CHAPTER-3
IDENTITY THEORY: ITS PROBLEMS

In the first chapter we discussed in details the identity theory advocated and developed by different philosophers beginning with Place, Feigl and Smart. Although this theory is better than dualism and Behaviourism, still it has its own problems. This theory leaves many things unexplained with regard to the relation between mind and body which have been questioned by different thinkers in different periods of time. Now we explore some of the problems often raised against identity theory. These problems are— the problem of identity, the problem of co-existence and the problem of consciousness. These three problems will be discussed in three sub section of this chapter. Let us begin our discussion with these problems.

3.1 The Problem of Identity

There is a serious objection against the mind-brain identity theory which has not been satisfactory resolved. This problem concerns various non-intentional properties of mental states on the one hand and physical states on the other. For example, after images may be green or purple in colour, but nobody could reasonably claim that states of the brain are green or purple. Moreover, it may be the case that with a fair degree of accuracy brain states are spatially located where mental states are traditionally assumed as non-spatial. The identity theory thus appears imply violation of Leibnitz’s Law, according to which two
identical things must have the common properties and thereby their differences are indiscernible.

Another problem of the theory is that it fails to give a satisfactory answer to the question of the relation and difference between mental and physical.

Hillary Putnam challenges the identity theory from consideration of multiple realizability. According to him, 'pain' is experienced not only by humans but by many different species of animal. But it seems unlikely that all these diverse organisms with the same pain experience are in the same identical brain state. And if the latter is the case, then pain cannot be identical to a specific brain state.

J. R. Searle puts forward certain problems for the identity theory. He states that identity theory violates the principle of logic called "Liebnitz Law". According to this law, any two things are called identical if and only if all the properties which they bear are found common to both of them. This means that the properties which we find in one thing are also the properties which we find in another thing. If this law is violated, that is, if it is possible to show that the properties of mental state cannot be attributed to brain and vice-versa then it refutes the identity theory. In this connection Searle cites an example-

"So I can say, for example, that the brain state that corresponds to my thought that it is raining is 3 cm inside my left ear; but, according to the objectors, it does not make any sense to say that my thought that it is raining is 3 cm inside my left ear. Furthermore, even for conscious states that have a location, such as pain, the pain may be in my toe, but the brain state that corresponds to that pain is not in my toe, but in my
brain. So the properties of the brain state are not the same as the properties of the mental state. Therefore, Physicalism is false”.1

There is another objection against the identity theory. If the identity of mental states and brain states are empirical one, that is if the identity is discovered empirically, for example, if it could be discovered on the analogy with water and H₂O, or lightning and electrical discharge, then it seems that there would have to be two kinds of properties which will define the two sides of identity statement. And these two kinds of properties must identify one and the same thing. Thus when it is said by the identity theorists that ‘lightning is identical with an electric discharge’ they must have to identify one and the same thing in terms of the properties of lightning and the properties of electrical discharge, or when it is said that ‘water is identical with H₂O molecules’ has to identify one and the same thing in terms of the properties of water and the properties of H₂O. Thus when the identity theorists claim that ‘pain is identical with a certain types of brain state’ they have to identify one and the same thing in terms of the properties of pain and the properties of brain-state. But problem arises if it is believed that in the identity statement there are two sets of properties and these properties are independent. In that case it appears that there are two different types of properties – mental properties and physical properties. And this belief of two sets of properties takes us back into property dualism.

Again, if it is true that all mental states are brain states, then what appears is that brain states are of two kinds – mental states and non-mental states. The mental states are of brain have mental properties and

those of non mental states of brain have only physical properties. If it is so, then it sounds like property dualism.

Another objection slightly more technical was labeled against the identity theory and this was the accusation of 'neuronal chauvinism'. This objection really vibrated the identity theorists and they were indeed forced to do some modification in their theory. This charge was highlighted by Searle and says-

"If the claim of the identity theorists was that every pain is identical with a certain kind of neuronal stimulation, then it seems that a being that did not have neurons or that did not have the right kind of neurons could not have pains and beliefs. But why can not animals that have brain structures different from ours have mental states? And indeed, why could not we build a machine that did not have neurons at all, but also had mental states?"²

Searle claims that facing this objection the identity theorists are bound to shift from what is called ‘type–type identity theory to ‘token–token identity theory’. Thus in order to establish this claim Searle explains the distinction between type and token. Write the word “cow” three times: “cow” “cow” “cow”. A question arises whether one word or three words are written. It is not debatable that here one type of word is written in three instances, or three tokens of one word is written. By types he means abstract general entities and by tokens he illustrates those which are concrete particular objects and events of those abstract generals. Thus when it is said that ‘a token of a type’ it means that it is a particular concrete example of abstract general type.

