

Philosophy of Mind: A Jain Perspective

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Dualism is one of the views concerning the nature of mind. Arguments have been forwarded for and against dualism. Western philosophy lacks a clear distinction between soul and mind. Closely related to the concept of mind is the question of consciousness, a clear view of which has also eluded the western thinkers. Jain philosophy describes “*jiva*” (soul) as the sentient substance, which is non-physical and not sense-perceptible; consciousness and “*upayoga*” (manifestation) are the differentia of “*jiva*”. Consciousness manifests itself in many ways: intelligence, intuition, conation, bliss, perception (cognitive elements), emotions, will, attitude and behavior, awareness of pleasure and pain. Jain distinguishes between soul and mind. The mind does not possess consciousness, which is the exclusive property of soul. Mind like soul is not permanent entity, it exists only when consciousness manifests as thoughts, beliefs, desires, emotions and feelings. All these activities are influenced by karma, which is interface between soul and mind. Our existence is seen to be at three levels: soul, mind and body. Soul is the source of intelligence; mind (subtle body) is the executive and regulatory body and material body is the place of physical actions. A model of interactions between these three units is presented. The soul perceives and knows the external world through mind, so the perceptions made by soul are influenced by mind. The relationship between brain and mind is discussed. The brain is seen as the center for information storage and processing, its activity is regulated by mind, which in turn is conditioned by the soul. The conscious experience is made by the soul, not the mind. The Jain model of soul, mind and body avoids all objections raised against dualism, as interaction between soul and karma body (unconscious part of mind) is assumed to be based on parallelism, and that between mind and body is through radiations not violating the law of conservation of energy.

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Substance or Reality in Jainism (Kachhara)

Concept of a substance is basic to Jain philosophy. Every existence or reality can be conceived in terms of substance, attributes, modes and traits. A substance is capable of eternal continuous existence through infinite succession of origination and cessation. A substance is also the assortment of qualities/attributes. It experiences transformation or modification of its state. During this process of transformation, the precedent mode ceases to exist and the succeeding mode originates, but the basic nature of the substance is preserved in this change. This trinity of OCP (origination-cessation-permanence) is the basic characteristic of a substance. This rule applies to all substances and objects in nature. The attribute of permanence implies that a substance can neither be created nor destroyed, and it can only change its form. Thus, a substance is a reality or truth having permanent existence through change. All objects are, in fact, transitory permanent, i.e., they are

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transient in respect of modes and attributes and permanent in respect of their basic substance hood. No object can be purely transitory or purely permanent. This is true for all objects whether living or non-living, physical or non-physical, subtle or gross.

“Jiva” (Soul) and Consciousness (Jain, 2006)

“Jiva” (Soul) is the generic name of sentient substance¹. “Jiva” substance is non-physical and is not sense-perceptible, it does not have the properties of color, smell, taste and touch. Consciousness and “*upayoga*” (manifestation) are the differentia of the “jiva”. “*Upayoga*” and consciousness are the two sides of the same entity “jiva”. Consciousness may be interpreted both as a structure and a function of the “jiva”, but “*upayoga*” refers to the functional side only. “*Upayoga*” gives us almost the same meaning as we get by being mentally active, just as a mental activity is a fact of mental functioning and a mental capacity, a fact of mental structure, in the same way, consciousness or “*chetana*” may be taken as a fact of the “jiva’s” structure, and “*upayoga*” as a fact of the “jiva’s” function.

Consciousness is the generality of the attributes (if not of all the attributes of the “jiva”), which distinguish the “jiva” from the inanimate. “*Upayoga*” is the generality of the manifestations of such attributes. Intelligence and intuition are agreed to be the two main manifestations (*upayoga*) of consciousness.

When “jiva” interacts with the external world in mundane state the consciousness manifests itself in several ways: knowledge, perception (cognitive elements), emotions, will, attitude and behaviour, awareness of pleasure and pain. Life and consciousness are coextensive. Wherever there is life, there is consciousness and vice versa. But there are degrees of explicitness or manifestation of consciousness in different organisms. In the lowest class of organisms, it is quite latent; while in human beings, it is quite manifest. “Jiva” is entirely distinct from inanimate existence, which does not possess consciousness.

Consciousness in Western Thought (*Consciousness*)

Explaining the nature of consciousness is one of the most important and perplexing areas of western philosophy. Perhaps the most commonly used contemporary notion of a conscious mental state is captured by Nagel’s famous “what it is like” sense (1974). When you are in conscious mental state, there is something that is like for you to be in that state from the subjective or first person point of view. But how do you understand this? For instance, how is the conscious mental state related to the body? Can consciousness be explained in terms of brain activity? What makes a mental state be a conscious mental state? The problem of consciousness is arguably the most central issue in current philosophy of mind and is also importantly related to major traditional topics in metaphysics, such as immortality and free will.

