NATURE AND STRUCTURE OF CONSCIOUSNESS- THE BIOLOGICAL NATURALIST'S VIEWS

Thesis submitted to the fulfillment of Doctor of Philosophy (PhD) in Philosophy

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DECLARATION

I, Reena Cheruvalath hereby declare that this thesis titled ***NATURE AND STRUCTURE OF CONSCIOUSNESS-THE BIOLOGICAL NATURALIST'S VIEWS****, is submitted to the University of Calicut to the fulfillment of* ***Doctor of Philosophy*** *in Philosophy, has not previously formed the basis for the award of any Degree Diploma, Associate Fellowship or other similar title or recognition.*

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This is to certify that this thesis titled ***Nature and Structure of Consciousness-the Biological Naturalist's Views****, is a bonafide record of research work, carried out by Reena Cheruvalath under my supervision and that no part thereof has been submitted for any degree in any university.*

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PREFACE

This thesis consists of an inquiry into biological naturalist's views of consciousness, based on John Searle. Despite shortcomings, Searle presents a much-unified perspective. This is what is seen in each of the contributions in a number of books, each one representing a distinct phase of his investigation. The central tenets of biological naturalism are however confined to his famous book on ***The Rediscovery of Mind*** *(1994). In a nutshell, this consists of two key propositions. They are stated as follows: (1) Consciousness is higher order feature of the brain, and (2) It is caused by lower level neuronal processes in the brain. These are supported by connection principle, supervenience and an account of structural relationship between consciousness and unconsciousness.*

Searle's general viewpoint may be termed as Non-reductive Physicalism, which was soon to be replaced by what he prefers to term as 'modified form of epiphenomenalism'. The purpose of this thesis is to inquire into what extend these later viewpoints sustain the biological naturalist's views on mind/consciousness. Epiphenomenalism is acceptable even in his earlier works. It is modified, when his inquiry turned into the question of unity of consciousness, logical structure of social reality and even so, on the logical structure of rationality, during his matured phase. If biological naturalism is a sustainable project, it is sustainable only when all these phases are rolled together into one general perspective.

It appears that Searle makes many twists and turns in the course of his complete investigations into the nature of mind, consciousness and their respective ontological

statuses. The first major twist comes when he makes a 'retrogressive move' from the analysis of the logical structure of intentionality. It is this which comes in for much of the criticism, but as part if the right perspective, Searle's turning point can be termed not as 'astonishing' as Apel claims to be in his criticisms.

Starting with the interface between philosophy of language and philosophy of mind, I move on to his critique of Cognitive Science and Strong AI. In the following two chapters, a schema is drawn to coalesce, two major features of explanatory gap and mental causation. One of the most interesting ways of assessing Searle's contribution is to investigate the way he shares a certain thesis concerning intentional theory of mental causation, among many thinkers by which Searle tries to pass the test of the so called causal exclusion problem. Does Searle approximate his theory of intentional causation into one about the theory of physical causation read in biological naturalist's terms? The beginning for this perspective is made in the way he uses the idea of causal supervenience. Two major lines of arguments are then open to Searle. First is on the supervenience, which lies on the forefront of current research on cognitive science. It is shown that such an important concept lies in the thickness of the controversy between reductionism and anti-reductionism. The other line of argumentation is what Kim has and leads to the consequent dilemma. Like the Supervenience Argument, Overdetermination Argument also takes many forms and even cut both ways. This provides a perfect backing to examine the credentials of Searle's theory of mental causation.

Then I pass on to examine his views on intentionality, especially the distinction between intrinsic, as if and derived intentionality. My effort shall also lies on exposing of his views on unity of mind, freewill and of rationality, the contrast between causal and reason explanation, culminating in the analysis of logical structure of social reality. Mind is biological; it is a system within a system of the entire world including the social world.

A full chapter is devoted to discuss the many sectors of criticisms before a final wind-up of evaluation. All of which have to demonstrate that Searle's biological naturalism is certainly not one single project but a group of projects, all of which when rolled together offers a grand perspective.