² ibid. p-41.
Let us now see how Searle proves that the identity theorists are moved from a type-type identity theory to a token-token identity theory. According to him, it is the point of the type-type identity theory that every type of mental state is identical to some type of physical state. Searle claims that by their own assertion it is a bit sloppy of the identity theorists. Because the identity in question is not between abstract universal types but between actual concrete tokens. What the identity theorists mean is that for every mental-state type there is some brain-state type and thereby every token of the mental type is nothing but a token of the brain type. The simple version of the token identity theorists, according to Searle, is-

"for every token of a certain type of mental state, there is some token of some type of physical state or other with which that mental state token is identical. They, in short, did not require, for example, that all token pains had to exemplify exactly the same type of brain states even though they were all tokens of the same mental type, pain. For that reason they were called ‘token-token’ identity theorists as opposed to ‘type-type’ identity theorists."

Searle claims that token-token identity seems to be more plausible than type-type identity. In this connection he cites an example that two persons may have same belief that ‘Denver is the capital of Colorado but it is not necessary to suppose that they have exactly the same type of neurobiological state. The neurobiological state of one’s belief might be at a certain point of his brain and another’s might be at another point although they have the same belief.

---

Searle thinks that in giving examples the identity theorists are often found very weak and this is unfortunate. Although they have given different examples, the favorite one is that pains are identical with C-fibre stimulations. But in giving this example both 'type-type' and 'token-token' identity theorists differ in certain extent. The former believes that every pain is identical with some C-fibre stimulation where as the latter believes that not every pain but particular pain might be identical with particular C-fibre stimulation. Regarding other pains they think that this might be identical with some other state of a brain or machine. But all these are designated by Searle as 'bad neurophysiology'. In explaining the status of C-fibre Searle says that C-fibres are a type of axon which carries certain types of pain signals to the brain. Pain mechanism is a complex one in the brain and nervous system and C-fibre is just a part of this complex mechanism. Thus neurophysiologically it would be ridiculous to think that except C-fibre stimulation, there is nothing in the pain. Thus there is a good deal of debate centered round the question whether or not we would get such type of identity as exemplified by the type-type identity theorists. Or is it token identity upon which we could hope for. Searle believes that in between type and token identity, it is latter one which is more influential than the former.

In spite of its acceptability the token identity theorists have been facing another question and this is the question of commonness. What common things are there in all of these tokens which make the same mental state type? If it is believed by both X and Y that Denver is the capital of Colorado then apart from their brain state what exact thing is common in them but again both X and Y have different types of brain states? There are two answers that we find traditionally-one is from the
dualist's quarter and another from type-type. But none of these answers will do for the token physicalist. Because the whole idea of the token identity theorists is to eliminate any type of irreducible mental properties and as such they cannot accept that the common thing in between X and Y is same irreducible mental properties. Again, the token theorists cannot accept the view that the same type of brain state is common in X and Y because it is this point disagreeing upon which there is move from type identity to token identity. Thus the answer that a particular mental state type and certain brain state type are identical cannot save the identity theorists from their downfall.

Soul Kripke also raised an objection against type-type identity theory from consideration of rigid reference. The identity theorists claim that the identity of mental and brain states are contingent. But Kripke argues that this identity is necessary, if true. He introduces two types of designators of entity, namely, rigid and non-rigid designators and holds that rigid designators refer to the same entity in every possible world and therefore identity of two entities referred by two rigid designators are necessary. Non-rigid or flaccid designators may refer to different entities in different possible worlds and identities of their referents thereby are contingent. The expression 'Benjamin Franklin' which always refers the same person is a rigid designator. The expression 'The inventor of daylight saving time' which, according to him, is a non rigid designator, although this expression refers to Benjamin Franklin in the actual world. In a possible world Benjamin Franklin may not be the inventor of daylight saving time. Anybody else other than Benjamin, the actual inventor, might have been the inventor of daylight saving time. On the other hand, it is not the case that someone else, other than Benjamin Franklin, might have been
Benjamin Franklin. It is due to this reason Kripke says that ‘Benjamin Franklin’ is a rigid designator, whereas ‘the inventor of daylight saving time’ is non-rigid.

