

Cognitions and Consciousness: Jainism and Contemporary Views

Narayan Lal Kachhara

Abstract

Cognition means knowing and perceiving. Cognition with its two aspects of *jnana*, intelligence, and *darsana*, intuition, is a permanent feature of the soul, it is the application of the faculty of knowing of the soul. Cognitions are of two types, articulate (knowledge) and inarticulate (perception). Ignorance is essentially absence of right knowledge. Cognition establishes a relation between the subject and the object. In the absolute sense the soul is conscious of itself; the object is reflected in it. The truth or falsehood of cognition is a subjective experience and is known on subsequent cognition. Perceptual cognition is made through senses and mind; direct cognitions are made by the soul bypassing the senses and mind.

Consciousness is the property of the soul and not an emergent property produced by combination of matter. The contemporary approach to define consciousness with the help of classical or quantum physics raises many questions and is not acceptable to many scholars. Empirical science has limitations and it is not a suitable tool to deal with subjective experiences. The subjective experiences are typified by unity and oneness whereas the neural activities are fragmentary. Jainism proposes a three tier model of existence of a being- soul, mind and body. The mind is supposed to be the integrating unit and is responsible for the unity and subjectivity of experience. The brain plays an important part in the cognition process and is an essential component in our experiences, but in no way is the source of consciousness, which is the exclusive property of the soul. The cognitions are related to the state of our happiness, the unlimited and unbound happiness is experienced only by the omniscient.

Keywords: Cognition, consciousness, soul, knowledge, perception, awareness

1. Introduction

Cognition means knowing and perceiving. In Jainism the soul is the knower and perceiver. The soul is a substance having two important characteristics, consciousness and *upayoga* (manifestation of consciousness). Consciousness manifests as attributes, two important attributes are *jnana* and *darsana*. Two other terms intelligence and knowledge for *jnana* have now come in vogue in modern philosophy. Many scholars use the term knowledge for *jnana* but these two are thought to have different connotations. It is more appropriate to use the terms intelligence and knowledge for *jnana* in context with internal and external use respectively. Similarly, intuition and perception may be used for *darsana* in context with internal and external use. Cognition is *upayoga* or

application of *jnana* and *darsana* attributes of consciousness. *Ajnana*, ignorance, has been defined as perverted attitude or absence of *jnana*.

2. Jnana (Knowledge).

Jnana was a means for the ethical progress of the soul in Agama period; it was one of the constituent of the path of Moksa. *Jnana* which did not help in Moksa was *ajnana* (ignorance) or *mithyajnana* (perverted knowledge). The difference between *jnana* (knowledge) and *ajnana* (ignorance) was not objective but subjective. In the period of logic, *jnana* was defined as apprehending the reality. *Jnana* now became objective.

There are four fundamentals of *jnana* [1].

- (i) *Jnana* is identical with self, but the self is not identical with *jnana* as it contains certain other qualities also.
- (ii) The function of *jnana* is to illuminate the objects. It does not create anything new.
- (iii) The soul is the instrument as well as the agent of cognition.
- (iv) The objects are presented to the subject directly.

Cognition, with its two aspects of *jnana* and *darsana*, is a permanent feature of the soul. It is not an accidental phenomenon produced by the external factors. Different forms of cognitions also are modes (*paryayas*) of the soul; they belong to a attribute or quality, *guna*, i.e. consciousness

Gautama: "O Lord! The soul is *jnana* or *ajnana*?"

Mahavira : "O Gautama! The soul is *jnana* as well as *ajnana*, but *jnana* is positively soul.

Thus both *jnana* and *ajnana* are part of the soul.

3 Darsana (Perception)

Perception is right (*samyaka*) if soul leans towards spiritual progress and believes in liberation as the highest goal. It is perverted (*mithya*) if the soul is engrossed in worldly pleasures. According to Siddhasena Divakara [2], *darsana* in the sense of attitude is to be included in empirical knowledge. But this is up to 7th *gunasthana* (spiritual stage), where right attitude is caused by the rise of the view deluding karma (*samyaktva mohaniya*) that is experienced as right faith. The *ksayopasama* (annihilation-cum-subsidence of karma) of empirical knowledge obscuring karma and the rise of the three degrees of view deluding karma create a certain attitude of mind towards worldly objects; it is called right view, *samayakadristi*, wrong view, *mithyadristi*, or *misradristi*, soul having partly enlightened view and partly deluded view, as the case may be. Beyond the 7th *gunasthana* the aspirant positively gets right faith which is beyond the range of empirical knowledge. Though *ksayika* right faith is possible in the 4th *gunasthana* also, yet, the existence of other varieties is not ruled out.

