

CHAPTER - 2

THE CONCEPT OF MIND IN DIFFERENT SYSTEMS OF INDIAN PHILOSOPHY

For a longer period of time we concern ourselves about the nature of mind. But we cannot understand its nature completely. In Western philosophy there are various points of view about the relation between mind and body. As a result, many problems have been raised there. The basic difficulty arises because of the fact that all these entire thinkers differentiate mind from body on the one hand and equate mind with the self on the other hand¹. The problem of will cannot be solved if mind is pure body. Again the problem of physical perception remains unsolved if mind is pure self.

To avoid such problem Indian philosophers recognize mind as something distinct from the self, though intelligence is a quality of the soul through association with mind.

The concept of mind is found since the Vedic time. In the *Vājasaneyā Saṁhitā*, mind is described as a psychical entity. Again here mind is characterized as something “Which goes out afar”². It is not a gross physical sense - organ nor can it be the soul or self. In their view mental activities have three fold divisions, viz. intelligence, feeling, and resolution.

In the *Aitareya Āraṇyaka*, it is explained that man has various psychical qualities, such as *samjñā* (awareness), *ajñānam* (comprehension), *vijñānam* (understanding) *prajñānam* (knowledge), *medhā* (retentiveness), *dr̥ṣṭiḥ* (insight), *dhṛtiḥ* (resolution), *matiḥ* (opinion),

smṛtiḥ (memory), *manīṣā* (reflection), *jutiḥ* (impulse), *samikalpaḥ* (will), *kratuḥ* (Purpose), *asuḥ* (life), *kāmaḥ* (desire), *vaśaḥ* (control). Thus man has the ability to anticipate the future and remember the past³.

The main thesis of the *Upaniṣad* is that mind is a subtle matter. So it is very difficult to look into the truth through the mind. In knowledge mind plays a secondary role. And therefore, in *Upaniṣad* the inner self, the knower, is more important than the mind. For whatever was secondary was not attended with the same way. In this respect it is important to say that, in the *Kena Upaniṣad* we find the question rose, “By whom impelled soars the mind projected?”, and we get the answer, “That which is the hearing of the ear, the thought of the mind.... There the eye goes not, nor the mind. We know not, we understand not, how one would teach it⁴.” But here interesting points have been found regarding *manas*, because mind binds the self to the world. The *Upaniṣad* **says:**

The mind, in truth, is for mankind

The means of bondage and release

For bondage, if to objects bound;

From objects free – that’s called release⁵.

The *Upaniṣad*’s view in the respect of (cosmology) creation is that *manas* is a created part. It is not the spiritual element of the human body. It is material like other senses. But the materiality of mind is of different types, since it is capable of reflecting the self. Mind is reflected by the pure intelligence of *Ātman*, and thus mind has intelligence.

In the *Chāndogya* - mind is made up of the finest particles of food or matter⁶. So there can be no difficulty to accept mind as matter. And therefore, mind, being material is described as that which governs the sense - organs. Thus any perceptual knowledge is possible when mind is in conjunction with the sense-organ. Again in the *Chāndogya*, we find that mind is something superior to sense-organs, since mind perceives not only the objects all other senses but it also perceives supersensible objects.

In the *Bṛhadāraṇyaka* we have the following verse:

People say my mind was elsewhere, I did not see.

My mind was elsewhere, I did not hear. It is with the mind,

Truly that one sees. It is with the mind that one hears.....⁷

Here a doubt is raised about the existence of mind. The reason for this doubt is due to the diversion of the mind from that sense – organs to other things. Hence apart from mind's existence it is also the most important requisite for knowledge.

But the *Upaniṣads* maintain that the individual self is the highest thing, which is the foundation of all knowledge. The self is often called either *prāṇa* (breath) or *prajñā* (intelligence). The self is the cause of all bodily and mental functions. Because all functions of the body and mind may cease without *prāṇa* or *Ātman*. So *Ātman* is the cause of all bodily and mental functions. Mind is the internal sense-organ directed by the *Ātman* and itself directing the other sense-organs. In this respect there is a comparison drawn between the chariot and man in the *Kaṭha Upaniṣad*⁸. The Lord of the chariot, the enjoyer of the fruits of activity is the *Ātman*. But for the *Ātman* the body has no meaning.

This body is drawn into various channels of activity by the senses which are comparable to the horses. But the chariot driver, who is *buddhi* or intellect, holds the reins which is *manas* and thus controls the horses. Here the word *manas* is used to mean only the characteristics of volition and doubt and *buddhi* is used to mean intelligence.

Here, two things have to be cleared. *Manas* guides the senses. Secondly, mind is capable of determining, valuing, attending, doubting etc. we can infer the existence of mind through its action such as will, desire etc. From very early times Indian thinkers have realized that *manas* is only an instrument of knowledge for the self. The *Upaniṣads* maintain that the heart and the mind are fundamentally one. Without the heart there is no life, and similarly without mind there is no knowledge.

It is true that at a time man is capable of attending more things than one. But the Naiyāyikas and vaiśeṣikas object to this and say that the feeling of simultaneity is due to the rapidity of transition of the internal sensory. The *Nyāya-sūtra* says: “The non-simultaneity of cognition is the indicative of mind”⁹. Vātsyāyana in his *Bhāṣya* says that here non-simultaneity means the non-simultaneity of the cognitions of several things through several sense-organs¹⁰.

The next *sūtra*, raises the objection that this does not happen in practice and that we do experience simultaneity of cognitions. The *Bhāṣya* cites this with an example, i.e. if a pupil perceives his teacher going in the forest, he has the following notions:

‘This teacher reads-walks-holds the water pot-looks at the path-hears the sounds proceeding from the forest-becomes frightened-keeps on the lookout for signs of serpents or tigers – remembers the place of destination’.

In support of the simultaneity of cognitive experience it seems to be a very strong argument. But the next *Sūtra* gives the counter argument. “This perception is like the perception of fire-circle and is due to the rapidity of motion.” The illusory experience of simultaneity is caused by the rapidity of succession. Hence *manas* is essential for perceptual knowledge. It is also proved by this that there must be one *manas* only for each body, for otherwise, simultaneity of cognitions would be possible.

There are three reasons for the existence of *manas* is given in the *Prāśastapāda-Bhāṣya* on the *Vaiśeṣika-sūtras*. They agree with the Naiyāyika and mention no simultaneity of cognitive knowledge as first reason. Secondly, there arise reminiscences or remembered experiences, where as the organ through which the original impression entered, is inactive (*Jñāna-lakṣaṇa-pratyāsatti*). For example, perception of the colour of an object also brings about the perception of its smell. The perception through the eye cannot sure rise to perception by the organ of smell, “because we find it appearing in the deaf and the blind also, in whose case there could be no operation of the organs of hearing or of vision.”¹¹ So if there is a correlation between two perceptions, it must be a constant correlation. Hence the *Bhāṣyakāra* maintains that *manas* is necessary for memory. In this respect a question has been raised by both Nyāya and Vaiśeṣika whether the mind is one or many for one person¹².

And the same answer as was given that there is only one mind for one person. “If there were several minds it would be possible for several sense - organs to be in contact with several minds simultaneously; whereby there should be several cognitions appearing (through these contacts) at one and the same time;.... but this never happens... there is a single mind (in one body)¹³.” The *Vaiśeṣika-sūtras* also say that not only non-

simultaneity of cognitions, but also volition is indicative to the fact that mind is one for one body. The efforts of man appear only one after the other. Western psychology also has proved with the help of the form-board and manipulation tests carried out in the investigation of the process of learning that attention is always singly present and that attending to two or more things at the same time is not usual¹⁴. The so-called manifold attention of the mind from one to another is an illusion. In this respect, the *Praśastapāda-Bhāṣya* poses a very interesting question; viz., how would we explain the simultaneous actions of moving and supporting one's own body? The answer is that "the moving and supporting of one's body also are accomplished by a *single* effort"¹⁵. From all these arguments both the Naiyāyikas and Vaiśeṣikas declare that *manas* is atomic in nature¹⁶.

Again *manas* is also a substance. Substance is that in which qualities in here. *Manas* has qualities and hence it, as the internal organ which is not all pervading, comes into contact with the material cause of cognition. Hence, being the bearer of qualities, *manas* is a substance. Again *manas* is material, as it possesses priority, posteriority and speed like other material objects. In this respect, Śrīdhara maintains that if *manas* is material, then like material objects it must be an object of touch but it cannot be touched *asparśavattvāt* – i.e., there is an absence of touch in it. So it is difficult to understand that which is atomic and that which is beyond the reach of touch, how such a *manas* produce cognition of all things through its conjunction Again it is said that *manas* moves very quickly, so activity is a quality of the *manas*.

Now the Naiyāyikas and the Vaiśeṣikas prove what *manas* is not. *The Bhāṣya* on *Vaiśeṣika-sūtra*, iii, ii 22 says "it must be regarded as unconscious; as otherwise the whole body would be the common ground (of all experiences or sensations)." So mind is

not conscious. It is not and cannot be the cognizer. If mind were to be both an organ of perception – as it undoubtedly is – and conscious, then the functions of perception and memory would be constantly active.

Śrīdhara in his *Nyāya-kandalī* says that consciousness may be a quality of the mind. It is not and cannot be the cognizer. If mind were the cognizer, then it would not need the instrument. For the experience of anything we require an instrument. Such as for the experience of pleasure and pain there must be some internal instrument. Though it is true that as an instrument mind is employed by others i.e. soul, for their own purposes. Here it is proved that mind is different from soul, and cognition (*buddhi*) is a quality of the soul and not the mind. From the *Bhāṣya*¹⁷ we know that mind as considered as the internal organ or *antaḥkaraṇa*. Throughout the comment on this *sūtra* it is known that the words *manas* and *antaḥkaraṇa* are used interchangeably.

Uddyotakara says that apprehension or *jñāna* is a quality of the “cognitive agent, who is the controller.” The self is the conscious person who is also the cognitive agent as well as the controller. The mind and the sense - organs are on unconscious by nature must all be controlled by the self. For the cognition of the perceptible objects the sense-organs are the instruments of the cognizer. Similarly for the thought of the person, *manas* is the instrument of thinking. Still according to Naiyāyika if both mind and soul were conscious (cognitive) entities, it would be difficult to say which act of cognition belongs to which.

But the opponent of the Nyāya maintains that soul is also unconscious and is not intelligent like mind. For soul is all-pervading and therefore is in contact with the senses, there would be cognition of all things at once. This is not so.

Now we find the location of the mind. It has already been stated that the *Upaniṣads* place the *manas* in the heart. According to Naiyāyikas, the mind lies within the body¹⁸.

The Prābhākara Mīmāṃsaka proves the existence of mind by pointing out that the qualities of the self such as *buddhi*, pleasure, pain etc, would never become manifest but for the activity of the mind¹⁹. Before cognition the contact of the mind with the soul is necessary. The Mīmāṃsaka proves that the mind is atomic by arguing in the following way. Every action requires two kinds of cause – the material and the immaterial or the effective cause. The immaterial or effective cause always takes the form of either circumstances or qualities which by contact with the material cause produces the given effects. In the case of cognition, soul is the material cause because cognition is a specific quality of the soul. To bring about cognition, the soul must come into contact with another substance. This other substance must be atomic, for all cognitions are unitary and occur one at a time. This atomic substance must also reside in the body, as otherwise no contact with the soul is possible. Mind is such an atomic substance. It by itself has no colour or smell, but can bring into existence these things by contacting the organs such as the eye and nose on the one hand and the *Ātman* on the other hand. Then the cognition of the *Ātman* becomes the perceptual cognitions of smells and colours. Thus the Mīmāṃsaka view of mind resembles that of the Nyāya Vaiśeṣika view.