Thus with these two types of designators Kripke examines the mind-body identity statement. He claims that if one term is rigid and another is non-rigid in an identity statement, the statement is not necessarily true and it might turn out to be false. Thus the statement ‘Benjamin Franklin is identical with the inventor of daylight saving time’ is true no doubt but this truth is contingent one because there may be a possible world where this statement is false. Kripke says that a statement must be necessarily true if it is the case that both sides of the identity statement are rigid and the statement is true. In this connection he cites the statement ‘Samuel Clemens is identical with Mark Twain’ and says that this statement is necessarily true because here both sides of the above statement mean one and the same person. It is impossible to imagine that there is a world where Samuel Clemens exists and also Mark Twain exists but they are not one and the same person but two different individuals. This is also true in the case of words that name natural kinds of things, for example, the statement ‘water is identical with H₂O’. Here both the expressions ‘water’ and ‘H₂O’ are rigid and the statement is true, therefore, this identity is necessary. Kripke finds the relevancy of this kind of argument in the case of mind-body problem. He says that if it is found that both the expressions ‘mental state’ and ‘brain state’ refer rigidly and the identity statement containing those expressions is true then the statement must be necessarily true. Thus ‘pain is equivalent to C-fibre stimulation’ would have to be necessarily true if it is the case that pains were really identical with C-fibre stimulations. Here all these depend on the condition that if it were to be
true at all. But Kripke claims that this statement is not necessarily true. Because it can be imagined that there exists pain without a C-fibre stimulation and also C-fibre stimulation without pain, although pains and C-fibre stimulations have strict correlations in this world. Thus Kripke logically concludes that if the statement 'pain is identical with C-fibre stimulation' is not necessarily true on the ground mentioned above then it cannot true at all, and hence it is false. His suggestion regarding identification of pains and neurobiological events is that there is a hope for identity theory if it is really the identification of particular conscious mental states and physical events.

3.1.1 The Problem of Co-existence

In the previust section of the present chapter we have explored the problem of identity that has been faced by the identity theorists. Now in this section we shall high light another problem that has been raised by the critics of the theory, and this is the problem of co-existence.

This problem is discussed by Shaffer (1994) from two standpoints: co-existence in time and co-existence in space. According to him, if two things are really to be identical then they must fulfill the conditions of co-existence in time and space. Two things which are apparently different may be one and the same; subject to condition that they must exist at the same time and in the same space. For example, whether Mr. X and Mr. Y are two different individuals can be assessed by ascertaining whether Mr. X existed in a particular location where Mr. Y was absent or whether Mr. X existed in a particular time when Mr. Y was absent. A person who was blamed for an offence can be declared innocent only by virtue of the fact that he was not there at the
time of the offence and hence he cannot be the offender. It is
undoubtedly true that the person who stole the diamond in Chicago and
Mr. X are certainly not one and the same person if Mr. X was not in
Chicago at the time when it was stole.

Mental events and physical events are said to be identical if and
only if they meet the conditions of co-existence of both time and space.
Now we shall scrutinize the identity theory and see whether this theory
fulfils the condition of co-existence.

Shaffer admits that we have very little knowledge about the co­
existence in time. So far we have facts in our hands is only from the
brain surgeon who is capable to stimulate the exterior part of the brain
during surgery. He says that in many cases at the moment of brain
operation, a patient may be fully conscious as because at that time only
a local anesthetic is necessary. Thus the brain patient may report the
happenings of different mental events, such as, memories, thoughts,
and sensations etc. during the stimulation of the different parts of the
brain by the surgeon. Now question arises whether both physical events
in the brain and mental events occur exactly at the same time or not. It
is certainly impossible at present to answer it rightly. To prove that both
physical events and mental events were not identical, it is only a very
small gap in time is required. But the more difficult task is to establish
that there is really a small gap in that case. Supposing that a small time­
gap is established but yet it would not be correct to generalize that
mental event and physical events are not identical. At best it can be said
that the mental event was not identical with just that physical event.
Thus Shaffer believes that as there is no possibility to have conclusive
information from this sort of empirical work just described, so for long
So far we have discussed above the problem of co-existence of time as analysed by Shaffer and it is evident from this analysis that identity between mental events and physical events cannot be fully accepted or rejected outright. Now effort will be made to see whether co-existence in space is possible given the identity theory. Shaffer is of the opinion that this task is also not so easy. It is very difficult to answer whether mental events and physical events occur in the same space or not. Shaffer believes that there are mainly two reasons for which the difficulty arises. These are:

1. Regarding knowledge of neurophysiology we are yet not fully aware. We are almost ignorant about the nature and function of the brain for which it is not possible to localize the relevant physical events. At best we can say that physical events are located in the brain and not much more than that known even up to present day. It may be that in the near future we will be able to learn much more about that.