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CONTENT

36. Ibid, pp.427-428

37. Ibid, pp.428-429

38. Ibid, pp. 429-530

39. Ibid, pp. 430-431

40. Alam. M. Turing, **Computing Machinery and Intelligence** in *Mind,* Vol.LIX, No. 236, 1950, pp.433-460

41. Ibid, p-451

42. The controversy with functionalists like Churchland originally started in *Scientific American;* see Churchland's **Could a Machine Think**? In *Scientific American* 262 1990, pp. 32-37; and Searle's **Is the Brain's Mind a Computer Programme**? in *Scientific American* 262 1990, pp. 26-31

43. John Searle, *RM*, p-190

44. Churchlands, **Could a Machine think** ? in *Scientific American,* Jan-1990, p - 27

45. Peter Carruthers, *LTC*, pp.26-27

46. Ned Block, Owen Flanagan and Guven Guzeldere (ed.), **The Nature of *Consciousness- Philosophical Debates*** (Edited by, MIT Press, 1999, pp.132-133

47. Ibid, p-127

CHAPTER - 1

INTRODUCING SEARLE'S BIOLOGICAL NATURALISM

1.1 Searle's Multi-Pronged Project:

Searle's perspective in philosophy of mind is called as Biological Naturalism (BN). BN is not a single project but it is projects about mind-body relation. It contains a large number of sub-projects within a project. It has a focus on speech act, intentionality, consciousness, semantics, social reality, freewill and unity of mind, rationality and whatnot. Though it shares the scientific interest in consciousness among philosophers, psychologists, neuroscientists and clinicians to solve the mystery of consciousness, it is difficult to weave them into a complete perspective. Mind is a macro-system caused by the micro-system of the brain. Consciousness is a real biological phenomenon. Besides, it has intentionality as well as subjectivity. It consists of inner, qualitative (phenomenal), subjective (what is called the 'I') and the unified states of sentience, awareness, thoughts and feelings. Consciousness is much more than a person having mental and physical predicates, an agent who acts and it is called the self. There is an irreducible non-Humean Self. As against a bundle or building block theory, it presupposes a unified field approach to the problem of consciousness. Self and its unity are mutual presuppositions that sustain each other. Searle's so-called 'simple' solution is not that simple, in that it holds that

mental events and processes are as much part of our biological natural history as digestion, mitosis and meiosis or enzyme secretion.

For Searle, both consciousness and intentionality are biological processes caused by lower-level neuronal processes in the brain, and neither is reducible to something else. Thus the top-down or bottom-up or levels of descriptions are mere metaphors. This is what is meant by saying that consciousness is the system feature of the brain and it is feature of the whole system where the whole system means that the system has freewill, rational deliberations or decision-making and also caused by the system. Consciousness, in other words, is system causation but it is not based on causally sufficient conditions. So much so that, if mental causes are found amongst a cluster of physical causes it cannot overdetermine its effects. Thus causation becomes only an analytical tool in that there are causal relations at different levels. There is no causal overdetermination. The intention in action is as causally real as the solidity of the piston of the car engine. Self is not an entity but it is a system of formal constraints. The unity is neither Kantian nor empirical. We can characterize Searle's model of consciousness as a system feature with constraints of a conceptual kind. The constraints are invariably from the semantics of an intentional type. Searle agrees that meaning is a special form of intentionality. It is a special form in the sense that it is a form of what he calls as derived form of intentionality. This is where the interface between philosophy of language and philosophy of mind becomes apparent. Searle uses the notion of conditions of satisfaction as a bridge between these two disciplines.

We shall raise two questions in the context of his perspective. The first is about the theory of mental causation, which Searle uses and the second is whether such a theory is poised well enough to close the so-called explanatory gap. Nevertheless, his perspective on Biological Naturalism aims to show mind is the world of nature but yet it is presented as a species of Non-reductive Physicalism or, as Ned Block calls it, default physicalism, which asserts that it is a default that consciousness has a physical or scientific nature.[1] Seeing the second question first, we shall to have to ask whether Searle is able to solve the hard problem of consciousness without falling into phenomenal variety or into neuro-biological claims about activity in the pyramidal cells of cortical layers in the brain (Crick), nor the vibrations in the microtubules (Penrose). Nor is he interested in the question of what Ned Block calls the 'harder' problem of the phenomenality of consciousness.[2] A mature Searle reconciles himself with modified form of epiphenomenalism that requires discussion below.