The Sāṃkhya philosophers contend that neither pure matter nor pure consciousness alone can explain the evolutionary phenomena in their totality. They postulate two ultimate principles to explain change and evolution, i.e. the conscious principle (*puruṣa*) and the material principle (*Prakṛti*) according to Sāṃkhya, *Prakṛti* is the ultimate source of all objects of cognition including both physical objects such as pots and stones and internal

states such as pleasure and pain. It is the uncaused cause. *Puruṣa*, the conscious principle, is conceived as neither the cause nor the effect but without it *Prakṛti* cannot evolve into the world. *Puruṣa* is pure consciousness that never becomes the object of cognition (*aviśaya*) and never undergoes any change (*apariṇāmī*). It is the witnessing subject (*sākṣin*) and the knower (*draṣṭā*) and free (*mukta*) and aloof (*udāsīna*) forever²⁰. *Prakṛti*, being material, is unconscious but it is constantly changing (*pariṇāma*) and active. *Prakṛti* contains three kinds of substance called *sattva* (literally, being; essence, vitality, inherent power, courage etc.), *rajas* (literally, dust; any small particles, menstrual discharge, passion, etc.) and *tamas* (literally, darkness; error, grief etc.)²¹. These are called *guṇas* or *constituents*. A *guṇa* for the Nyāya signifies a quality inhered in a substance. But it would be a mistake to take the word *guṇa* in this sense here. *Sattva*, *rajas* and *tamas* are called *guṇas* because they are the common constituents or natures of all non-eternal things. *Sattva* is of the nature of pleasure, *rajas* of pain and *tamas* of perplexity and confusion (*moha*). *Sattva* is bright light and white and needed for revelation; *rajas* is red and needed for mobility, change and effort; while *tamas* is dark and heavy and is responsible for inertia and ignorance²². *Prakṛti* refers to a state when *sattva*, *rajas* and *tamas* exist in a state of harmony. In this state no substance can dominate the other two though each continues to change independently into its own kind by itself and in complete isolation from the other two. That is, in this condition *sattva* transforms only into *sattva*, *rajas*, only into *rajas* and *tamas*, only into *tamas*. So nothing particular evolves in this condition. Creation or the origin of particular things beings when *Puruṣa*, in accordance with the law of *karma*, comes into contact with *Prakṛti*. In this state there is no conflict but there is a continual motion (change). The change is

homogeneous because in this state the *guṇas* change into their own types. The evolution begins when each *guṇa* tries to predominate over the others. In other words, creation beings when there is a transition from homogeneous transformation (*svarūpa-pariṇāma*) to heterogeneous transformation (*virūpa parināma*). Since *sattva*, *rajas* and *tamas* are the constituents of *Prakṛti*, everything that evolve have these three *guṇas*. The differences among the created particulars depend upon the relative dominance of the *guṇas* on them.

The first thing to evolve with the preponderance of *sattva* is called *mahat* or great because it is prior to and greater than all other non-eternal things²³

The next thing to evolve is the sense of egoness (*ahaṃkāra*) which is represented in the awareness of I and mind to the exclusion of others²⁴.

As one thinks oneself to be the doer of actions, one remains bound to the results of actions, good or bad. It is on account of *Ahaṃkāra* that one remains subject to the karmic bondage, i.e. dualities of pleasure and pain. When *Mahat*, which contains the reflection of *puruṣa* identifies itself with '*Ahaṃkāra*'. *Puruṣa* appears to be moving just as the moon appears to be moving in clear moving water. To Sāṃkhya the state of *Ahaṃkāra* is alternatively predominated by *sattva*, *rajaḥ*, and *tamaḥ*. Dominance of *sattva* results in *sāttvika* or *vyavahārika Ahaṃkāra* which in turn gives rise to five sensory organs, five motor organs and mind. The dominance of *tamaḥ* gives rise to *bhūtādi*. As a result, five subtle essences, *tanmātras* (the essence of sight, smell, taste, touch and sound) are created which, in turn, give rise to five gross elements. The dominance of *rajas* in *Ahaṃkāra* results in *taijasa* which do not give rise to any evolute in particular but help *vaikārika* and *bhūtādi* to give rise to different evolutes. In the scheme of Sāṃkhya, mind,

being an evolute of *Prakṛti*, is subject to the influence of *sattva*, *rajas*, and *tamas*. The evolution of mind is very crucial in the sense that it is not only the internal sense organ by which the individual comes to know the state of happiness and sorrow but also regulates the function of five sensory-motor organs. But the external organ cannot function as a cognitive organ at all. The external organ can only come into contact with an external object, but cognition is possible only when the internal organ is activated. Again each external organ is restricted to a particular kind of object. For example, the eye can grasp colour but not smell. The nose can grasp smell but not colour and so on. But the internal organ is not restricted in this way. Every mind is unique due to the relative dominance of the *guṇas*. And therefore the personalities of two persons are not same. As long as the *guṇas* have sway on the mind, the action of the individual lead to bondage. The karmic bondage is nothing but the bondage due to the *guṇas* of *Prakṛti*. Liberation is possible only when through the power of discrimination (*vivekajñāna*), one discriminates between self and not self. As bondage is the result of wrong identification, liberation is the result of proper discrimination. Knowledge helps one to discriminate and discrimination helps one to attain liberation. Liberated individual is one whose mind functions not by the prompting of the *guṇas* but the nature of consciousness (*Puruṣa*).

Sāṃkhya and Yoga are allied disciplines in so far as Sāṃkhya develops the metaphysics and Yoga develops the practice. Sāṃkhya system contains a theoretical explanation of the nature of the self (individual *Puruṣa*), the transcendental self (cosmic *Puruṣa*), and the causes of bondage and means of liberation. Yoga philosophy devotes itself to explication of the ways of attaining the highest state. Like Sāṃkhya, Yoga, explains bondage as the result of wrong identification of *Puruṣa* with *Prakṛti*. In the state of

bondage, *Puruṣa* appears to undergo the experience of pleasure and pain depending on the modification of *citta*. In Yoga system, *citta* refers the three internal organs of Sāṃkhya – *buddhi* (intellect), *Ahaṃkāra* (ego), and *Manas* (mind). *Citta* plays a vital role in all cases of cognition. *Citta* takes the form of the object, in every case of cognition. This form is called *vr̥tti* or modification. *Citta vr̥tti* is nothing but the modification of *citta*, which impels one to action. On account of *citta*, the individual appropriates the same of pleasure and pain to oneself. Since, *citta* is an evolute of *Prakṛti*; it is inherently unconscious but appears to be conscious on account of the *Puruṣa*'s reflection in it. As a result, *Prakṛti* which is unconscious appears as conscious and *Puruṣa* which is inactive appears as active. Yoga enumerates the five fundamental *vr̥ttis*, modification of *citta*, viz., *pramāṇa* (veridical cognition), *viparyaya* (wrong cognition or illusion), *vikalpa* (imagination), *nidrā* (sleep), and *smṛti* (memory). Besides *citta* being the evolute of *Prakṛti*, is subject to the relative dominance of *guṇas*. Yoga advocates five different states of mind which arise because of the influence of the *guṇas*. The lowest level is called *Kṣipta* or restless where mind is extremely unstable on account of the predominance of *rajas*. The second is called *Mūḍha* or torpid, where mind tends to be inert, indolent and ignorant on account of the predominance of *tamas*. The third is called *Vikṣipta* or distracted, wherein *sattva* is dominant but *rajas* continues to have its sway. The fourth is called *Ekāgra* or concentrated where mind is relatively composed on account of the dominance of *sattva*. In this state the mind becomes concentrated on the object of meditation. The fifth and the highest level is called *Niruddha* or restricted. The first three stages are not at all conducive to *yogic* life whereas last two are conducive. Yoga is construed as a state where in there is absolute cessation of modification of *citta*.

In other words, Yoga conceives of a state where mind continues to exist without any modification whatsoever. Yoga philosophy conceives of eightfold limbs of yoga (*aṣṭāṅga yoga*), viz. *yama*: it includes the five vows of Jainism-non-killing, truthfulness, non-stealing, continence, and non-receiving of any gifts. Next are *Niyama*- cleanliness, contentment, austerity, study and self surrender to God. Then come *Āsana* or posture – which makes the body and mind congenial for practice of Yoga. *Prāṇāyama* or control of *Prāṇa*–which is a basic prerequisite for mind control. *Pratyāhāra* restraint of the senses from their objects.*Dhāraṇā* or the flow of mind in singular direction.*Dhyāna* or contemplation on the object of ideation.*Samādhi* or the state of absolute concentration, where the *citta* becomes one with the object, and loses its identity in the objects of ideation. Again the state of *samādhi* is attained in two stages. In the initial stage *citta* retains the consciousness of the object. As a result, the sense of duality is not altogether transcended. It is the state of determinate trance (*samprajñāta samādhi*). In the state of indeterminate trance (*asamprajñāta samādhi*), the consciousness of the object is completely done away with. There is nothing before *citta* to take its form. As a result, there is no modification arise. It is the highest form of Yoga where self is restored in its own nature and is immune to the influence of the *guṇas* of *Prakṛti*.

The Vedāntic view of *manas* is different from others in very important respects. It bears a close correspondence to its metaphysical outlook.

Gauḍapāda is regarded as Śamkara's *paramaguru*. The *Māṇḍūkya Kārikā*, an exposition of the *Māṇḍūkyaopaniṣad* is the main work of Gauḍapāda from which we derive his Advaita views. It is considered one of the most important sources of Advaita. Another important source book for the *kārikā* is the *Bṛhadāraṇyaka Upaniṣad*²⁵

The central thesis of all advaitic literature is that the ultimate reality is *Brahman*, the self; there is nothing other than the self. *Īśvara* is *Brahman*, the ultimate reality who is regarded as the creator of this world of plurality. But there is a question raised who creates this manifold world, if everything else is illusory. In answering to this question actually there is no world created. The whole manifested and unmanifested world of things and ideas is but the imagination (*kalpanā*) of the mind of this cosmic self. “*Cittaspanditam eva.*”²⁶To explain creation it is said that all the things and ideas are destroyed during *pralaya*. They remain as potencies in the mind of *Īśvara* and during creation; these again take form and shape. The individual *jīva* is also then created; he is a “product of imagination and competent to effect further imagination.”²⁷This individual *Jīva* is enclosed with many coverings called sheaths (*kośas*). In *BṛhadāraṇyakaUpaniṣad*,²⁸ there are five sheaths (*kośas*.) They are *annamaya*, made up of food and matter; *prāṇamaya*, vital breath which is subtler than the physical; *monomaya*, mental sheath being subtler than the breath; *Vijñānamaya*, intellectual sheath, which is responsible for all empirical knowledge; *ānandamaya*, which is made up of bliss. All these *kośas* can be regrouped into three. The first one *annamaya* is the gross body. Next the three sheaths of *prāṇa*, *manas* and *vijñāna* can be grouped together to refer to the psychical principles; and lastly the *ānandamaya*, indicating happiness. From this division of the self it is clear that the psychical states are only subtler forms of the physical, and it is to be inferred that Gauḍapada accepts that mind is material and is only an aspect of the perishable body.

