists in varying measure in all individuals.

The conscious experience identified by “what it is like” sense is made by the soul and not the mind. The mind is a physical entity and is devoid of conscious property. The phenomenal property is also possessed by the soul. The term ‘conscious’ in conscious mind denotes the property of the mind through which the soul makes conscious experiences, the mind itself is not conscious. The *cetna* manifests in mind and body and so the mind and body are able to function in a given manner. No function of mind and body is possible without *cetna*; a ‘dead’ body has all the necessary organs and parts in place but cannot perform any action typical of life because the soul has left the body. The dualists assign consciousness to mind and materialists to brain because mind and brain function the way they do in the presence of *cetna*. It is clear that consciousness is not the property of mind or brain. The conduct and behavior of any being is determined by his karma and *cetna* property of the soul. Jain dualism thus presents a theory of body, mind, and spirit where the non-physical spirit manifests in the body and mind and the life is explained.

We now review the objections raised against dualism. The process of fetal development was referred to above. The soul attached with subtle mind enters the newly fertilized ova and modifies the DNA in accordance with its karma (through radiations). This process of entry cannot be directly known to science as the soul is non-physical and the mind is composed of mass less subtle matter. Further growth and development of fetus takes place according to the modified DNA. According to Jain philosophy life in the form of beings like nano organisms is always present even during the period of early earth. This organism must have provided the cell from which further development of life took place on earth. In Jain dualism the interaction between mind and body is through radiations and the principle of energy conservation is not violated. The soul does not directly interact with mind and body; its interaction with karma body is based on principle of parallelism involving no energy transfer.

A correlation between the activities of mind and brain is a requirement of the system. The brain is the apparatus providing a physical structure for the activity of mind. The neuron firings and other neurophysiological activity in the brain are synchronized with the mental activity in the mind. Thus a correlation between mental events and neural events makes it possible to transform the mental states into physical actions. This is possible only when the brain is properly developed and is functioning. In the early period of fetus or in a trauma state a suitable brain structure is not available and required physical actions do not become possible. It shall be wrong to assign mental capabilities to neural events, as the materialists do, the driving force behind the neural activity is the mind which actualizes the powers of the soul who is the ultimate source of all activity, conscious and autonomic, in the body. The objections of Hume and Kant that the mind and soul are not apprehended due to human cognitive limitations are subjective; a person having strong karma is not in a position to do so. But an omniscient or a person having minimal psychological karma can apprehend mind and soul. He has the direct first-person experience of the reality in its absolute form.

5.0 Scientific Faith

1. Based on above philosophical and scientific analysis we postulate that a scientific faith must have the following three essential elements.
2. Belief in the existence of non-physical and immortal soul. The soul is the source of consciousness and intelligence in beings.
3. A subtle mind, which stores memories, desires, needs, thoughts and emotions. The unconscious part of mind contains the instinctual desires, needs and long-term memory. The conscious part contains thoughts, emotions and short term memory that perform the function of making choices, taking decisions and regulating and managing the processes in the brain and material body.

4. Doctrine of karma. This dictates that the thoughts and actions of a being leave a permanent impression in the unconscious mind which unless neutralized are carried forward to the next life. These impressions or karma generate desires and needs in the beings and provide an important input for determining his or her conduct and behavior.
5. Jain philosophy has elaborated in great detail on all these points in a logical and scientific manner. The doctrine of karma is particularly significant which states that one has to inevitably reap what he sows; good results for good actions and bad results for bad actions. Any kind of violence, physically, mentally, or verbally, is bound to produce similar results in later life (present or future) of the soul. Killing in any form, including killing of self, is a violence of the worst order and becomes a cause for suffering, misery and unhappiness in life. Violence and peace are opposite poles and can never exist together. A being desirous of peace has to have a non-violent way of life as a rule. There are instances where the religious faiths are misinterpreted to mean that killing of followers of other faiths can provide a place in heaven. This is absolutely against the doctrine of karma and is motivated by personal or political interests and no true religion can support such actions.

6.0 Conclusions

Jain philosophy establishes dualism on a strong ground logically and scientifically. It clearly propounds that the soul, although intrinsically infinitely powerful, is subdued by karma and due to attachment and aversion to objects goes through the cycle of birth and death. The soul has his own history, which guides his future; he has to enjoy the fruits of his actions sooner or later. The soul reaps what he sows; good results for good actions and bad results for bad actions. This is the essence of all religions. All religious doctrines teach us to bear a good conduct, love fellow beings, be kind and compassionate to all creatures, not to commit violence and wish well being of every one. Jain philosophy provides a scientific meaning and a logical explanation to these teachings and inspires us to pursue right conduct based on right knowledge and right beliefs. Violence, hatred, conflicts, prejudices and the like are not only unreligious but are also unscientific. Acceptance of the scientific faith can bring peace and happiness to individuals and harmony and general well being in the society.

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