CHAPTER-1

IDENTITY THEORY: INTRODUCTION

1.1 Historical Antecedents

Every branch of study has its history and this is also true in the case of philosophy. It is also true that philosophical theories are formulated in response to earlier ideas with regard to a philosophical issue. Identity theory too has its historical antecedents.

The recorded history tells us that both philosophers and non-philosophers have struggled to give answer to the question— what exactly is mind? Although the question is simple its answer is not easy to give. Some propose that mind is a spiritual entity and temporarily resides in body. It enters into body at the time of birth and leaves it on death. Others propose that there is an intimate relation between mind and body although they do not consider mind as an entity. Mind exists when body is organized in a particular way, and when this particular organization is destroyed, mind becomes nonexistent. Over and above these two views, there is a third opinion according to which mind is an entity and this entity is physical. Mind is just Brain. All these answers are controversial theories of mind.

But we shall not discuss all these views in this section. We will highlight those theories that triggered the views of the thinkers who
contributed to the emergence and development of the Identity Theory of Mind.

In the modern era philosophy of mind effectively begins with the work of Rene Descartes. It can be firmly admitted that the problem of mind was not introduced by Descartes first. It is a problem that has been treated as one of the central problems in Anglo-Saxon philosophy from early Greek period. However, Descartes view was most influential in modern philosophy of the seventeenth century and afterwards. His views were so influential that many of his views were accepted by people of then uncritically. Descartes theory of mind is known as dualism. This theory proposes the existence of two entities - mind and body, two distinct substances. As he accepts the reality of two substances, his dualism is sometimes called "substance dualism". In describing the nature of mind and body Descartes says that the essence of mind is consciousness or thinking and the essence of the body is extension. Descartes further maintains that the essences of both mind and body have different modes or modifications. Being extended, body can be divided indefinitely. But this is not possible in case of mind.

Descartes theory of mind-body may be summarised in the table below:

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<thead>
<tr>
<th>Substance</th>
<th>Mind</th>
<th>Body</th>
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<tbody>
<tr>
<td>Essence</td>
<td>Thinking (consciousness)</td>
<td>Extension (having spatial dimension)</td>
</tr>
<tr>
<td>Properties</td>
<td>Known directly</td>
<td>Known indirectly</td>
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<tr>
<td></td>
<td>Free</td>
<td>Determined</td>
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<td></td>
<td>Indivisible</td>
<td>Infinitely divisible</td>
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<td>Indestructible</td>
<td>Destructible</td>
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Descartes firmly states that in spite of their opposite nature, both mind and body influence each other and there is a causal relation between the two and that is why his theory is also known as interactionism.

This theory of Descartes created endless debates. Critics have pointed out that Descartes, instead of solving the problems left us with a number of problems. There are several problems in his theory but the most vital problem is to explicate the exact relation between the mental and the physical. How can there be a causal relation between two completely different entities? How does anything in the body cause anything in the mind and vice versa? This problem that Descartes left for us is commonly called the "mind-body problem". All the subsequent philosophers who worked on the philosophy of mind concerned themselves with this problem. But the problem remains a vibrant one in contemporary philosophy in spite of considerable progress made over the centuries.

The question that Descartes answered and left it incomplete re-emerges in its modern version as, 'How can brain processes produce mental phenomena at all? Or 'How can brain cause mind?' This question is a specific form of the question 'How can anything physical produce an effect inside the soul, which is non physical? Another question is how can events in some one’s soul affect the physical world? Descartes probably did not think of such questions. Descartes did not think of a general question like 'how can a mental substance arise out of neurobiology?' His question was that how an injury of the body produces a specific mental event such as feeling a pain. In contemporary literature, the very existence of the mind is explained by the operation of the brain, a hypothesis which Descartes did not think
of. His only question was how an event occurring in the body could cause specific thoughts and feelings like sensation of pain.

Moreover, we surely and certainly believe that our bodies with their brains are conscious, which Descartes did not believe. According to him, as the material objects like chairs, tables, houses or any other hunk and junk are unconscious; so are our bodies and brains. It is only souls which are conscious and these conscious souls are separate from the body although somehow these are attached to human bodies.

In addition to this fundamental difficulty of relating mind with body, Descartes' dualism suffers from many other defects. Descartes tries to answer the critics, but it can be surely stated without exception that Descartes' answer was inadequate. Descartes himself was also aware of the inadequacy of the answer. He never felt that the problem of the causal relation of mind and body had been resolved by him. This failure of Descartes gives credence to the belief that substance dualism in any form is unable to solve the mind-body problem.

It is true that the problem of causal relation between mind and body is inherited by all forms of substance dualism. The followers of Descartes face an additional problem. It appears that substance dualism is very much inconsistent with modern physics. Physics categorically states that the total amount of matter or energy in the universe remains constant. It never increases nor decreases. But contrary to the claim by modern physics, it is implied by substance dualism that spiritual or mental energy is not fixed by Physics. Thus substance dualism goes against the fundamental laws of Physics known as Laws of Conservation of Matter and Energy. If substance dualism is correct, then the laws of Physics are false and if the laws of Physics are correct,
then substance dualism must be incorrect. Acknowledging the threat modern physics pose, some substance dualists attempt to resolve the problem in another way. According to them, for each infusion of spiritual energy, there is a diminution of physical energy. By saying this, they attempt to go with Physics that the total amount of energy in the universe is constant.

Other substance dualists also tried to resolve the problem in another way. According to them, mind has the power to rearrange the distribution of energy in the universe and in this rearrangement it does not add to it or subtract from it any amount of energy.

The extreme doctrine of substance dualism maintains that like other material objects such as car, television set etc., our bodies are unconscious. Like plants our bodies are alive but having no consciousness. This extreme dualism also maintains that our brains are nothing more conscious than our bodies. It supposes that our souls are conscious and this conscious soul is somehow attached to our bodies and these bodies appear as conscious. The attachment of soul and body remains intact until the body dies. When body perishes, the soul departs from the body.

But this extreme theory of substance dualism is also not supported by the scientific hypothesis that without certain sorts of physical processes in the brain, human consciousness cannot exist. In principle it is possible to produce consciousness in some other physical substance but yet we may not know the way of doing this. It may be a conceivable idea that apart from any physical substrate, the idea of consciousness might be produced. But such an idea is not supported by the scientific hypothesis.
Apart from substance dualism, another form of dualism is there which is known as ‘Property Dualism’. This is a weaker version of dualism but fairly widespread. This theory tells us that there are two types of properties- physical properties and mental properties. This theory does not accept the existence of two kinds of substances in the world. By physical properties they mean those properties such as, having an electrical charge, or having a certain mass. The properties like feeling a pain or thinking about something are mental properties. This dual property theory also accepts that there are physical bodies of human minds and in particular accepts that human brains possess both physical and mental properties.

The theory of property duality does not postulate separate existence of a mental substance. Nevertheless this theory inherits some of the problems of substance dualism. Like substance dualism, the property dualism also fails to answer the questions of the relation between the mental and the physical. If the physical properties of a thing really cause mental properties of that thing then in what process this is done remains unexplained. Moreover, a further problem for the property dualists is that- if there be really mental properties, how can they function causally to produce anything physical? How can someone’s conscious states, which are taken to be non physical features of the brain, function to cause any physical properties in the world?

Thus the failure of dualism, both of substance dualism and property dualism obviously turns the philosophers into monism according to which there is only one kind of thing in the universe. Monism is of two types – mentalistic monism and materialistic monism. Mentalistic monism is called “Idealism” and the materialistic monism is simply called “Materialism”. The central point of idealism
is that the entire universe is mental or spiritual. According to an idealist, there exists nothing but ‘ideas’ and every mental phenomenon is an idea. The famous idealist George Berkeley believes in the reality of mind in addition to ideas. This mind is taken by him as the container of ideas. But here we shall not deal with idealism but shall confine our discussion only to materialistic point of view as because the purpose of our dissertation is to solve some of the problems that the materialistic theory like Identity Theory has been facing. Idealism is an alternative conception of reality which in a sense escapes the problem of mind and body. This view is kept outside the scope of the present study.

We find a family of views in the philosophy of mind ranging from 20th century to 21st century. Of these views the single and most dominant one is in one form or another of materialism. According to materialism, material or physical reality is the only reality that exists. This theory proposes that if there is a real existence of mental states, these must be reducible to physical states or these are nothing but physical states. In explaining the nature of mind, a famous materialist philosopher Maurich Comforth says,

"According to materialism, so far mind being separate from the body, all mental functions depend on their appropriate bodily organs and cannot be exercised without them. All people’s conscious and intelligent activities can be traced back to material causes, so that far from such activities being exclusive product of mind, mind itself is a product – the highest product – of matter".

But this materialism is treated as one form of religion in present time by many thinkers of the opposite camps. According to them,

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1 M.Comforth (1997), Dialectical Materialism, p-288
materialism is as much dogmatic as the traditional religion was. In explaining the drawbacks of materialism, John Searle says that different versions of materialism fail to recon some essential mental features of the universe that Searle and others believe to exist. In this connection Searle mentions two essential features of mental states viz., consciousness and intentionality. He thinks that we all intrinsically have these two states which is denied by the materialists and as such they fail to give us a completely satisfactory account of the mind.

In the 20th century, Behaviourism is the earliest and influential form of materialism. The crudest version of this theory is that, “To attribute a mind to something is to attribute to it certain behavioural dispositions; to have the relevant dispositions just is to have a mind”.2

Behaviourism does not accept the existence of mind apart from the behaviour of the body. Behaviourism is of different types. Identity theory came into existence rejecting logical behaviourism.

Logical behaviourism holds that statements about mental phenomena can be translated into a set of hypothetical statements about behaviour. This theory believes that translatability does not mean presently existing behaviour but can be translated into a set of statements about that person’s actual and possible behaviour. A mental state means to have the behavioural dispositions. The fore runners of logical behaviourism are Gilbert Ryle (1949) and later Wittgenstein (1953). Ryle in his book The Concept of Mind writes, “Dispositional words like “now”, “believe”, “aspire”, “cleaver” and “humorous” are determinable dispositional words. They signify abilities, tendencies or

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2. Edward Feser(2009), Philosophy of Mind, p- 61.
pronenesses to do, not things of one unique kind, but things of lots of different kinds”.^3

Behaviourism as a theory in psychology or philosophy reigned supreme up to the middle decades of the twentieth century. But this theory fails to solve a lot of problems and the difficulties of this theory had led to its general weakening and subsequently this theory lost all its appeal.

Thus so far we have discussed the historical preliminaries of the identity theory. But there was also a philosophical background of this theory which we will explore now.

The philosophical climate that we delineated in the above was changed in the English-speaking world after a long twenty five years. Wittgenstein’s posthumous work - Philosophical Investigation published in 1953 was a crucial influence on this change. There was also a parallel development that we see in the United States amongst the members of the original Vienna Circle.

There were a number of consequences of this development and for the subsequent restatement of the Mind-Brain Identity Theory in the late 1950’s these were very crucial. First of all, this development revived interest in the work of Frege, particularly his distinction between sense and reference. Feigl (1958) and Smart (1959) developed the doctrine of contingent identity where the distinction of sense and reference appears as fundamental one. Moreover, Wittgenstein’s private language argument (1953) together with Austin’s critique of the

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3 G. Ryle (1949). The Concept of Mind. P-114
argument from illusion in his Sense and Sensibilia led to the dramatic collapse of phenomenalism and of Berkeleyan form of idealism.

So far we have discussed the historical background of the Identity Theory of mind – body relation and found that the failure of dualism and behaviourism, have much effect for the development of this theory. Here we did not discuss the theory of Behaviourism in details because there is a specific chapter allotted for this theory. The next section of the present chapter we shall explain the Identity Theory of mind. But before going to close this section let us delineate the different chapters of the present Dissertation.

This Dissertation is divided into five chapters. Each chapter is constituted by its different sections. The First Chapter of this dissertation will contain three sections. Of these, section – I is allotted for discussing the Historical Antecedent of the Identity Theory where we have discussed briefly the origin of the mind – body problem in modern era. The next section of this chapter we shall explain The Nature of Identity Theory. In this section, we will try to find out the origin of the theory and how this theory developed in the hands of its exponents particularly by its prominent advocates like U. T. Place, H. Feigl, J. J. C. Smart. Not only this, the views of some other thinkers who have contributed to this theory will also be incorporated in this dissertation. The third section of this chapter will contain the two types of Identity Theory viz., Type and Token Identity Theory.