The waking self comes into contact with the external world has its cosmic counterpart which is called the *vaiśvānara* self. In dream the self is also active and is conscious of

what is within (*antahprajñah*), and this self is known as *taijasa*. It is also said to be *svapnasthāna*. To Samkara ²⁹ this *Taijas* self is related to the *Vaiśvānara* self as effect and cause, because the impressions, left by the mind in the waking consciousness are those which are the objects of dream consciousness. Therefore the dream self is called *antahprajñah*. In explaining this Śamkara says, “From the standpoint of the sense - organs, the mind is internal”.³⁰

Here it is suggested that *manas* along with *buddhi*, *ahamkāra*, and *citta* is an instrument of knowledge for the self and that all these make up the internal organ of knowledge for the dream self. The mind is acting as an *antahkāraṇa*, an internal cause; it may be counted as an integrating instrument of knowledge. There are many places in the *kārikās*, “mind” is used to mean “self”. To some Western thinkers this should not mean that mind and consciousness are one. Here mind means the *Ātman* which is not born and which is without end. “Mind in this sense is the ground of the world conditioned by *Māyā*”³¹ and this is known as *jiva*, which is responsible for empirical knowledge. When mind and the external sense- organs function, this empirical knowledge arises. It is necessary to have an internal organ “Through whose attention and non-attention, perception and non-perception take place”.³² In support of this view Śamkara quotes the *Upaniṣadic* text which says, “My mind was elsewhere, I did not here; for a man sees with his mind and heres with his mind”.³³ It is clear from this that Śamkara accepts the *Upaniṣadic* statement that *manas* is a necessary instrument of cognition.

According to the Advaita *Brahman* alone is real, and all other things are non-different from it. But this ultimate truth cannot be grasped by the mind of man which is limited in its capacities. In this case we remember the Śruti words³⁴ it is maintained that all these

originate from *Brahman* and go back into *Bharman* (*yato va imāni bhūtāni jayante*). To Śamkara, the two words *manas* and *antaḥ- karaṇa* are interchangeable, but due to division of functions, the same *manas* is referred to by various names as *manas*, *buddhi*, *ahaṃkara* and *citta*.³⁵ *Manas* or *antaḥkaraṇa* by itself is that which refers to the past, present and the future. This internal organ controls the other organs of sense perception. To Śamkara mind is minute. But *aṇutva* of the Nyāya-Vaiśeṣikas is not the same as this minuteness. It is subtle and limited in size,³⁶ because it is not perceived at death when mind leaves the physical body. So, it is *sūkṣma* or subtle. Again, *manas* should be limited in size, since unless it is so; it cannot pass in and out of a body.³⁷

But though mind is an instrument of knowledge, yet it is not the agent of knowledge, *Manas* or *buddhi* can never be an agent (*kartā*). Śamkara says, the self is definitely different from the *buddhi* or intellect and though the former alone is the agent of action, still it is dependent on *buddhi* and *indriyas* to provide knowledge of it. “An agent requires some assistance in his work. A cook remains the agent in the action of cooking, although he requires fuel, water and so on.”³⁸ *Manas* is conceived as the central functionary on which the *karmendriyas* and *buddhi indriyas* are dependent. These eleven *indriyas* make up for the whole conscious life of the individual.

Now we consider the problem whether *manas* is an *indriya* or not in post-Śamkara literature on Advaita. And so we must consider what a sense- organ is. To the question a possible answer can be given. To Buddhists view it may be said that the sense-organs are merely the peripheral organs – the *goḷakas*. This view is rejected because certain animals can hear, although they have no ears, e.g. serpents. Secondly, it may be argued by Mīmāṃsakas that sense - organ consists of the *śakti* or potency that resides in the end

organs. This view of potency is not also correct. The third possibility is that the sense - organs are not distinct substances, not to be confused with either the orbs or their powers. Both an agent and instruments are required when we cut a piece of wood. Similarly cognition requires the self which is an agent, and the sense-organ which is an instrument.

Now we find the Naiyāyika making a starting modern differentiation between conceiving and cognizing.³⁹ It is maintained that the act of conceiving needs no instrument, while the act of cognizing needs an instrument.⁴⁰ But conceiving and cognizing cannot be differentiated. Uddyotakara, commenting on this *sūtra* raises an objection; if both cognizing and conceiving are done with the help of an instrument, and that every cognition must be through an instrument, then the cognition of mind (i.e., self cognition of mind) also must be through an instrument. Vācaspati Miśra says, the mind cannot be an instrument of its own cognition for no instrument can operate on itself. Hence it is maintained that the postulation of an instrument for the cognition of pleasure and pain is not right. Here the Naiyāyika replies that the existence of mind is cognized not by perception but by inference. Again in the case of the *yogin*, who has direct perception of the mind, the instrument of perception is the mind-soul contact aided by the powers divided by yogic practice. Later Naiyāyikas like Udayanācārya (in his *Parisuddhi*) maintain that this is not true because no yogic powers cannot make the *yogin* go against nature. Therefore, Udayanācārya says, the object of cognition is mind, whereas the instrument of cognition is the mind aided by the faculties born of *yoga*. Since these are not the same there is no question of self operation. He maintains that there is no incompatibility of one thing being both “instrument” and “object”. When it is acted on by the agent it is an instrument and it is an object when it is subjected to effects of actions

that do not belong to it. Vācasapati Miśra says that this position does not involve any incongruity, because it is by its own existence that mind is capable of having its own cognition. Mind as an existent is cognized by mind in its capacity as an instrument, just like the light of the lamp which is instrumental in revealing itself.⁴¹ Here we use the words of D. M. Datta we are here “required to distinguish between mind as a term of the relation and mind as the medium of relation, which latter along can be called an *indriya*”⁴². But a question may be raised here: Both these accept of the mind are mental, and if one can be conceived as an *indriya*, why not the other?

The direct causes for psychological states known as desire and aversion (*icchā* and *dveṣa*) are pleasure and pain. To Praśastapāda *icchā* consists in wishing for something not already obtained either for one’s own sake or for the sake of another. It proceeds from the contact of mind and the soul, through pleasure or remembrance. It is the source of effort, or remembrance, virtue and vice.⁴³ After this, Praśastapāda goes on to give a list of the different forms of desire. (1) Lust – desire for sexual experience; (2) Hunger – desire for food, (3) Affection – desire for the repeated experience of an object; (4) Aspiration – desire for bringing about something not near at hand; (5) Compassion – disinterested desire for removal of others’ troubles; (6) Dis-inclination – desire for renunciation of an object after finding something wrong with it. (7) Disposition – desire to impose or deceive others; (8) Inclination – Unexpressed desire.

These different forms of desire are followed by a list of effects of *dveṣa* or aversion. Aversion proceeds from “The contact of the soul and the mind by pain or by remembrance (of pain).”

(1) *Krodha* - anger is the first evolute of aversion. It also produces certain physical changes. (2) *Droha* – ill-will. This is not perceptible outwardly as anger, but is a deep seated inclination. (3) *Manyu* - resentment. When retaliation is impossible, aversion is hidden in the mind. (4) *Akṣamā* – Jealously. (5) *Amarṣa* – indignation.

All these mental states arise out of pleasure and pain primarily and out of desire and aversion secondarily. Like Jung, the Vaiśeṣika also says that from the dual qualities of pleasure and pain all other emotive experiences can be derived and understood.

According to the Sāṃkhya theory of perception, perception is a cognition which takes the form of the object because it is brought into contact with it.⁴⁴ Thus the *manas* conjoins the external objects through the sense-organs. To Naiyāyikas this process of contacting is not difficult one, because the senses are themselves of the same nature as the object which they are capable of perceiving. But the Sāṃkhya thinkers do not accept this, because the sense-organs are the first evolutes of *ahaṃkāra* and not the elements. Again there are differences between the composition of the sense - organs and the composition of the elements out of which the gross objects are evolved. Here the mind is not material in the sense in which the Naiyāyikas mean. The *indriyas* being psycho physical in nature are capable of motion and hence they go out, reach the object, and establish contact. If the *antaḥkāraṇa* internal sensory, is to have knowledge of the external object, the sense organ that is involved must reach out to the object. Because the Sāṃkhya thinkers maintain that sense-organs do not apprehend objects which they do not reach.⁴⁵ Here Aniruddha comments that the sense of sight cannot reveal things that are either too far from it for it to reach, nor can it reveal objects that are obstructed by impenetrable objects like a wall. So the *vṛtti* or the function of the sense-organs is limited. According to

Sāṃkhya thinkers, the senses are capable of motion because of their particular *Śakti*. In this respect the Naiyāyika points out that if the sense of sight is made up of light and if they can apprehend objects without moving to them, the whole universe could be perceived at the same time, which is impossible.

In this situation Vijñāna-Bhikṣu says that the sense-organ by itself never leaves the body, but only its particular modification known as its *vṛtti* or function. That is how the eye is capable of seeing light which is far off. According to Sāṃkhya thinkers the proof of the existence of the *Vṛtti* lies in the fact that knowledge is gained of such an object existing outside the sense -organ.

But there is still the problem of the arising of knowledge in the individual. So the internal sensory has to be examined. *Mahat, ahaṃkāra, and manas* are jointly known as the internal organ (*antaḥkaraṇa*). In the process of gaining knowledge they have separate functions. *Mahat* is characterised by its judging capacity, *ahaṃkāra* by its conceit, and *manas* by its capacity for its resolution and doubt (*Samkalpa and Vikalpa*). Apart from these distinctive features, they also have a common function, viz. the circulation of the five forms of vital airs.

Manas is said to be characterised by *samkalpa and vikalpa*. That activity of *manas* called *samkalpa* is that “Which co-ordinates the indeterminate percepts into determinate perceptual or conceptual forms as class-notions with particular characteristics...”⁴⁶

Vijñāna-Bhikṣu says that the only characteristics of *manas* are *samkalpa* and *vikalpa*, thus ruling out any determinative activity for *manas* with regard to knowledge. Determination or *niścaya* is the function of *buddhi* or intellect. The two *vṛttis* of *manas*

of *manas* are *samkalpa* and *vikalpa*. According to Vijñāna-Bhikṣu *samkalpa* means *cikīrṣā* or desire to act and *vikalpa* can be either a doubt or *bharmanviśeṣa*.

Vācaspati Mīśra says that the function of *manas* is selective attention which analyzes and synthesizes at the same time. It assimilates and discriminates. At this stage of knowledge process *Ahaṃkāra* intervenes and appropriates the experiences as belonging to itself; thus “I see the Chair”. At the level of the *manas*, cognition is still impersonal and objective, but at the level of *Ahaṃkāra* it assumes the shape of subjective experiences.

But the process of acquiring knowledge of the object is not complete after the *Ahaṃkāra* refers the perceived object to the self. Every experience involves the act of will or determination. So in this situation the perceptive content is taken charge of by the *buddhi* or intellect (*mahat*) who’s characteristic is *adhyavasāya*. Due to the conative nature of the intellect it resolves how to act towards the cognitive element. Vācaspati Mīśra, discussing the process of perception supports the view of Sāṃkhya⁴⁷ and says *buddhi* or intellect is the supreme of all organs both internal and external. He compares the process to that of the “Village account collecting taxes from the house holder, remitting them to the mayor, who in turn remits them to the Governor who looks to their reaching the king’s treasury.

⁴⁸The external sense-organs perceive the objects immediately. *Manas* reflects upon them, sorts them out and pigeon – holes them as it were, and presents them to *Ahaṃkāra* and judged by the *buddhi* for the eternal *Puruṣa* who is self. Therefore the process of perception involves not only the external sense-organs but also the internal sensory *antaḥkaraṇa*. It is important to note that though the one internal organ of the Naiyāyika is here split into three organs, viz. *Manas*, *Ahaṃkāra*, and *buddhi*. But all these three are only modifications or different aspects of an *antaḥkaraṇa*. Again the Naiyāyikas believe

that the senses never function simultaneously. But the *Sāṃkhya* thinkers believe that internal sense-organ along with the external senses may function either simultaneously or successively. Aniruddha gives the following examples in support of this. “A thief is perceived in a faint light, the sense of sight reaches the object of perception; and by the internal sense (*manas*) it is clear that ‘this is a thief’; then it is referred to *Ahaṃkāra* (*abhimanyate*) as ‘ he will take my money away’; then *buddhi* determines ‘I will catch the thief’”. Here the sense- organs are functioning one by one. But in other case, such as seeing a tiger in the night by the flash of a lightning, a man runs away instantly. In thus experience all the four organs functions simultaneously.

