

## MIND IN NYĀYA VAIŚEṢIKA WITH A COMPARISON TO ARTIFICIAL INTELLIGENCE (AI)

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### ABSTRACT

Mind has been among the most intriguing and complex cognitive faculties to know. We see a long tradition of inquiries in the field of religion, philosophy, psychology, linguistics and also in cognitive science to understand the nature, characteristics and functions of mind.

In Indian knowledge tradition, much debate has been made on mind. Here, mind is addressed as 'manas', and is kept under the category of internal sense organ. It has been considered a vital organ to acquire knowledge.

The concept of mind is understood in many different ways by many different cultural and religious traditions. Some see mind as a property exclusive to humans whereas others ascribe properties of mind to non-living entities, to animals and to deities.

In this paper, an effort has been made to know what the mind is and what its distinguishing properties are. As the study of mind includes so many fields, here mind will be discussed in the context of Nyāya and Vaiśeṣika systems with a little comparison to Artificial Intelligence.

**Keywords:** *Manas, Indriya, antarendriya, ātman, Upalabधि, Parimāṇa, Anu, Vibhu, Antaḥkaraṇa, ālātacakra.*

### BACKGROUND

The study of mind, its nature and working was undertaken in our country very seriously. In Indian knowledge tradition, from the Vedās to medieval Sanskrit literary works, there is a wide description of the manas tattva. In the Vedas, the wellness of mind has been prayed by *Vedic* seers in the śivasamkalpa sūkta. In Upanishads, mind is said to be the main cause of bondage and liberation.

*Mana eva manuṣyāṇām kāraṇabandhamokṣayoh.*

*Bandhāya viṣyāsaktam muktyai nirviṣayam manaḥ.<sup>1</sup>*

<sup>1</sup> Brahmabindu Upaniṣad.2. p.687.

In the Gīta that is an integral part of the epic Mahābhārata, the swiftest velocity of mind is described:

*Cancelam hi manaḥ Kṛṣṇa pramāthi balavaddṛdham.  
Tasyāham nigraham manye vāyoriva suduṣkaram.*<sup>2</sup>

At the other place, the importance and potentiality of mind is narrated:

*cakṣuḥ paśyati rūpāni manasā tu na cakṣuṣa.  
manasi vyākule cakṣuḥ paśyannapi na paśyati  
tathendriyāni sarvāni paśyantīyabhicakṣate.*<sup>3</sup>

An anonymous Sanskrit text gives more comprehensive ways of proof of existence of mind:

*Ākarairingitairgatyā ceṣṭaya bhāṣitena ca.  
Netravaktavikāraiśca gṛhyate antarangam manaḥ.*

Thus, it is quite apparent here that that mind has been considered as a very mysterious organ since beginning. Its indispensable role in life can be known by the fact that the study of mind has not only been the subject of philosophy, but also of psychology, linguistics, cognitive science and medical science.

In ancient India in the field of medical science, Ayurveda has focused on the deep aspect of mind. As mind plays a vital role to lead a happy, healthy and happy life. So in ancient India, Ayurveda also had studied mind thoroughly.

In Indian philosophy, the element mind or *manas* is considered as unconscious instrument of the *ātman*.

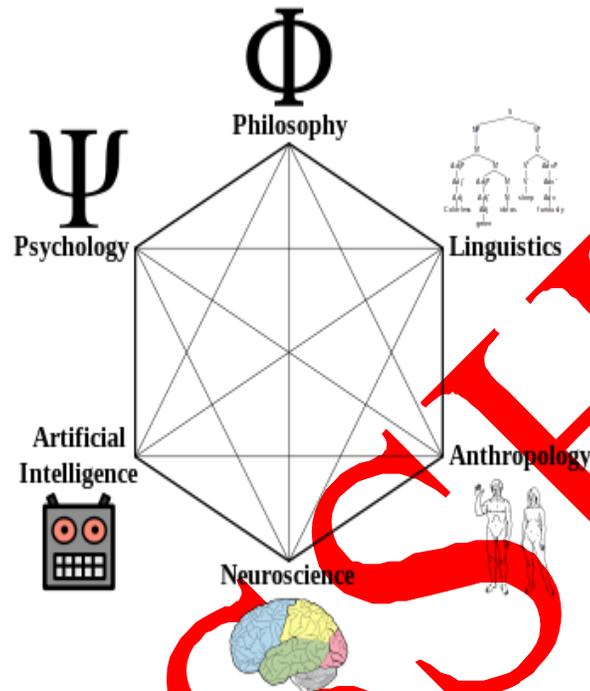
Indian philosophy does not regard mind (conscious and unconscious) as the highest psychic function as is conceived by western philosophers. According to Indian approach, *Atmanis* the highest psychic function and the mind is mere an unconscious instrument of the *ātman*.