Some philosophers attempt to explain consciousness directly in neurophysiological or physical terms, while others offer cognitive theories of consciousness, whereby conscious mental state are reduced to some kind of representational relation between mental states and the world. There are a number of such representational theories of consciousness, including higher order theories which hold that what makes a mental state conscious is that the subject is aware of it in some sense. The relationship between

¹ Jain philosophy propounds that the universe has not been created by any super power like God, and it has been existing since beginning less time and is eternal. The whole universe, which is supposed to be much larger than the universe known today, is comprised of six kinds of substances, real, all of which have independent eternal existence and do not convert into one another. Two major substances are: (1) “jiva”, the sentient substance; and (2) “*pudgala*”, the non-sentient or inanimate matter and energy. *Dharmastikaya* (agent for motion), *adharmastikaya* (agent for rest), *akasa* (space) and *kala* (time) are other four real substances.

consciousness and science is also central in much current theorizing on this topic: How does the brain “bind together” various sensory inputs to produce a unified subjective experience? What are the neural correlates of consciousness? What can be learned from abnormal psychology which might help to understand normal consciousness? To what extent are animal minds different from human minds? Could an appropriately programmed machine be conscious?

An intuitive way to talk about consciousness is to say that a mental state is conscious when you are conscious of it. It might seem that the term “conscious” is synonymous with “awareness”, “experience” or “attention”. However, it is not generally accepted by philosophies today. Philosophers sometimes refer to conscious states as phenomenal or qualitative states. More technically, philosophers often view such states as having qualitative properties called “qualia” (singular, quale). There is significant disagreement over the nature, and even the existence of qualia, but they are perhaps most frequently understood as the felt properties or qualities of conscious states.

Distinction is also made between consciousness and self-consciousness, which plausibly involves kinds of awareness or consciousness of one’s own mental states (instead of something out in the world). Self-consciousness arguably comes in degrees of sophistication ranging from minimal bodily self-awareness to the ability to reason and reflect on one’s own mental states, such as one’s beliefs and desires. Some philosophers even hold that consciousness entails some form of self-consciousness.

Western Philosophies of Mind (*Dualism and mind, ; Dualism (philosophy of mind),)*

The mind in western philosophy is conceived as something that thinks, perceives, knows, experiences, holds beliefs and memories, desires and interacts with the external world, and so on. To explain such phenomena, views have been presented by thinkers and philosophers who differ in their approach. Some philosophers think that mind is different from body, some are of the view that such functions are performed by brain, and there are those who hold that both mind and body have a common origin. Accordingly, there are three main views concerning the nature of mind and conscious mental states: dualism, materialism and idealism.

There are different forms of dualism which can be classified in two ways. The first is mind-body dualism which has three types.

Substance dualism. Substance dualism requires that mind and body are composed of two ontologically distinct substances. The mind is comprised of a non-physical substance, while the body is constituted of the physical substance known as matter. This type of dualism is famously defended by Descartes and called as Cartesian dualism. The mind is a thinking thing that lacks the usual attributes of physical objects: size, shape, location, solidity, motion, adherence to the law of physics, and so on. If the conscious mind is not physical, it is more plausible to believe in the possibility of life after bodily death and immortality, as well as free will;

Property dualism. Property dualism suggests that the ontology distinction lies in the difference between properties of mind and matter, and that consciousness is ontologically irreducible to neurobiological and physics. Property dualists claim that mental phenomena are non-physical properties of physical phenomena, but not properties of non-physical substance;

Predicate dualism. Predicate dualism claims the irreducibility of mental predicates to physical predicates. Predicate dualists maintain that while there is only one ontological category of substances and properties of substances (usually physical), the predicates that we use to describe mental events cannot be re-described in

terms of (or reduced to) physical predicates of natural languages.

Dualism can also be classified by the views of mental causation. On this basis, we have five different classes of dualism, interactionism, epiphenomenalism, parallelism, occasionalism and non-reductive physicalism. 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 the two clocks that are synchronized so that one chimes when hands of the other point out the new hour. In reality, mental causes only have mental effects, and physical causes only have physical effects.

Dualism is supported by strong arguments. But there are also arguments against dualism.