As far as the cognizer and the object are concerned the Jaina does not hold any difference between *jnana* and *darsana*. *Darsana* is devoid of judgment; it is more like awareness without any predication.

Like *jnana* the *darsana* attribute of the soul is also veiled by karma. In the veiled state the manifested *darsana* attribute is divided in five categories, the last category, slumber (*nidra*) is further divided in five types. Among the 9 types of *darsana*, defined by the respective obscuring karma, the first four follow the corresponding types of perceptions.

(1) Ocular Perception (*Chaksu darsana*) – apprehends the object through the sense of sight

(2) Non-ocular perception (*Achaksu darsana*) - there are different views. The general view is that this is apprehension of the object through non-visual senses and the mind (some scholars have objections to mind as it has no *darsana*).

(3) *Avadhi darsana* – clairvoyance qua intuition

(4) *Kevala darsana* – omniscience qua intuition

The remaining 5 types of slumber (*nidra*) do not obscure *jnana* according to theory of karma. They are related with *darsana* only and do not put any obstruction to the cognition of generality. They obstruct the very activity of the soul towards knowing. The sleep is thus a state of the soul in which *darsana* attribute (except ocular) manifests, but the *jnana* does not, and cognitions here refer to perceiving the generality, not the particularity, of the object.

4 Upayoga (Cognition, Application)

Upayoga (Manifestation) is a general term comprehending all activities related to consciousness. Literally it means application, attention or coordination of the subject and the object. It is the application of the faculty of knowing possessed by the soul. It is attention of the soul when the later knows the object. Cognition is also *upayoga*. This is of two types; inarticulate cognition (*nirakara upayoga*) is perception or *darsana* and articulate cognition (*sakara upayoga*) is knowledge or *jnana*. The articulate cognition is designated as knowledge, *jnana*, or ignorance, *ajnana*, according to the faith of the knower. *Upayoga* is a mode of the soul related to consciousness. The term *upayoga* literally means a relation by coming near; expressing the relation of the object with *jnana* by coming into contiguity.

Siddhasena defined *upayoga* in two ways. (1) The consciousness, which is a constant characteristic of the soul, manifests itself into the stages of *jnana* and *darsana*. This manifestation is *upayoga*, and (2) *upayoga* means attention of *jnana* and *darsana* towards the object. This definition can be applied to the case of constant cognition also.

Akalanka [3] said that *upayoga* is a mode of cognizer, related to consciousness; occurring at the possible presence of external and internal means. Is every mode of the

soul an *upayoga*? No; but only that which is related to consciousness. As a matter of fact consciousness is power and *upayoga* is its application. There are two types of causes of *upayoga*, external and internal. Each of them is further divided into two, inseparable and separable. Thus there are four types of causes of *upayoga*

- (1) External inseparable - physical senses
- (2) External separable - the object, light etc.
- (3) Internal separable - physical mind, material cause of thinking (brain) etc.
- (4) Internal inseparable - activity of the soul (*bhava*- yoga) resulting from partial or complete destruction of the karmic matter.

In certain cases all causes are necessary, in others, three, two or even one can do. The 4th cause is essential in all activities.

Vidyananda [4] mentions two types of *upayoga*, *ksayika*, emanating from annihilation of karma, and *ksayopasamika*, emanating from annihilation-cum-subsidence of karma. The former does not require any external or separable means; it solely depends upon the fourth type of cause, which is always present. *Ksayika upayoga* is permanent, once appeared it never vanishes. *Ksayopasamika upayoga* is temporary; it appears and vanishes according to the external and internal conditions. Temporariness here means a change in respect of objectivity, intensity, kind, etc., and not total disappearance.

5 Ignorance (*Ajnana*)

Ignorance may be interpreted to have four meanings.

(i) Wrong knowledge. According to Jain logic valid knowledge (*prama*) means a decisive cognition of the self as well as the object. The wrong knowledge is known as false imposition (*samropa*) which has three type (a) doubt (*samsaya*) (b) illusion (*viparyaya*) and (c) indistinct appearance (*anadhyavasaya*). *Darsana* also is generally included in the last category; but *anadhyavasaya* stops with its flash of indistinct appearance, *darsana* later on develops into *jnana*.

No demarcation line can be drawn between the right and wrong as far as incomplete knowledge is concerned. According to Jaina logic difference between truth and falsehood is not that of quality, but is of degree.