As we know, Searle's early works are in philosophy of language, especially the variety called speech act philosophy of language, which has been much derided in the literature. It appears as if that his philosophy of mind should presuppose his works in the philosophy of language. He boldly reiterates that his analysis of the logical structure of speech acts provides the necessary foundation to the logical analysis of the structure of intentionality. To what extent he tries to establish a bridge between philosophy of language and philosophy of mind will become clear if we understand his intentional theory of meaning which is

constituted out of the notion of literal meaning and compositionality account of meaning. Briefly, the contribution it makes to the crucial ingredient of intentional theory of meaning will be shown to have great relevance. Even though Searle does not make explicit the relation between former and latter, there is an implicit interface between these two domains. Semantics survives intact and acts as a bridge throughout. Meaning intentions are as much part of features of pragmatics or communicability. Searle however produces a completion-argument, which holds that the philosophy of language is to be completed in philosophy of mind and hence philosophy of language should be a branch of philosophy of mind. Therefore, no theory of language is complete without an account of the relations between mind and language and of how meaning- the derived intentionality (as opposed to intrinsic intentionality of Husserlian fame) of linguistic elements- is to be grounded in the more biologically basic intrinsic intentionality of the mind/brain.[3] So, how exactly the conclusions about philosophy of language are to be illumined by his non-reductive naturalism? The likelihood of this happening must depend upon the relation between language and mind, which is not easily resoluble within his perspective. But one can equally go the other way saying that if his linguistic premises are okay, then the conclusion about mind can be deduced from these premises. But if they are vulnerable to attack, then his conclusions are not fully warranted. This is perhaps a good strategy. Let us start with an overall perspective of Searle's philosophy of

language and philosophy of mind. The whole corpus of Searle can be divided into the following four or five phases.

a) The speech act phase: In this phase, Searle asserts that speech act is essential to any specimen of linguistic communication that involves a linguistic act. It is not the symbol or word or sentence, but rather it is the production of the token in the performance of the speech act that constitutes the basic unit of linguistic communication. The structuration of the species of philosophy of language has been brought under the 'code' conception of language. According to a recent assessment, all these philosophies of language will fall under ***verstehenist*** philosophies of language, which holds that a theory of meaning is a theory of communication or understanding, and they are to be classified under folk philosophy of language. As folk philosophy of language, they are criticized for what they lack. They lack explanatory power. To what extent Searle will free himself of this charge forms part of the inquiry. The ***erklarenist*** (explanatory) theory, in contrast is one, which combines truth-conditions with the structural theory of grammar such as the one that stems from Chomsky's writings. It holds that a theory of meaning is part of a theory of physical property of language.

b) The biological naturalist phase: where it is shown how language, meaning and intentionality culminate in biological (non-reductive) naturalism. Searle continues to argue that meaning and intentionality of speech act sponsors a certain interface of language and mind, culminating in Biological

Naturalism, which states that consciousness is caused by brain processes and is a higher-level feature of the brain system. We are more concerned with this alleged theory of mental causation, which requires extensive examination and its capacity to close the explanatory gap. The alleged theory has no physical base, but has an intentional base. Do they approximate to each other?

c) The social construction phase: this adds the theme of how social construction of reality is related to intentionality. For him, they are complementary to each other. What he calls the collective intentionality is used as a foil here to assimilate social reality to our basic ontology of physics, chemistry, and biology.[4]

d) The free will and unity phase: this is purported to explain free will, volition and unity of consciousness. We can see this matured phase of Searle in his recent article titled 'Consciousness, Free Action and the Brain'. [5] Here, he discusses consciousness of free action, its implications for the explanation of rational behaviour and the existence of the self, and relates this to the traditional problem of the freedom of the will and proposes ways in which the problem of free will might be solved as a neuro-biological problem. This is where consciousness as a unified system but with a gap or a system of constraints comes to the fore. This is a peculiarly gappy view of consciousness along with its attending view of rationality. This is where biological naturalism is turned into a modified epiphenomenalism.

e) The rationality phase is purported to explain rationality in action, thus taking us beyond the narrow theory of mental causation of the second phase. [6] A theory of mental causation is explainable in terms of the above system of constraints.