(1) If consciousness (the mind) can exist independently of physical reality (the brain), one must explain how physical memories are created concerning consciousness. Therefore, dualism must explain how mind affects physical reality. One of the main objections to dualistic interactionism is lack of explanation of how the material and non-material are able to interact. If some external source of energy is responsible for the interactions, then this would violate the law of conservation of energy;

(2) There are clear correlations between certain mental events and neural events. And when the brain is damaged in some manner, the properties of the person are significantly compromised. If the mind were a completely separate substance from the brain, why should the mind be affected when the brain is injured? Indeed, it is very frequently the case that one can even predict and explain the kind of mental or psychological deterioration or change that human beings will undergo when specific parts of their brains are damaged;

(3) Human beings (both phylogenetically and ontogenetically) begin their existence as entirely physical or material entities, since nothing outside of the domain of the physical is added later on in the course of development, then we must necessarily end up being fully developed material beings;

(4) The dualist is faced with the question of why anyone should find it necessary to believe in the existence of two, ontologically distinct, entities (mind and brain) when it seems possible and would make for a simple thesis to test against scientific evidence to explain the same events and properties in terms of one. It is a heuristic principle in science and philosophy and does not to assume the existence of more entities that is necessary for clear examinations and predictions;

(5) Why the possessor of mental states has a privilege access to them that no-one else can share? Hume 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 has these ideas.

We find that Western philosophy lacks a clear distinction between soul² and mind. While it is true that the term "soul" (or "spirit") is often used instead of mind, the problem in philosophy is that it is unclear just how the soul is supposed to differ from mind. The terms are often used interchangeably by many philosophers, because it is unclear to them what else the soul could be other than "the mental substance". One might wonder "even if the mind is physical, what about the soul", may be it is the soul, not the mind, which is non-physical. Jain philosophy (Kachhara, 2005) clearly distinguishes between the non-physical soul and physical mind.

Karma in Jainism

² Soul, in common terms, refers to "jiva" in mundane existence. According to Jain philosophy, this is impure state of "jiva", bound with karma. Only impure "jiva" embodies, the pure "jiva", free of karma, is the liberated soul that never embodies again.

According to Jain philosophy (Kachhara, 2005), a living being commonly has three bodies: physical (“*audarik*”) body, “*tejas*” (or Fiery) body and karma body. The physical body can be sensed but the other two bodies, “*tejas*” and karma, are invisible. The physical body is the subject of science and has been studied in great detail. The “*tejas*” body has two important functions to perform: (1) to manage the body systems; and (2) to support and provide control on the physical body. These functions are discharged with the help of “*prana*” energy and other systems. The karma body and the “*tejas*” body never depart and both of them are always in union with the soul. This union is maintained till the soul attains the state of emancipation. The karma body and “*tejas*” body together are referred to as subtle body (“*Suksma Sarira*”). The liberation of the soul is, in fact, getting freedom from the imprisonment by these two bodies. The subtle body is not visible to the eyes but it has been photographed by Kirlian photography. This special kind of photography has shown that a luminous body leaves the physical body at the time of death. This luminous thing is the subtle body.

All Indian philosophies believing in re-birth believe that the records of actions performed in the life are maintained in some form and that these records become a cause for effects in the future life. Such records are known as karma (or “*Samskara*”). The soul is immortal and is embodied due to his karma, which are the cause of cycle of rebirths. All births of a soul are not temporally independent but are linked through karma records. In fact, the soul is on a time journey consisting of several divisions, each division is known as life. The powers and abilities the soul enjoys in a particular life depend on his performance in previous births. Therefore, state of the soul in this life has not come as a surprise; it is a logical outcome of his previous performances. In other words, the soul himself is responsible for his state in this life, and there is no one else, including God, to blame for it. This type of continuity in the journey of the soul becomes possible through karma records.

The state of the soul is determined by the level of his consciousness, which in turn depends on the existing karma. The life a soul enjoys in different realms like animal, human being, infernal being or heavenly being is a function of consciousness and karma. The karma body comprising of the karma is a common feature of all organisms in the universe from a virus to highly developed organism like human beings.

The karmas are divided into two groups on the basis of their influence on the soul (Kachhara).

(1) Psychological (“*Ghati*”) Karma. These karmas affect the psyche, by which they inhibit and destroy the fundamental nature of soul. The intelligence obscuring, intuition obscuring, deluding and vitality-obstructing karmas belong to this group;

(2) Physiological (“*Aghati*”) Karma. These karmas concern the physical body and do not cause any harm to the fundamental characteristics of soul. This group includes bliss obscuring karma, morphological karma, status determining karma and age determining karma.

The psychological karmas may destroy the nature of soul fully or partially. It may be mentioned that the fundamental quality of soul is never fully obscured. If that were the case, the soul would lose its basic character and become as good as an inanimate object. Even the densest and darkest of cloud cannot completely obscure the sun, in the same way, any amount of karma cannot obscure the total abilities of intelligence and intuition of the soul.

The effects of psychological karmas on soul can be briefly summarized as follows:

(1) generate attachment and aversion qualities like anger, ego, illusion and greed;

(2) generate desires, instincts and needs like hunger, sleep, defense (fear) and mating (sex);

- (3) determine the level of intelligence, knowledge, wisdom, perception, will power and determination;
- (4) determine faith, philosophical and spiritual qualities;
- (5) determine personal and social conduct and behavior.