The second chapter of this dissertation is entitled – Identity Theory: Critique of Paradigms. This chapter is sub divided into two sections. Section I discusses Behaviourism and section II is about Functionalism. We have chosen these two theories because
Behaviourism is the theory reacting to which the Identity Theory came into existence. It is therefore necessary to have a detailed discussion of this theory. Again, Functionalism is a more refined theory than behaviourism and presupposes a materialistic account of mind which also needs a closer scrutiny.

In the third chapter we shall try to find out the different problems that have been facing by the Identity Theory. This chapter is subdivided into three sections. In the section I we discuss the problem of Consciousness. Section II is allotted for the problem of Identity and section III, the Problem of Coexistence.

In the fourth chapter of this dissertation attempt will be made to resolve the problems of the Identity Theory.

Finally, fifth chapter is allotted for concluding chapter where we briefly outline the outcome of the dissertation.

1.2. Nature of Identity Theory

Mind-body problem is a genuine problem in the history of philosophy. This problem arises at two levels. The first one is the general issue which concerns with the relation between a subject’s mental states and his possession of a body. Here body includes observable behaviour of the person. The second level is that of a relation between a subject’s mental states and certain internal physical states. Here internal states of the organism particularly mean states of the central nervous system. Of these two levels, the first is called by Bernard William the ‘Macro level’ and the second is the ‘Micro Level’. At the Micro level one tries to characterize most economically and
illuminatingly the correlation between mental states and internal states of the individual. Recently a group of philosophers contributed to this area and their views has often been called the ‘Identity Theory’ or ‘Central State Materialism’.

The Identity theory of mind occupies an important place in the history of philosophy. This theory is one of the important representations of the materialistic philosophy. This theory is known as “Materialist Monist Theory of Mind”. Sometimes it is called “Type Physicalism”, “Type Identity” or “Type-Type Theory” or “Mind-Brain Identity Theory”. This theory appears in the philosophical domain as a reaction to the failure of Behaviourism. A number of philosophers developed this theory and among them U. T. Place, J. J. C. Smart, Herbert Feigl, D. Armstrong, and David Lewis are prominent. The main thesis of this theory is states and processes of the mind are identical to states and processes of the brain. Now we shall discuss the viewpoint of these thinkers in different sub sections.

1.2.1 View of Place

U. T. Place openly admitted that in the 1930’s psychologist E. G. Boring introduced the idea of Type Identical or Mind-Brain Identity Theory but elapsed nearly a quarter of a century without any recognition and acceptance by the philosophical community. Boring in his book entitled “The Physical Dimensions of Consciousness” published in 1933 states his views as follows:

“To the author a perfect co-relation is identity. Two events that always occur together at the same time in the same place, without any temporal or spatial differentiation at all are not two events but the same
event. The mind-body correlation as formulated at present, do not admit of spatial correlation, so they reduce to matters of simple correlation in time. The need for identification is no less urgent in this case."

There are several reasons for which Boring’s view was not accepted at that time either to the psychologists or to the philosophers. In the field of psychology Behaviourism was leading school with regard to philosophical and methodological issues and that is why Boring’s view failed to command the serious attention of psychologists. Similarly, in the field of philosophy his theory was not appreciated as because time was not yet ripe for the discipline to incorporate such a revolutionary doctrine. Moreover, it was also supposed to be a disqualification for Boring that he was belonging to the category of psychologist who wrote for psychologists. His theory could not occupy the forefront place of logic also. The logicians of that time did not consider identity theory as a topic for their discussion. Although Frege was working on this topic but outside the periphery of Vienna Circle his theory was virtually unknown. At that time it was a golden time for phenomenalism to ride high and this theory developed a new concept known as ‘sense datum theory.’ It was not successful. Furth, Logical Positivism was also unable to give a satisfactory solution to the mind-body problem at that time. This was an advantage for Boring’s theory. It was considered as an alternative solution to this problem. Moreover, it was the commitment of Boring to combine the identity theory with that of phenomenalist account of sense-datum or sensory qualities. With this end in view he continued his work. Thus although Boring was

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4 E. G. Boring (1933), *The Physical Dimensions of Consciousness*, p-16
the initiator of the Identity Theory he got his recognition after a long period of time.

Identity theory of mind holds that certain physical states of the brain and mental states are identical. In other words, this theory held that the so-called mental phenomena, like thoughts, feelings, wishes and the rest are identical with the bodily states and processes. Thus to have some specific kind of thought there must be some kind of specific states and processes of the bodily cells. When we say that someone is in a certain mental states it implies that in the cerebral cortex of the brain of that person a certain physical event is going on. In that case although the person concern may not be aware of the happenings of brain but these two are identical. It is not the case that these two states are correlated with each other rather these two states are one and the same event in literal sense.

But the term 'identity' is ambiguous. It is used in two different senses. These are-

(1) exactly the same, and

(2) one and the same thing.

When someone says that one piece of marble is identical with that of another, it means that the characteristics of these two marbles are exactly the same. It may be the case that it is impossible to have two identical marbles in the world possessing similar characteristics but supposing that there are, then the term 'identical' is used in the first sense. But in addition to similar characteristics, spatio-temporal order is counted as an essential characteristic. But logically it is impossible, because no two things occupy same place at the same time. It is one thing that occupies same place at the same time not two. Thus, in that
case, there cannot be two but one marble. Thus in the first case the term ‘identical’ is used in having same properties, barring spatio-temporal properties.

In the second sense the term ‘identical’ means numerical identity. When we say that A and B are identical it means that A and B are numerically identical, i.e., these are not two separate things but one and the same thing. The identity theorists use the term ‘identity’ in its second sense. To them mental states and processes and physical brain states and processes are literally one and the same thing and hence they are numerically identical.

The sense of the term ‘identical’ can more easily be understood with the help of the example of the morning star and the evening star. Although the meaning of the expressions is not same, the object referred to by these two expressions is one and the same, known as ‘Venus’, a planet. The same star when it is seen in the morning, it is called ‘morning star’ and when it is seen in the evening, it is called the ‘evening star’. Thus the morning star and the evening star are identical, since it is the same star which is called differently at different times. Again, there are two terms ‘lightning’ and ‘electrical discharge’ referring to lightning and electrical discharge respectively which seem to be identical, but the meaning of these two terms are not strictly identical. When there is a massive electrical discharge from one cloud to another cloud or to the earth one can say that it is ‘lightning’. But it is not the case that the word ‘lightning’ means a particular massive electrical discharge. Lightning is a kind of electric discharge.

Thus the identity theorist’s argument that thought, feelings, wishes and the like are identical with physical states and processes is to
be taken in the sense that both mentalistic terms and physicalistic terms refer to one and the same thing. These two types of terms are not synonymous in meaning and therefore the term 'identical' is not used in the sense of their meaning being identical.

The Identity Theory of mind came into existence as a serious philosophical thesis in the late 1950's. Although this theory was introduced by the psychologist E. G. Boring in 1933, it took a long duration of time to be accepted as an alternative theory in philosophy. The pioneering works which deserve credit for the acceptance of the philosophical version of this theory in philosophical domain were - U. T. Place's "Is Consciousness A Brain Process?" (1956), Herbert Feigl's 'The "Mental" and the "Physical" (1958) and in 1959 J. J. C. Smart's paper "Sensations and Brain Processes" (1959). Of these three papers, the earliest one was U. T. Place's. Thus, he may rightly be said to be the fore runner of this theory next to Boring. All of these papers were depending on the same basic position although the differences of them were remarkable in their details. But in spite of their differences the area of agreement was sufficiently greater than that of their differences. It was possible because of the fact that there was direct personal connection between Place and Smart. One of the chances of their fruitful personal relation was due to the fact that both Place and Smart were working in the same department of the University of Adelaide in 1954. A series of discussion took place in Smart's department and he actively participated in it. Place developed his theory based on these discussion. In his paper "The Concept of Heed" appeared in the year 1954 Place announced his intention to defend the thesis that, "The logical objections to the statement 'Consciousness is a process in the
brain’ are no greater than the logical objections which might be raised to the statement “lightning is a motion of electric changes.”

This announcement was made by Place before his discussion with other members of the faculty. But Place’s another writing ‘Is Consciousness a Brain Process?’ was finally knocked into shape only after a series of discussion with Smart, C. B. Martin and D. A. T. Gasking. It is correct that when Place opens discussion on this theory Smart was sympathetic to Place on different issues though Smart was at that time arguing for the behaviourist theory. Like the behaviourist he believed that mental events can be elucidated purely in terms of hypothetical propositions about behaviour. These can also be elucidated by the reports of the first person’s experiences. These reports are called by G. Ryle as ‘avowals’. By ‘avowals’ Ryle means mere pieces of behaviour. Thus to say that a person is in pain is to meant that the person concern is doing a sophisticated sort of wince. Ryle’s motivation was not to be a physicalist but Smart saw Ryle’s theory as friendly to physicalism.

It was Smart’s hope that hypotheticals of the behaviourist though cannot be explained ordinarily but these can be ultimately explained by neuroscience cybernetics. As the time went on Smart began to question Place’s theory on different issues. But this could not continue for long. In 1957 in Fall term Smart was entrusted to deliver lectures in graduate classes on Ryle and Wittgenstein at Princeton. During this lectures Smart expressed his support and advocated the Identity Theory. He also invited objections from different corners to this theory and his paper of 1959 is a record of objections and answers to them. The secret of Smart’s acceptance of Place’s view was that he was not satisfied with

5. Quoted from "Identifying the Mind" – selected papers of U.T.Place (2004), edited by George Graham Elizabeth R. Valentine, p-255
Ryle's treatment of inner experiences and also that he was unable to refute Place. But this is not all. Another reason for accepting Place was that he was encouraged and influenced by Feigl's "The Mental" and "The Physical" (Feigl 1958, 1967).

U.T. Place may also be called a contributor to the Behaviourist theory. But unlike other behaviourists, he restricted his theory to intentional or representational states of mind such as belief. He paid his respects to Ryle, Wittgenstein and Skinner who inspired him in developing behavioural theory. He forbade them who identified dispositions with central states, although he believed that dispositions of behavioural sort causally depend upon the brain, and on this point he differed from Armstrong and developed identity theory. Disagreeing with behaviourists, Place said that mental processes just are processes in the brain but whereas dispositional mental states are not states of the brain. This view was given towards the end of his life. Admitting himself to be a behaviourist, Place writes in his article 'From Mystical Experience to Biological Consciousness: A Pilgrim's progress'.

"One consequence of studying psychology alongside philosophy at a time when Ryle, Austin, Grice, and Strawson were creating Oxford ordinary language philosophy was that the acknowledged behaviourism of Ryle and the unacknowledged behaviourism of Wittgenstein, which I learned about from the then newly appointed Wilde Reader in Mental Philosophy at Oxford, Brain Farrell, was to awaken an interest, also fostered by Farrell, in the neo-behaviourism of Tolman, Hull, and Skinner whose different formulations were then the focus of theoretical debate within psychology, not so much in Britain as in the United
States. It was through this that I became, as I remain to this day, a behaviourist”.^6

Place declares himself as behaviourist, but he at the same time believes the existence of conscious experience and the possibility of its scientific study. Because Place believes that to deny the existence of conscious experience is to abandon everything that he has stood for. He extended the following reasons for considering himself a behaviourist.

(1) He subscribes to the idea that study of private experiences of the individual is possible only through the objective records of what he says when he is asked to narrate them. It is because of the fact that words are anchored to what is observable publicly and for which linguistic communication is possible.

(2) Place believes that we can describe and explain the behaviours of others through our ordinary psychological language. But this does not do very well in describing our own private experience. And all these are due to the fact that words are anchored to what is publicly observable and for which linguistic communication is possible.

(3) Place says that we can explain and describe the publicly observable behaviour of others through ordinary language and this is the primary function of ordinary language. But as a theoretical language it is unsuitable for scientific psychology. Thus Place supports the attempt of the behaviourist who extended their effort to construct an alternative to ordinary language for scientific purposes.