A picture of the possible areas for the study of mind is given below<sup>4</sup>:

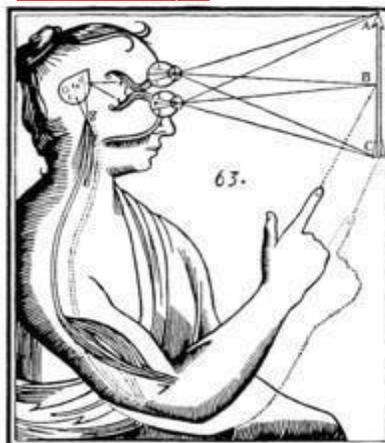
<sup>2</sup> Śrīmadbhagavadgītā. 6/34.

<sup>3</sup> Mahābhārata, śāntiparva, 12/299/16.

<sup>4</sup> All the pictures in this paper are taken from internet.



In western philosophy, all the substances bifurcated into two parts, mind and matter. Though, by the ‘mind’ word they want to convey sentient being. Rene Descartes tried to present a vivid picture of the function of the mind:



(Descartes' mind and body)

With a comparison to Western thought, in Indian philosophical thought, mind has not been thought the ultimate element. It is kept between subtlest and proto elements. Mind is a

mediator. We can say it a channel through which the permanent element self (*ātman*) receives the knowledge of external world. This is the main difference of mind in Indian and western thought.

In Indian philosophy, mind has never been an object of direct perception and its existence and work always has been inferred.

A study of mind (*manas*) in the proposed context is as follows:

### Mind in Nyāya Philosophy:

According to Nyāya system, mind (*manas*) is the sixth sense and is an internal organ, which perceives such qualities of soul as desire, hatred, pleasure and pain etc. It is eternal and not *ahaṅkārika* (not born out of the ego factor), non *Bhautika* (not derived from *bhutas*), atomic in size and located in the heart; co existing with the soul.

According to this system, mind is a subtle element. It is not the subject of direct perception, so it can be only inferred. Nyāya enumerates the following functions of mind:

1. Remembrance;
2. Inference;
3. Verbal cognition,
4. Doubt,
5. Intuition,
6. Dream,
7. Speculation,
8. Internal perceptions i.e. pain, pleasure, desire etc.

Sense organs cannot perceive the objects in the absence of mind, as its only proximity ensures perception. Internal perceptions like pain, pleasure, desire, aversion etc. cannot be perceived by sense faculties and indicate towards the existence of a separate faculty which is termed 'mind', as Gautama says: *Yugapajjñānānutpattiḥ manaso liṅgam*.<sup>5</sup> In the commentary of the same aphorism Vātsyāyana says: *Yugapacca khalu ghrāṇādinām gandhādinam ca sannikarṣesu satsu yugapat jñānāni notpadyante tenānumīyate asti tattadindriyasamyogi sahakāi nimittāntaramavyāpi*.<sup>6</sup>

<sup>5</sup> Nyāyadarśana, 1/1/6.

<sup>6</sup> Vātsyāyana bhāṣya, 1/1/16.

States or functions like sleep, dream, memory, speculation, and inference are beyond the preview of the sense organs, so a separate organ has been identified to attend to these functions and this organ is mind:

*Annindriyanimittah smṛtyādayah karanāntaranimittah bhavitumarhanti.*<sup>7</sup>

According to Gautama, mind is atomic and unitary. *Jñānāyaugpadyadekam manah*<sup>8</sup>.

It cannot be all pervasive or multiple in view of non-appearance of simultaneous cognition. The fact that we have only one act of cognition at one point of time in spite of having five organs of sense suggests that the true organ of knowledge is unitary. If mind had been all pervading (*vibhu*). It could have simultaneous contact with all the sense and perception continuously through all these objects.

*Na yugapadanekakriyopalabdheh.*<sup>9</sup>

The apparent simultaneous perception is only an illusion and in reality is only successive. Just as the three wings of a fan appears to move at one instance in view of the speed with which the fan rotates, the wings in reality move one behind the other.

*Ālācakra darśanavattadupalabdhirāśusanarāt.*<sup>10</sup>

The apparent simultaneous perception of taste, smell and vision during eating of pastry like *casuli* (*dirghacaskulinyāya*) is a good example. It is the velocity of the mind which causes the illusion and velocity is beyond measurement. Mind is an organ of attention and attends to one faculty at a time.