Such a perspective goes from the logical structure of speech acts, illocutionary speech acts, a logical structure of intention, logic of the institutional action (a collective intentionality), culminating in the logical structure of freewill and rationality thus passing from book to book. The elemental confluence however is between the philosophy of language and mind. If this is much is warranted, then the criticisms, made by philosophers like and Habermas and Karl-Otto Apel respectively on the 'reductionism' of philosophy of language to philosophy of mind and later 'retrogression' or the astonishing turn' from speech-act or pragmatic philosophy of language to cognitive or intentional philosophy of language, must be seen somehow to justify the above interface.

It was Tyler Burge who urges that, with the advance of cognitive theories, there is a natural transition from philosophy of language to philosophy of mind. Tyler Burge's article in the *Philosophical Review* locates the problem of singular reference that binds both traditions. [7] While reflecting on the interface between philosophy of language and philosophy of mind, he argues that, with the perceptible shift of ferment toward the issues in philosophy of mind, the contemporary philosophy of language also felt the 'dialectical pressure' forward a shift in the philosophy of mind.[8] One can say with equal ease, there was

continuity and an interface between them.[9] As Burge urges, giving an account of truth and conditions of propositional attitudes *('I believe that p')* and *de re* belief were the problematic bridges between them. The syntax and semantics of propositional attitudes (the proposition *'I believe that p'* has a mental content *M)* gave a natural lead towards folk psychology. The debate between folk and scientific psychology became sharp. One must recall that Searle's early work on philosophy of language (a speech act variety of philosophy of language), provided a firm foundation to a later intermediate theory of direct reference within this particular framework.[10] Questions related with this issue of the above transition are 'Is thought really occur in language?' 'Are language-less thoughts possible?' 'In which language do we think?' 'Is it a private one?' 'Is private language possible?' The mutual contribution of psychology and philosophy has also helped for the interface between philosophy of language and philosophy of mind.

Mainly, there are three reasons for the above-mentioned interface. Firstly, the arguments of Quine and Grice on meaning have shown that there is a systematic interplay between attitudes like belief and intention. Certainly, this is the reason for the emergence of the problem about the syntax and semantics of propositional attitudes of the form *'I believe that p'*. Secondly, some of the most difficult problems of singular reference point toward the philosophy of mind. Finally, the philosophy of language seems to have exhausted its premise in illuminating traditional philosophical questions. Davidson in his paper 'Thought

and Talk' articulates that language and thought are conceptually interdependent.[11] He points out that a creature cannot have a thought unless it has a language. In a sense, Davidson provides a paradigm case for an interface between philosophy of mind and philosophy of language. For obvious reasons, this is not however considered as important as his anomalous monism.[12] One is the rich thicket of cognitive science where the controversy between reductive and non-reductive materialism becomes more and more acute. This becomes the rallying point. Even within cognitive studies, we come across cases where language serves as a focal point. Peter Carruthers subscribes to a paradigm, which holds that thinking is linguistic. Language is constitutively involved in our conscious thinking, which he refers as the cognitive conception of language. Thus, language has an intra-personal cognitive functioning, as well as having its obvious interpersonal uses. The cognitive conception of language has been endorsed by Wittgenstein (1921 and 1953), Lev Vygotsky (1934) and Daniel Dennett (1991). Often it has been associated with a radical empiricism about the mind, according to which many human concepts and the young child from adults acquires ways of thinking and much of the very structure of the human mind itself, when the child learns its native language. Recent history of cognitive science shows that researchers have become increasingly convinced by neuro-physiological and other evidence that the mind is more or less modular in structure, built up out of isolable, and largely isolated, components. They are convinced that the structure and contents of the mind are substantially innate

and that language is one such isolable and largely innate module.[13] However, it is important to see that someone, endorsing the cognitive conception of language, does not have to regard language and the mind as cultural constructs, either socially determined or culturally relative. In fact, the cognitive conception of language can equally be deployed along with a modularist and nativist view of language and mind, and this can be counter posed to a communicative conception of language.