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6 Ibid. P-27
(4) He also believes that in case of both human and animal, our ordinary psychological language is the source of important insight which controls behaviour. By the use of the technique of conceptual analysis, which is developed by Wittgenstein and other ordinary language philosophers, these insights can only be extracted.

(5) Place further maintains that an integral and vital part of the causal mechanism in the brain is the phenomenon of conscious experience. These conscious experience controls the interaction between the organism and its environment by the process of transforming input into output, stimulus into response. Thus only in the light of the distinctive function it performs in that process of input and output transformation, its peculiar properties can be understood.

Once it was believed that mental events are a separate class of events which cannot be described in terms of the concepts employed by the physical sciences. But this kind of belief is not above the question and as such now-a-days it has no universal acceptance among philosophers and scientists.

In his famous article “Is Consciousness A Brain Process” (1956) Place boldly stated that unlike the materialism of the seventeenth and eighteenth centuries the modern Physicalism is behaviouristic. On this view consciousness is treated either as a special type of behaviour, or disposition to behave in a certain way.

The logical behaviourist’s analysis of cognitive and volitional concepts in terms of disposition was accepted by Place. He emphatically stated that an analysis in terms of dispositions to behave is fundamentally sound in case of cognitive concepts like ‘knowing’, ‘believing’, ‘understanding’, and ‘remembering’. The same is also true
in case of volitional concepts like ‘wanting’ and ‘intending’. But he believes that there are some sorts of mental concepts which he calls ‘intractable residue of concepts’ clustering around the notions of consciousness, experience, sensation and mental imagery which he believes speak of inner process in case of which no behaviouristic account would suffice. Although these mental concepts cannot be analysed in terms of dispositional verb, Place expresses his firm conviction that ultimately a satisfactory behaviouristic account in case of these mental concepts will be found. Place admits that there are certain statements that refer to some events and processes that have some sort of private or internal experience. These are really private to the individual of whom they are attributed. He cites statements of such cases about pains and twinge, about how things look, sound and feel, to speak metaphorically about things dreamed of or pictured in mind’s eye. But he apprehends that one may infer that making this assumption leads him to an inevitable dualist position. Dualists believe that over and above the physical and physiological processes there is a separate category of processes. This category is formed by sensation and mental images. They also believe that mental state posseses an ontological reality and there is a correlation between these two categories. But Place firmly believes that one who accepts the separate category of inner processes is not a dualist. According to him, there is no logical ground by which one can dismiss the thesis that consciousness is a process in the brain.

But although Place believes that consciousness is a process in the brain, he is not in favour of the thesis that to describe our dreams, fantasies and sensation is to talk about a process in our brain. He extends his view that ‘cognition statements’ are analysable into
statements about behaviour. But he does not claim that in the same way statements about sensation and mental images are reducible to or analysable into statements about behaviour. It is clearly false to say that statements about consciousness are statements about brain processes. This falsity is shown by him by considering several facts.

(a) It is a fact that one may not know anything about brain process or even that such thing exists but yet he can describe sensation and mental images.

(b) It is not correct to say that statements about one’s consciousness and statements about one’s brain processes are verified in the same way. The two processes that provide the truth conditions for such statements are distinct and provide entirely two different ways of verification, and

(c) It is a fact that someone is in pain but there is nothing going on in that person’s brain. In that case there is nothing self contradictory in this statement.

When Place claims that ‘consciousness is a process in the brain’ he asserts that this statement is neither necessarily true nor necessarily false. This statement, according to him, is neither self-evident nor self-contradictory. In this connection Place cited an analogy to convince us that his position is correct. He says that as the statement “Lightning is a motion of electric charges” is a reasonable scientific hypothesis so is the statement “consciousness is a process in the brain”. He cited potential explanatory power as the reason for hypothesizing consciousness-brain state relations in terms of identity rather than mere correlation.
Place believes that there are two senses in which the word 'is' is used. These two senses are 'is' of definition and 'is' of composition. Failing to distinguish these two senses of 'is' leads to the conclusion that on logical grounds alone these assertion of identity between consciousness and brain processes can be ruled out. He says,

"The distinction I have in mind here is the difference between the function of the word 'is' in statements like, 'A Square is an equilateral rectangle', 'Red is a colour', or 'To understand an instruction is to be able to act appropriately under the appropriate circumstances', and its function in statements like, 'His table is an old packing case', 'Her hat is a bundle of straw tied together with string' or 'A cloud is a mass of water droplets of other particles in suspension.'”

In spite of the difference between these two functions of the word 'is', Place says that, one thing is common in these two types of statements- the commonality is that "(it) makes sense to add the qualification 'and nothing else'” while making the definitional as well as compositonal sense of the the word 'is'.

Place further says that there is another type of statements in which the word 'is' is used to express predication and this type of statements differ from the propositions that accommodate the qualification mentioned earlier. He says that it is nonsense to say "'Toby is 80 years old and nothing else', 'Her hat is red and nothing else', or 'Giraffes are tall and nothing else'”.

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8. Ibid, p-46.
Place maintains that the statements like “A square is an equilateral rectangle” and the statements like “His table is an old packing case” are strikingly different in another respect. A statement of the former group is true by its definition and therefore, it is a necessary statement. But a statement of the latter group, on the other hand, is contingent, because this type of statements need to be verified by observation. In former case there is a relationship between the meaning of grammatical subject and grammatical predicate and as such the subject expression and the predicate expression are applicable to the same thing. The statement that ‘Red is a colour’ implies that one who describes something as red must also be able to describe it as coloured. Similarly, to say that ‘A square is an equilateral rectangle’ is to say that if something is described as square then it must also be possible to describe it as equilateral rectangle. But this cannot be the case with the statement like, ‘His table is an old packing case’. Because here the meanings of the subject expression and the meaning of the predicate expression are different and no such semantic relationship holds between these two expressions. We apply both the expressions ‘his table’ and ‘an old packing case’ to one and the same thing depending on the ground that both the expressions provide an adequate characterization of the same object. Thus, Place suspects that those who put forward their argument for the claim that consciousness as a brain process is logically untenable base their claim on mistaken assumption that two statements or expressions cannot provide an adequate characterization of the same object or state of affairs if the meanings of them are quite unconnected. Thus the critic’s argument is based on the ground that ‘a state of consciousness’ and ‘brain process’ do not carry the same meaning and hence both can not characterize the same object or state of affairs.
In further explanation of the two statements viz., ‘This table is an old packing case’ and ‘consciousness is a brain process’, Place says that there is an important difference between the two. The former is a particular proposition because it refers to only one particular case whereas the latter is a general or universal proposition because it refers to all states of consciousness whatever. According to Place, if it is found that there is a world where all the tables are packing cases, in that case, the relation between ‘table’ and ‘packing case’ would be such that “table” would be a species of packing case and both of them in our language would not have logically independent status. The table would be a member of a species of packing case as a particular red thing is a species of colour. In explaining the rule of language Place says-

“It seems to be a rule of language that whenever a given variety of objects or states of affairs has two characteristics or set of characteristics, one of which is unique to the variety of objects or states of affairs in question, the expression used to refer to the characteristics or set of characteristics that defines the variety of objects or states of affairs in question will always entail the expression used to refer to the other characteristics or set of characteristics. If this rule admitted of no exception, it would follow that any expression that is logically independent of another expression that uniquely characterizes a variety of objects or states of affairs must refer to a characteristic or set of characteristics that is not normally or necessarily associated with the object or state of affairs in question.”

Place’s suggestion is that as this rule has almost universal application, so it is normally justifiable to argue from the two expressions which are logically independent to the states of affairs

10. Ibid, p-47.
which have ontological independence. It is generally believed that this
rule will be able to explain the independent existence of entities like
consciousness and brain processes. But Place believes that there are
certain exceptional cases, though relatively small in number, where the
rule of the argument from the logical independence of two expressions
to the ontological independence does not work and the case of brain
processes and consciousness is one of them. In mentioning the
exceptional cases he says,

"These exceptions are to be found, I suggest, in those cases
where the operations that have to be performed in order to verify the
presence of the two sets of characteristics inhering in the object or state
of affairs in question can seldom if ever be performed simultaneously". 11

He further says that the case of the cloud and the mass of
droplets or other particle in suspension is a good example of such
exceptional cases. A cloud appears differently from different distances.
If it is observed from far, it looks like a large semitransparent mass and
fleeting in appearance and there is a continuous change in its shape. But
the same cloud is found to consist of a mass of tiny particles and in
continuous motion if it is observed from a close distance. Thus our
conclusion that a cloud is nothing but a mass of tiny particles is drawn
on the basis of our close observation of it. But in between a cloud and
a mass of tiny particles, there is no logical connection in our language.
If it is said that a cloud is not composed of tiny particles in suspension,
there is nothing self-contradictory. If someone assumes that a cloud
consists of a dense mass of fibrous tissue there involves no
contradiction. In mythology and fairy stories we find that cloud

11 ibid. p. 48
performs many functions. From this it is implied that there is consistency in making the above statements about clouds. Here the meaning of the terms ‘cloud’ and ‘mass of tiny particles in suspension’ are not same. But in spite of their quite different meanings we do not conclude that these two terms viz., ‘cloud’ and ‘mass of tiny particles in suspension’ must be two things. The reason behind this conclusion, as suggested by Place, is that there is an invariable association of the characteristics of the objects both the terms ‘cloud’ and ‘mass of tiny particles in suspension’ speak about. But in spite of this we never think that to verify the two statements ‘that is a cloud’ and ‘this is a mass of tiny particles in suspension’ observation is necessary at one and the same time. It is only when we are enveloped by cloud, we can observe the microstructure of it but at that time we cannot observe those characteristics which describes cloud when observed from a distance. Thus the same thing is called ‘fog’ or ‘mist’ when we are enveloped by it and when observed from a distance, it is called ‘cloud’.

Place holds that among the few cases of general propositions the example of the cloud and the mass of the tiny particles in suspensions is one which does not involve scientific technicalities although it involves the compositional sense of ‘is’. But this type of proposition has its uses. It tries to make a connection between the two senses of ‘is’, viz., ordinary everyday use and the more technical use. The former is exemplified by ‘the table is a packing case’ and the latter by ‘lightning is a motion of electric charges’. Place tries to show that there is an important difference between consciousness-brain process case and cloud-tiny particles in suspension case. In case of the cloud being tiny particles we establish the identity between the states of affairs referred to by the two expressions by observation. But this
situation fails to manifest clearly the crucial problem of the identity of the states of affairs. It is claimed that the establishment of the identity of the entities referred to by the two expressions is possible if there is a continuous process of observation between the two sets – moving of observer towards cloud or away of the observer from the cloud. But such a process of continuity between two sets of observation does not hold good in a case of brain processes and consciousness. To verify the statements about consciousness and statements about brain processes require a fundamentally different type of operation.

Place holds that in order to find out a parallel for this feature it is necessary to examine other cases where an identity is asserted. By ‘other cases’ he refers to those things by the ordinary process of observation whose occurrence is established. To meet this purpose he has chosen the case of ‘lightning is a motion of electric charges’. He says that no one will be able to observe the electric charges even if he scrutinize the lightning very closely. In his own words, “......just as the operations for determining the nature of one’s state of consciousness is radically different from those involved in determining the nature of one’s brain processes, so the operations for determining the occurrences of lightning are radically different from those involved in determining the occurrence of a motion of electric charges. What is it, therefore, that leads us to say that the two sets of observations are observations of the same event? It cannot be merely the fact that the two sets of observations are systematically correlated such that whenever there is lightning there is always a motion of the electric charges.”

12. Ibid, p.49.
Place believes that there are so many cases where there is correlation between two sets of things but from this correlation one cannot conclude that observation of this two sets are really the observation of the same event. In this connection he cites the example of the movements of the tides and the stages of the moon. There is no doubt that these two events are systematically correlated but from this one cannot say that the records of one are the same as the records of the other and vice versa. Here we should rather say that two independent events or processes are causally connected.

In answering the question - when are two sets of observations observations of the same event? Place says “........in the cases where the technical scientific observations set in the context of the appropriate body of scientific theory provide an immediate explanation of the observations made by the man in the street”13

Thus, considering the above fact, Place’s conclusion regarding lightning is that it is nothing more than a motion of electric charges. In this connection he also shows the reason for this conclusion. He says that it is well known to all of us that through the atmosphere a motion of electric charges occurs and this electric charge produces a type of visual stimulation, observing which an observer reports that it is a flash of lightning. But in the case of records of tidal levels and records of the moon’s stages, Place holds that, there is no such direct causal connection between an observer who measures the height of the tide and the stages of the moon although in between the moon and the tides, there is causal connection.