(ii) Perverted attitude. Knowledge is enlightened knowledge when it cannot be reversed; it is perverted knowledge when it can be reversed. Knowledge in itself is neither enlightened nor perverted; it is enlightened or perverted according to the attitude of the subject, which is influenced by deluding karma. Knowledge may change according to the attitude of the subject. The knowledge of one possessing perverted attitude is not held to be rational, and is ignorance.

(iii) Absence of knowledge. The absence of knowledge is due to the veil of intelligence and intuition obscuring karmas. These two can be complete (*sarvaghatin*) or partial (*desghatin*).

(iv) Cause of ignorance

6 Relation between Subject and object

There are two important views on relationship between subject and object. Kundakunda [5] in Pravacansara says "The knower has *jnana* of his nature and all the objects are within the range of *jnana*, just as the objects of sight are within the ken of the eye, though there is no mutual inherence." Further, "The knower, who transcends sense- perception necessarily knows and sees the whole world neither entering into nor entered into by the objects of *jnana*." He says that *jnana* exists as power and a function. The *jnana* power is confined to the body but the function is not limited, it covers the whole universe. The soul is co-extensive with *jnana* and *jnana* is co-extensive with the object. The *jnana* operates on the object, just as a sapphire thrown in the milk pervades the whole if it with its luster. In the case of omniscient the object of *jnana* comprises the whole physical and the non-physical world.

The later scholars have not appreciated this explanation of Kundakunda. Akalanka states that consciousness has two forms, the cognition form and the object form. Cognition- form is like the mirror without any reflection. The object form is like that with reflection. Cognition form is common in all apprehensions; but the object form is different with every appearance. The cognition form is pure consciousness. The reflection in a mirror is just like its prototype but the latter is not the content of the mirror. The mirror contains the reflection only. Similarly, *jnana* contains the images or concepts only. They distinguish one cognition from another; and not the physical objects. The content of *jnana* is not something different from *jnana* itself.

Jaina holds that the soul does not come into direct contact with the objects; nor are they represented by via media but illuminated by the soul when the obscuring karma is removed. Thus *jnana* means the removal of this obscurance which naturally results into the illumination of an object. The *jnana* does not take the form of object and the object is not the cause of *jnana*. The object does not stand in *jnana*, it only manifests in it. Cognition never appears without having an object as its datum. Whenever there is cognition it must be associated with some object.

In the mundane soul the *jnana* is clouded by karma. Irrespective of the karma veil some *jnana* always manifests. This manifested *jnana* is divided in four classes based on the intensity of the veil and the function performed by *jnana*. When the veil is thick the manifested *jnana* is known as *mati jnana*, empirical knowledge, that takes help of senses and mind to cognize the object. This is the ability of the individual soul. *Sruti jnana*, articulate knowledge, is the knowledge of the object manifested by another soul;

it is also cognized through senses and mind. When the karma veil is thinner the soul attains the ability of cognition without the help of senses and mind. In this state the soul extends his capacity to cognize the objects which are beyond the limits of senses and mind. These direct cognitions are of two types. *Avadhi jnana* directly perceives the external objects, which transcend the limitations of senses and mind, as well as the self. *Manahaparyaya jnana* also perceives the thoughts of other mundane souls. When the psychical karma veil is completely eliminated these four divisions of *jnana* cease to exist and the natural *jnana* of the soul, *kevala jnana*, that can cognize all objects, small and big, near and far, past and future, and the self, manifests.

In the absolute sense the soul can only be conscious of itself, because it alone exists as that state of pure singularity [6]. When we say 'it is conscious of itself', we separate the intellectual level into two aspects: (1) the aspect that it is observer and (2) the aspect that it is observed (although they are one and the same). Intellectual examination, in fact, reveals the existence within consciousness of three values, inherent in any process of conscious experience or any process of observation: (1) the observer, (2) the observed, and (3) the process of linking the observer and the observed.

Even though there is nothing but one consciousness, this principle of three emerges. Consciousness being awake to itself experiences itself, and is at once the knower, the process of knowing, and the known- observer, process of observation, and observed; or subject, object, and the process of linking them. In this state of absolute consciousness, these three values are one and the same, yet they represent these aspects of the same singularity.

It is obvious that every relative experience requires a subject coming together with an object. This coming together takes place both on the level of attention as well as on the sensory level of perception. When the subject comes together with the object through the process of observation, then the experience occurs- then knowledge of the object by the subject takes place. Knowledge therefore, is the result of the coming together of the observer, the process of observation, and the observed.

As one consciousness leads to three aspects, the interaction between the three and the resultant aspects, relationships, and their interaction, etc. leads to an infinite number of ever-expanding possibilities. All these possibilities, all these forces of interaction and relation, exist in the soul.