2. Regarding the location of mental events we are also not fully clear for which it is difficult to say that there is identity in space of both mental events and physical events. It is very difficult to answer whether the mental events, such as, thought, feelings and wishes occur in the brain or any other places. If someone thinks something and if he is asked to answer the exact location where his thinking occurs then the obvious answer would be that it occurs in the place wherever the person concerned is when he has that thought. If he is in the college when he thinks, then his thought occurs in the college and nowhere else. But to ask the exact location of his interior part of the body where his thought
occurs, whether it is in foot or liver or heart or head, is utterly unnatural. Because no one of these places is a location where thought occurs and therefore, preference of one place than another is a wrong answer. But all these do not mean that other than foot, liver, heart or head, our thought occurs somewhere else of our body. It is rather nonsense to say that somewhere else in our body the thought occurs. Someone may point a place of his body and claim that on that point his entertaining thought was located. But this claim is difficult to understand. Because it is certain that observing thoroughly the claimed point one would not be able to see anything resembling a thought. In reply to this point the identity theorists may further claim that pain can be located in the body but it cannot be seen. But this claim paves the answer that pain can be felt by someone but it is rare case that some one feels a thought in the body.

From the above analysis Shaffer says that as it is meaningless to say that in some point of body mental events occur, so it proves that identity theory cannot be true. If it is claimed that physical events occur somewhere within the body and if it is really true that these physical events are identical with mental events then logically it might be concluded that these mental events must occur in some point within the body. But, according to Shaffer, it is senseless to say that mental events occur here or there within the body because these actually do not occur at any point within the body. Thus he says that as mental events fail to fulfil the condition of co-existence in space and therefore in no way these can be identical with physical events. Shaffer says that we are unable to find out the location of both mental events and physical events in our body. But these inabilities in two cases are different. In the case of physical events, particularly of brain events, our knowledge
is not so enough. But it may be assumed that after some days we will be able to know the exact location of relevant physical events. But this cannot be said in the case of mental events. There is no hope that in future our knowledge about the location of mental events will increase. To discover the location of thought in our brain is really a difficult task. There is no means by which we can find out the exact location of thought in our brain. It may be that every event that occur in our brain is understood by means of x-ray or by other means, but these means in no way ca give us a glimpse about thought. To solve the problem it may be imagined that brain could be enlarged or shrink where we can roam about freely but in that way also we will not be able to find out the location of thought. It is only physical events that we will observe occurring in the brain. Thus Shaffer says,

“If mental events had location in the brain, there should be some means of detecting them there. But of course there is none. The very idea of it is senseless”.

Thus far we have discussed the problem of identity and the problem of co-existence that have been faced by the identity theory. But here we should not make any attempt to solve these problems as because next chapter of this dissertation is allotted purely for resolving the problems that have been raised by the critics of this theory. Let us look at the next problem.

3.2 The Problem of Consciousness

In his article “Is consciousness a brain process?” – Place states that consciousness is a brain process. Prima facie it sounds odd because when we are aware of something it seems that the experience cannot be

---

4 J. A. Shaffer (1994), Philosophy of Mind, p-49.
described merely by neurophysiological process. To explain this awareness is a great challenge to the Identity theorists. Now in this chapter we shall try to explore the problem of consciousness.

It is undoubtedly true that the phenomenon of consciousness is familiar to us and cannot be denied. In our waking lives at every moment we are conscious of something or other. In every phase of existence, except in case of our deep sleep or in a coma or otherwise, this feature is there. Sometimes the term 'conscious' is used in the sense of 'awake' or 'aware' and we know what the substitute terms mean. When someone awakes from deep sleep he regains his awareness of what goes on in and around him after a temporary suspension of consciousness. Similar things happen when caused by general anesthesia. We say that he is conscious now. None can deny the fact that central and crucial feature of mentality is consciousness without which we cannot accept that we are a kind of being or creature with mentality. Hence it is commonly accepted that a person who has lost permanently the capacity for consciousness is not with us.

But in spite of all these it is true that one of the biggest mysteries of the universe is consciousness and in our quest for a scientific understanding of the universe, its comprehension is an outstanding obstacle. One cannot admit that the science of physics has completed its findings about the universe without making mind understandable. Similarly, regarding the nature of life there were many mysteries which have been removed by the science of biology. It is true that in our understanding of these fields, there are philosophical gaps but that is natural to any field of inquiry.
It is true that in recent times much progress has been made in the science of mind. For a better understanding of the human behaviour and of the processes that produce it, the recent work in cognitive science and neuroscience is leading us. In theories of cognition we do not have perfection but it is sure that the details are not too far from our reach. Yet consciousness is a matter of puzzle. That the causation of behaviour should be accompanied by a subjective inner life is still utterly mysterious. The view that the physical system, such as, brain is the cause of consciousness is believed by us as because we have good reason in favour of such a belief. But to answer the question of how it arises, or why it exists at all, we have little idea. Brain is a physical system but how this physical system is also a system of an experience at the same time is undoubtedly a genuine and complex question. Thus the question about consciousness is really a difficult one and this difficult question is hardly touched by the recent scientific theories. In order to answer the question how consciousness fits into the natural order, it cannot just be said that we have no detailed theory about it. It is rather that we are entirely in the dark about consciousness.