Morphological karmas have a wide variety of functions ranging from the types of realm of birth to the minutest details of the body. These karmas can produce all possible types of bodies of all species, all possible variations in bodies of a given species, all different features like outer appearance, deficiencies, voice, etc., autonomic and physiological functions and structural quality of the body. The bliss obscuring karma may operate at mental or body level to produce mental- or body- oriented pleasure or pain. The age determining karmas has a temporal character and may be connected with “*prana*”.

In order to appreciate the role of psychical karma, we take an example and examine the philosophical theories of perception in the light of psychology karma. Jain holds that perception is made by the soul and no intermediary is needed. No object of knowledge is required to change itself into a mental entity for its comprehension. The soul need not assimilate an object into its own constitution to have knowledge of that object. The knowledge of the object is an affection of the soul in relation with the object. The knowing and perceiving capacity totally belongs to the soul. The objects are possessed of knowability and they simply become an occasion for the generation of knowledge. The **knowing** capacity resides in the soul, but it is only actualized in the presence of the object. The capacity of the soul to know objects and the knowability of the objects are the two basic conceptions upon which the Jain theory of knowledge stands. The object and the subject are two different entities and have independent existence, neither can change into the other. Jain supports the theory of direct realism.

The perceptions of an object made by different subjects, however, may be different. These differences are due to difference in perceptual capacities of the subjects having diverse karma. We note that a non-physical soul does not directly interact with objects; the interaction is affected by karma. The perception of the object made by the subject is thus dependent on karma, which differ in subjects. In other words, the karma provides a frame of reference against which the subject perceives the object. It also means that the perception made by the subject is relative; absolute perception is not possible in the presence of karma. Only a pure soul, free of karma, can have the absolute and true perception of the object. Our perception of the world is, therefore, relative and we shift from one truth to another as our understanding changes. Jain philosophy is founded on the perceptions made by the omniscient **soul** who has destroyed all his psychical karma, and therefore, can claim to be nearest to reality.

Perception is a feature of all “*jivas*”. In higher organisms like human beings, the perception is also accompanied by thoughts. Thoughts are not intrinsic part of the soul, they are also karma-generated. Thinking is a physical phenomenon and is made possible by a special structure which develops in higher organisms where psychical karma intensity is less as compared with that in lower organisms. This structure is called mind (conscious) and is supposed to be a part of fiery body. Mind, however, should not be considered as an intermediary, this structure does not play any role in perception, **it** only supplements **the perception** by thoughts. Lower organisms perceive objects without any significant thinking.

Karma Radiations (Kachhara, 2005)

Jain philosophy gives details of the mechanism which is responsible for bonding of karma to the soul. The actions of the soul, physical, mental and verbal, and accompanying passions cause vibrations in the soul and

the vibrating soul induces similar vibrations in the karma field. The active karma field emits radiations known as “*adhyavasaya*” (vibrations of the soul in physical form), which possess the characteristic features of the active karma. The psychical “*adhyavasaya*” and physiological “*adhyavasaya*” must operate in different ways. The psychical “*adhyavasaya*” interact with the fiery body field and produce another kind of radiations called “*lesya*”. The physiological “*adhyavasaya*” are supposed to interact directly with the body cells, most probably, genes, and regulate and control the working of the genes, the biochemical activities, autonomic functions and other body related functions.

“*Adhyasaya*” are present in all living organism. The mind is developed in human beings and other five-sensed animals (vertebrates). The “*adhyasaya*” discharge the functions of mind in rest of the living organisms. “*Adhyasaya*” are the means of harvesting the intelligence of the soul. The body cells, according to some scientists, are the source of knowledge in living organism that do not have brain or mind. This only implies that “*adhyavasaya*” present in the body cells are the source of knowledge.

Our feelings and emotions are products of “*adhyasaya*”. Our thoughts are based on our feelings and emotions, and they do not have independent existence. Thoughts rise and subside with feelings. We can exercise control on our body, mind and speech, but the feeling are beyond our control. The “*bhava*” (feelings), in fact, need purification and refinement, once purified, there will be no need of control.

“*Lesya*” provide connection between the subtle body and the physical body. They work in both directions. They pick up the signals from the soul through “*adhyasaya*” and produce our feelings, and through it transmit the message to the mind and body. On the other hand, whatever is performed by mind, speech and body is communicated by “*lesya*” and “*adhyasaya*” to the karma body. Thus, the entire communication between the subtle body and the physical body is through “*lesya*” and “*adhyasaya*”.