The interaction of forces, even though within the soul, creates a dissymmetry, as if a distortion, in the flat and homogeneous- yet infinitely flexible- absolute singularity of soul. The virtual pull and push, rise and fall, vibration and silence, dynamism and silence, leads to the formation of structure within the soul. Structure is the result of apparent breaking of infinite symmetry. With all interactions always taking place in accordance

with the fundamental forces that uphold them, structure is the result of the virtual distortion generated by the interaction of forces.

In the pure soul or the soul of the Omniscient the structure is absent and the subject and the object is the same pure consciousness. In the impure soul the subject is the consciousness and the object is the structure created by the virtual distortion. The structure identifies the perverted state of the soul.

7 Cognitions: True or False

Before we consider the truth or falsehood of cognition it is pertinent to introduce an important principle of reality in Jainism. According to Jainism a thing is possessed of infinite number of attributes and characteristics. Out of them some qualities are natural (*svabhava*) while others are derivative (*vibhava*) i.e. caused on external association. Consciousness of soul is a natural quality. But the possession of body is not an independent act; the soul depends upon matter (*pudgala*) for it. Similarly, matter has corporeality as its natural quality but its transformation into a physical body is derivative. Everything that exists, temporary or permanent, natural or derivative, is on the same level as far as reality is concerned. All of them are objective. The reality is not confined to the existence only, which is only one aspect of it. The reality also consists of many other aspects in addition to the existence. Existence implies non-existence in relation to the factors other than governing the existence. Similarly, non-existence implies existence in different relations. One without the other is unconceivable. To say, that one is real and objective and the other as unreal and merely conceptual has no reason.

Objectivity or subjectivity of cognition has nothing to do with its truth or falsehood. Cognition is false when something appears in the context other than its own. False knowledge is that which represents things in relation to which they do not exist. Falsehood consists in the misrepresentation of objective facts in experience. Illusion consists in attributing such spatial, temporal or other kinds of relations to the objects of our judgment that do not actually exist, but the objects themselves actually exist in other relations.

The truth and falsehood of the context are ascertained by the subsequent correspondence or contradiction. The criterion of falsity is not subjectivity of the appearance, but its contradictions. If a judgment is contradicted by another judgment of unquestionable truth, the former is to be rejected as untrue. The problem of falsity is thus, ultimately a question of experience. The problem of truth also is no less a matter of experience and a prior logic is absolutely incompetent to deal with it.

How do we explain the cognitions based on personal attitude? It is concerned with *jnana*, knowledge, as well as feeling. When both of them are intermixed, they result into confusion. Knowledge of every being except that of omniscience is alloyed

with passions and other karmic effects; which disfigure or color the vision like colored glasses. This disfiguring sometimes amounts to a very high degree and we call it illusion. When the degree is not so high we consider it valid cognition. The difference between the two is that of degree and not of quality. The cognition of a layman is valid to certain degree only. Nothing is absolutely valid or invalid. The difference between knowledge and the disfigurement is this, that the former is the result of the removal of karmic obscurance while the later results from the karmic rise. The first depends upon the object while latter on the subject.

A thing possesses innumerable qualities without depending on the cognizer. In the case of derivative (*vibhava*) qualities also, they are generated by a cause different from the self. But while they exist they are as real as the natural ones.

The cognizer is free to choose any of the qualities already existing for his expression. He cannot impose anything new. All the qualities and relations are not physical. The existences are physical as well as non-physical. But non-physicality does not necessarily mean subjectivity. There are many non-physical objective qualities such as knowledge, actions etc. which are neither subjective nor physical.

8 Perceptual Cognition or Empirical knowledge (*Mati Jnana*)

There are different elements of perceptual cognition. Perceptual cognition (*mati*) takes stock of a present objective datum, recollection (*smriti*) has reference to a datum perceived in the past; recognition (*samjna*) is the cognition of the identity of a past object of perception with the present; thought (*cinta*) is the cognition of a future event. All these different varieties of cognition are regarded as identical in spite of the difference of determinations, because the substantive object is the same. *Abhinibodha* is cognition competent to take stock of an object with all its temporal determinations as past, present and future. Empirical knowledge (*Mati jnana*) is a comprehensive class of cognitions which includes a large variety. Thus, for example, there are purely sensuous cognitions, purely mental cognitions and cognitions which are generated by both the senses and the mind. The sensuous cognition of animals, beginning with one-sensed and ending with five-sensed, but destitute of mind, are purely sensuous. Recollection and instinctive intuition are purely mental. The normal cognitions of beings endowed with mind are generated by the cooperation of the mind and the senses. According to Jain epistemology, all cognitions are nothing but different states of soul as stated above