13. ibid. p-49
In explaining the Physiological Explanation of Introspection and Phenomenological Fallacy Place says that if the above account is taken to be correct then it leads to the conclusion that before establishing the identity of consciousness and certain processes in the brain it is necessary to show some other thing. His suggestion is that it is necessary to establish that a subject’s reports of introspective observation can be accounted for in terms of his brain processes. If this truth is established then it can be easily established that consciousness and certain brain processes are identical. This truth may not be understood by a physiologist as because the understanding of a philosopher and a physiologist is very different. When a physiologist faces the difficulty to see how consciousness and brain processes are identical, he does not think that this assumption is self contradictory rather considers it as an apparent impossibility. He thinks that, it is impossible to account the report of conscious processes given by a subject in terms of the known properties of the central nervous system. In this connection Place quoted a version of Sir Charles Sherrington. Place says that the above problem is posed by Sherrington in the following way,

“The chain of events stretching from the sun’s radiation entering the eye to, on the one hand, the contraction of the pupillary muscles, on the other hand, to the electrical disturbances in the brain-cortex are all straightforward steps in a sequence of physical ‘causation’, such as, thanks to science, are intelligible. But in the second serial chain there follows on, or attends, the stage of brain – cortex reaction an event or set of events quite inexplicable to us which both as to themselves and so as to the causal tie between them and what preceded them science does not help us; a set of events seemingly
incommensurable with any of the events leading up to it. The self 'sees' the sun; it senses a two – dimensional disk of brightness located in the 'sky', this last a field of lesser brightness, and overhead shaped as a rather flattered dome, coping the self and a hundred other visual things as well. Of hint that this is within the head there is none. Vision is saturated with this strange property called 'projection', the unargued inference that what it sees is at a 'distance' from the seeing 'self'. Enough has been said to stress that I the sequence of events a step is reached where a physical situation in the brain leads to a psychical, which however contains no hint of the brain or any other bodily part. The supposition has to be, it would seem, two continuous series of events, one physicochemical, the other psychical, and at this interaction between them".14

Place thinks that the physiologist and the philosopher hold two different outlooks. A philosopher may believe that in supposing consciousness to be a brain process there involves some self-contradiction. The physiologist may not consider the thesis to be a case of conceptual incoherence and take it to be an unexplainable piece of phenomena and hence he is not likely to be impressed by such a contention of the philosopher. Similarly, the philosopher is not likely to be impressed by the contention of the physiologist and it is because of this Sherrington concludes the existence of two sets of events – physicochemical and psychical. But such a conclusion of Sherrington, according to Place, is based on emotional appeal and it depends on a logical mistake, although the mistake is fairly a simple one. This type of mistake is called by Place as the "phenomenological fallacy". Place believes that such type of mistake is very common amongst the

physiologists and psychologists and philosophers themselves in the past were not exception from committing such mistake. Description of a subject’s experience means how things are looked at by him or how things sound, smell, taste or feel to him. But contrary to this, it is supposed that this description of experience of a subject is nothing but the description of the literal properties of object and events and these properties are of peculiar sort of internal cinema or television screen, that in modern psychological literature these usually referred to as the ‘phenomenal field’. It is here where this ‘phenomenological fallacy’ occurs. In this connection Place cites an example. If it is assumed that a subject’s report of green after-image is nothing but the assertion of an object which is literally green and which is not due to peculiarities of his own, in such cases we assume the existence of an entity which has no place in the physical world but our own making. Corresponding to the subject’s description of green object there is no green object in the environment of him. Hence green afterimage is there without any green object. When the subject reports the appearance of the green afterimage, there is nothing found green in his brain. Moreover nothing green emerged at the time of his reporting of green afterimage. Colour concept cannot be applied to the brain processes as because brain processes cannot be categorized as that sort of things.

Place believes that it is a mistaken assumption on which the phenomenological fallacy depends. This mistaken assumption is that it is our consciousness of object on which our ability to describe things in our environment depends. Contrary to this assumption, whenever we describe things we primarily describe nothing but our conscious experience and objects and events in our environment are described secondarily, indirectly and inferentially. It is our assumption that by
their look, sound, smell, taste and feel, we recognize things in our environment. From their phenomenal properties like the properties of looks, sounds, smells, tastes and feels that the things produce in us we infer their real properties. But this line of thinking is rejected by Place and he says that the fact is just its opposite. Recognition of the real properties of things on our environment starts by learning. It is not that before describing the things themselves we have to learn how to describe the look, sound, smell, taste and feel of things. Rather it is by their look, sound, smell, taste and feel, we learn to recognize the real properties of things of our environment. The real situation is that we can learn how to describe our consciousness of things in our environment only after we have learned to describe them the way we ordinarily do.

In the mythical 'phenomenal field' there are mythical objects in which mythical 'phenomenal properties' are supposed to inhere and we describe our conscious experience in terms of their 'phenomenal properties'. But Place strongly rejects this theory. He says, "..........when we describe the afterimage as green, we are not saying that there is something, the after image, that is green; we are saying that we are having the sort of experience that we normally have when, and that we have learned to describe as, looking at a green patch of light".15

In his latter writings Place maintains that J. J. C. Smart's thesis that sensations are processes in the brain could and should be interpreted as a straight forward scientific hypothesis. But Smart claims that such a comment of Place is partly right and partly wrong. Place is partly right in the sense that the issue is between a brain process thesis

15. Ibid, p-51
and a heart, liver or kidney thesis, so this issue is empirical and therefore, the decision of this issue can be obtained by the method of experiment. He is partly wrong in the sense that the issue is between materialism and epiphenomenalism, psychological parallelism, interactionism and so forth, and therefore, it is a non empirical issue. But contrary to Smart, Place argues that the view of Smart is itself partly right and partly wrong. When Smart maintains that the issue is between the kinds of materialism, he is right because both Smart and Place themselves wish to defend this theory. But when Smart says that the rival theories are epiphenomenalism, psychological parallelism, interactionism and so forth, he is wrong because these doctrines are non-empirical issues. This topic is argued by Place in his own paper and holds that in order to say that a process or event that is observed in one way is the same process or event which is observed in another set of observations made under quite different conditions; there are certain logical conditions which must be satisfied. In his paper (Place, 1956) he suggested only one logical criterion which is that, "........the process or event observed in or inferred from the second set of observations should provide us with an explanation, not of the process or event observed in the first set of observations but of the very fact that such observations are made." 16

Place cited an illustration of such criterion. He compares two events in this connection. These are –

16 Ibid, p-53
1. Observation of the celestial movements of the sun and the moon are used in Astronomy to explain the movement of the tides in Geography, and

2. The motion of electric charges is interpreted and used to explain an event called ‘lightning’. This later event though real is not a separate physical object but it is a fact that in a stormy night we see and hear the sort of things we call ‘lightning’ which actually is the motion of electric charges.

This point is explained by Feigl by giving another example. He says that relation between temperature and molecular movement brings out the same point. Place and Feigl interprete the nature of identity differently. Feigl says that it may be a case that different observers observe the same mountain from different viewpoints but there is the identity of concepts. Two concepts are said to be identical if they are about the same thing. Another example of the case is similarly, in the case of $2^3$ and $\sqrt{64}$, there is the identity of concepts. He further says that it is possible to establish the identity of things empirically but the identity of concepts cannot be obtained empirically only. It can also be attained deductively as in the case of $2^3$ and $\sqrt{64}$. The identity of the temperature and molecular motion is established by empirical verification of a scientific theory.

But unlike Feigl, Place holds that the temperature, lightning and sensation-brain-process cases are identity of things of a special variety where an identity is asserted between a state, process or event and the micro processes of which it is composed.

From the above analysis it appears that both Feigl and Place differ from each other but Place suspects this apparent difference. He
says that although at first sight this difference appears but there is no fundamental difference between Feigl’s position and of his own.

To prove that a process or event observed in one way is the same process or event that observed in another set of observations which is made under different condition, Place mentions an additional criterion and this criterion he mentions in his article — “Materialism as a Scientific Hypothesis”. In this article he says,

“I would now want to add to this rather obvious additional criterion that the two sets of observations must refer to the same point in space and time, allowing for such things as the time taken by the transmission of light and sound, distortions in the transmitting media, the personal equation of the observer, and differences in the precision with which location is specified in the two sets of observations”. 17

After mentioning this criterion Place says that for the present purpose it is not necessary to prove the correctness or incorrectness of this logical criterion. The important thing here is that some logical criterion must be there in the case of taking decision whether the same event or two separate events are referred by two sets of correlated observations or the events that are causally related. It is a problem no doubt to decide what these criteria are and this problem is a logical problem and as such it cannot ordinarily be decided by experiment.

1.2.2 View of Smart

J. J. C. Smart developed the identity theory in his paper “Sensations and Brain Processes”. In this paper he claims that his argument takes departure from U. T. Place’s argument that he put

17. ibid, pp – 53-54.
forward in his article "Is Consciousness a Brain Process"? Smart admits that he is lucky enough to have the opportunity to discuss Place's thesis in different universities in the United States and Australia and tries to answer the objections to Place's thesis although Place himself did not consider these objections.

In this article Smart mentions the possible objections that may come from critics against the identity theory. At the same time he also answered these questions. Among these, the following are the important one.

1) An illiterate man may not know anything about neurophysiology but he can perfectly talk about after-image, or how things look or feel to him or he can talk about his aches and pains. Thus, when we describe our sensations, the things we are talking about cannot be processes in the brain.

   In reply to this objection Smart says that a contingent statement of the form "A is identical with B" can be there and that something is an A may be known by a person without knowing that it is also B. Without knowing about brain processes an illiterate peasant might well be able to talk about his sensations as without knowing anything about electricity he can talk about lightning.

2) To say that when we have certain kind of sensation there is a certain kind of process in our brain is only a contingent fact. But it may be the case that in connecting the mental processes with the going on in our hearts present physiological theories will be out of date as we find in the case of ancient theory, although there is highest degree of impossibility of such an event. Thus to report a sensation is not a report of brain process.
In reply Smart says that this objection means that having an after-image does not mean that someone has such and such brain process. But the fact is that what one reports is brain process. Two propositions – ‘I see lightning’ and ‘I see an electric discharge’ – do not mean the same thing. But there is a logical possibility that one day the electrical discharge account of lightning might be given up. But this logical possibility, according to Smart, is highly unlikely. Moreover, the meaning of the ‘Evening Star’ and the meaning of the ‘Morning Star’ do not mean the same but these two stars are one and the same thing. Thus Smart believes that the proposition that ‘the Evening Star and the Morning Star are one and the same thing’ is a contingent one.

Smart apprehends that some of the apparent strength of the second objection a ‘Fido-Fido theory of meaning according to which the meaning of a word is an object it stands for. If it were the case that the meaning of an expression is what the expression named then it is obvious that there are different meanings of ‘sensation’ and ‘brain-process’ and as such these two terms cannot name one and the same thing.

3) The critics of the identity theory may claim that the above two objections, if fails to prove that sensations are something over and above brain processes, at least prove that the qualities of both sensations and brain processes are not same. The qualities of the former are something over and above the latter. We call ‘morning Star’ and also call ‘Evening Star’ and identify them. We call the morning star ‘Morning Star’ because it has the property of being seen in the morning. Similarly, the Evening star is called ‘evening star’ because it is seen in the evening. Again, apart from theses properties some other properties
might be there, such as, ‘that of being yellow flash’ and these are logically distinct from the former.

In reply to the above possible objection Smart says that it is the strongest one among others with which he has to deal. In this connection he refers property of ‘being a yellow flash’ and says that this property might lay outside the physicalist frame work and this laying is inevitable. In this connection his suggestion is like this, “when a person says ‘I see a yellow-orange after-image,’ he is saying like this ‘there is something going on which is like what is going on when I have my eyes open, am awake, and there is an orange illuminated in good light in front of me, that is, when I really see an orange’”\footnote{Ibid, p-248.}

Smart believes that to answer the question No.3 is not as easy as it seems to be. The reply of this question depends on the ability to report the likeness of two things but not their respects in which these are alike. By saying this he is also in doubt whether this answer is correct or not and that is why he deals this problem in his subsequent works.