According to Yoga, the forms of mental activity have been divided into five types. They are *kṣipta* (restless wandering), *mūḍha* (infatuated, forgetful), *vikṣipta* (distracted), *ekāgra* (one pointed, single-in-intent) and *niruddha* (restricted, restrained). These five different attitudes of mind are normally found in man. *Kṣipta* is the wandering mind. When the mind is unable to settle on any one thing due to the excess of *rajas*, its attention is always shifting and it does not tend to be steady. The second condition is *mūḍha*, which is being either forgetful or being, infatuated is the state of *tamas* when the mind is full of deep sleep or unawareness of the right course of action because of deep passions like love or anger. The third state of the mind, *vikṣipta*, is that which is found in the average man when the mind is tossed about between evil and good. Occasionally it is steady. When the mind is in these three states it is not fit for contemplation. Contemplation is possible only in the next two, *ekāgra* and *niruddha*. *Ekāgra* is that state where the mind is entirely dominated by *sattva* and *rajas* and *tamas* are subdued. The mind becomes concentrated on one thing. This in turn removes ignorance, thus making

the mind ready for the next stage. Where even this mental concentration on one thing is restricted and the *manas* turns towards *puruṣa* realizing its own nature.

Citta means the three internal organs of Sāṃkhya – *buddhi* or intellect, *ahaṃkāra* or ego and *manas* or mind. *Citta* is the same as *antaḥkaraṇa*. It is *mahat* or *buddhi* which includes *ahaṃkāra* and *manas*. *Citta* is the first evolutes of *Prakṛti* and has the predominance of *sattva*. It is in itself *unconscious*. But being fines and nearest to *puruṣa*, it has the power to reflect the *puruṣa* and therefore appears as if it is *conscious*. When it goes related to any object, it assumes the ‘form’ of the object. This form is called *vṛtti* or *modification*. The modifications of the *citta* or *vṛtti* are of five kinds: *pramāna*, *viparyaya*, *vikalpa* *nidrā* and *smṛti*.⁴⁹ According to Vācaspati Miśra the cognition is defined as that which brings about *pramā* or true knowledge. *Pramā* is “an illumination of a thing not already presented and is caused by the operation of the self.”⁵⁰ *Pramāṇa* is the means of giving rise *pramā*. According to Sāṃkhya - Yoga thinkers there are three such *pramāṇas*, here our interest lies in *pratyakṣa*, because *pratyakṣa* is not only a basis *pramāṇa* but also it is that where there is contact between *manas* and the sense - organ.

Perception is defined as “that source of valid ideas which arises as a modification of the inner organ when the mind-stuff has been affected by some external thing through the channel by some external thing through the channel of the sense -organs.”⁵¹ We know that perception depends in the first instance on the mental modification, *citta - vṛtti*, and secondly, that the contact between the object and the mind is carried out through the sense - organs. The Naiyāyika holds that in the *nirvikalpaka* stage of perception, only the bare universal without the qualities of the particular is seen. But Vācaspati Miśra says it is impossible for the mind to see either the universal or the particular alone at any stage

of perception. “The object consists of a genus and of a particular. The object does not have these two as its properties, but it consists of these two by a relation of identity.”⁵²

Puruṣa who is the real cognizer and who is of the nature of intelligence illumines the *citta - vṛtti*. Again self-perception is possible. A question is raised here how it is possible? The self infers its own existence from its reflection in the cognitive instruments. Just as the existence of the original can be inferred from the copy or the reflection, the self realizes its existence because of its reflection. This very realization is through the mental mode which assumes the form of self. But this seems to be contradictory. It may be asked, how can the self cognize itself if the act of cognition does not belong to itself? It is because the nature of the self is self-luminosity and it can illumine both itself as well as the object. This also leads to the problem of self-perception: at the same time how can the self be both object and subject? This possibility cannot be denied. Vyāsa and Vācaspati Mīśra say that the pure self is the subject in self apprehension and the empirical self is the object. The above stated self - cognition is not possible if *Puruṣa* is only one. If it is many, then the original tenets of the theory are contradicted. Again the self is always the knower or the spectator (*draṣṭṛ*) and hence it can never make itself an object of knowledge. As James Ward has said. “To identify I and me is logically impossible... The I cannot be the me, nor the Me the I. At the same time the objective me is impossible without the subjective I”.⁵³ In this situation Patañjali says, the self can be perceived by intuition which is yogic perception attained by yogic practices.

The next mental mode, according to Yoga thinkers, is *viparyaya*. It is *mithyā Jñānam*. It “knows of the unreal possessing a form not of its own”.⁵⁴ The *Bhāṣya* explains the meaning of the word *mityā*. The characteristic of valid knowledge is that it is

unsublatable. Here the knowledge that is derived through *Viparyaya* is sublated by a later cognition. Vācaspati Mīśra adds a rider to this, that sublation is possible because *viparyaya* “cognition is contradicted by the common knowledge of all mankind”. For example, the perception of two moons in the place of one real moon. This type of misconception is ordinarily known as erroneous perception. But there are some psychic erroneous cognitions which are the products of *māyā* or *avidyā* or nescience and whose removal alone can give peace to the individual.

Vikalpa is also another way through which knowledge is gained by the mind. It is knowledge gained through imagination “without any corresponding perceptible object”⁵⁵ or “is devoid of objective substratum”,⁵⁶ and it is the result of verbal expressions of knowledge. It is abstract imagination based on language. It cannot be a *pramāṇa* because it is devoid of objective substratum. And it is not *viparyaya* for it is not sublatable, nor proved by further knowledge. In the *Bhāṣya* it is said that, “*Puruṣa* is of the nature of consciousness”. This type of relation between consciousness and *Puruṣa* can neither be proved by any *pramāṇa* nor can it be brushed aside as an erroneous cognition. It is purely abstract thought. If *Vikalpa* is not accepted, no abstract thinking would be possible.

Sleep is defined as that state (*Vṛtti*) of the mind, which has nothing for its object. The commentator, however, explains that in sleep also a kind of perception must take place, because, otherwise, we could not say that we had slept well or badly.

Remembering is the not wiping out of an object that has once been perceived. While true perception, false perception, and fancy take place in a waking state, a dream, which is a perception of vivid impressions, takes place in sleep, while sleep itself has no perceptible

object. Remembering may depend on true or false perceptions, on fancy, and even on dreams.

The Vedānta view of mind is different from those of other schools in certain important respects.

First according to the Vedāntins, *manas* is not an independent reality. It is not regarded as a fundamental substance. It is only one of the many aspects or functions of *antaḥkaraṇa* (inner organ) which is the generic term that would correspond to the word mind.

Secondly, according to most of the Vedāntins, *manas* is not an *indriya* or sense- organ.

Thirdly, it is not regarded as an invisible, infinitesimal substance (as in the *Nyāya system*), but is considered to be of medium dimension.

According to some vedāntins like the authors of the *Vivarana*, the *Vedānta – paribhāsā* etc., *antaḥkaraṇa* has four different aspects or functions such as (1) *manas* (2) *buddhi* (3) *ahaṃkāra* (4) *citta*. *Manas* represents the indecisive state of *antaḥkaraṇa* or mind as found, for instance, when we cannot ascertain whether an object is this or that. *Buddhi* stands for *antaḥkaraṇa* in its state of decision, as when we decisively know a thing as “this”. *Ahaṃkāra* is the state of *antaḥkaraṇa* having some reference to the self, as in the judgement “*I am happy*”. *Citta* is *antaḥkaraṇa* in its state of remembering, i.e, referring to past event.⁵⁷

The author of the *Pañcadasī*,⁵⁸ however, distinguishes only two functions of *antaḥkaraṇa*, namely *manas* and *buddhi* = (*vijñāna*) and it is thought by subsequent writers that in his opinion *citta* is included in *manas*, and *ahaṃkāra* in *buddhi*. The author

of the *Vedāntasāra* also supports this twofold division, but according to him *Ahaṃkāra* is subsumed under *manas* and *citta* under *buddhi*.

The mechanism of knowledge according to the Advaitin can only be understood when the Advaitic theory of perception is understood well. According to the vedāntins, in the perception of an external object the *mind* (*manas* or *antaḥkaraṇa*) goes out to the object through the sense- organs and, after establishing identity of consciousness defined by the internal organ and consciousness defined by the object, gives rise to knowledge. The non-Advaitic schools say that it is the sense-organ itself that goes out to the object, whereas according to the Advaitin, it is the mind that goes out, and the difference in perceptual knowledge such as seeing, hearing, touching etc, is said to be because of the difference in the instruments which are required for those type of knowledge. These are called *citta vṛttis*. To the question if *antaḥkaraṇa* is responsible for knowledge what for are the sense- organs, it is replied that these sense-organs serve as the cause for the mental modes or *vṛttis*. For the mental mode to arise sense object relation is necessary.

The Advaita view that the mind goes to the object, seems to be more plausible than the accepted theory that light from the physical object strikes the eyes and creates impressions in the brain. Here the movement of the mind is not meant in any metaphorical sense, but in the sense of an actual going forth; the mind moves out and after reaching the object envelops it. The view expressed by the Advaitin that the mind goes out for collecting the raw materials for sense perception is not acceptable to the Western thinkers. Because, ordinarily, one believes that the senses act first and then the mind, because the senses are usually identified with the physiological organs and when these are impressed, sensations are said to arise for the mind to action. But this is not so.

According to Naiyāyika, mere sense affection can never give rise to knowledge. The senses are recognized and treated as senses only in so far as they are the channels through which the mind apprehends the objects. Even if the brain is considered as being adequate to combine the different senses, still how such purely cerebra-spinal vibrations in a particular nerve centre can produce mental activity is not explained. The purely neural explanation and the fact of psychological reaction do not tally. “Physico-chemical explanations of the behavior of bodies can be pushed to a point where they make nonsense. We cannot in any way understand why mentality should emerge in certain physico-chemical conditions and disappeared in others. We cannot understand why mentality should be exhibited only in bodies of a certain sort. For a parrot to exhibit mentality is perfectly conceivable; it just does not seem to occur”.⁵⁹ William James says, “The general law of perception is this: That whilst part of what we perceive comes through our senses from the object before us, another part (and it may be the larger part) always comes out of our own mind”⁶⁰ Hence it is right that the Advaitin emphasizes the outgoing of the mind. No doubt, the mind is material, but a very subtle material and is analogous to light and hence can go out to the object and assume its form.

Let us consider some views on the concept of mind as found in Western Philosophy. In Western point of view there are various ‘isms’ that try to answer a cluster of questions. What is the ultimate nature of the mental? At the most general level, the question is what makes a mental state mental? Recently at the more specific level the focus has been: What do thoughts have in common in virtue of which they are thoughts? What makes a thought a thought? What makes a pain a pain? So we explain here the various theories that try to answer the questions regarding mental events.

Naturally before studying philosophy of mind we shall have to clear about the definition of mental phenomena. Jerome A. Shaffer in his '*Philosophy of Mind*'⁶¹ defines mental phenomena as all phenomena that exclusively involve beings capable of consciousness. However it would be useful if we could say that all mental phenomena fall into some manageable number of categories. It has been proposed that the mind has three basic capacities or 'faculties'. These are cognition, affection and volition, or in other words knowing, feeling and willing. Each mental phenomenon is supposed to be result of the operation of these faculties.

In the context of everyday relationships, we often make statements about the thoughts, feelings and actions of people. So the word 'minds' or mental is used here.

Now the question arises about the mind. What is the real nature of mental states and processes? How are they related to the physical world? Is the mind distinct from body?

To answer these questions, there are various theories of mind. Now let us look at these alternative theories.