The process of perceptual cognition has four steps (i) *Avagraha*-sensation (ii) *Iha*-speculation, (iii) *Avaya*-judgment, and (iv) *Dahrna*-retention. Sensation means cognition of a generic character in the wake of the intuition of the contact between the sense and the object without the manifestation of any particular characteristic of the contact. The sensation is in respect of the *vyanjana* (possible object) and the *artha* (plausible object). The *vyanjana* sensation means indeterminate cognition of the objects

such as sound and the like through the contact between the object and the sense organ. This is a judgment like 'there may be something'. There occurs in the trail of this sensation another sensation called *artha*-sensation, which cognizes the object a little more distinctly, though devoid of the concepts of class, substance and attributes. This is a judgment like 'there exists something'. Speculation consists in the experience "this must be that". The speculation constitutes the intermediate stage between indeterminate perception and determinate perceptual judgment. Speculation is an attitude of the mind which leads to the determination of the specific character of the object by laying emphasis upon the real characteristics that are perceived and the elimination of the unreal attributes that are not cognized. Perceptual judgment is the specific determination of the object 'this is that'. The persistence of the perceptual judgment is called retention.

The memory of past lives is also a kind of perceptual cognition. The memory of past lives arises in a rational being, engaged in speculation, discrimination, investigation and research, inspired by a particular occasion, on the purification of mind and emotions on account of the requisite auspicious transformations.

9 Direct Cognitions

There are three types direct cognitions described in Jain philosophy.

(i) Clairvoyance.

Clairvoyance is the cognition dependent on the self alone (soul) and takes stock of material substances as its objects. Clairvoyance is limited cognition. In the case of the denizens of heaven and hell clairvoyance is congenital, immediately caused by genesis. It does not require the assistance of sense organs but emerges in the soul directly and immediately. This happens only if the veils of obscuring karmas are held in check. In the case of denizens of heaven and hell, their very birth brings about the relevant destruction - cum - suppression of karma, which is thus regarded as the direct cause of the knowledge in question. In case of other beings i.e., humans and lower animals, it is due to the occasional destruction - cum - suppression of the relevant obscuring karmas. Clairvoyance is limited to objects having shape and form; it does not cognize formless substances like soul, space, time, etc. Clairvoyance transcends the barriers of time and space in proportion to the difference of destruction-cum-subsidence of karmic veils. The highest type of clairvoyance will cognize all objects having form irrespective of past, present and future or near or far and the lowest type can perceive very small fraction of the object and can penetrate only a small part of time and only a part of all modes. When a person has partially destroyed the influences of karma, he acquires the power of direct knowledge of objects that are too distant or minute or obscure to be observed by the ordinary senses and mind.

(ii) Telepathy (Mind-reading)

Telepathy, cognition of mental modes, is the revealer of the modes of the mental substance. Telepathy is the direct knowledge of the thoughts of others. Scholars are divided as to the fact whether telepathy should be conceived as perceiving the states and modes of mind alone as held by Jinabhadra, Hemchandra, etc. or it perceives also the external objects as held by Pujyapada Devanandi. The later view holds that as minds are conscious of objects, the objects are also perceived by telepathy. Telepathy has been recognized of two varieties. Simple Direct knowledge (*Riju-mati*) of simple mental things, viz., of what a person is thinking now, and Complex Direct knowledge (*Vipulmati*) of complex mental things, viz., of what a person is thinking now along with what he has thought in the past and will think in the future. Naturally, the later is purer and more lasting, more vivid though less wide in scope and therefore superior in the spiritual sense.

Mind-reading is different from clairvoyance on account of its difference in respect of purity, scope, and knowing subject and content. The mind-reading takes cognizance of a large number of details than the clairvoyance. The clairvoyance is possible in all four realms of existence, human beings, animals and denizens of heavens and hells. The mind-reading, on the other hand, is possible only in human beings. The object of clairvoyance consists of all the material objects possessed of color and shape, whereas that of mind-reading is limited to an infinitesimal part of the substances known by the former. A closure study will reveal that the line of demarcation between clairvoyance and telepathy is not very clear; qualitatively they appear to be the same.

(iii) Omniscience.

Omniscience directly cognizes all the substances, material and non-material, with all their modes, at all places and in all times, nothing is unknown to him. It is pure and perfect knowledge.