Minds in Jain Philosophy (Kachhara)

Jain 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. As all these activities are influenced by karma, the soul creates a separate entity for their execution. This new entity known as mind is manifested with consciousness of the soul and is influenced by karma in its working. The karma is thus interfaced between the soul and mind. The state of mind is now a function of karma and it changes with karma. This means that the perception of external objects made by the mind is highly karma dependent. The existence of mind is also connected with its activities, when the activities cease, the mind also ceases to exist. The activity of thinking is prominent in five-sense beings (vertebrates) and is limited in lower organisms. The five-sense “*jiva*” are therefore, endowed with mind, and “*jiva*”, in lower organisms, discharges the limited functions of instincts, desires and feelings with the help of “*adhyavasaya*”. A question may be asked that why the soul primarily manifests externally. It is the karma that forces the soul to do so. The physiological karma makes the soul to manifest and extend in the body, the type of body from one-sense to five-sense depends on the physiological karma. The psychological karma results in the formation of mind in the five-sense “*jivas*” as noted above, when the veil of this karma has thinned down, and then the thinking activity takes place in a major way.

Jain recognizes two types of minds: (1) physical mind (“*dravya manah*”); and (2) psychical mind (“*bhava manah*”).

Physical mind. This is the physical counter part of mind and is composed of “*mano vargana*”. This part of

mind interacts with the brain and nervous system. The physical mind stores memory;

Psychical mind. This is the part of mind which thinks, imagines plans, discriminates and takes decision. The mind derives these powers from the soul, which actually is the seat of psychical mind. The psychical mind is the acquired impurity of the soul or the impure mode of the soul. A pure soul does not have mind.

The psychical mind exists in two ways, as a potential power (capacity) and as a manifestation power. The potential power is the ability of the psychical mind, for example, the level of intelligence, and the manifestation power indicates the power of activities.

The mind has two properties: singularity and individuality. It can have only one thought at a time. If minds were many, we could have many thoughts simultaneously. In contrast, the soul (devoid of psychical karma or the pure soul) has power of plurality, it can conceive many and have **full** knowledge at a time. Both the soul and mind (psychical) are spiritual substances. The physical and psychical (spiritual) parts of mind are intimately connected. The mind derives its power from the spirit and acts on a physical plane. The mind is influenced by the physical and external world and it influences the soul. Thus, mind establishes a connection between the soul and the external world. As long as mind exists, this connection exists and the soul bonds karma. In the emancipated state of the soul, the veil of psychical karma disappears, the mind ceases to exist and bondage of karma does not take place.

The mind is identified by its faculty of thinking, imagining, discriminating and memorizing. Its activities span the entire time scale: past, present and future. The mind remembers the past, thinks of present and imagines the future. All these activities are difficult to stop making mind '**still**' a difficult proposition. But when these activities are stopped, the mind ceases to exist. Mind is one but its modes are many, it can assume a mode as per our wish. So mind can present a thought in a multitude of perspectives.

We attempt to construct a simple model of mind for our further analysis of interaction between mind and body. We note that the karma body stores memories of past lives, which are accepted by cognitive scientists also to be present at the time of birth. The physical mind contains thoughts, beliefs, desires, emotions and feelings and also the conscious memories. We can, therefore, consider the karma body as unconscious mind and the physical mind as the conscious mind to make a comparison between the Jain view and the modern view. Actually the karma body performs a very wide range of functions as compared to what is normally assigned to unconscious mind, so comparison between them requires some clarification. It would be more appropriate to regard unconscious mind as consisting of two parts, the psychical unconscious, directing the conscious mind, and the physiological unconscious, directing the physiological activities and the autonomic and other voluntary body functions. **The former is part of psychical karma and the latter is part of physiological karma.** The conscious mind in higher organisms is developed as a part of fiery body, which also contains the "*prana*" body. The conscious mind and "*prana*" body are intimately connected and influence each other, and so are considered as parts of the same unit—the fiery body.

The conscious mind contains memories of this life, whether we remember them or not. The forgotten memories can usually be recalled by special efforts or when reminded by some one else, so they are not distinguished from memories we are conscious of. All the memories can be retrieved and brought to the attention of the conscious mind. The memories of past lives stored in the unconscious mind direct our drives, instincts, desires, needs and impulses, and influence the conscious mind. The memories of this life are also recorded in the unconscious mind as karma, and they also influence the drives, instincts, etc. So the events in

our life and our behavior are affected by both the past karma and the karma bond in this life. It may not always be possible to make out that whether a particular thought, action, behavior or event is the result of karma of past lives or the karma of this life. Sometimes, we are not able to assign any causes for a particular action we indulge in, for example, the animals like instincts in human beings indicate to their past animal history. If the source of cause cannot be traced in this life, it must belong to past lives. This brings us to the question of division of ego and super-ego in the conscious and unconscious mind. Freud’s proposition that ego and super-ego are partly conscious and partly unconscious is supported here, but with a difference that the unconscious part is a karma record the operation of which is based on rules different from that of the conscious part. The rise of karma involves the provisions of the doctrine of karma and factors like object, place, time, feelings and passions. The conscious part, on the other hand, is always accessible to the conscious mind. The discriminating power vests with the conscious mind, but is influenced heavily by the unconsciousness and the consciousness manifested as conscience.