Dualism is the most common theory of mind for most of Western philosophy. It is thus an appropriate place to begin our discussion. The most systematic dualistic theory was propounded by the French philosopher Rene Descartes. To him, each mind is a distinct non-physical thing; a thing whose identity is independent of any physical body to which it may be temporarily 'attached'. He said the essence of the mind is consciousness. Consciousness means thinking, feeling, memories etc. on the other hand, the essence of the body is extension, i.e. having shape, size, and location in space; and it has no consciousness. Therefore the two cannot be the same.

Descartes said that the mind can exist without the body and, in the same way; the body can exist without the mind. He said that the mind is immortal. Minds continue to exist even after the body perishes.

Spinoza, who had been a follower of Descartes, first pointed out that there is an important gap in Descartes' account. The essence of the mind is consciousness, and the essence of the body is extension. But from this we cannot say that the mind and the body are two separate entities. Spinoza realized that "although two attributes may be distinct", yet a man can be both a thinking thing and an extended physical thing.

Nevertheless, Descartes held that extension and thinking are so basically different that the same thing could not have both. But we have not a reason for thinking that thinking things could not be extended and vice-versa. Again, P.M. Churchland says in his book "*Matter and consciousness*"⁶² that if mind stuff is different from matter stuff then how my mind to make any causal affect on my body. How can two such different things be in any sort of causal contact? In this context Descartes proposed a very subtle material substance – 'animal spirits' – to make known that the mind can affect the body. Here again the same problem arises: how something spatial can interact with something entirely non-spatial.

Here the dualistic approach to mind embodies several quite different theories. Descartes believed in interactionism. He believed that the mind can affect the body as the body can affect the mind. The other oldest version of dualism is epiphenomenalism. In this view only body can affect mind not vice-versa. Finally, there is the dualist theory known as parallelism. According to parallelist, there is no casual connection between the mind and

the body. The two are like two clocks. Both the clocks show the same time though there is no causal connection between the two, in the same way, mental events and physical events are keeping parallel positions and there is no causal connection.

Now let us see how do we support dualism? Churchland ⁶³ emphasizes that there are at least three reasons. We can first point to the argument from introspection. When we focus our attention on the content of our consciousness, we feel a constant change in our thoughts, sensations, desires and emotions. We can only understand mental states and properties with the help of introspection. But physical things and states cannot be known through introspection. So mind and matter are different.

The second is argument from irreducibility. It might be, thought that because of our variety of mental phenomena, no purely physical explanation can explain them. Descartes says our faculty of Reason must surely be beyond the capacity of any physical system. Again the introspectible qualities of our sensations and the meaningful content of our thoughts and beliefs can never be reduced to any physical system. According to the dualist, though a physicist or chemist might know everything about the molecular structure of the rose, and of the human brain, yet the quality of these inexpressible experiences cannot be predicted by physical theories.

Finally, in support of dualism, Para psychological phenomena would be relevant too. Within the limitation of psychology and physics it is not easy to explain some mental phenomena, such as, telepathy (mind reading), precognition (seeing the future), telekinesis (thought control of material objects) and clairvoyance (knowledge of distant

objects). Suppose, they are also forever beyond physical explanations. So some mental phenomena must be irreducibly non-physical.

But, unfortunately the argument from introspection is deeply suspect. Because it assumes that by introspection or inner observation the real nature of thing is revealed. But our other forms of observation – sight, hearing, touch – do no such thing. For example, the warmth of the summer air does not feel like the mean kinetic energy of millions of tiny molecules, but that is what it is.

Again, the argument from irreducibility is weak. Descartes could not imagine how a purely physical system could ever use language in a relevant way or engage in mathematical reasoning, as any normal human can. But, now electronic computers are doing mathematical reasoning.

In support of dualism, it is also said that the existence of para -psychological phenomena such as telepathy and telekinesis beyond purely physical explanation. But Churchland emphasizes that it is not entirely clear that such phenomena must forever be free from a purely physical explanation.

Now, in this respect we try to understand the meaning of ‘Intentionality’. Brentano says⁶⁴ that when we are conscious we are always conscious of something or about something. Therefore, consciousness is always directed towards something. Consciousness, in other words leads us to objectivity. According to Brentano, this aboutness or directness is the essential characteristic of consciousness. All mental states have these characteristics. On the other hand no physical states can have it. Different attitudes may have the same content. Consider, for example, a person X thinks that P,

believes that P, desires that P, and so on. But, interestingly different attitudes have different directions of it. Believes, e.g., have the mind to world direction and attitudes like sorrow and happiness have no direction to it. Here X has a propositional attitude to P, because X expresses a distinct attitude about P. Such states are said to display intentionality in that X's beliefs, thoughts, desires are about things.

Now, the intentionality of these propositional attitudes distinguishes the mental from the merely physical; no purely physical system can display intentionality. But there is an important gap in this claim. Though intentionality has occasionally been cited as the 'mark of mental', it need not constitute a presumption in favour of any form of dualism.

Jerome A. Shaffer⁶⁵ claims that there are difficulties with dualism. Firstly, the dualists believe that the mind is an entity like the physical entities. Yet at the same time mind is different from physical things. Now the question arises, what is a mind? Is the mind then a kind of peculiar matter?

Secondly, the dualists cannot tell us anything about the internal constitution of mind-stuff or the mind's structural connections with the body or the manner of its operation. Again the dualists cannot explain human capacities and pathologies in terms of its structures and its defects. No detailed theory of mind-stuff has ever been formulated, so the dualists can do more of these things.

Thirdly, many philosophers say that everything that happens in the world can be explained without using the mind. Therefore dualism is an unsatisfactory theory of mind.

Materialism is one of the oldest theories of reality. Democritus was a materialist. According to him, only material atoms and the void exist. Materialism does not give ontological status to mind. Mind is there, but it evolved out of matter.

But there are other materialistic philosophers who deny the existence of mind. They say that even the word 'mind' is unintelligible. Again other materialists say that mental terms are nothing but 'bits of behaviour'.

Our main problem as regards materialism are two:

- i) How do we explain the phenomenon of mind and
- ii) How do we explain the relation of mind and body?

Regarding the origination of mind, materialism explicitly says that mind evolves out of matter. The primal being is matter and only matter has the ontological status. Mind has a secondary existence. It is subservient to matter, matter is a substrate and mind is its attribute.

Regarding the relation between mind and body, there are four types of materialistic explanations:

- i) The Unintelligibility thesis
- ii) The Avowal Theory
- iii) Behaviourism
- iv) Identity Theory

According to the Unintelligibility thesis mental phenomena such as thoughts, feelings, wishes etc. have no real meaning at all and these words should be vanished from the

language. They say that all these are non sensical words that, entered into the language due to our ignorance and superstition. On this view mentalistic terms should be allowed to suffer the fate of the language of witchcraft and demonic possession ⁶⁶.

The Unintelligibility thesis has not gained much support among contemporary philosophers. Because according to the unintelligibility thesis mentalistic terms are meaningless like the terms of witchcraft. But it is clear why the notions of witchcraft and demonic possession died out. It has been proved by science that no such phenomena in fact exists. On the contrary it is impossible to prove that in fact there are no thoughts feelings, wishes etc.

And, secondly the unintelligibility theorists say that there are really no thoughts, feelings or wishes. They say that these terms should be replaced by physicalistic terms but this contention has not been accepted by psychologists and others.

Some materialists say that mental terms are not used to make any statements. They are not used to describe anything or report anything or assert anything. Those materialists are called the Avowal Theorists. According to them mental terms are simply 'bits of behaviour'. When, for example, one says "Ho hum", one does not make and express any statement. These two sounds (Ho, hum) are rather the result of certain inner physical conditions of that person. In the same way certain states of the person which is neither true nor false. Thus the expression "I feel bored" is neither true nor false. And for the same reason, "God, I am board" is also neither true nor false.

But, we must say that this theory fails in two important respects. First, when we say "He is bored". Certainly this statement is not the expression of our inner physical condition or

feeling. Therefore, such statement must be taken to be mental statements. Second, the avowal theorists say that mental statements do not report anything. But suppose I am feeling bored and looking at my watch. Now if somebody asks I may say “Because I am bored”. Here certainly the sentence is reporting something.

Behaviourism has played an important role in recent psychology. And most psychologists today are greatly indebted to it. According to the behaviourist, mental terms can be replaced by physicalistic terms. So the meanings of mentalistic terms such as emotions, sensations, beliefs, desires, etc., can be analyzed in terms of actual and potential patterns of behaviour. Thus instead of saying that I am thinking, I should say that the cells of my brain are operating in a certain way. They say this because mental terms cannot be verified, but the physicalistic terms can be verified or there is a possibility that they may be verified.

Introducing the concept of dispositional property, behaviourists claim that a person in a particular mental state may not be behaving in any particular way. Dispositions are properties of things. To possess a dispositional property is not to be in a particular state or to undergo a particular change; it is to be liable to be in a particular state or to undergo a particular change, when a particular condition is realized. For example, brittleness is a dispositional property. A thing is brittle if, and only if, under suitable circumstances it will shatter. However, a brittle thing may never in fact shatter.

According to behaviourist, the so-called internal states and processes are nothing but behavioural dispositions analyzable in terms of the behavioural hypothetical. For if, we define thoughts, feelings, wishes etc., in terms not of behaviour but of dispositions to

behave, then the man who secrets his thoughts, feelings and wishes behind an expressionless face and an expressionless behaviour would still have dispositions to behave in certain ways. For example, Mr. X's disposition, pain, is analyzed with the help of the behavioural hypothetical: If 'X' were pricked with pains, then 'X' would make loud noises.

Therefore on this view, there is no problem about the relation between the mind and the body, e.g. when we talk about some one's mind, we talk not about 'something' that she possesses; but we talk about certain extraordinary capacities and dispositions which belong to her. To the behaviourist, the mind-body problem is a pseudo-problem.

But unfortunately, philosophical behaviourism has major difficulties. It evidently ignores and even denies the 'inner' aspect of our mental states. Such as, to have a pain seems to be not merely a matter of being inclined to moan, to wince, to take medicine, and so on. But pains have an intrinsic qualitative nature which is revealed in introspection, any theory of mind that denies such qualia is simply failure in one's duty. So the major problem for behaviourism is that it assigns the insignificant role to the qualia of our mental states. But to solve this problem, Ludwig Wittgenstein, had a further argument against the standard view: the private language argument.

According to this standard view, in sensations, when someone use the word 'pain' is purely private. Wittgenstein attempted to show that a purely private language was completely impossible. Suppose, at the time someone says "I am in Pain". When someone uses the word "pain", he is referring to his sensation and telling other people.

But at a later time, again he may say “I am in pain”. Here the nature of his pain is completely different from his first sensation. Therefore, private language is impossible.

So, the behaviourists claim that mental terms can be defined in terms of their connections with publicly observable circumstances and behaviours.

But in our common sense view, it is important to say that no term can be meaningful in the absence of systematic connections with other terms. So terms will connect to one another by means of general statements that contain them.

Again behaviourist fails to state the necessary and sufficient behavioural conditions for the application of even a single psychological term.

So it is important to note that if we accept philosophical behaviourism, then folk psychology does not appear to be true. For according to folk psychologist, we can explain and predict psychological states of other humans by appeal to their beliefs and desires.

Now, the philosophical behaviourism is to sharply distinguish from the methodological behaviourism.

Over the past half century, behaviourism has been the most influential school of psychology. Methodological behaviourism represents a very strong reaction against the dualistic and introspective approaches to psychology.

By “behaviour” the behaviourists mean the publicly observable, measurable and recordable activity of the animals. No doubt it is admitted that there must be objective reality of these phenomena. The aim of psychology is that it takes animal behaviour as its

primary explanatory target. But on the other hand, according to the earlier view the elements and contents of internal consciousness are the proper explanatory target of psychology.

Especially in the case of non-human animals, the familiar mentalistic notions are ill-defined and there are no clear objective criteria for their application.