10 Consciousness: Is it an Emergent Property?

Consciousness, according to Jainism and most other philosophies, is a property of the soul. Consciousness, and hence intelligence, in no case can be a property of matter. The concepts, classical or quantum, of emergent property, or epiphenomenon, that consciousness emerges from matter (or brain) is fundamentally misplaced. The interpretation of brain processes in terms of consciousness must be taken as insistence on denial of the existence of soul by science and perhaps to justify the scope of science to explain all phenomena in nature including the living systems. Beck (2001) [7] states explicitly that “science cannot, by its very nature, present any answer to [...] questions related to mind”.

Sir Karl Popper (1977) [8] describes the mind and brain exists in two separate realities. The brain is a functioning material organ of the body, and the mind or consciousness is the immaterial symptom of the living entity or soul which motivates the body. It seems that the ingredients of physics, biology (both of the classical and quantum physics) and of the present science of information are not sufficient for the study of the brain / mind. There is more in nature: The phenomenological sense (experience in mind and perhaps in any organism) and the deep underlying reality may be, even, a fundamental consciousness. All these may lead us towards a renewed science.

David Chalmers [9] argues that there is no particular reason why particular macroscopic physical features in the brain or a particular quantum features e.g. the electromagnetic field in the brain, should give rise to consciousness. Jeffrey Gray (2004) [10] also thinks that tests looking for the influence of electromagnetic field on brain function have been universally negative in their result.

Michael Price [11] says that quantum effects rarely or never affect human decisions and that classical physics determines the behavior of neurons. Price's position does not necessarily imply that classical mechanics can explain consciousness, but that quantum effects including superposition and entanglement are insignificant. Bernard Baars, a neurobiologist and co-editor of consciousness and cognition wrote "No serious researcher I know believes in an electromagnetic theory of consciousness. It is not really worth talking about scientifically."

No theory of brain can explain why and how consciousness is a fundamental property of matter? Any theory that tries to manufacture consciousness from some property of matter is doomed to failure. Existence of consciousness is separate from the physical properties of matter. The main problem is the lack of an empirical test for consciousness. We cannot know whether a being is conscious or not. We cannot "measure" consciousness. There is not, up to the moment, any satisfactory explanations for the mechanism of formation of a conscious experience, typified by individuality, subjectivity; the self.

The materialistic approach stems from the thinking that every truth is empirically verifiable, According to Jainism universe consists of two kinds of substances physical and non-physical; the non-physical substances can be verified by inference only and cannot be measured empirically. It is obvious that to understand consciousness the science has first to recognize the existence of soul, which would require transcending the traditional approach of studying nature, adopting a new way of comprehending reality and discovering new laws that merge science and spirituality.

The major stumbling block in solving the brain mind problem had been how the brain-mind binds together millions of disparate neuron activities into an experience of a

perceptual whole [12]. How does the perceived wholeness of our world emerge from a system consisting of so many parts, billions of neurons. What creates feelings, free will and creativity?

Quantum systems are essentially unified, so are our thought processes. Thought processes and quantum systems are analogues in that they cannot be analyzed too much in terms of distinct elements, because the “intrinsic” nature of each element is not a property existing separately from and independently of other elements but is instead a property that arises partially from its relation with other elements. Does it mean that it is not the brain but the mind (physical) is a quantum system? The physical mind made of *mano vargana*, a quasi-physical matter, may well possess the quantum properties. This aspect needs serious attention of the researchers.

The contemporary approach does not so much attack the existence of an independent soul as render the concept less relevant [13]. The notion of soul has less explanatory power in a western world-view which prefers the empirical explanations involving observable and locatable elements of the brain. Materialists hold that the mind is the brain and the conscious mental activity is identical to neural activity. When the brain activity ceases, so do all conscious experiences and there is no immortality. However, if we are entirely physical beings, then must not all the brain activity and behavior in question be determined by the laws of nature? Although materialists may not logically rule out immortality or free will, they will likely often reply that such traditional, perhaps even outdated or pre-scientific beliefs simply ought to be rejected to the extent that they conflict with materialism.

There are 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 [14] and Frank Jackson [15]. 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. . On the whole, brain-mind identity theory does poorly in accounting for mental phenomenon of qualia and intentionality. While neuroscience has done much to illuminate the functioning of the brain, much of subjective experience remains mysterious.

Jaina distinguishes between soul and mind. The physical mind does not possess consciousness which is the exclusive property of the soul. Mind like soul is not a permanent entity, it exists only when consciousness manifests as thoughts, beliefs, desires, emotions and feelings. All these activities are influenced by karma. The state of mind is a function of rising karma. This implies that the perception of external objects made by the mind is highly karma dependent.