Interactions between Soul, Mind and Body

Jain dualism is a special kind of dualism. Instead of two levels of existence—non-physical soul and material body, with two ontogonally distinct substances, supposed in substance or Cartesian dualism, Jain dualism consists of three levels of existence: the soul, mind and body. This three-tier structure is applicable to all animals and human beings. It is also true of heavenly and infernal beings with the difference that they have a protean body in place of material body of animals. The detailed structure varies a little in case of higher organisms and lower organisms.

Higher organisms are five-sense beings endowed with mind (vertebrates), including human beings and common animals. All such organisms have a developed brain. Figure 1 shows the proposed model of interaction system of human beings (Kachhara). There are three distinct units: the soul, mind and body. The soul has no physical connection with mind or body, and it is related to karma body by the principle of parallelism. The mind and the body are physical units and interact through electromagnetic radiations. The mind consists of karma body and fiery body. Karma body is divided in two parts: psychical karma and physiological karma, and the fiery body is comprised of the conscious mind and the “prana” body. It must be remembered that the karma body, conscious mind and “prana” body made from “karma vargana”, “mano vargana” and “tejas vargana” respectively, are electromagnetic fields and are coextensive with the material body.

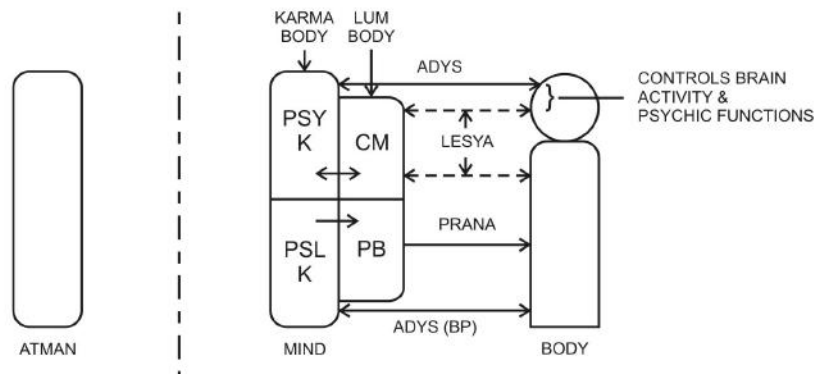


Figure 1. Interaction system in humans and higher organisms.

Notes. PSY-K: Psychological karma; PB: Prana body; PSL-K: Physiological karma; ADYS: *Adhyvasaya*; CM: Conscious mind (physical); BP: Bio photons.

The karma body continuously emits "*adhyavasaya*" radiations, which are electromagnetic. The "*adhyavasaya*" from psychological karma, representing our psychological personality, interact with the conscious mind part of the fiery body and produce "*lesya*" radiations. "*Lesya*" radiations interact with the endocrine glands which secrete hormones that mix with the blood and control the chemical activity in the cells. Some "*adhyavasaya*" from the psychological karma directly interact with the brain and produce "*citta*", which is the physical imprint of our past memories and impressions. The psychological "*adhyavasaya*" impart the features of non-righteousness, non-restraint, violence and passions to the conscious mind, and these are reflected in our thoughts and actions. The "*lesya*" radiations bearing these features represent the state of our conscious mind. "*Lesyas*" reflect our psychological personality; the color of "*lesyas*" represents our thoughts, emotions and feelings and is closely related to our qualities.

The "*adhyavasaya*" emitted by physiological karma determines our physical personality. The emissions from morphological karma and bliss-obscuring karma, most likely as bio photons (Fritz-Albert,), are supposed to directly interact with the cells in the body and control the physiological activity through the operations of the genes. The age determining karma is supposed to operate the fiery body, draw "*prana*" ("*tejas vargana*") from the cosmos and supply "*prana*" energy to various body systems and cells for their functioning³.