4) The brain-process occurs in physical space but the after-image is not and therefore it is not correct to say that after-image is brain-process.

Smart says that his argument is not like that the after-image is a brain-process rather experience of having an after-image is a brain-process. Our introspective report is about the experience. Again, objection may come from the critic that an after-image is yellow-orange but there is nothing yellow-orange in the brain even if a surgeon looks into it. Smart says that here the description is about the
experience of seeing yellow-orange and this experience itself is not a yellow-orange something.

5) There is an obvious sense to say that a molecular movement in the brain is swift or slow, straight or circular but the experience of seeing something yellow having such characteristics makes no sense.

Smart’s reply is that he never intended that experiences could be swift or slow, straight or circular. He never claims that the meaning of the term ‘experience’ and ‘brain-process’ are same or even these two terms have the same logic. In this connection he says,

“All that I am saying is that ‘experience’ and ‘brain-process’ may in fact refer to the same thing, and if so we may easily adopt a convention (which is not a change in our present rules for the use of experience words but an addition to them) whereby it would make sense to talk of an experience in terms appropriate to physical processes.”

6) Another possible objection Smart anticipates is that sensations of someone are purely private to him. These are personal to himself. No other person have it. He is epistemically in a privileged position access it. But such privilege cannot be ascribed in the case of brain processes which are rather publicly observable. It is not wrong on the part of someone who says that he sees a yellowish-orange after image. There is nothing verbal mistake made in that case. But the same is wrong when says about brain process. It might be the case that the same brain process is observed by two or more people but the inner

19. Ibid, p-249.
experience of one cannot be reported by any one except the experiencer.

Smart says that the logic of the language of introspective reports and the logic of the language of the reports for the material processes are not the same. He admits that the brain process theory has not improved adequately and widely accepted yet and that is why we have no criteria in our hands to say that Smith has an experience of such-and-such sort. Until we get such a fully developed theory we will have to depend on Smith’s introspective reports to understand his experience. Thus the rule of language we have adopted normally is the reports of Smith about his experiences.

7) Someone can imagine that he himself is turned into stone and yet he possesses the capacity to imagine, have the feeling of pains, aches and other things.

Smart’s reply is that there cannot be any objection to imagine that the electrical theory of lightning is false and it is some sort of purely optical phenomenon. Or it can be imagined that lightning is not an electrical discharge. Similarly, there is no objection to imagine that the Evening Star and the Morning Star are not one and the same object. But actually lightning is an electrical discharge and the Morning Star and the Evening Star are one and the same object. Critics’ objection shows that the meaning of the term ‘experience’ and the meaning of the term ‘brain process’ are not same. Their objection does not reveal that an experience is, in fact, not a brain process.

Smart claims that his own paper (1959) successfully answered the objections of Place’s paper and presents his thesis in a more nearly unobjectionable form. He also claims that this paper is
meant to supplement the thesis ‘The ‘Mental’ is the ‘Physical’’ propounded by Feigl. Feigl’s paper, according to Smart, argues for much the same thesis as propounded by Place.

Smart explains a report of a visual experience in the following way, if a person reports that he has an after-image which is roundish, blurry-edge in shape, yellowish towards its edge and towards its centre it is orange. In this reporting the person is reporting nothing. In that case the person is actually expressing some sort of temptation and that temptation is to say that there is on the wall a roundish yellow orange patch. Similarly, when someone reports a pain, he is not really reporting anything; he is doing a sophisticated sort of wince. Smart admits that instead of a pain he prefers to discuss an after image, because pain brings the notion of ‘distress’ which is irrelevant to this purpose. According to him, to say that ‘a person is in pain’ is to say that he is in certain agitation condition as because the term ‘pain’ entails ‘distress’. But to say that ‘I am in pain’ is partly to report and that report is physical something and as such it is irreducible. Thus regarding after – image, Smart wishes to resist the suggestion that it is a report of something physical and as such irreducible.

Smart believes that science is developing day by day and this development will help us to see the organisms as physico-chemical mechanisms. He also claims that day will come when, with the mechanistic terms, the behaviour of man himself will be explicable. It is pertinent to note that in scientific explanation we find the talk about complex arrangements of physical constituents in the world and nothing else. But Smart says that even if all is explicable in terms of physical arrangement, consciousness cannot be so explicable. According to him, to describe fully the happenings of events that are
going on in a man, the physical processes in his tissue, glands nervous system and so forth are not sufficient. In that case his states of consciousness: his visual, auditory and tactual sensations, his aches and pains are also necessary. It is not correct to say that these are correlated with the brain processes because nothing can be correlated with itself. Thus to say that these are correlated with the brain processes implies that these are something over and above the brain processes. It is possible to correlate footprints with burglar’s but Bill Sikes the burglar cannot be correlated with Bill Sikes the burglar. Thus Smart’s conclusion is that sensation and states of consciousness are one kind of things which are not included in physicalist picture. But its exclusion does not demand for existence of things other than physical things. He believes that everything except the occurrence of sensations should be explicable in terms of physics. Following Feigl, Smart says that such sensations would be ‘nomological danglers’.

Smart firmly believes that sensations are brain processes. But he does not accept the thesis that the meaning of ‘after-image’ or ‘ache’ and ‘brain process of sort x’ are same. He rather believes that ‘after-image’ or ‘ache’ is a report of a process and that process happens to be a brain process. He stated that this does not mean sensation statements are translatable into statements about brain processes. It is also not a claim that the logic of sensation statement and brain processes statements are one and the same thing. Nevertheless, the report of sensation statement is in fact a report about a brain process. Over and above brain processes, there is nothing called sensations. Smart compares sensations and brain processes with that of nation and its citizens. We find that there is no existence of nation without its citizens although the logic of nation statements and the logic of citizen
statements are very different. As the nation statement cannot be translated into citizen statement, so the sensation statement cannot be translated into brain processes statement. But here Smart does not want to assert that the relation of sensation statement to brain process and the relation of nation statement to citizen statement are very alike. Here he draws one’s attention to the truth that there is ontological commitments to citizens only as it is the case with the brain processes.

It is to be noted here that Smart, at least in the beginning, followed Place in applying the Identity Theory only to those mental concepts considered resistant to behaviourist treatment, notably sensations. He attempts to identify sensations with states of the central nervous system and that is why this limited version of Mind – Brain Type Identity also became known as “Central – State Materialism”. This analysis of sensation – reports was the main concern of Smart. He analysed this sensation report into as ‘topic – neutral’ language. His topic neutral language can be roughly stated like this ‘there is something going on which is like what is going on when my are eyes open, am awake, and there is something green illuminated in front of me.’ Thus for adopting the thesis that sensations are processes in the brain Smart has given explanation and by this explanation he was diverged from Place. Smart points out that to decide between materialism and epiphenomenalism, there is no conceivable experiment. He maintains that the statement ‘sensations are brain processes’ is not a straight out a statement of a scientific hypothesis. It should be adopted on other grounds. In support of this claim he cited Occam’s razor. He also maintains that even if the brain process theory and dualism are equally consistent with the facts, the former has an edge in virtue of its simplicity and explanatory utility.
Since Smart cited Occam’s razor in support of his claim, it is necessary to have an explanation of this principle. Occam’s razor is a principle attributed to the 14th century English logician and Franciscan friar, William Ockham. This principle states that in explaining any phenomena we should make as few assumptions as possible and at the same time we should eliminate those that make no difference in the observable predictions of the explanatory hypothesis or theory. In Latin, the principle is often expressed as the *lex parsimoniac* meaning ‘law of parsimony’, or ‘law of economy’ or ‘law of succinctness’. This roughly means that entities must not be multiplied beyond necessity. An alternative version of this saying is that plurality should not be posited without necessity.

In his article “Sensations and Brain Processes” Smart claimed Occam’s razor as the basis for his preference of the mind-brain identity theory over the dualistic theory of mind and body. It is the claim of dualists that there are two kinds of substances that we find in the universe. These are: physical and mental or non physical. In contrast to this dualistic theory, the identity theorists claim that everything is physical, including consciousness.

Occam’s razor also plays an important role in Feigl’s version of Mind-Brain Identity Theory. In addition to the normal physical laws of cause and effect that we find in the naturalistic picture, it is supposed that there are psycho-physical laws positing mental effects and for any observable behaviour these by themselves do not function as causes. Feigl criticizes this supposition. According to Feigl, the dualist’s supposed mental-physical causal relations unnecessarily imply mental states as ‘nomological danglers’. They would dangle from the nomological net of physical science and should strike one as
implausible excrescences on the fair face of science. Feigl holds that in a respectable ontology such nomological danglers have no place. Thus according to him, epiphenomenalism, being a species of dualism, should be rejected in favour of an alternative and this alternative should be a monistic theory of mind-body relations. It is the suggestion of Feigl that the empirically ascertainable correlations between phenomenal experiences, which he calls “raw of feels”, and neurophysiological processes are to be interpreted in terms of contingent identity. He also says that the terms we use to identify them though have different senses; their referents are one and the same – namely, the immediately experienced qualities themselves.

1.2.3 View of Feigl

It is to be mentioned here that the identity theory that Feigl developed was out of his 1958 paper and his version of the theory was quite independent of Place and Smart. In that paper he argued that what is designated by the mentalistic language is identical with what is described by the behaviouristic language. These designate and descripta of the mentalistic language and behaviouristic language respectively, are also identical with the designate of the neurophysiological language. But subsequently in his 1958 paper Feigl concentrates his discussion within the mentalistic language dropping the descripta of the behaviouristic language into the background. He attempted to find out the descripta of the concept mental within mentalistic language which could reasonably be supposed to be identical with certain events or processes in the brain. He argued that in the present day psychology the word ‘mental’ covers the
unconsciousness events and processes in addition to the events and processes of direct experience i.e., the raw feels. It also covers the *intentional* acts of perception, introspective awareness, expectation, thought, belief, doubt, desire volition, resolution etc. but Feigl claims that *intentionality* belongs to the logical category rather than psychological category and as such this term is to be analysed in terms of pure semantics. To him, any attempt to identify this aspect of mind with that of neurophysiological language is to commit a category mistake. Thus considering the above, Feigl concludes that the identity thesis which he intends to clarify and defend is that the states of direct experience of conscious human being and the states of those which we confidently ascribe to some of the higher animals are identical with certain aspects of the neural processes in those organisms.

In his article ‘The “Mental” and the “Physical”’ (1958) Feigl explains the Identity Theory of mind-body relation. He says, “.....By ‘physical’ I mean the type of concepts and laws which suffice in principle for the explanation and prediction of inorganic processes.”

But with the inorganic processes he also added biological phenomena under the category of ‘physical’. Following the terminology used by Meehl and Sellars he uses ‘physical₂’ to designate these phenomena. In contrast to this physical₂, mental states are designated by “physical₁”. The concept of physical₁, according to him, could be introduced on the basis of inter-subjective observation language of common life. In this connection he compares the mental events with that of magnetic. Just as the concept of magnetic field can be introduced with the help of postulates and correspondence rules

17. ibid, p-230
although it denotes nothing directly observable, so, it is conceivable that by postulates and correspondence rules the concept of vital forces, entelechies, diatheses and mental events might be given their respective meanings. Moreover, in answering the question whether in the explanation and prediction of the behaviour of human or sub human organisms such concepts are really needed and whether they will do the expected job, he says that his personal views regarding this question is that physical\textsuperscript{2} laws will prove sufficient. This view, according to him, is admittedly tentative and based on the progress and partial success of physicalistic micro explanation.

Feigl says that purely subjective factors or data as a basis for prediction or explanation are also radically opposed by the scientists. He writes,

“This would indeed be scientifically meaningless, if not even statistical relations of subjective states to antecedent or consequent inter-subjective observables could be assumed.”\textsuperscript{21}

Some interactionists intend in the radical sense that subjective states are purely subjective. But Feigl says that the interactionist view is not correct, that is, subjective states are not purely subjective or private. In this connection he refers the interpretation of the “emergent” raw feels by Mechi\textsuperscript{s}s and Sellars who hold that these are subjective. Feigl says that their views are correct only on the ground that they can be the objects of direct introspective verification. But since these can also be assumed by scientists, although they do not have the same sort of raw feels of their own direct experience, these are also inter-subjective.