It is noteworthy that Nyāya has admitted the concept of *Indriyas* in the form of five organs of cognition and does not include the five motor organs in the category of sense organs. It is the reason that there is no direct reference in the Nyāyasutrās to accept mind as *Indriya*. But Vātsyāyana argues that it cannot be stated that mind is not an *indriya* just because it is not counted among *Indriyas*. To him, mind is an *indriya*, but it is separate from five senses, because of its cognition in relation to inner states of thoughts, feeling and desire. However the soul is the true cognizer and mind mediates between the soul and the senses as an instrument of the cognition.

<sup>7</sup> Ibid.

<sup>8</sup> Nyāyadarśana, 3/2/60.

<sup>9</sup> Ibid.3/2/61.

<sup>10</sup> Ibid.3/2/62.

As it is mentioned above that mind is eternal, not *bhautika* and not derived from *ahamkāra* and is located in the heart in close proximity with the soul which cognizes through the mind.

As Keśava Mīśra says in Tarka-bhāṣā:

*Sukhādyupalabdhisādhanamindriyam manaḥ. Tacca aṅuparimānam hṛdayāntaravartī.*<sup>11</sup>

Same thing is mentioned by Ananabhaṭṭa, as he says in Tarkasaṃgraha:

*Sukhādyupalabdhisādhanamindriyam manaḥ. Tacca pratyātmaniyatatvādanantam paramānurupam nityam ca.*<sup>12</sup>

### Mind in Vaiśeṣika Philosophy:

In the seven categories of *Vaiśeṣika* system, mind comes in the first category, named 'dravya' (substance) and counted as the last among the nine *dravyās*.

*Prthivyāpastejo vāyurākāśam kālo digātmā mana itī dravyāṇi.*<sup>13</sup>

It is considered dravya in view of its being a substratum of qualities, number, magnitude, separation, combination, division, predominance, subordination and transformation. These are the attributes of the mind.

*Tasya guṇāḥ saṃkhyāparimānaprthaktvasamyogavibhāgaparatvāparatvasaṃskārāḥ.*<sup>14</sup>

*Vaiśeṣika School* also believes in the existence of mind and agrees to a great extent to the Nyāya theory of non-perception of mind. Mind is non *bhautika* while other Indriyas (senses) are indeed *bhautika*. It is corporeal (*Mūrta*), eternal (*nitya*) and imperceptible (*sukṣma*) like soul but not all pervasive (*avibhu*).

Like Nyāya, *Vaiśeṣika School* admits the atomicity and unicity of mind.

*Prayatnāyugpadyat jñānāyugapadyat caikam.*<sup>15</sup>

Mind is atomic but this atom is not physical like the atoms of material substances. It is unique in the sense that it is innumerable in number but still only one, such an atom inhabits one living body. It's beyond the perceptive capability of sense organs. As each sense organ can perceive only one class of objects, *Vaiśeṣika* holds that there should be another sense organ

<sup>11</sup> Tarkabhaṣa, prameyanirūpaṇam, indriyāṇi.p.168

<sup>12</sup> Tarkasaṃgraha,p.52.

<sup>13</sup> V.S. 1/1/5.

<sup>14</sup> Pra. Bhā., manaparakaraṇa.p.57.

<sup>15</sup> V.S. 3/2/3.

different from the five that can perceive all classes of objects of the external world. Mind's existence is inferred from the fact of non-sensory internal perceptions as well.

Mind in Vaiśeṣika is used in the widest sense as it is applied to all mental power means sensation, perception, understanding, feeling, willing and higher intellectual functions. It infers to the whole of inner organ of perception (*antaḥkaraṇa*) the faculty or instrument through which the thoughts enter or by which objects reach the soul. It is different from the soul but closely linked to it, different from the body, but resides in it; it is a sense organ' still different from other senses.