An average grown up human body contains about 60 trillion cells. The DNA (Deoxyribonucleic acid) in each cell has 30,000-40,000 genes and one gene has about 3,000 bases. The human genome thus has about 3 billion bases. This gives about 180×10^{21} bases in the human body. The soul is also supposed to contain innumerable parts mathematically (otherwise, it is an indivisible unit). Each part of soul contains total and identical karma. The value of the innumerable is supposed to be more than 10^{140} according to Acharya Kanaknandhi. We see that the number of soul divisions out heavily the number of genes and the number of bases. Let there be 10^n soul divisions per base of the gene. As all divisions of the soul are identical, we may think of one-to-one correspondence between genes and karma divisions. So the karma and genes are locally related, each gene is interacting with karma individually. The bio photons emitted by karma field control and regulate the activity of the gene on an individual basis. The activities in different cells are also related and connected. As a result of coherence of karma field, fast communication takes place at all levels within cells and between cells, and a complete and perfect coordination is established in the activities of all cells, so that the body behaves as a single unit performing goal-oriented functions. The DNA in every cell is identical but each cell performs differently and produces a variety of proteins in different parts of the body. This kind of selective function of DNA is possible due to karma. There is laboratory evidence that DNA is influenced and reprogrammed by radio and light frequencies (Grazyna & Franz,). The karma radiations in each gene are

³ Jain philosophy considers "*prana*" as an essential ingredient of life. We know that when the soul leaves the body, along with the "*prana*" body, on death, the body decomposes. This implies that "*prana*" must act as a cementing force for construction of the body. Scientists have not been able to synthesize structures larger than nucleotides in the laboratory, which means that for large structures like DNA, and finally the cell, "*prana*" and intelligence is essential. "*Prana*" helps in producing the cell, assembling tissues and organs and in functioning of various parts and systems of the body. The "*prana*" body supplies the "*prana*" energy required for the physical body. The other important function performed by the "*prana*" body is to revitalize the physical body by distributing "*prana*" energy through the "*nadi*" system to all parts of the body, to improve the immune system and to help prevent disorders in the body functions. "*Pranayama*" is an important technique to enhance supply of "*prana*" to the body.

identical but they work selectively, they regulate the non-protein making part of genes through a process of selection and determine different function of cells suitable to their locations in the body. In this manner, the performance of the body at the cell level is regulated by the soul through karma.

Guenter Albrecht-Buehler, a German biologist, claims that 30 years of his research on cell has shown that mammalian cells possess intelligence (Albrecht-Buehler,). If cells were intelligent, molecules and their genes would be the “collaborators” or even “slaves”, but not the “masters” of the life functions of cells. If cells were intelligent, we would have to rethink all the cause-and-effect chains from genes to molecules to cell functions that we believe today to be true.

The intelligence, according to Jain philosophy, means presence of soul “*pradesa*” in the cell. The physiological karma, particularly the morphological and feeling-producing karma, exercise control through radiations on the working of the genes and the cell functions. The control is local through karma of that cell, but at the same time, it is also global as the same soul, and identical karma are present in all cells. There is a central authority (the soul) that monitors, coordinates and controls the activities of individual cells as well as of a group of cells like tissue, organ or part, so that each cell, group of cells and organs perform according to plan contained in the karma body. It is clear that the intelligence of soul constructs the body according to the blue print contained in the karma body and the cell received from parents.

The soul perceives and knows the external world through karma body or mind, and it does not make direct contact with objects. The perceptions made by the soul are influenced by conscious mind. The conscious mind is a complex system working on various inputs, three main types generating the mental states or thoughts are: (1) active karma, only the rising karma are active and the rest are dormant; (2) stimuli coming from physical senses through the brain; and (3) higher mental states generated by the conscious mind itself from the previous mental states. The last component is a specialty of humans who have a developed power of thinking and reasoning. One or more types of input components may act at a time to determine the total mental state. The way the three components and their combinations act decide the role of conscious mind in determining the conduct and behavior of the being, the study of which is the subject of psychology.

The brain is the center for information storage and processing (Kachhara). The information in the brain is received either from the senses or from the mind. All information in the conscious mind is presumably copied on the brain and is available for processing. The information from the unconscious mind is also copied, it is assumed that whatever information is to be processed must be available in the brain, because the mind can only store and not process the information. The information processing in the brain is done at the instance of mind, which communicates with the brain through “*lesya*” or “*adhyvasaya*”. The processed information has two end-uses, one for the functions of the material body and the other for the mind. We thus have four broad cases of information flow from the brain:

(1) input information received from senses and physiological activities and output information used for material body;

(2) input information received from senses and physiological activities and output information sent to mind;

(3) input information received from mind and output information used for material body;

(4) input information received from mind and the output information also used by mind.

The first case is the major application of the brain and involves motor actions, autonomic functions and

other functions of the body. In the second case, processing of sensual and physiological inputs generates thoughts, emotions, desires and feelings in the conscious mind and also results in bondage of karma in the unconscious mind. In the third case, the thoughts and emotions in the conscious mind are processed by the brain, and signals are sent to various parts of the body for action, no external input is required for this. In the fourth case, the mind generates information by itself, thoughts from conscious mind are processed in the brain and the output appears as new thoughts or mental states in the conscious mind; it can also result in bonding of karma in the unconscious mind. More than one type of processing can take place at a time. For example, the inputs from senses may cause activity in the body as well as generate new mental states in the conscious mind, or in a dream situation, the inputs from the conscious mind may cause body activity in the form of rapid eye movement and generate new mental states in the form of feelings and emotions.