Even in the case of humans individual introspection does not provide a uniform or reliable ground for their application.

Now, we explain how any organism's behaviour can be explained in terms of dispositions. For example, solubility is a dispositional property. To say that a sugar cube is soluble is to say that if the sugar cube were put in water, then it would dissolve. So explanations of any organism's behaviour are to be based on either publicly observable or operational definition. Here we explain the notion of an operational definitional definition with the help of an example.

“X is water soluble”

Is equivalent by definition to

“If X were put in water, X would dissolve.”

The above example is called an “operational definition”. The term soluble is defined in terms of certain operations of tests from which it is clear to us whether or not the term actually applies.

It was thought if the familiar mentalistic notions really do have integrity then the behaviourist methodology will lead us back to them, or to suitably defined versions of them. And if they have no explanatory integrity then there is no real loss rejecting them.

Certain philosophers of science belonging to “logical positivism” school claimed that any meaningful theoretical term had to possess an operational definition in terms of observables.

Methodological behaviourism also faces some difficulties. According to some other schools of philosophy and psychology, behaviourism tended to dehumanize human beings.

Secondly, there is no scientific reason to deny the existence of internal phenomena. We have at least some introspective access which plays some role. In so far as behaviourism urged us to ignore such phenomena. So it is unsatisfactory.

In this respect most thinkers have simply tried to reject behaviourism. But one of the behaviourists, B. F. Skinner has recently proposed a version of behaviourism in which the reality of internal phenomena is asserted, and as well as our introspective access to them, and in which internal phenomena plays a perfectly legitimate role in psychology. To him... “What is felt or introspectively observed is not some non-physical world of consciousness mind or mental life, but the observers own body”⁶⁷.

Identity theory is the most common materialistic theory of the mind. This theory is being very much discussed now. According to this theory, all mental phenomena such as

thoughts, feelings, wishes etc. are numerically identical with the states and processes of the body or the nervous system or the brain.

According to Jerome A. Shaffer⁶⁸ in one respect the identity theory is very close to behaviourism. Because both behaviourism and identity theory identify mental states with bodily states. But there is an important way in which they differ. The behaviourists identify mental states with the changes in the body in certain circumstances. On the other hand, the identity theorists identify mental states with the identifiable structures of the body, or the on going processes and states of the bodily organs, and, in the last analysis, with the very cells which go to make up those organs. Again the behaviourists intend to analyse the meaning of mentalistic terms, but the identity theorists do not analyse the meaning of mentalistic terms.

Now let us try to understand the word “identity” from a different angle. When we say that the morning star is “identical” with the evening star, we mean that there is just one planet, namely, Venus, which in the morning is called the morning star and in the evening is called the evening star. So they are one and the same object.

But when the identity theorists say that mental states are identical with the bodily states he means that the mental states may be identical but certainly not synonymous with the bodily states. Here the word “identical” is used in the sense that the actual events recognized by mentalistic terms are one and the same events as those recognized by physicalistic terms.

It is important to know that whenever a mental event occurs, a physical event of a particular sort occurs and vice-versa. Again the identity theorists not only hold that

mental and physical events are co-related in a particular way but that they are one and the same events, e.g., it is not like lightning and thunder, (which are co-related in lawful ways but not identical) but like lightning are electrical discharges. (Which always go together because they are one and the same).

In the identity theory, there is duality of terminology, but no duality of entities, events or properties.

Now let us see what the difficulties of the identity theory are. Churchland says that we can first point to the argument from introspection. We can only understand mental states and properties with the help of introspection. They are radically different from any neurophysiological states and properties.

J.J.C. Smart holds that we can easily substitute physicalistic terms for mentalistic terms. But Shaffer does not admit this. Suppose a man is reporting about his experience of a red after-image. But while reporting he certainly is not aware about physical condition.

Another important objection is the identity of the mental with the physical is literally unintelligible. Therefore many philosophers say that the identification is a case of “category mistake”. Here, we can imagine the most important law concerning numerical identity. According to Leibniz’ law if A is identical with B then every property that A has B has, that too and vice-versa: in logical notation,

$$(A) (B) [(A=B) \supset (F(A) \supset F(B))]$$

In view of this law identity theory is impossible. For properties of brain states are not properties of mental states. Again if there is to be identity then there must be co-existence

in time and space. Here the question arises, Do they? It is impossible to say that the physical events in the brain and the mental events occur at precisely the same time & space.

Again it is important to note that brain states are processes are located in the brain as a whole or in some part of it. If mental states are identical with brain states then mental states have also the same specific location. But it is literally meaningless because I cannot say that my feeling of pain is located in my ventral thalamus. So it is meaningless to claim that the number 9 is red.

Some have argued that our thoughts and beliefs have a meaning, a specific propositional content they are either true or false. But it is impossible to say that some resonance in my association cortex is true, or logically entails some other resonance close by, or has the meaning that Q. So the two are not same.

Now according to Shaffer, we can say that for all three difficulties, materialist philosophers have made a mixed theory. According to the mixed theory although mental and physical events are different sorts of events and in no sense identical, nevertheless the subjects to which they both occur are material objects. Thus we have a theory which preserves materialism and at the same time makes a departure from it in accepting a dualism of events which happen to material objects.

Functionalism is currently the most popular and well-known theory of mind. It is one of the major theoretical developments of twentieth-century analytic philosophy and provides the conceptual underpinnings of much work in cognitive science. Functionalism tries to move beyond both Behaviourism and Identity theory by taking elements from both. Like

those two theories, Functionalism is generally taken to be a materialist theory. According to functionalism, the essential feature of any type of mental state is specified in terms of its causal relation to sensory stimuli, behavioural responses and other mental states. The essential or defining feature of any type of mental state is its causal role. So, according to the functionalist, the essential characteristic of pain is its causal role. Similarly other types of mental states (sensations, fears, beliefs and so on) are also defined by their unique causal role. It is important to note that functionalism is concerned with mental state types, not tokens, e.g. with pain and not with particular pains.

In this respect, this view is very close to behaviourism, but there is one fundamental difference between two theories. We know that the behaviourist defines each type of mental state solely in terms of environmental and behavioural output. But the functionalist claims that this is impossible. And says that the characterization of any mental state involves to a variety of other mental states with which it is casually connected.

According to functionalism, there are two descriptions of the same state may both be appropriate and insightful, namely – functional description and physical description. For example, not only the essential characteristic of anger is its causal role, but that anger is most probably a complex of hormonal activity and arousal of aspects of the nervous system. In this context Sterelny⁶⁹ says that the importance of functionalism as a theory of mind is that it is consistent with physicalism, so there is nothing but physical systems with folk psychology.

P.M. Churchland suggests that folk psychology is known as belief-desire psychology. We are conscious beings. Our actions have intentional, belief desire explanations. Even we can explain and predict psychological states of other humans by appeal to their beliefs and desires.

Now many functionalists take folk psychology as a functional description of the mind, which is a partial and only partially correct. Only partial because there is much in human psychology beyond our knowledge. And only partially correct because sometimes the folk have many of the details wrong.

According to Sterelny,⁷⁰ there are two general features of functionalist positions. One important feature of functionalism is that the theory of the mind is relatively independent of the theory of the brain, though brain states realize mental states. Secondly, two systems or organisms can be in the same mental state, irrespective of the differences in their physical constitution. For example, Human and other animas can be in the same psychological state for fear, despite their very different brains, This procedure for the type identification of mental state is better elucidated with the notion of the Turing machine.

In the early 1960s, Putnum proposed a version of scientific functionalism, machine state functionalism: according to this view, mental states are types of Turing machine table states. Turing machines are mechanical devices consisting of a tape with squares on it that either are blank or contain symbols, and an executive that can move one square to the left, or one square to the right, or stay what it is. And it can write a symbol on a square,

erase a symbol on a square or leave the square as it is. According to the Church-Turing thesis, every computable function can be computed by a Turing Machine⁷¹.

Some versions of functionalism are expressed in terms of the notion of a Turing machine, while others are not. A Turing machine is an amazingly simple device, yet which is, in principle extraordinarily powerful. A Turing has a finite number of machine states, inputs and outputs. Now there are two functions specifying such a machine. Out of the two functions one is from inputs and states to outputs and the other is from inputs and states to states. And the two functions specify a set of conditionals, one for each combination of state and input. The conditionals are of this form : if the machine is in state 'S' and receives input I, then it will go to the state 'S' emit the output 'O'.

A Turing machine must be able to control its input in certain ways. In standard formulations, the output of a Turing machine is regarded as having two components. It prints a symbol on a tape, and then moves the tape, thus bringing a new symbol into the view of the input reader. The machine to have full power, the tape must be infinite in at least one direction and movable in both directions.

We often express a Turing machine in the form of a machine table. One very simple version of machine functionalism states that each system that has a mental state in terms of its relation to inputs, outputs and other states is described by at least one Turing machine table of a certain specifiable sort. The programme specifies the relational structure for each mental state. However, the machine version of functionalism does not explain the nature of relation that exists among states, inputs and outputs. The functionalists construe these relations as causal relation.

But this formulation of functionalism, according to Block⁷² is very vague and would not help characterize mental states. Again P. M. Churchland concluded that it is not important to make a functional claim about the mind. Block and Hinckfuss proposed that functional claims are trivial. So human mind might be a Turing machine leads to a very weak conception of functional systems and functional properties. But we need a full and rich conception of functional properties.

A functional system is more than causally in interrelated activities. It is not that the behaviour of a functional system can be described only in terms of a set of inputs, internal states and outputs. For in the case of solar system planets take as input gravitational and inertial information (Their own mass and velocity detect there inputs) and produce as output an orbit. But the solar system is not a functional system. In this respect, it is important to say that functional systems are systems whose existence and structure have a Teleological explanation. But the interrelation of the solar system have not such an explanation. Human body clearly does have such an explanation, with its components. For instance, the design of our eye. For it is composed of parts related to each other functionally and not just causally. It has many parts: Lens, Retina, Focusing, mechanism, light meter, shield, plus lubrication, maintenance and movement subsystems. And it is composed of functionally not just casually with its parts. So it is a functional system within a functional system. According to Sterelny functionalist should hold that the mind too is a functional system within a larger one. The mind stores information in long and short term memory.

Sterelny claims⁷³ that functional systems have a design, according to functionalists. To support a functional theory of the mind he (Sterelny) assumes that mind also has a design.

He assumes from natural selection that it (mind) has an internal organization designed to carry out various perceptual, cognitive and action-guiding tasks. So it has a Teleological explanation.

We have already seen that there are two relatively independent descriptions of the human mind, i.e., a functional theory, and a physical theory. But it is not that there is a single functional, and a single physical theory. Psychological kinds differ in respect different physical realizations. Some psychological kinds are very independent of their physical implementation. For example thoughts, that is beliefs, desires, fear and the like. Sterelny says that one's particular array of perceptual organs does not matter. He also says Helen Keller was a physically disbalanced person but he was more intelligent than many people. We know that dolphins are intelligent, but their beliefs are very different from ours. They (dolphin) don't act like people. And it is not that like human mind their intentional systems have to be built using the same biochemistry.

An intentional agent acts on its beliefs and goals, though there is some debate about the degree of rationality and some perception like flow of information from the external world to the mind. In this respect Sterelny says that an intentional system must have (i) some perpetual systems, and through this system some informations flow from the external world to the mind, (ii) a reasonably rich system of internal representation, (iii) to use perceptual information to update and modify its internal representations of the world there must have cognitive mechanisms and (iv) to translate its internal representations into behaviour, there must have mechanisms.

Therefore, on the basis of this we can say that intentional systems could be psychologically very different. Language users and non-language users can all be intentional systems. But there are differences between human desire and other animal desire. There is good reason to suppose that humans sexual psychology and physical nature, perhaps to their sense of smell and touch.