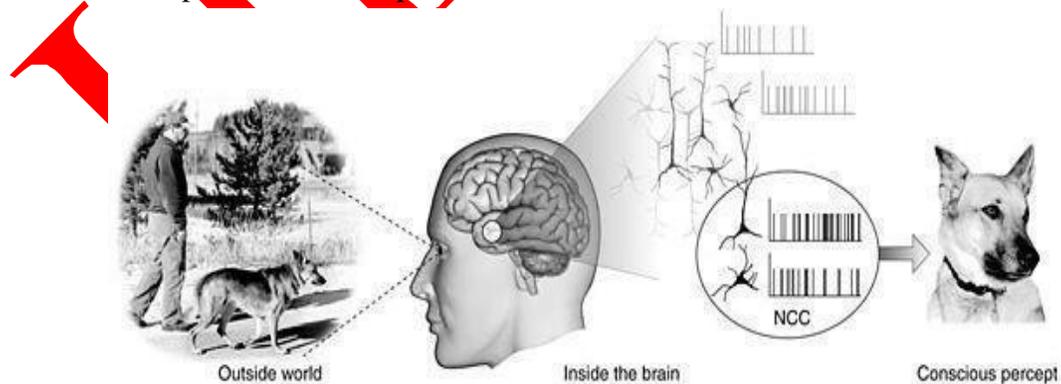
Mind associates with the soul at the time of death bound by the *Adrṣṭa* (fate). The quickness of movement of mind enables it to carry impressions quickly from one organ to another, one after the other.

The going out of soul and mind from the body is called *Apasarpaṇa* and entrance of the soul and mind into other body is called *Upasarpaṇa*.

*Apasarpaṇanupasarpaṇamaśītapītasamyogāḥ kāryāntarasamyogāśca ityadrṣṭakāritāni*.<sup>16</sup>

Mind does not follow a liberated soul. Mind carries the impressions from one life to another and these impressions can be relieved if the state of mental equanimity is achieved. According to *Vaiśeṣika* School, the living being consists of a soul, a mind, sense organs, and a body. The minds and souls are eternal in existence and infinite in number and souls are ubiquitous, pluralistic but minds are atomic. Each soul in its mundane existence has an associated mind, which acts as its instrument of knowledge, feeling and action. The mind is a linking factor (a channel) between the soul and the organs of the senses.

Here, a vivid picture has been presented as an effort to show the functions of mind:



<sup>16</sup> V.S. 5/2/17.

## ARTIFICIAL INTELLIGENCE

*“Artificial Intelligence is the study of mental faculties through the use of computational models”.* This definition of AI is given by Eugene Charniac and Drew McDermott. The definition shows that artificial intelligence is the area where the study of mind or mental faculties is possible and being done.

AI can be referred to intelligence as exhibited by an artificial (man-made, non-natural, manufactured) entity. AI is studied in overlapping fields of computer science, psychology, neuroscience and engineering, dealing with intelligent behavior, learning and adaptation and usually developed using customized machines or computers.

According to an internet source, research in AI is concerned with producing machines to automate tasks requiring intelligent behavior. Examples include control, planning and scheduling, the ability to answer diagnostic and consumer questions, handwriting, natural language, speech and facial recognition. As such, the study of AI has also become an engineering discipline, focused on providing solutions to real life problems, knowledge mining, software applications, strategy games like computer chess and other video games. One of the biggest difficulties with AI is that of comprehension. Many devices have been created that can do amazing things, but critics of AI claim that no actual comprehension by the AI machine has taken place.

*The debate about the nature of the mind is relevant to the development of artificial intelligence.* If the mind is indeed a thing separate from or higher than the functioning of the brain, then hypothetically it would be much more difficult to recreate within a machine, if it were possible at all. If, on the other hand, the mind is no more than the aggregated functions of the brain, then it will be possible to create a machine with a recognizable mind, by simple virtue of the fact that such a machine already exists in the form of the human brain.

## THE STRUCTURE OF MIND

Mind or *manas* is said non corporeal in Nyāya and Vaiśeṣika systems. The other schools of philosophy accept this thought in one accord. Mind in non- corporeal that's why it and its attributes are inferable due to its function. This is the reason that we don't find the debate over the structure of mind in Indian philosophy.

In Tantra Vidyā, we find some clue when they talk about the tricks to have control over mind but that also is not very clear. For example, in Kundalini Jāgaraṇa Sādhanā, that causes

infinite power in devotee, it is mentioned there that there are six cycles or chakra in human's spinal cord. These are:

1. Mūlādhāra Cakra (Sacro- Coccygeal Plexus),
2. Svadhishṭhāna Cakra (Sacral Plexus),
3. Maṇipūr Cakra (Epigastric Plexus)
4. Anāhata Cakra (Cardiac Plexus),
5. Viśuddha Cakra (Carotid Plexus),
6. Ajña Cakra (Medula Plexus).

When all these chakras are meditated upon, the devotee gets unflagging control over his mind. Once mind is controlled, unlimited power comes to the penancer. Thus, here, also we get the insufficient description over the structure of mind.

In conclusion, we can say that in Indian knowledge tradition, mind (manas) is considered above the physical existence. It cannot be brain. It is more than that. That's why the lack of the description of the structure of mind or manas tatva is found in Indian philosophy also.

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