We can define consciousness. Consciousness is the power, and also function (of the soul), that has attributes of *jnana*, intelligence or ability to know, and *darsana*, intuition or ability to perceive, and ability to experience pain and pleasure, and bliss, unaided. Consciousness (soul), is supposed to have infinite intelligence, infinite intuition power, infinite bliss power, and infinite power to experience these attributes to the fullest extent without the assistance of any other substance. The soul is complete by self and does not depend on anything else for its functioning and manifestation. The karmas impair the manifestation of powers of the soul temporarily and the soul is capable of removing the karma by self without the grace of any other power. Every soul is independent and maintains its existence in all conditions, mundane or liberated.

Another concept analogous to consciousness is awareness. Awareness is defined as the state or ability to perceive, to feel, or to be conscious of events, objects, or sensory patterns. In this level of consciousness, sense data can be confirmed by an observer without necessarily implying understanding [16]. More broadly, it is the state or quality of being aware of something. In biological psychology, awareness is defined as a human's or an animal's perception and cognitive reaction to a condition or event.

Awareness may be focused on an internal state, such as visceral feeling, or external events by way of sensory perception. Awareness provides the raw material from which animals develops qualia, or subjective ideas about their experience.

11 Projections from Jainism

There are three stages in the perceptual cognition process (1) desire to know, (2) cognition, and (3) attitude in terms of feeling and willing. The first and the third stages are processes of mind, soul (*bhava manah*). The second stage of cognition consists of two parts (i) change in the state of the soul that affects cognition, and (ii) physical processes taking place in the body in accordance to changes in the soul. The soul and the body system are in mutual balance, a change in one causes 'equivalent' change in the other. The second part of cognition process comprises of two steps (a) processing of

The sense data to brain link is accessible to scientific observations and has been studied in detail. Operation of this link depends on the health of the body and the brain; it is broken in case of any physical disability. For example, sensory loss takes place in polio, brain damage, or coma. In all such cases the brain does not register the sensory inputs. The receipt of processed data by mind from brain depends upon attentiveness of mind; the mind receives data only when it is attentive. For example when someone is calling you, you hear him only when you are attentive; if your mind is wandering elsewhere you miss the call. In this case the ears receive the sound and the brain registers the sense signal but still you are not conscious of it. This implies that in order to be conscious of a sensory input both the brain and mind must be attentive. Understanding follows when the mind compares the sound you heard with the previously recorded sound of the same individual and then you know that X is calling you.

Mind is a powerful super computer that manipulates data at such a fast speed that we experience the event almost instantaneously. Because of its speed the mind can also present several options in quick succession and you decide that it is only X, and not Y, calling you. For this kind of processing the mind should also be in a healthy and alert state. If the mind is preoccupied or disturbed because of worries or some other mental problem the understanding, awareness, may be impaired. Note that the high speed of action is possible because of the subtle structure (quantum?) of mind; the brain does not possess this capability. The brain processes data and information primarily for the body where the communications are relatively slow.

We now compare the terms awareness and 'consciousness'. Awareness is assumed as reception of sense data without understanding. The process of awareness bypasses the mind, which is the instrument of understanding, and it is identified by the link senses data-brain-soul on the flow diagram. Awareness is comparable to the first stage of perceptual cognition, the sensation. In the above example it means that you only hear a sound and do not know that it is a call. The process of being conscious of the object involves application of mind and the path of information flow is now sense data-brain-physical mind-soul on the flow diagram. This 'conscious state of being' is comparable to the second stage of perceptual cognition, speculation. In the example in question it means that you know that the sound is a call. In the next stage of perceptual cognition, judgment, you know for sure that it is X and not Y calling you and this constitutes knowledge. There is a third kind of mental activity called thinking, not requiring assistance of sense data, and this is represented by the route physical mind-soul on the flow diagram. Is brain involved in thinking? Perhaps the brain may be involved as a processing center, and therefore it has a record, but thinking primarily is supposed to be an activity of mind.

A final remark on the meaning of the terms 'consciousness' and awareness is in order. The main property of the soul is called *cetana*. *Cetana* is not only just 'consciousness', it manifests itself in several ways: intelligence, knowledge, intuition, bliss, perception, emotions, will, attitude and behavior, awareness of pleasure and pain as stated before. Philosophers hold that consciousness is "awareness" or "experience" in the conscious state, it is supposed to be absent in unconscious or in coma state. *Cetana* being property of the soul is always present, it manifests explicitly in the conscious state and implicitly in the unconscious or coma state. Without *cetana* no life is possible.