\textsuperscript{21} Ibu, p.230.
Feigl holds that throughout the ages the problem of 'subjective' and 'objective' has been the source of endless badly confused controversies. But in this distinction something significant and worth-preserving is there. In this connection he cited an example of 'twinge pain' that has been experienced by a person A. This pain experience of A is undoubtedly 'subjective' or 'private' to him which cannot be directly experienced by others. Nevertheless, another person B, though does not have A's pain, may infer analogically A's pain only by observing the behaviour of A. Toothache of a patient cannot be experienced by a dentist. Yet the dentist can know the toothache of the patient for similar reasons. Feigl says,

"I conclude then that it makes perfectly good sense to speak of the subjectivity or privacy of immediate experience. Numerically different but qualitatively identical (indistinguishable) experiences may be had by two or more persons, the experiential events being' private' to each of the distinct persons."\(^{22}\)

In order to complete the analysis of the meanings of 'physical', Feigl, as mentioned earlier, distinguished physical into two types- physical\(_1\) and physical\(_2\). He clearly stated that all terms whose specification of meaning essentially involves logical connections with the inter-subjective observation language as well as the terms of this observation language itself is meant by him as 'physical\(_1\)' terms. He cites the theoretical concepts in physics, psychology, biology and all other social sciences as examples of the physical\(_1\) concept.

Again, the kind of theoretical concepts which are sufficient for the explanation of the observation statements regarding the

\(^{22}\) ibid. p-231.
inorganic domain of nature is meant by him as ‘physical\textsubscript{2}’. He further believes that if the above classification is found to be correct, there will be equal scope for both the terms ‘physical\textsubscript{1}’ and ‘physical\textsubscript{2}’. But the scope of both the terms will be different on the condition that if there is genuine emergence, i.e., logical underivability, in the domain of organic, mental and/or social phenomena. If this happens, then in that case the scope of ‘physical\textsubscript{2}’ terms is clearly narrower than that of ‘physical\textsubscript{1}’ theoretical terms.

Feigl further says that there will be no basic distinctions between the theoretical terms of physical\textsubscript{1} and physical\textsubscript{2} languages if it is found that above the level of lifeless phenomena there is no genuine emergence in the logical sense. By saying this he cites the example that as the theoretical terms of chemistry are now-a-days explicitly definable on the basis of the theoretical terms of the physical\textsubscript{2} language, so on the basis of the theoretical concepts of physics, the theoretical terms of biology and psychology could be explicitly definable.

Thus, according to Feigl, the central question of the mind-body relation is: “Are the concepts of introspective psychology-relating to phenomenal data or phenomenal fields-definable on the basis of physical\textsubscript{1} theoretical terms, and if so, are they also definable on the basis of ‘physical\textsubscript{2} (theoretical) terms?”

Out of these two questions the first one, according to him, is a matter for philosophical analysis and the second one is undecided as because it is at the present level under scientific research. But he boldly, but taking risk guesses that the scientific research progress will decide it affirmatively in future days.

\textsuperscript{23} ibid, p 234
1.2.4 View of Armstrong

D. Armstrong, another materialist philosopher, also contributed to the Identity theory of mind. In his preface to the book *A Materialist Theory of Mind* he admitted that almost from the beginning there were philosophers who were materialists about mind. But this materialist analysis of mind could not attract the philosophers of twentieth century till the appearance of U. T. Place, H. Feigl and J. J. C. Smart. Armstrong acknowledges Smart’s influence on his thought with regard to the analysis of mind-body relation. He says,

“Professor J. J. C. Smart converted me to the view, defended in this book, that mental states are nothing but physical states of the brain. He in his turn has acknowledged the influence of U. T. Place.......... My intellectual debt to them remains profound.”

Armstrong categorically and enthusiastically announced that he was and is happy to say that mental states and the states of the brain are identical, and this identity is a contingent identity. The Identity theory of mind is regarded by many philosophers as really paradoxical. They say that this theory of mind is very extraordinary. In this connection we may refer the view of A. G. N. Flew who, in 1962 writes: “In the face of the powerful and resolute advocacy now offered this admittedly paradoxical view can no longer be dismissed in such short order.”

Armstrong too admits that when he first heard this theory he also found it paradoxical. He also thinks that not only he himself but

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many other philosophers shared the attitude of Flew. But he is sure that this attitude is confined exclusively to philosophers only. Like the first year university students they usually thought that it is not possible to regard mind as the brain and that is why they regard it as self evident to hold that the Central – state theory is false. But Armstrong holds that such a view of philosophers is not shared by others and it is evident that because of the potentiality, this theory enjoys wide support outside philosophy.

Armstrong holds that whenever we speak of ‘brains’, ‘brain-storm’, ‘brain-washing’, ‘brain-child’, racking one’s brains’ we actually speak about the mind. And if we ask the people who have general education and without having any philosophical training that whether mind is brain or is it separate from brain, many of them will answer that mind is brain. Some will in return, ask that if mind is not brain then what it is. Armstrong believes that there are persons who deny this fact and their denial is based on theological reasons. On the contrary, there are scientists and particularly the psychologists, who do not regard the Central-state theory paradoxical. Among them Hebb (1958) is a representative of this group. In his famous book ‘Text Book of Psychology’ he writes;

“There are two theories of mind, speaking very generally. One is animistic, a theory that the body is inhabited by an entity – the mind or soul – that is quite different from it, having nothing in common with bodily processes. The second theory is physiological or mechanistic; it assumes that mind is bodily process, an activity of the brain. Modern psychology works with this latter theory only. Both are intellectually respectable (that is, each has support from highly
intelligent people, including scientists), and there is certainly no
decisive means available of proving one to be right, the other wrong.26

Armstrong believes that to maintain the unity of mind and
body, the identity theory explains it in a very simple way. According to
him, Brain is the pilot in the vessel as because physically it resides
inside the body. To say that mind is ‘in’ the body and to say that mental
processes are ‘inner processes’ are completely natural. He used the
word ‘in’ primarily in spatial sense. But this sense of use of the ‘in’
must be denied by the dualist according to whom mind is a mystery and
thus in any gross material sense mind is not in the body.

Armstrong says that as the attribute and the behaviourist
theories can provide a simple principle of numerical difference for
minds, such as, difference of place, so he expects that this can be
provided by the Central-state materialism. He also believes that the
interaction of mind and body can be explained by this theory in a very
simple way. This theory derives the conclusion that mind and body
interact on the ground that brain and body interact. According to
Armstrong, from the implication of the Central–state theory we are
allowed to say that it is not that we have a mind or that we do not have
it, there is no sharp break because in a gradual way mind comes into
being. This conclusion is drawn by Armstrong on the ground that there
is evolution of the species and development of the individual and, in
this process, in a gradual way brain comes into being. Thus Armstrong
believes that the especial advantage of this theory and also of
behaviourism is that they represented the world-picture in a simple
way.

But Armstrong also points out that there is a basic difference between the Central-state theory and behaviourism. The Central-state theory admits the existence of inner state where behaviourism denies. The Central-state theory holds that these inner mental states are physical states of the brain.

We have already mentioned that Armstrong developed the Identity theory originally advocated by Place, Feigl and Smart. But before his positive contribution to the theory, he delineated some of the serious objections of this theory that might be raised by the critics and subsequently he tried to meet these objections.

In the first place he considered the argument that any theory of mind to be satisfactory must have to admit the logical possibility of disembodied existence of mind. If the Central-state theory argued that mind is the brain then this theory does not admit the disembodied existence of mind as because there is no brain without body.

Secondly, an independent existence of brain states and processes could be conceived as these seem to be things. Even their existence could be conceived as, (e.g., patterns of electrical discharge in space) without requiring the existence of any brain. But it is not clear how the Central-state theory can account the mental states because these have no independent existence.

Thirdly, regarding intentionality, i.e., the power of the mental states to refer to things other than themselves is not explainable in the account given by a Central-state theory. Armstrong believes that this is not a problem only with Central-state theory, but no theory prior to it is able to give us a satisfactory solution on this problem.
Fourthly, it is found in the theory of behaviourism that in some way or other behaviour or disposition to behave does enter into the concept of mind. But what the views of central-state theory are with regard to this mental feature or how this theory does justice in regard to mental feature of behaviour is not clear.

The above mentioned problems were raised by Armstrong in his book *A Materialist Theory of the Mind*. But he also mentions some other drawbacks of the theory and their remedies. He claims that the difficulties of the central-state theory mentioned above will become pale in front of the present problem that he will raise as because this is a more powerful line of argument. He considers an argument that could be regarded as conclusive against the claim that mind is the brain. Consider the question whether the statement ‘the mind is the brain’ is a logically necessary truth or this statement is simply contingently true. Whether the defender of this theory desires to assimilate the statement with other statements like ‘An oculist is an eye-doctor’ or ‘7+5 is 12’ on the one side and on the other side they try to assimilate the statement with ‘The morning star is the evening star’ or ‘The gene is the DNA molecule’. Armstrong holds that it is not so easy to answer the above question as because it is a dilemma. To him, the statement ‘The mind is the brain’ is certainly not a logically necessary truth. In this connection he refers Aristotle who delineated brain as an organ which keeps the body cool and nothing more. And in this description of brain, Aristotle certainly cannot be blamed of denying a necessary truth, mistake although he committed, it was an empirical mistake. Armstrong suggestion is that among the contingent statements of identity we must have to find out a model if ‘mind is the brain’ is a true statement. The statement that ‘the mind is the brain’ must be compared
with some other contingent assertion of identity like "The morning star is the evening star" or 'The gene is the DNA molecule'.

Armstrong claims that if it is admitted that the statement 'The mind is the brain', then logically independent explanations of the meaning of the two constituting words 'mind' and 'brain' must be possible. In this connection he refers to the example of a contingent statement that 'the morning star is the evening star'. Here the meaning of the two phrases - 'the morning star' and 'the evening star' - can be explained like this way – a very bright star that appears and can be seen on certain mornings of a year in the sky is called 'the morning star'. Similarly, a very bright star that appears and seen on certain evenings of a year in the sky is called 'the evening star'. Here the meanings of the above mentioned two phrases can be given by logically independent explanations. On the same line of argument Armstrong mentions another statement that "The gene is the DNA molecule" and he claims this statement to be a contingent one. Here the meaning of the word 'gene' and the word 'DNA molecule' can be explained in the way that - gene is a principle that resides within us and because of which hereditary characteristics, like colour of the eye, are transmitted from one generation to another. The phrase 'the DNA molecule' can be meaningfully explained by saying that a certain type of molecule constituted by very complex chemicals and the nucleus of the cell is formed by this. Thus here also the meanings of the two phrases 'gene' and 'DNA molecule' can be given by logically independent explanations.

Thus Armstrong's conclusion is that to be meaningful to say that 'The mind is the brain' is to say that the meanings of both the words 'mind' and 'brain' can be explained in these ways. He is sure that in
that case the word ‘brain’ will not create any trouble. But the problem is with the word ‘mind’. In a quasi-ostensive way it is possible to explain the meaning of the term ‘brain’. But in the case of ‘mind’ to attempt to give a verbal explanation or ostensive definition of the meaning of the word is impossible. In that case we must depart from a physicalist viewpoint. This problem is a great one that the central–state theory is facing.

Armstrong says that in virtue of certain physical characteristics of an object we call it brain and it is found inside the skull of the people as a sort of certain physical object. But if we treat this physical object also as mind we must have to add some further characteristics to it by virtue of which it is so-called. Because, the meaning of the word ‘brain’ and the word ‘mind’ are not same. But the question remains as to what this further characteristics are that are not found in the brain.

The above mentioned problem is stated by Armstrong in another way. According to him, it is the view of the central-state materialism that to be aware of our mental state is to be aware of mere physical states of the brain. But it is certain that we are not aware of the mental states as the states of the brain. These mental states, according to Armstrong, are of a quite peculiar sort – these are mental.

One of the physicalists, Paul Feyerabend, was daunted by this problem. His suggestion on this issue is that the world-view that is recognized by the materialist does not allow him to state any statement that may assert or imply the existence of mind. Thus talking about mind by a true Physicalism is an intellectual loss but it should talk simply about the operation of the central nervous system.
In order to have an explanation of the concept of mind Armstrong refers to the psychological way of thinking about man. In picturing man psychologist holds that man is an object upon which certain physical stimuli continually act and certain behaviour are elicited from him because of these stimuli. Thus there is a causal chain between the stimulus and response and mind falls in between this causal chain to mediate our response to stimuli. But central-state theory says that it is nothing but physical processes in the central nervous system that falls between the stimulus and response. This theory even does not believe that mind is an epiphenomenon of stimulus and response.