In explaining the notion of consciousness Armstrong says, "Consciousness, or experience, then (as opposed to completely unselfconscious mental activity which is perfectly possible, and which occurs in the case of the ‘automatic driving’) is simply awareness of our own state of mind. The technical term for such awareness of our mental state is ‘introspection’ or introspective awareness.”

While debating with Norman Malcolm, Armstrong compared consciousness with proprioception. In explaining the nature of proprioception he exemplifies that when our eyes are not open and

without touch we are immediately aware of the angle at which one of our elbows is bent, a case of proprioception occurs. Different from that of bodily sensation, proprioception is a special sense by which we become aware of the parts of our body. We also become aware of the states and processes of our brain through proprioception. Armstrong makes a distinction between proprioception and mere awareness. As distinguished from mere awareness, the proprioception is higher order awareness. Here one part of brain is perceived by the brain itself. He anticipates that some may see regress here that is, there can be proprioception of proprioception, proprioception of proprioception of proprioception and so on. But he believes that this sequence will not probably go up more than two or three steps. In this sequence, the last proprioception will not be propriocepted. This may help to explain our sense of the ineffability of consciousness.

In the past few years many philosophers have written different books and articles on consciousness and might claim that they have made progress in answering the problem of consciousness. But if one looks into the matter closer then he will find that the claimer has not touched the hardest problem of consciousness. They either knowingly or unknowingly ignored the central problem of consciousness. Thus the problem of consciousness has remained a puzzling one forever. But this does not mean that it is a matter of despair. Rather this puzzlement makes the problem of consciousness an exciting challenge to the intellectuals at present time. It is because of the fact that this problem is a fundamental one and at the same time ill understood. Our conception of the universe and of ourselves is profoundly affected by a solution of the problem.
Some people are of the opinion that consciousness is an illusion. But this opinion cannot be accepted as because among all other things that we find in this universe, consciousness has the surer existence, although its existence cannot be proved. Its existence is understood directly. Narrating the nature of consciousness, Chalmers (1996) says:

“That consciousness is a natural phenomenon seems hard to dispute: it is an extraordinary salient part of nature, arising throughout the human species and very likely in many others. And we have every reason to believe that natural phenomena are subject to fundamental natural laws; it would be very strange if consciousness were not. This is not to say that the natural laws concerning consciousness will be just like laws in other domains, or even that they will be physical laws. They may be quite different in kind.”

Chalmers points out that consciousness cannot be defined. What can be said about consciousness is its clarification. Thus he says that in the most interesting sense, experience is central to consciousness. It is fruitless to define consciousness in terms of more primitive notions. Thus Chalmers openly admits that ‘consciousness’ refers to a number of phenomena and thus this term is ambiguous. But he categorically states that when he talks about consciousness, he talks by the term only about the subjective quality of experience.

In developing the account of consciousness Chalmers accepted a number of constraints. Among these constraints the first and most important one he mentions is that to take consciousness seriously. In developing a theory of consciousness the easiest way, according to him, is to deny its existence or it is better to say that the phenomena which

---

are needed for explaining what it is not must be redefined. But this approach does not really solve the problem; rather the strategy escapes the problem. In his book ‘The Conscious Mind’ Chalmers assumed that consciousness exists. But it is unacceptable to him to redefine the problem by explaining how certain cognitive or behavioural functions are performed.

Chalmers believes that consciousness is a problem no doubt and this problem lies uneasily at the border of science and philosophy. He further emphatically stated that the problem of consciousness is properly a subject matter of science. Like motion, life, and cognition, it is a natural phenomenon and the explanation of consciousness is possible in the way that these are done. But it is also true that by the usual scientific methods consciousness is not investigated. In observing the phenomenon of consciousness, it is difficult on the part of scientific method to have grip over it. The collection of data of consciousness is very hard outside the first person case. But this does not mean that there is no relevance of external data. Before justifying the relevancy of external data we will have to arrive first at a coherent philosophical understanding. Thus Chalmers’ conclusion regarding the problem of consciousness is that, may be it a scientific problem but it requires philosophical methods of understanding.