12 Cognitions and Happiness

Desires are source of unhappiness. One of the causes of desires is incomplete knowledge. A soul having incomplete knowledge is in search of truth which is experienced when all the aspects of all objects are known. The cognitions in a soul having empirical knowledge and articulate knowledge are temporal and take place sequentially. The process of knowledge of multiple aspects of objects in such a soul spans a long period of time, usually across several births. That is, the quest for truth is an ongoing process because the soul suffers the limitations of the cognition process, senses and mind. In the absence of complete knowledge, both of the external objects as well as of the self, the desires continue to persist and permanent happiness is not achieved. Therefore the soul possessing empirical knowledge and articulate knowledge is necessarily unhappy, the happiness, if any, is relative and temporary.

The temporal process of cognition of aspects of any object is expected to take place in a random order, its occurrence must be uncertain. That what aspect of the object shall be revealed in the next cognition is not decided. The process of knowledge is very complicated and we illustrate this with the help of an example. Let an object A have five aspects a_1 to a_5 . Suppose the soul is aware of aspect a_1 at any given time. The soul does not know whether this aspect truly describes the object in its entirety. The deficiency is known only when the second aspect, any one from a_2 to a_5 , is revealed. This process continues till all the five aspects are revealed over a period of time after which the soul realizes the truth of that object. It can be seen that the journey to truth can have several paths depending on the order in which the aspects of the object are cognized and revealed.

There is another factor affecting the revelation of the aspects of the object. Normally, the cognitive process of knowing is dependent on two factors, (i) the material (*upadan*) cause pertaining to the object in question, and (ii) the auxiliary or helping (*nimitta*) cause relevant to the relationship of this object with another object. It is difficult to identify the second object and therefore the cognition of truth may proceed in a probabilistic way. To clarify the point let there be total of 26 objects A to Z each

having five aspects. The revelation of aspect a_2 of our object may depend on its relationship with any of the objects B to Z and all their aspects b_1 to b_5 up to z_1 to z_5 . This imposes two important conditions on a_2 . First, the required aspect of the objects B to Z must be revealed prior to a_2 . Second, a relationship between aspect a_1 of our object and the concerned aspect of the objects B to Z is established. Even when this is accomplished the desired output a_2 is subject to the state of the perception deluding karma of the cognizer for cognition. We now see how complicated is the process of knowing the truth for a soul having empirical knowledge and articulate knowledge, specially knowing that all objects in nature have infinite aspects.

The omniscient perceives and knows all objects simultaneously. This has two connotations. First, the temporal limitations do not apply and his experiences are instantaneous. Second, the aspects are not cognized by him in serial order, all aspects of the object concerned and of all other auxiliary objects are revealed in parallel and he at once experiences the truth. And this happens in a natural way because of direct cognition. The experience of truth means that the cause of unhappiness is absent and the omniscient continuously experiences bliss, the natural attribute of the soul.

13 References

- 1 Shastri, I.C. (1990), *Jaina Epistemology*, P.V. Research Institute,
- 2 Siddhasena Divakara, *Sanmatitarka*
- 3 Akalanka, *Rajavartika* (1952, 1957 edition)
- 4 Vidyananda, *Tattvartha-sloka-vartika* (1918 edition)
- 5 Kundakunda, *Pravacansara* (1969 edition)
- 6 Jain, S.C. (2006), *Structures and Functions of Soul in Jainism*, Bhartiya Jnanpith, New Delhi
- 7 Beck, F. (2001), *Quantum brain dynamics and consciousness*, In *The Physical Nature of Consciousness*, ed. by P. van Loocke, Amsterdam: Benjamins
- 8 Popper, K.R., and Eccles, J.C. (1977). *The Self and Its Brain*. Berlin: Springer.
- 9 Chalmers, D. (1995). "Facing up to the problem of consciousness", *Journal of Consciousness Studies* 2(3)
- 10 Gray, Jeffrey (2004), *Consciousness: Creeping up on the Hard Problem*
- 11 Price, Michael Clive at <http://www.hedweb.com/manworld.htm/free-will>
- 12 Dharmawardena, G. (1999), *A Quantum Mechanical Model of the Brain and Consciousness*, International Brain Research Organization,
- 13 "Dualism and Mind", the Internet Encyclopedia of Philosophy
- 14 Awareness - Wikipedia, the free encyclopedia
- 15 Nagel, T. (1974), What is it like to be a bat? *Philosophical Review*, 83

- 16 Jackson, F. The knowledge argument against physicalism, *The Internet Encyclopedia of Philosophy*
- 17 Kachhara, N.L. (2011), *Philosophy of Mind: A Jain Perspective*, US-China Education Review,