Thus, according to Armstrong, solving of the problem of 'mind' is within our hand if we think of the psychologist's picture outlined above. From the psychological point of view a particular mental process is the effect of certain stimuli and also cause of certain responses and both of these processes are within man. The concept of mental state is that which is brought about by certain stimuli and which in turn brings about certain responses in a man. Armstrong points out that it is science to discover the exact nature of mind or mental states. He also agrees to the modern science the supposition that the central nervous system or more crudely and inaccurately, but more simply, the brain performs the task of mediator between stimulus and responses.

So far we have explored Armstrong's analysis of the issue of mind and brain. After explaining his own view he considers the view of Place and Smart which are called the classical exposition of central-state materialism. Armstrong points out that both of these thinkers consider only the side of stimulus, but not response. In this connection he quotes Smart (1959), 'When a person says, 'I see a yellowish-orange after-image', he is saying something like that: 'There is
something going on which is like what is going on when I have my eyes open, am awake, and there is an orange illuminated in good light in front of me, that is, when I really see an orange".  

Armstrong believes that having an orange after-image is explicated by Smart in terms of stimuli alone. Here in a suitable condition an orange acts upon a person. He opines that similar line is taken by Place also. Contrary to the view of both Place and Smart, Armstrong desires to defend a central-state account of all the mental concepts. According to him, it is our natural tendency to distinguish between thought or belief and the expression of thought or belief in words or action, between emotion and the expression of emotion in action, and also between the intention or aim and its expression in action. When something is squeezed out, we literally say that 'something is expressed' as we find that from olives, oil is expressed. If the same is applied to the mind, the picture of the inner state is that it yieldes or that it brings about out behaviour. It is sure that if this picture is to be rejected, there must be some strong reason behind it. There is hardly any reason that strong to reject that picture.

Explaining introspection Armstrong says that it helps us being aware of sense-impressions, sensations and mental images. These are regarded by him as most obtrusive sort of inner items. But it is true that sometimes we do not have thoughts and intentions. In that case they may be imagery without accompanying sensations. In analysing the position of Place and Smart in this regard Armstrong says, "I think, indeed, that Place’s and Smart’s position is a mere hang-

over from the Sensationalism of the British Empiricists which attempts to reduce all actual mental items to impressions, images and sensations.”

Armstrong holds that although both Place and Smart did not give an account of all mental concepts but subsequently Smart has changed his views and accepts all mental concepts in Central-State account. Armstrong believes that if someone admits inner mental states he will have to give all the mental concepts in a central account and it is actually a theoretical economy. Armstrong says that the original ground chosen by Place and Smart on perception is inadequate as they explain it in terms of the characteristic effects of certain stimuli. This point is regarded by Armstrong as partial truth. A full truth about perception, according to him, is that a person can do certain things. In that case a person can systematically discriminate between certain classes of objects in his behaviour. A person’s lacking in perceptual powers is picked up by certain inefficiency in his conduct. So, according to Armstrong, both stimuli and responses are equally important in perception.

After considering the views of Place and Smart Armstrong has given his own view on the concept of mental state. He says,

“The concept of mental state is primarily the concept of a state of the person apt for bringing about a certain sort of behaviour.”

Armstrong does not regard that mind is behaviour but he points out that mind is the cause of behaviour. This does not make him a patron of behaviourism. He denies himself to be a proponent of

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28 Ibid. p. 81.
29 Ibid. p. 82.
behaviourism as he forbids us to identify mind with behaviour. He identifies mind with the inner principle of behaviour.

Armstrong holds that for the sake of argument if we accept the view that to talk about mental state is to talk about inner states of the person apt for bringing about certain sort of behaviour then obvious questions come up about the nature of these inner states and what these inner causes are. Armstrong says that to answer this question is not an easy task and no logical analysis can help us in this regard. In his view only a high-level scientific speculation can solve this problem. But yet he puts forward different accounts of the mind that have been advanced through the ages.

According to Armstrong, primitive view about the mind or spirit is that it is breath which makes a difference between a living man and a corpse. While making difference between the two, this theory makes difference between man and other sorts of things. Man differs from other living things in essential respects. A living man’s behaviour is extremely different from other things, but the difference between corpse and other material object is little one. Moreover, the most essential features which make a living man different from a corpse is his breath. This breath or air is the spirit or mind which is responsible for inner principle of man’s unique behaviour.

Other suggestions about the nature of the mind are that it is a flame in the body or it may be said that a collection of atoms which are specially smooth, mobile and scattered throughout the members of the body. Again, mind is thought of as a spiritual substance, or regarded as a set of special properties of the body. These properties cannot be reduced to the physico-chemical properties of matter. The irreducible
properties are supposed by the Central-state Materialism as a physico-chemical working of the central nervous system.

Armstrong says that many features of the statement ‘The mind is the brain’ can be understood by a very good model provided by the statement ‘The gene is the DNA molecule’. The concept of the ‘gene’ was introduced by Brian Medlin to Biology. Mandel holds that this gene is responsible for producing certain characteristics in animals or persons. In explaining the nature of gene, Armstrong holds that, different sort of answers are possible. One of them is that the gene might have been an immaterial principle. Moreover, genes are responsible for the colour of our eyes. Biologist’s conclusion regarding gene is that, for the production of heredity characteristics it plays a vital role and this conclusion they have drawn from experiment on the substance that is found at the centre of cells: deoxyribo-nucleic acid. This identification of the gene and the DNA is sufficiently certain although it is impossible on the part of anybody to observe directly nor one could ever hope to observe in practice the causal chain from the gene to the colouring of the eyes. From this observation Armstrong’s assertion regarding central-state theory is that, “....once it is granted that the concept of a mental state is the concept of a state of the person apt for the production of certain sorts of behaviour, the identification of these states with physico-chemical states of the brain is, in the present state of knowledge, nearly as good a bet as the identification of gene with the DNA molecule.”\textsuperscript{30}

With this conclusion Armstrong declares that his preliminary sketch of the central-state is complete with this version.

\textsuperscript{30} Ibid. p-90
Thus the Central-state materialism of Armstrong identifies beliefs and desires with states of the brain and in this regard Smart agreed with him. But Place does not agree with this view. Place is rather against the attempts to extend identity theory to dispositional states like beliefs and desires. His argument was that we have no privileged access to our beliefs and desires.

Place firmly believes that it is fundamentally sound to analyse the cognitive concepts like ‘knowing’, ‘believing’, ‘understanding’, ‘remembering’ in terms of disposition to behave. The same also true in case of volitional concepts, like ‘wanting’ and ‘intending’. He further says that in the case of these dispositional mental states it is necessary to give a different account of the mind-brain relation. This account, according to him, is different from that of mental processes which he refers by the term ‘consciousnesses’. By the term ‘mental process’ Place means the process in the brain and nothing more. But the dispositional mental states are not recognized by him as states of the brain. Dispositional state is causally dependent on the structure of the entity which bears this disposition, but in no way it is identical with the structure of the entity. Again, disposition has no existence apart from its structural underpinnings otherwise it will become a peculiar entity.

With regard to the notion of mental propensities, such as, believing a certain proposition to be true, or wanting something to come about, or intending to do something, there are arguments that these belong to a different category apart from mental capacities. Because in those cases none but the individual himself has privileged access to his own dispositional mental states. in this connection Place says, “But this is only because in these cases stating what you believe, asking for what
you want, and stating your intentions are in themselves manifestations of the dispositions in which believing, wanting and intending consist.\textsuperscript{31}

Like Place, Armstrong also rejects the argument that we have privileged access to our beliefs and desires. According to Armstrong, there are persons who may admit that it cannot be logically guaranteed that introspective awareness is free from mistakes but at the same time maintain that to our own current inner states we have a logically privileged access. But this view is denied by Armstrong. According to him, it may be that, someone's inner states can be understood by the person himself as because he himself is logically ultimate authority of his own inner states, but in that case, there is every possibility of his being mistaken. Thus Armstrong concludes,

"So it seems that, once incorrigibility is given up, logically privileged access cannot be sustained. No doubt we have a privileged access (at times) to our own mental states, but it is an empirically privileged access."\textsuperscript{32}

\textbf{1.2.5 View of Lewis}

Lewis (1966) also puts forward his arguments in favour of Identity theory. In explaining this theory he says that every experience is identical with some physical states. Here by physical states he specially mentions some neuro-chemical states. This explanation he takes as a hypothesis and as such it is not necessarily true but true as a matter of fact. He says that it is the working hypothesis of the materialist that physical phenomena have purely physical explanation and nothing else. It is his contention that those who accept this

\textsuperscript{31} Quoted from "Identifying the Mind" – selected papers of U.T.Place (2004), edited by George Graham Elizabeth R. Valentine, p-93

materialistic working hypothesis must accept the identity theory. There are some friends of this theory who believe themselves to be free to accept this theory on the ground that there is some sort of economy or elegance in accepting this theory. But Lewis does not agree with these friends of the theory. He rather believes that there is stronger foundation upon which this theory rests on. While explaining this theory he put forwards his argument thus-

"My argument is this: The definitive characteristic of any (sort of) experience as such is its causal role, its syndrome of most typical causes and effects. But we materialist believe that these causal roles which belong by analytic necessity to experiences belong in fact to certain physical states. Since those physical states possess the definitive characteristics of experience, they must be the experiences".  

When Lewis extends his opinion in favour of identity theory he says that this theory asserts that certain physical states are experiences. These are also introspectible processes or activities. But in no way these physical states are supposed to have intentional objects. The object of experience is a physical something on condition that if these really exist separate from experiences of them. But Lewis thinks that these are also possibly neural or abstract constituents of veridically surroundings or these may be something else or even nothing at all. But he does not claim that experience of seeing red is itself a red neural state.

According to Lewis, identity theory says that both experience-ascription and certain neural-state-ascriptions have the

same reference. They refer neural states and these neural states are experiences. But these ascriptions are not used in the same sense in two cases. A state that is referred by experience-ascriptions is connected to the latter by the causal law and this property accidentally belongs to it while neural-state-ascription refers to a state by describing it in detail. Thus this version of identity theory does not imply that the truth about experiences is the truth about neural state nor vice versa. In this connection Lewis refers to the doctrine of sense and reference and says-

"For a truth about things of any kind as such is about things of that kind not by themselves, but together with the sense of expressions by which they are referred to as things of that kind. So it is pointless to exhibit various discrepancies between what is true of experiences as such and what is true of neural states as such. We can explain those discrepancies without denying psychophysical identity and without admitting that it is somehow identity of a defective sort."^34

According to Lewis, experience itself and the attribute that is predicated of somebody who have these experiences are not identical. The former is but the latter is the attribute of being in a certain definitive causal role is occupied by the former, whatever its state may be but the latter occupies that causal role, whatever state it is. Thus Lewis is confident that the above analysis is sufficient to answer the critic’s objections. Critic tries to refute the identity between experience and neural states on the logic that the meaning of the terms of experience-ascriptions and neural-state description are not same and that it is only synonymous expressions whose attributes are identical and, therefore, the attributes of experiences and neural states cannot be identical.

^34 Ibid. p-101
Lewis admits that there is non-identity no doubt but this non-identity is not between experiences and neural states.

Thus by analysing 'experience, Lewis elaborates an argument for the identity theory. For this purpose he takes two crucial premises that the definitive characteristic of an experience is its causal role and secondly, that our causal role is in fact played by physical states and processes. Thus he concludes that as the definitive characteristic of experience is played by physical states and processes so experience must be physical.