Functionalists try to explain mental states in terms of their causal role and they claim that this function can be specified without bringing in any question of their physical realization. The same function can be realized in different physical organizations. But we should remember that if a function is so specified that it cannot be realized in a physical organization of a certain type then the claim of functionalism would be weakened. There are various degrees of independence of functions we must pass from simple functionalism to homuncular functionalism.

Teleological explanation of mind or “homuncular” functionalism, associated with William G. Lycan and early Dennett. According to homuncular functionalism, a human being is analogous to a large corporation, made up of co-operating departments, each with its own job to perform; these departments interpret stimuli and produce behavioural responses. Each department (at the highest sub personal level) is in turn constituted by further units (at a sub personal level) and so on down until the neurological level is reached.

Sterelny says that it (homuncular functionalism) has three elements⁷⁴. The first is the idea of functionalism itself: The essence of a mental state is what it does, not what it is. The second is that mind is modular, Minds are ensembles. Our general and flexible

intelligence comes from the interactions of lesser and more specialized intelligences that compose us. A complex function is broken into interacting less complex ones. The third and the most important element is to apply the first two ideas recursively. That is, each homunculus is in turn seen as a whole of more specialized and hence simpler homunculi. And in this way we reach a level where the task the homunculi must carry out so simple that they are psychologically primitive.

Dennett and Lycan develop and defend homuncular functionalism. To them, face recognition is a nice example. Face recognition is the most important to social creatures like us. And we concentrate on it with the help of our cognitive mechanism. For in many cases even in a faint light, an unknown or an indistinct photo, we are able to recognize faces and pictures of faces.

Functionalism which is a blend of behaviourism and central state identity theory is subjects to an objection from the same view-point. It appears in the form of absent or inverted qualia argument initially raised by Block and Fodor.

The first of these is the 'inverted qualia argument' and the second is absent qualia argument.

Functionalism avoids the 'inner' or qualitative nature of our mental states. But the qualitative nature is the essential features of the various kinds of mental state (pain, sensations of colour, of temperature and so on). Therefore functionalism is false. It is true that every person does, in fact, have different qualia. Suppose, you and I correctly say that we have the same sensation, say toothache, but pains feel quite different to every person (you and I). But, functionalism says that since we have no way of comparing our

inner qualia; and since apparently there are no differences between our pains, so there is no way to tell whether my pain is inverted relative to yours. Therefore, they are the very same type of state and it is not reasonable to say pain is 'really' a different type of pain from yours.

Another qualia related fatal flaw for functionalism is the so-called "absent qualia problem". Functionalism seems an incomplete account of the nature of mental states. Because to functionalism, it may be that a given functional state can exist without having a given "intrinsic qualia". And if a state which have intrinsic qualia can be functionally identical with a state without itself having a intrinsic qualia, then functionalism would seem to be untenable.

The functionalist can meet the inverted-qualia and the absent-qualia argument in two ways. Let us try to understand the inversion problem first. The qualitative character of your sensation of pain might be different from the qualitative character of my sensation of pain. But these two states are caused by pain. So two states are sensations-of-pain, whatever their intrinsic qualitative character. In this respect the functionalist claims that phenomenal or qualitative properties are irrelevant for the type identification of mental states. Two functionally identical psychological states are type-identical, independent of their qualitative content, it follows that qualitative characteristics are not essential to mental states. This also suggests a solution to the absent qualia problem. Functionalism considers qualitative content of the mental states to be an accidental property.

We are intentional agents. Our behaviour exhibits our intelligent nature. And such behaviour requires thought. In this respect, it is important to note that though according to

materialists, people and certain higher animals do not contain any immaterial substance, nonetheless they have certain mental states that are completely unexplainable in physical terms, e.g., thought. Now the question arises what is the function of our mental states. According to the representational theory of the mind, our mental states are representational states. There are two very different pictures of our mental life. One of these two pictures is the picture of folk psychology and the other is the physicalist picture. According to folk psychology we are conscious beings. Our actions have intentional, belief – desire explanations. We have hopes, fears, plans, beliefs etc. As a result we can explain and predict the psychological states of other humans in terms of their beliefs and desires, hope and fears. And our actions are explained also by these mental facts. On the other hand there is the physicalist picture. According to this picture, we are physical entities. We do not differ from the biological world. However, we are sentient and conscious beings, and so we are not mere physical systems.

We cannot deny the scientific image of ourselves. And the scientific and folk picture combine to produce the idea that representation is central to human minds. Let us try to understand the scientific picture.

We are different from many other animals in our behavioural capacities. For example, robins feed their young. And they sometimes feed young cuckoos, though young cuckoo look nothing like robin young. But cuckoo heaves the robin chicks out of the nest. Indeed they grow to be bigger than the adult robins that feed them. So they are unable to learn to use information that shows that they are feeding not their chicks but the killer of their chicks. But many animals can learn to avoid the new problems. Chimps behave excellently and are adapted to their life ends.

Again men have this capacity to a very high degree. Our behavioural informations in modifiable by experience. Plasticity is a consequence of our sentience. Our intelligent behavior can solve the new problems. Especially adaptive flexibility requires representing the world. Since adaptability is a central part of intelligence, intelligence essentially involves representation.

It has been thought that our intelligent behaviour is informationally sensitive. Suppose, on hearing an alarm bell from a building that reliably indicates fire, we will attempt to escape from that building. Here it is important to note that since our behaviour is adaptively flexible and informationally sensitive; it must be directed by representation. For there can be no informational sensitivity and flexible adaptability without representation. In this way physicalist try to show that mind is a builder and user of representations.

Folk psychology ('FP') is a 'conceptual framework' and 'network of principles'.

Again it is also that folk psychologist admits that representation is central to human minds. This idea is clear to us with the example of folk – psychological explanation. Folk psychology is also known as intentional, propositional attitude, or belief desire explanation, e.g. X voted for Y because X feared crime and believed Y would reduce it. Here the representational content of the intentional states seems to play a central role.

The 'content' of folk psychology can be regarded as the particular concepts and practices employed by an ordinary person in understanding, explaining and predicting humans psychology, whether his or her own or someone else's.

Now we explain the content of folk-psychology. Firstly, it consists of concepts relating to our various propositional attitude states (especially the attitudes of belief and desire). Secondly, it consists of principles connecting these mental attitudes to each other, to perceptual stimuli, and to actions.

The conceptual apparatus of folk-psychology encompasses not only concepts of mental states such as the propositional attitudes but also a vast array of concepts relating to a person's personality traits and dispositions.

But we cannot assume that folk-psychology is the right psychology. According to the eliminative materialists, our common-sense psychological framework is a false and radically misleading conception of the cause of human behaviour and the nature of cognitive activity. So our common sense psychological framework does not enjoy universal acceptance. In this respect we must say that folk psychology is not just an incomplete representation of our inner states; it is also a complete misrepresentation of our internal states and activities. In this view the central terms of folk psychology – belief, desire, fear, sensation, pain, and joy and so on – are empty; they apply to nothing. Consequently, it is likely that folk psychology is a hopelessly primitive and deeply confused conception of our internal states. Here, the eliminative materialist raises three points about folk psychology.

Firstly, the central feature of folk psychology remains a complete mystery to us. The eliminative materialist's point to the widespread explanatory, predictive and manipulative failure of folk psychology. We do not know how memory works. We have no idea what mental illness is, nor how to remove it.

Secondly, now, we try to draw an inductive view from our conceptual history. Our past folk conceptions have been refuted. Similarly, our folk theories of the nature of fire and the nature of life were shown to be mistaken. For most of the eighteenth and nineteenth centuries, according to the caloric theory of heat, heat is a fluid substance. But by the end of the last century it had become clear that heat was not a substance at all, but a high mean molecular kinetic energy. Here the new theory-kinetic of heat was much more successful than the old theory.

And finally, the eliminative materialist expects that the old theory (folk psychology) will fail to reduce to a new theory (matured neuroscience).

Again Paul Churchland has argued that though folk psychology is a theory, it is quite likely to be a radically false theory. Like eliminativists, Churchland also argues that there are no intentional states. And the central terms of intentional psychology – ‘belief’ and ‘desire’ – are empty; they apply to nothing. In this respect, Churchland claims the following three points⁷⁵

Firstly, Churchland emphasizes that intentional psychology fits badly into the rest of our picture of our mind.

Secondly, In accordance with his semantic views, Churchland’s ontological conclusion is that there probably are no beliefs or desires. Sometimes we can refer to object without understanding the nature of it. Ptolemaic astronomy wrongly misunderstood the nature of the planets and stars. Similarly, we are right in recognizing the existence of beliefs and desires, but wrong about their nature.

Thirdly, Churchland says that the accounts of cognition and representation closely related to the neurosciences, so there are important alternatives to the view that mind is a sentential machine.

Again Churchland thinks that folk psychology is a degenerating research program. It is failing to solve new problems. But it is not that Churchland rejects folk psychology. Churchland says that there is a considerable variety of central psychological phenomena – mental illness, sleep, creativity, memory, intelligence differences, and the many forms of learning – on which our folk theory is silent.

The most important of its failures is that folk theory fails to integrate with the rest of our self-knowledge.

Now by studying the relationship between propositional attitudes psychology and cognitive psychology we can assess the validity of Churchland's critique. Sterelney puts forward the following argument:⁷⁶

P1 – Folk psychology is a central part of cognitive science.

P2 – Cognitive psychology does not fail to integrate with the physical science.

C1 – So folk psychology is probably approximately true.

But there arises some problems about the exact nature of the relations between folk and cognitive psychology. Fodor and Pylyshyn both suggest that the central role of cognitive psychology is to explain how internal processes are computationally implemented. Sterelney claims that cognitive psychology includes folk psychology.

Folk theory might be a part of cognitive psychology. In this respect Churchland says that it would have played a role in the development of theories that do address perception, memory and language use. For example, from folk psychology we obtain the central notion, viz. thought. We may do say that folk theory is the most abstract level of the mind.

Jackson and Pettit⁷⁷ points to the epistemic strength of folk psychology. Like Churchland and Fodor they accept that folk theory is a theory, in particular, a functionalist theory. But they claim folk theory, like other theories does outrun its empirical base. Suppose on a pocket calculator we punch 8, then 7 and 15 appears. Here, this hypothesis goes beyond the evidence, but ultimately the hypothesis would be credible, however, doubt remained about how 4 was stored. In their view, there is a matter of chance that people behave as if they had beliefs and desires. And they say the chance hypothesis is incredible.

Now, to understand how internal states can simultaneously have the function of representing the world, and how internal representational structures can direct behavior. We have to explain 'The Language of Thought' hypothesis.

The main task of language depends on mutual communication of it. When someone successfully transmit his thought to someone by his language and the other can understand and express which the former speaker intended then the function of language is fulfilled. The environment around us is always changeable and we gather knowledge from it. The gathered knowledge is transformed one to other by language. The process is not possible without our mental representation of objects of environment. According to Jerry Fodor external things from which we acquire knowledge through representation is

possible only because mind has its own language, i.e. language of thought. The framework of this language is already given to human. Man accepts the content as a form of representation which he/she gets from experience and he/she places this representation in his structure of language of thought. As a result language takes a special form and becomes Natural Language, which is used as the language of communication.

Now let us try to understand how Jerry Fodor supposed that there is an “inner language” of thought that corresponds to the “outer-language” which one speaks. According to him⁷⁸, thoughts are sentence like. And there are semantic parallels and syntactic parallels between our language of thought and language of sentence.

Firstly, we consider semantic parallels between thoughts and sentences. Let us try to understand these similarities with the help of an example. Suppose, some one believes that dolphins are intelligent, and one utters the sentence. “Dolphins are intelligent”. Here the belief and the sentence have the same truth value. And they also refer to the same elements, such as, dolphin and intelligence. So they have the same meaning. From this similarity we can explain that thoughts have language like sentences. According to Fodor our thought sentences are not English or sentences of other languages. We think in a special inner language, mentalese. Mentalese is organized by words and sentences.