Chalmers has given arguments for rejecting a materialistic account of consciousness. He holds that materialism cannot explain how consciousness could amount to physical structure and processes. He argues that if one takes consciousness seriously, he should endorse dualistic theory like the property dualism. In the philosophical study of consciousness there are mainly three schools of thought. Viz., (a) dualism with its forms, (b) materialism, and (c) eliminativism. Among
these three schools of thought, the study of consciousness is the most controversial issue and Chalmers provides a good guide to the important issue. He also claims that eliminativism does not take consciousness seriously, so he argues against this theory. Thus in this chapter we will try to explore Chalmers' and other prominent philosophers' view of consciousness against materialism.

Let us start with the question - what is consciousness? Some philosophers often referred to consciousness as what it is like to feel pain or to see the colour red. There are different terms used by philosophers, such as, 'qualia', 'phenomenal feel', and 'the subjective quality of experience' and all of these terms make reference to consciousness. There are grammatical differences among these terms but apart from these there are mostly subtle differences among these which are known as a matter of connotation. Thus Chalmers says that 'to have qualia', 'to have subjective experience' and so on are roughly synonymous with 'to be conscious'. He has mentioned a catalog of conscious experiences. These are – visual experiences, auditory experiences, tactile experiences, olfactory experiences, taste experiences, experience of hot and cold, pain, other bodily sensations, mental imagery, conscious thought, emotions and sense of self.

After mentioning the different types of conscious experiences Chalmers also mentions that this catalog covers only a number of cases and it leaves out some other important experiences which he does not mention in this list. Dreams, arousal and fatigue, intoxication or the novel character of other drug-induced experiences may also be included in the list of conscious experiences. He also mentions that from the combination of two or many of the components as mentioned above, there are also rich experiences. In the list of conscious experiences
given above he only mentions the combined effects of smell and taste. But in addition to these, there are other combined experiences such as, music and emotion which are difficult to separate because they interact in a subtle manner. He also mentions that another important thing that he left aside is the unity of conscious experiences which is experienced by a single experiencer. This kind of experience is very difficult to pin down as because it is very much different from any other specific experiences. Due to its complexity sometimes it seems to be illusory. But Chalmers believes that there is a strong intuition behind this unity of experience.

Chalmers holds that it is not correct to say that mind is full of wholly conscious experiences. In this connection he refers that modern cognitive science says so much about mind in general but it says nothing about consciousness. This cognitive science deals with the explanation of behaviour and it believes that the internal basis of behaviour is mind. It also believes certain mental states which are relevant to the causation and explanation of behaviour. But it cannot be certainly stated that these internal mental state, which are responsible for the causation and explanation of behaviour is conscious or not.

He further says that there are two distinct concepts of mind which lie at the very root of this analysis. Of these two concepts the first one is phenomenal and the second is psychological. All conscious experiences or consciously experienced mental states are phenomenal. The psychological concept is the causal or explanatory basis of behaviour. Thus whether a mental state has a conscious quality or not is less important for psychological concept of mind. But Chalmers believes that these two concepts of mind are intimately related. He also believes that mental is exhausted by these two concepts of mind and
that is why he declares that all mental properties must be either phenomenal or psychological or both. Even intentional states, emotional states and others can be assimilated in any of them or to both.

There are different ways through which the problem of consciousness can be viewed. One of them is to think of it as the old mind-body problem with a new set of concepts to consider. In recent times one of the most important debates about consciousness is that of supervenience. The concept of supervenience can be understood as dependence relation between two sets of properties. Suppose there are two levels of properties, a set of higher level properties and a set of lower level properties and if the higher level properties depend upon the lower level properties then the set of higher level properties supervenes on a set of lower level properties. This supervenience is defined by Chalmers as

“B-properties supervene on A-properties if no two possible situations are identical with respect to their A-properties while differing in their B-properties.”

The purpose of the notion of Supervenience is to have understanding of higher level properties of organism, such as, size, shape and behaviour which really depend upon and can be explained by much lower level properties, such as, genes, DNA, nerve impulses etc. Supervenience can be of several types- logical, metaphysical and natural supervenience. These concepts can help us understand the argument put forward by the materialists, property dualists and eliminativists. Chalmers characterizes logical supervenience as follows,

---

7 Ibid, p-33.
"B-properties supervene logically on A-properties if no two logically possible situations are identical with respect to their A-properties but distinct with respect to their B-properties."\(^8\)

It is impossible on the part of God to create a world where bachelors are married. Because here the meaning of the two terms ‘bachelors’ and ‘married’ are contradictory. So it is logically impossible for a bachelor to be married and this impossibility is due to the meanings of these two terms. Hence, a man’s bachelorhood logically supervenes on his marital status. However, it is supposed to be possible on the part of God to create a world and in this world certain laws, such as, ideal gas laws did not hold. It is certain that in our world this could not happen. But if a few laws of physics were changed by God, then the ideal gas law could also change.