It is seen that brain is an important component in the working of the life system; neither mind nor body can function without the brain. In case of head trauma or brain damage, a part or whole of the information in the brain is lost and the information processing activity is hampered, rendering the system incapable of proper functioning. But in this case, full information is still available in the mind, and if the brain is restored to its initial or healthy state, the information from conscious mind is again transferred to the brain and the brain resumes its normal functioning. However, it must be emphasized that the brain activity is not independent as is believed by materialists; it is regulated by mind, which in turn is conditioned by the soul by the principle of parallelism. The soul is the source of consciousness and intelligence, which acts through mind on the brain and body. A definite correlation between mental activity and neural activity is a requirement of the system, and this should not be construed to mean that brain possesses consciousness or intelligence.

Rupert Sheldrake is one of the few contemporary scientists who maintain that it is possible for memory to exist without the support of the brain (Rupert,). David Bohm concurs with him on this possibility. Sheldrake argues that just because we do not know of any memory without the brain, it does not follow that there cannot be any memory outside the brain. As all we know, the brain can act as a conduit through which memory (or consciousness) manifests itself, much like the antenna and the wiring in a radio act as conduits for the electromagnetic waves to be manifested as sound. Thus, just as the radio, signal can exist (in the form of electromagnetic waves) outside the radio with its antennas and wiring, memory can exist outside the brain.

All conventional theories assume that memories are somehow coded and located in a memory store in the brain. When they are needed, they are recovered by a retrieval system. However, for a retrieval system to retrieve anything, it has to know what it wants to retrieve, it thus must be able to recognize the memory that it is trying to retrieve. In order to recognize it, the retrieval system must have some kind of memory. Therefore, the retrieval system must have a sub-retrieval system to retrieve its memories from its store. This leads to an infinite regress. Sheldrake, therefore, suggested that brain is more like a tuning system. These arguments support the concept proposed above that memory exists outside the brain in the conscious (and also unconscious) mind. The brain consisting of hardware is the processing center.

The conscious experience identified by “what it is like” sense is made by the soul, 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 soul makes conscious experiences, the mind itself is not conscious. The “*chetana*” manifests in mind and body and so the mind and the body are able to function in the given manner. No function of mind and body is possible without

“chetana”; 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 *“chetana”*. 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 *“chetana”* 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 the mind, and the life is explained.

The main property of the soul that distinguishes it from matter is *“chetana”*, which is not just “consciousness” as is generally believed by 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. *“Chetana”*, being property of the soul, is always present and manifests explicitly in the conscious state and implicitly in the unconscious or coma state. Without *“chetana”*, no life is possible. The manifestation of *“chetana”* takes place in various ways; the principal way is intelligence, intuition, bliss 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. A state, known as omniscience, can be attained when 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 intelligence, intuition, bliss and will power.

We now consider the question “what is intelligence”, intelligence is the property of the soul and it does not belong to physical object like mind or brain. The soul possesses infinite intelligence, but this is limited by “intelligence obscuring karma”. It means that the “intelligence obscuring karma” do not allow the intelligence of the soul to manifest itself fully in the mind and the brain. Reduction in intelligence obscuring karma, by means of methods cited above, results in increased explicit intelligence of an individual. The knowledge in the presence of intelligence obscuring karma is relative (to karma), and an individual is not able to perceive the object in all its reality. This is the reason that the principles, theories and explanations advanced by imperfect individuals, possessing intelligence obscuring karma, are vulnerable to change. A perfect person, an omniscient, free of intelligence 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 refers to the information or empirical knowledge of the object acquired by the soul on account of its intelligence 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. Knowledge is the outcome of manifestation of intelligence in the external world. The information is stored in the brain and is operated upon by the mind, both conscious and unconscious. The difference in intelligence obscuring karma is the reason for difference in intelligence by birth in individuals.

Objections to Dualism Revisited

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 take place according to the modified DNA. According to Jain philosophy, life in the form of beings like nano organisms (*“nigod”*) is always present even during the period of early earth. This organism must have

provided the cell from which further development of life takes 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 activities in the brain are synchronized with the mental activity of 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 which is the ultimate source of all activities, 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. However, an omniscient or a person having minimal psychical karma can apprehend mind and soul, he has the direct first-person experience of the reality in its absolute form.

Consciousness and intelligence are properties of the soul and not of the mind or the brain. Consciousness exists in all organisms at all times and in all conditions whether awake or in coma. The brain is the center for storage and processing of information, it processes information for the requirements of the body as well as the mind. The mental events and brain events are correlated to ensure a perfect harmony in the system, and that all components of the system work as faithful units to uphold the sovereign existence of the mundane soul.

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