Now let us see the syntactic parallels between thoughts and sentences. It is important to say that here the similarities are on the basis of productivity and systematicity. Thought is productive and systematic. To say that thought is productive is to say that we are forever thinking new things, which are complex. We can think chimpanzees like a tailless monkey and four footed animal, that Gorillas and Chimps are tailless monkey and four

footed animals, that Baboons and Gorillas and Chimps are tailless monkey and four footed animals. And so on. Again thought is also systematic. For example, if someone thinks that cows are mammals, and if also she has the concept of a goat, then she has the capacity to think that goats are mammals.

In the same way language which one speaks (sentence) is productive and systematic. There is no limitation of the length of a sentence. Again if thought is systematic then our speaking language must be systematic. Systematicity (like productivity) is a property of sentences but not of words.

So the relationship between an inner language of thought and the outer language which one speaks is relatively more likely the relationship between spoken and written language.

And finally, according to Fodor, language of thought involves the nature of mental processing. He argued that rational choice, perception, and concept learning are the three examples of processes through which he tries to show that mental processing has characteristics that help us to accept language of thought. We try to consider here rational choice. To understand a player's move we must rank her preference. Perhaps she wants a draw or she really needs a win. So she recognizes a set of options. Again her expectations depend on the outcomes of various possible moves. Now we compromise between most desired outcome and most likely outcome on the basis of her preferences, options, and expectations. Again to learn a language is to acquire a certain concept. No language can be acquired unless the learning mind already has a representational system. We cannot learn to say anything if we cannot already think. Suppose there are some cards. And

someone is asked among this cards what are blangular? (A card is blangular if it is blue and triangular). Here someone can say that they are blangular and they are not blangular if she has a concept of blangularity. Therefore Fodor concluded that cognition involves an inner sentential code.

According to Sterelney we can naturalize the representational theory of mind if there is a language of thought. No doubt all intentional agents could not have the exactly the same language of thought, but all would have some language like system of mental representation.

It is also said that without mentalese no public language is known to us, but we understand public language through our special purpose equipment though mentalese does not require any further system in its background.

But what mechanisms are required to understand our inner sentences, i.e. sentences of the language of thought? Another question is : If there any criteria to comprehend what an individual understands about his own language of thought ?

In order to answer those questions we must compare the language of thought hypothesis with the computational theory of mind. It is not easy to know how a man actually thinks with the help of computational models of cognitive process. But we can only say that human thought is partly computational. Sometimes computer and intelligent creatures have the same capacities, such as both seem to be symbolizing devices. But there is also difference between computer and intelligent creatures, such as at a time computer must have only in one state, and carry out only one operation. On the other hand, human

beings are in many psychological states at any one moment. Moreover, our mental operation does change over time.

Connectionists' offer a view of the nature of mental representation that is explicitly opposed to the language of thought hypothesis. So there is a connectionist account of the architecture of the mind, the nature of mental representation, and the nature of operations on these representations.

Connectionist account of thinking is encumbered with various technical details. In this view human brain consists of a network of simple electrical processing units which stimulate and inhibit each other. These networks consist of large numbers of units or nodes. These nodes are simple input-output devices capable of being excited or inhibited by electrical currents. These nodes are interconnected.

Let us explain connectionism with the help of an example. Suppose we are to recognize a pattern. A network can recognize a pattern with the help of a sonic echo. The problem is to determine whether something is a rock or a mine by throwing at it sounds waves. The network which does this function has three layers. The first layer consists of input nodes. Each node is tuned to a particular frequency of sound. If that frequency is present in the total incoming signal then it will fire either strongly or weakly or not at all. The first layer of input nodes is connected to a hidden layer. Each input node is connected to all the hidden nodes, the hidden layer is connected to the third layer of output nodes. Each hidden is connected to two output nodes. An incoming signal first excites the input nodes. These input nodes excite some and inhibit others of the hidden nodes. Each hidden node

excites one of the output nodes and inhibits the other. From the network we learn the following.

If one of the output nodes fire then there is a mine from which the echo has bounced off, and if the other output nodes is fired then we shall learn that the echo has bounced off a rock.

Against the claims of connectionist, Fodor and Pylyshyn argue⁷⁹ that connectionist models of mental representation and mental processing are impoverished. So, there is no satisfactory explanation of the central features of cognition. Fodor and Pylyshyn⁸⁰ characterize the connectionist theory in the following way. First, in the view of the connectionist mental representations have no constituent structure. They are not built from elements that themselves represent. Second, sententialist theories offer complex representations. They recognize richer structural relations that are relevant to cognitive processes between representations. But the connectionists recognize that only psychologically relevant relations between mental representations are those of excitation and inhibition between nodes. So, they require simple representations and simple processing. According to Fodor and Pylyshyn, simple representations and associationist relations between mental representations are too simple. Here we cannot get a natural account of the differences between thinking that someone hates everyone, and thinking that everyone is hated by someone.

Fodor and Pylyshyn appeal to properties of language such as productivity and systematicity and argue that these are also characteristics of thought. Productivity is the fact that additional sentences can always be added to the corpus of a language.

Productivity requires compositionality. And systematicity is the fact that for any sentence of a language there are systematically related expressions that are also sentences of the language. This notion of systematicity is clear to us through examples.

Such as –

John loves Mary

Can also understand the systematically related sentence

Mary loves John.

And if someone can think that tigers are beautiful and he has the concept of leopards, he can also think that leopards are beautiful.

They argue that like languages, classical symbol systems naturally exhibit systematicity since they employ operations upon symbolic representations which are built up via a compositional syntax that supports compositional semantics. But connectionist architectures do not employ symbolic representations with a compositional syntax (though they can be used to implement such systems) and hence are themselves inadequate as cognitive models.

In Sterelny's view, Fodor and Pylyshyn have missed alternative explanations of systematicity. In this respect, to Sterelny⁸¹ we argue that systematicity is a fundamental fact of our cognitive life. Sometimes cognitive psychology claims the view that human active short-term memory seems to hold about seven (unrelated) items. But no one would what to claim that it is a fundamental feature of our cognitive organization. Perhaps, that

fact is very likely a consequence of the amount of neural tissue dedicated to short-term memory.

Systematicity is a functional feature of our mental organization if our minds are systematic. Thought it is not a consequence of our basic mental organization. Now from the claim that systematicity is a functional, rather than an implementational, feature of our mental life we come to the idea that systematicity is to be explained by the basic architecture of our cognitive system. Braddon-Mitchell and Fitzpatrick⁸² argue against this claim. They agree that mental representation is not punctuated. For a punctuate mind is incapable of having some thoughts, including, survival and reproduction enhancing ones. So natural selection will tend to build a no punctuate mind. Minds are typically systematic but the explanation is selective rather than architectural. No connectionist believes that the systematicity of intelligence is a chance by-product, or any personal peculiarity.

But as we move our attention away from the famous three Fs (feeding, feeling and fighting), so we should expect only a rough approximation to a non-punctuate mind. Again there is no reason to accept the view that cognitive representation is systematic. In this respect Fodor and Pylyshyn raise a question whether nonverbal minds, and the nonverbal parts of our minds, are systematic. However, it is not plausible that only the verbal minds are systematic.

Sterelny doubts that animal representation is systematic. For separation of form and content is a necessary part of systematicity, but we cannot assume that other creatures except human have achieved the radical separation of form and content. There also raises

a question whether perceptual representation is systematic or not. According to ethological literature, apparently behaviour patterns are realized by perceptual gestalts of some kind, for example, ducklings' new-born imprint on anything that moves.

But in the absence of an explicit definition of systematicity, it is difficult to assess this guess.

Fodor and Pylyshyn argue in favour of the language of thought hypothesis. That is there is an "inner language" of thought that corresponds to the "outer language" which one speaks. In their view language is productive and systematic. And mental representation is also prima facie a productive and compositional symbol system. If so, it is language like on the other hand connectionists argue that mental representation is not punctuate, but they can give no explanation of why mental lives are not punctuate, for connectionist architecture can be arbitrarily punctuated. Perhaps, not only an architectural explanation will do, but also there are other reasons to accept that mental representation is systematic.

Before coming to any conclusion we need to clarify Searle's well-known skeptical challenge.

John Searle, in his paper on Minds, Brains, and programs (1980)⁸³, argues that computational theories in psychology are essentially worthless. He makes two main claims: those computational theories, being purely formal in nature, cannot possibly help us to understand mental processes; and the computer hardware – unlike neuroprotein – obviously lacks the right causal power to generate mental processes.

According to Searle, all mental phenomena are part of our natural biological history, as much a part of biology as growth, digestion, enzyme secretion or reproduction. So, to express the relation between mind and body he proposed that all mental states, from the profoundest philosophical thoughts to the most trivial itches and tickles are caused by neurobiological processes in the brain. Generally, this sort of relation is quite common in nature⁸⁴.

Searle rejects the possibility of cognitive science and artificial intelligence. Cognitive science is mistaken in thinking that the mind is a computer program. In his view minds cannot be identical with computer programs, because programs are defined syntactically in terms of the manipulation of formal symbols, whereas minds have mental or semantic contents. Searle has explained this point with the help of his famous Chinese Room Argument. He illustrated it with the following story.

He imagines himself locked in a room, in which there are a lot of Chinese symbols in boxes; a window through which people can pass bunches of Chinese symbols to him, which are called questions, and through which he can pass out the answers to the questions; and a book of rules in English for matching Chinese symbols with other Chinese symbols. To him the boxes of symbols are called a database, and the instruction book in English is called a program. The people who give questions to him and designed the instruction book are called the programmers, and he is clearly a computer. We imagine that he gets so good at shuffling the symbols, and the programmers get so good at writing the program, that eventually his 'answers' to the 'questions' are indistinguishable from those of a native Chinese speaker. He passes the Turing test. But all the same, he does not understand a word of Chinese and – this is the point of the story

– if he does not understand Chinese on the basis of implementing the program for understanding Chinese, then neither does any digital computer solely on that basis because no digital computer has anything that he does not have.

The logical structure of this argument as follows:

- (a) Computer programs are purely syntactic. So what a computer does in processing information is nothing but meaningless symbol manipulations.
- (b) Minds have contents (semantics).
- (c) Syntax can never give us semantics.
- (d) Hence computer programs are not minds.

“There are several common misunderstandings of the Chinese Room Argument and of its significance. Many people suppose that it proves that no machine can think. Searle’s point here is that humans can think, and human are machines; even he adopts the materialist credo that only machines can think. He is not saying that human and programs are utterly incommensurable. He grants that, at some highly abstract level of description, people like everything else are instantiations of digital computer. Searle argues that no system can understand anything solely in virtue of its instantiating a computer program”⁸⁵.

Various attempts have been made to reply to the points raised by Searle. Understanding is not explained by postulating an “understanding centre” within a black box. Understanding is to be attributed to the organization as a whole. The Chinese Room understands Chinese, even though no proper part of it does. Searle is right in thinking that thinking or understanding is not a mere manipulation of symbols. For thought to have

content it must be appropriately connected with the thinker's environment. The symbols are given content by their causal connections with world. The connections to the environment are not within the computer.

The problem remains however that intelligence cannot be regarded as mechanizable reasoning. Unless this problem is solved satisfactorily a computational theory of the mind will not be acceptable.

Some kind of physicalism in philosophy of mind seems to be inescapable. There cannot be two things mind and matter. Computers have given us some idea about how mind can function. However, the precise character of the functioning of the mind still remains a mystery and the representationist theory appears only as a research program. We cannot decide whether it is ultimately true without further philosophical reflection buttressed by empirical research to be undertaken in the next thousand years.

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