But Chalmers believes that beside logical supervenience there can be other supervenience. He describes natural supervenience as the result of two sets of properties being found in the natural world but systematically and perfectly correlated. The concept of natural supervenience is formally stated as: B-properties supervene naturally on A-properties if any time two situations which could naturally arise in our world share the same A-properties; they also share the same B-properties. The natural laws in our world, such as, the laws of physics, upon which it depends whether some properties naturally supervenes on another property or not. It is empirical possibility and impossibility by which natural supervene has to be understood. Supervenience is there where two properties are related by causally necessity in our world, not in all possible worlds. The ideal gas law is an example of naturally necessary phenomena which is not logically necessary. If it
happens that B-properties naturally supervene on A-properties, then it is conceivable that without the same A-properties the same B-properties could be instantiated. It would break the laws of physics if it ever happens in our world.

So far we have discussed the logical supervenience and natural supervenience. Now we shall discuss metaphysical supervenience. It is not based on either logical or natural necessity but on metaphysical necessity. This type of identity is credited to Saul Kripke. He makes a distinction between logical identity and metaphysical identity. Logically two things are identical if it is impossible that they could be distinct things and the identity is due to the meanings of the terms. But metaphysical identity depends upon how our world turns out. The identity of water and H₂O is the classic example of metaphysical identity. Kripke’s argument that, once we discover the chemical composition of H₂O is water in our world, it will be same thing in all possible worlds. We may imagine that the stuff we find in lakes and oceans, that is water, might not have had the chemical composition H₂O. But once the identity of water and H₂O is discovered a posteriori, metaphysically water is identical to H₂O.

The metaphysically supervenience can be formally exemplified as B-properties supervene metaphysically on A-properties if it is metaphysically impossible for two situations or objects to have exactly the same B-properties without having the same A-properties.

Thus it is some form of metaphysical identity or metaphysical supervenience on which the materialists often appeal in order to find out a way to overcome the recent debate on consciousness and to hold materialism. But Chalmers firmly believes that materialism cannot be
saved by the notion of metaphysical identity. His view is that the problem which he raises with the logical supervenience cannot be avoided by the materialist on the appeal to metaphysical supervenience. Hence, the materialism must hold that consciousness is logically supervenient on the physical and therefore, materialism fails to solve the problem of consciousness.

In order to reject materialism Chalmers puts forward arguments against the logical supervenience of consciousness. His first argument stems from the logical possibility of "zombies". In the philosophical literature a 'zombie' is supposed to be a person-like being in all respects having language ability, appearance, behaviours, possession of beliefs and desires. But in spite of all these similarities, it lacks consciousness. Chalmers himself imagines his zombie twin who lives on a twin earth and who is physically identical to him. He also believes that the physical environment of this twin earth is identical with our own. The zombie twin that he imagines also looks and acts just like real Chalmers does in our real world. But the twin Chalmers lacks all kinds of phenomenal experiences that one being experienced by the real Chalmers.

Chalmers by his imaginative argument tries to show that zombies are logically possible creatures and this logical possibility of zombies proves that materialism is false. Thus by the following his argument can be summarized.

1. It is an empirical claim that in our world consciousness exists.

2. Because zombies are logically possible, consciousness cannot logically supervene on the physical.
3. Therefore, just by appeal to physical facts one cannot explain the occurrence of consciousness.

It is the contention of Chalmers that materialism is committed to the view that consciousness is logically supervenient on the physical and therefore materialism is false.

Levine (1983) also comments on the materialist theory. He coined the expression “the explanatory gap” to express a difficulty for any materialist attempt to explain consciousness. In explaining the problem of materialism he says that it is very difficult for us to understand the relationship between brain properties and phenomenal properties in any explanatory satisfying way and this is a basic problem. An odd kind of arbitrariness involved there. The question with which this arbitrariness arises is – why or how does some particular brain process produce that particular taste or visual sensation? To find out any real explanatory connection between specific conscious states and brain states is a very difficult task. This, according to him, is an explanatory gap between the mental and the physical. This difficulty in explaining consciousness is unique and we do not have similar worries about other scientific identities. The identity that water is H2O or that heat is a molecular kinetic energy are not serious problems as the identity of brain processes and mental states. Thus Levine holds that there is an important sense in which we cannot really understand how materialism could be true.