1.3 Type and Token Identity Theory

The chapter in which we just discussed was the Identity Theory of mind where we explored the views of the main exponents of this theory. In the present section we will delineate the different forms of identity theory, such as, Type and Token identity. But before going to these different types of this theory it is important to have a clear conception of the term "events" which is standardly used in identity theory while talking about mind that mental events are physical events in the brain. Naturally an obvious question arises about the meaning of the term 'event'. Kim (2006) points out two alternative approaches and he says that the identity theory can be understood by making the difference between these two alternatives. Of these two views of events, one takes events as basic concrete particulars that are available in this world. These concrete particulars also include the material objects around us. These concrete particulars are of different kinds and possess different kinds of properties as we find in material things. In this sense an explosion or the collapse of a bridge may be called events. Similarly, a
swift, violent and unexpected earthquake can be called events. This view also asserts that a particular occurrence of pain is an event because it belongs to a category of events called pain and all the properties of pain event are also present in this particular occurrence of pain. This particular pain event can have other properties also if it falls under other event kinds. If it is said that pain is dull or pounding pain or that it is caused by a decayed tooth or that pain wakes up a person from sleep in the middle of the night and it continues more than three hours then pain possesses the properties of these different events. Kim claims that pain must be brain event and the event falls under the neural event kind C-fibre excitation. All this is true on condition that the identity theory is correct.

In the explanation given above we find that an event is taken as basic particular. Thus to say an assertion that a pain event, e, is a C-fibre excitation is to say that e belongs to two different kinds of events, such as, pain and C-fibre excitation. It means that e is a pain and at the same time it is C-fibre excitation. There is another way in which it is said that both the properties of pain and C-fibre excitation are present in e.

There is another sense in which the term ‘event’ is used by Kim. According to this sense, at a particular point of time when an object exemplifies or instantiates a property, it is called event. Thus ‘I am now in pain’ is an event. Similarly, ‘you are now in pain’ is also an event. But these two events are distinct. Kim says that two events e and f are said to be same event on condition that they exemplify or instantiate the same property possessed by one and the same object at the same time.
The difference between type-token identity is implicitly contained in various mind-brain identity theses. Among many thinkers Nagel is one who distinguishes between ‘general’ and ‘particular’ identities in connection with mind-body problem. Charles Taylor (1967) accepted this distinction of Nagel and says that “the failure of (general) correlations..............would still allow us to look for particular identities, holding not between, say, a yellow after-image and a certain type of brain process in general, but between a particular occurrence of this yellow after-image and a particular occurrence of a brain process”.

When it is said that mental things are the same as physical things or both are distinct, a question naturally springs up: whether it is said about concrete particulars, (e.g., individual instances of occurring in particular subject at particular times), or about a kind to which such concrete particulars belong.

According to token identity theory, every concrete particular that falls under a mental kind can be identified with some physical happenings. In this connection this theory refers the instance of ‘pain’ which is not only an instance of mental state (e.g., pain) but also an instance of physical state (say, C-fibre excitation).

Type identity theory, on the other hand, holds that mental kinds themselves are physical kinds and in that sense token identity is weaker than type identity. In explaining the relation between type identity and token identity Jerry Fodor (1974) says that the former entails the latter but not vice versa. Because if mental kinds themselves are physical kinds, then a particular instance of mental kind will also be a particular instance of a physical kind. But in no way the former is identical by the
latter because a concrete particular that belongs to both mental kind and a physical kind is a contingent fact. As such it cannot guarantee that mental kinds and physical kinds are identical. Thus the type identity theory claims that there is a contingent relation between mental states, such as, pain and physical states (events), such as, C-fibre excitation. Similarly, mental states (events) are theoretically reducible to physical states (events).

It is to be mentioned here that originally the concept 'type' and 'token' are applied to words and analogically used in the identity theory. Let us take a sentence 'love and love and love'. Here we find only two types of words such as, 'love' and 'and'. But in another sense there are five words. Each of these words is called a 'token word'.

Explaining the token identity Place says,

"For both 'His table is an old packing case' and 'The morning star is the same object as the Evening star' are cases of token identity, cases where two descriptions with different senses just happen to apply to one and the same particular object. Such cases are extremely common. Indeed, any non-analytic proposition that asserts the co-application of two conceptually unconnected predicates of the same object is of this kind".35

But Place asserts that the statement 'consciousness is a process in the brain' is not a token identity. Because in that case we find two types of things – one is consciousness and another is a certain brain activity although the brain activity is yet not a specified type. These two types not only just describe the thing rather we can apply the features in two descriptions equally. But if the same feature is found

35. Quoted from Identifying the Mind, Selected Papers of U. T. Place, p-82.
absent then it leads us to withdraw the both in old cases. This kind of identity, according to Place, is a typical case of type identity. He further says that the typical token identity statement like “His table is an old packing case” is a contingent and synthetic one, on condition that it is found true and empirical verified. But a typical type identity statement like “Water is H₂O” is a necessary and analytic one as because their denial leads to self-contradiction. It is to be mentioned here that in his paper “Is Consciousness a Brain Process” Place did not introduce the terms ‘token’ and ‘type’ and thereby he did not use the word “is” in the sense of identity. In the passage of his 1956 paper he introduced the statement “His table is an old packing case” as an example and attempted to answer this question. But he admits that the passage which he wrote in 1956 was not clearly expressed. But in 1997 he presented a paper in a conference at the University of Leeds in connection with forty years celebration of Australian Materialism in which he fulfilled the deficiency of his 1956 paper. Since then his revised version was incorporated in his 1956 paper that we find in the revised edition of W.G. Lycan’s *Mind and Cognition* (1999).

Thus the new addition which Place claims in his (1997) were that token-identity statement is typically synthetic. But type-identity statements are typically analytic. Moreover, token identity statements are contingent but type-identity statements are necessarily true. Place further mentions the reason for this claim. He says

“The reason for this is that in the case of predicates that are co-existence, or where the extension of the one includes the extension of the other, a conceptual connection develops between the two. The only exceptions to this rule are cases where the extensional equivalence or overlap is not a matter of common observation, where the observations
on the basis of which the predicates are assigned are widely separated in time and space".\textsuperscript{36}

In support of the above passage Place cited the example of water and H\textsubscript{2}O. He says that two terms ‘water’ and ‘H\textsubscript{2}O’ are co-extensive. On observation we describe a sample as ‘water’ and the same thing discovered later we describe as ‘H\textsubscript{2}O’. But here these two types of observations are widely separated. It is well established that both the predicates for water have the same extension and that is why it is widely known that ‘water is H\textsubscript{2}O’. This statement, according to Place, is analytic and necessary truth. A liquid thing is in fact water, and chemical test shows that the same sample has the chemical composition H\textsubscript{2}O. From this observation a conceptual connection is developed between water and H\textsubscript{2}O.

Place says that in the case of consciousness and a particular pattern of brain activity we can expect a similar outcome. Though this is yet to be identified but we can presume it. It is by future neurological research that a hypothesis of the existence of such a pattern of brain activity will be confirmed or disconfirmed. Place hopes that if both the existence and the nature of the pattern of the brain activity in which consciousness consists of are established by the neurological research; and if these results are reached to the people widely that, then we can expect a development of a similar analytic and necessary connection between the two. This probability is increasing day by day.

It is to be mentioned here that token identity theory is favoured by philosophers, theologians and the peddlers of superstition. Type identity theory is committed to prediction as to what future empirical

\textsuperscript{36}. Ibid. pp-83-84.
research will reveal. But token identity is not committed to any prediction. It does not rest on the outcome of future psychophysiological research it is rather rest on an apriori argument. This view is originally formulated by Davidson (1970).

But in spite of all these merits that we find in favour of token identity theory, Place favoured the type identity theory. His conclusion regarding type-token distinction is that-

"I conclude that, apart from the dubious advantage that it is less susceptible than is the type identity variety to empirical disconfirmation, token-identity physicalism has nothing to recommend it over its more robust type-identity rival. Moreover, so far from protecting physicalism from empirical disconfirmation, the token-identity version is itself in serious danger of being sidelined, if not actually falsified, by the emergence in the light of current and future research of the kind of 'perfect correlation' between psychological and physiological measures that according to originator of the identity theory, psychologist E.G. Boring (1933, p. 16) constitutes identity".  

He further says that if by using the recently described techniques of brain imaging, it is possible to have a perfect correlation between mentally and physically specified variables then in that case we can confidently assert that at least some speciable type-identity statements are known to be true. When this will happen, token-identity physicalism will not be favoured by anybody. This expectation, according to him, is more than likely to be true.

Putnam holds the view that identity between mental and physical events that is asserted by the token-physicalism is mysterious and

37. Ibid, p-89.
unexplained. Because this theory does not provide any means by which it can be determined that which physical tokens are identical with which mental states. That is why we cannot identify someone’s psychological and perceptual states in physical terms. Putnam thinks that this problem is something which an identity theorist should be aware of.

Davidson (1980) formulated an interesting form of token identity which is known as anomalous monism. According to this theory, under the neural descriptions causal relations occur. It does not occur under the description of psychological language. It is an intentional predicate which is used by the descriptions of psychological language but these predicates do not occur in law statements due to indeterminacy of translation and of interpretation. Thus it is only on the level of individual events that mind-brain identities can occur. If it is found that two events share the same causes and effects then characterized under different descriptions, they must be the same event. Hence, in identifying a token mental event with a token physical event we need to determine whether they share the same causes and effects or not.

Quine has observations on Davidson’s principle of individuation and says that the principle is viciously circular. Because this principle individuates events by quantifying over causes and effects which are, themselves, events. Putnam draws our attention on this issue in the following way. According to Putnam, someone may imagine to come to the conclusion whether the firing of a small group of neurons with an “experience of blue” is or is not token identical. There will have a host of effect in the firing of the group of neurons, for example, excitation of other neurons. Ordinarily, we would not think or speak of this host of effects as the effects of our experiencing blue. If it is true that experience of blue and the firing of the group of neurons are
identical then it is also true that those other excitations are effects of the experience of blue. Again, if it is true that experience of blue and the activity of a larger part of the brain, including the other neurons in question are identical, then those other excitation events will not be the effect of event rather these will be part of the event, that is, the experience of blue. Here, by employing Davidson’s criterion one cannot decide which group of excitation events is identical with the experience of blue. There is no criterion to decide the identity. It is a unique sort of identity.

Putnam observes that there is a problem of circularity in the above discussion. Because, before determining the neural event which is identical with sensation of blue one will have to decide the relevant event. But here one has already decided on the identity in question. Putnam says that as there is no non-circular way by which we can determine the specific mental events and the specific neural events which are identical for the supposed identity so there is no possibility of objective evidence. From this it is evident that to individuate mental events there are no physical means and thereby, to produce sensations in normal observers, there is no account of the causal mechanisms. Thus Putnam believes that anomalous monism fails to have explanation for one of the basic facts of perception.

Quine’s formulation of objection and the force of his criticisms were gladly accepted by Davidson. When Quine says that the suggested criterion for individuating event is radically unsatisfactory, Davidson does not deny.
So far we have discussed identity theory of mind in its type-token distinction. But before ending this section we would like to incorporate the view of J. Kim in this regard.

In describing the nature of token physicalism Kim says that it is a form of non reductivism. Because this theory says nothing about the relation between mental properties and physical properties. But for the reduction of mental to physical, such relationships are generally taken to be necessary. But all this does not mean that mind-body reduction is denied by token physicalism; rather this theory has commitment on this issue. The philosophers who support token physicalism believe that reductionism is false. They also claim that token physicalism is sufficiently physicalism.

In contrast to token physicalism, Kim says that, type physicalism is a form of 'reductionist' or 'reductive' physicalism. Because this theory claims that over and above physical properties there are no mental properties. This theory holds that mental properties are just physical properties and therefore these are identical. This theory thus entails that over and above physical facts there are no mental facts. It is true that there are mentalistic expressions which we continue to find out as because these are useful and practically indispensable. But type physicalism believes that in principle physical language is sufficient to describe all the facts and therefore expulsion of mentalistic expressions will not affect the total descriptive power of our language.

While contrasting the type physicalism with token physicalism, Kim says that as a materialistic doctrine the former is a strong and robust one and that is why this form of physicalism is classic identity theory. Token physicalism is a weak doctrine. It only says that by the
same type of entities the mental properties and physical properties are instantiated. An event or occurrence that has mental properties also has some physical properties or other. But about the relationship between mental properties, such as, pains, itches, thoughts, consciousness, and physical properties, such as, neural events, this theory has no comment.

From the above analysis it is clear that Kim extends his strong support in favour of type physicalism. But in the end he says, "Perhaps it is too strong to be true."³⁸

³⁸ J. Kim: *Philosophy of Mind*, p-105.