A similar worry is articulated by Chalmers by using the catchy phrase “the hard problem of consciousness”. By this phrase he refers to the difficulty of explaining how physical processes in the brain give rise to subjective conscious experiences? Here by the ‘hard problem’
he means the problem of experience. It is very hard on our part to explain the question - why do we have a mental image, or experience an emotion? Chalmers acknowledges that similar points are made by others also. Now, the phrase “the hard problem” has gained currency in the contemporary literature. Thus from these and other considerations Chalmers is more inclined to draw anti-materialist metaphysical conclusions than Levine is. It is from the relatively easy problems Chalmers distinguishes the hard problem of consciousness. He exemplifies certain easy problems such as – the ability to discriminate and categorise stimuli, the ability of cognitive system to access its own internal states and the difference between wakefulness and sleep. Chalmers urges to realize that these problems may be solved but the hard problem of phenomenal consciousness remains untouched. But generally easy problems have more to do with the function of consciousness. According to Chalmers, it is easy problems with which most of the philosophers really and only addressing and thus phenomenal consciousness is ignored by their theories.

It is worth mentioning here that although Levine commented on the materialist theory but he does not reject the metaphysics of materialism. He, on the other hand, sees an epistemological problem in materialism which he cognized as the ‘explanatory gap’. This problem, according to him, is primarily a problem having to do with knowledge or understanding.

Another objection against materialism is put forward by Nagel (1974). In his article ‘What is it like to be a bat’ Nagel imagines that a day may come in future where we know everything physical but yet something may not be known. This something he exemplifies by talking about a bat’s experience. We cannot have the bat’s experience.
It will remain a mystery for us what it is like to be a bat. Even from the bat’s subjective or first person point of view we will not be able to know this fact. Thus if it is supposed that we know all of the physical facts about bat but still something remains unknown about it, then analogically we can infer that there is an inherent weakness in the materialism itself. This weakness obviously manifests when it comes to explain consciousness. Even in an ideal future we may be able to know all physical things but still something would remain out of knowledge. But it is to be mentioned here that like Levine, Nagel does not reject the metaphysics of materialism altogether.

The same line of argument is put forward by Jackson (1982, ‘86) also. In his paper ‘Epiphenomenal Qualia’ (1982) Jackson argued that materialism must be mistaken. This argument he extended is known as ‘knowledge argument’. It is about the epistemological limitations of materialism. It is to be mentioned here that the original intention of Jackson was to yield a dualistic conclusion but subsequently that was rejected by him. This argument assumes that all the physical facts about some conscious mind or some conscious experience are known. But yet it does not mean that about the mind or experience all is known. Thus according to him, this unknown knowledge is non-physical in nature and is surely an anti-materialist in some sense. He tells us to imagine a future where a person, Mary, who has been kept in a black and white room from her birth. Remaining in this room she becomes a brilliant neuroscientist and an expert on colour perception. During this period she learns all the physical facts of the world and everything neuro-physiologically about human colour vision but who never sees red colour. But she is released from this room and sees the unknown colour ‘red’, then this experience of red colour is a new and additional
knowledge on her part. This new piece of knowledge must be a fact that contains some non-physical elements for her as because it was taken to be true by hypothesis that she knew all the physical facts. Thus all our knowledge about conscious mind is not knowledge of something physical in nature.

There is another group of thinkers known as mysterians who commented on materialism from another standpoint. They state that it is not possible to solve the problem of consciousness because human beings are incapable to do this because of their cognitive limitations. To them, the problem of consciousness is a hard problem and since human beings have cognitive limitations with respect to this problem, the explanatory gap can never be filled up. Such a view is advocated by McGinn (1989, ’91, and ’95). He compares human beings with that of a rat or dog who is incapable to solve or understand the problems of calculus. He specifically claims that conscious experiences are produced by some brain property but as human beings are cognitively closed, so they do not know what that brain property is or by what process brain produces conscious awareness. We will not be allowed to grasp the physical and causal basis of consciousness simply by our concept forming mechanisms. Conceptually we are not suited to be able to do so.

It is to be noted here that the metaphysics of materialism is not rejected by McGinn, rather he has a pessimistic attitude towards solving the problem of consciousness. For his pessimistic conclusion he presents another argument. It is his observation that there is no mental faculty in us which can access to both consciousness and the brain. There are different procedures by which we can enter to both consciousness and brain. Through introspection or the first person
perspective we access to consciousness. On the other hand, through the use of outer spatial senses or a more third-person perspective we access to the brain. Thus there is no way to access both the brain and consciousness together, and therefore, any explanatory link between them is not within our reach.

So far we have highlighted the different problems such as the problem of identity, the problem of co-existence and the problem of consciousness that has been faced by the identity theory. In the next chapter we will attempt to reveal the materialists attempt for the resolution of the problems.