While the dependence of mind on language is a matter of dispute and difficulty, the converse dependence is not generally supposed to be. Thus, it appears evident that speaking language requires the possession of thoughts, these being precisely what the sentences of a language express. In other words, performing speech acts such as assertion presupposes the possession of mind. Colin McGinn points out that the question as to whether thought is essentially linguistic has a significance, which goes beyond getting clear on the nature of thinking. For, on its resolution turns the larger question of what philosophy should, conceive itself as studying. Philosophy is mainly concerned with investigating the means by which we represent the world, and we represent reality in thought, through the exercise of concepts. So, thinking consists in the deployment of language and it also means that philosophy should address itself to language, in a primary way. An important feature of thought is that they have a structure, specifically the logical structure. Thus we have compound thoughts, like for example, thinking that snow is white and coal is black; thought involving multiple generality, for

example, the thought that everyone loves someone who hates himself, modal thoughts like the thought that necessarily 7+5=12. In fact, thoughts of any structure can be specified, simply by completing *'X' 'judges that....'* with an arbitrary declarative sentence. This structure on the part of our judgments confers a capacity to have indefinitely many distinct thoughts. Judgments have what is called a recursive structure; in that they involve devices, which may be repeated at, will so as to generate infinitely many potential thoughts. It is this structure that permits a finite creature to wield such an infinite capacity and the capacity to make judgments of arbitrary complexity rest upon a finite basis of capacities relating to elements of the structure. Therefore, any theory of judgment must represent this capacity as a finitely based structured ability. Thus, the structure of thought just is the structure of some internal sentence, and so a theory of structure of language will carry over directly to the structure of propositional attitudes.

McGinn suggests that the proper procedure would be to try to elicit the general principles which govern the way thought acquires its content, and the ways this content get manifested in judgment and action. It is needed to ask what central concept best elucidates the content of thought or whether we can develop a properly systematic theory of thought or whether it is possible to give a reductive analysis of what it is for a thought to be directed on to a proposition. Hence, on the supposition that thought does not require a linguistic medium and so it is not to be explained in terms of meaning, the philosophy of mind would be

methodologically anterior to the philosophy of language. The reason is that concepts would otherwise be incapable of direct investigation.

Briefly, no progress can be made on the central problem of philosophy without due consideration being given to the question concerning the relationship between philosophy of mind and philosophy of language. Let us hypothesize, after neutralizing the two stances mentioned in the above, that in Searle's case, the confluence between philosophy of language and philosophy of mind takes on a semiotical tag allowing semantics to survive in various forms including an acceptance of a compositional theory of meaning.

1.2 Searle's Interface Between Philosophy Of Language And Mind:

It is obvious in his view that philosophy of language is concerned with meaning, truth and reference and the method that tries to figure out how these phenomena work in the minds of actual speakers and hearers. He also adds that philosophy of mind is interested in intentional action and thought. Nevertheless, Searle changes tack categorically affirming that, 'Several other important branches of philosophy such as epistemology, metaphysics, the philosophy of action and the philosophy of language are now treated as dependent on, and in some cases as branches of the philosophy of mind, whereas fifty years ago the philosophy of language was considered 'first philosophy', now it is the philosophy of mind'. [14]

There are numbers of reasons for this change, but two stands out.

Firstly, it has become more and more obvious to a lot of philosophers that our understanding of the issues in a lot of objects, the nature of meaning, rationality

and language in general presupposes an understanding of the most fundamental mental processes. For example, the way language represents reality is dependent on the more biologically fundamental ways in which the mind represents reality and indeed linguistic representation is a vastly more powerful extension of the more basic mental representation such as beliefs, desires and intentions. Secondly, the rise of the new discipline of cognitive science has opened to philosophy whole areas of research into human cognition in all its forms. Besides, the basic subject matter of cognitive science is intentionality in all of its forms. Searle himself cites one precise reason. He is willing to set aside the sort of research he had done, and by others thirty years ago on the theory of speech act and on the use of language, since they become mostly absorbed as part of linguistics called 'pragmatics'. They probably form no part of philosophy of mind. But, as we theorized, semantics survives as a bridge.

If this is a correct view to take, the hypothesis of interface may not work in a straightforward way after all. True, he may very much want to ground the theory of language in the philosophy of mind. He insists that the mind imposes meaning on language via the intention to do just that. Such an interface is based mainly on two theses:

(1) Linguistic notions can be analyzed in terms of intentional notions; and

(2) The theory of intentionality provides a conceptual frame for the classification of speech acts.

His claim is this: Person *A*, by doing *x*, means that *p=x* is an act which *A* intends to express the belief that *P*. Here, the problem is one may meaningfully say that *P* without possessing, oneself, any belief that *P*, as when one is telling a lie. Moreover, it would surely be implausible to claim that whenever one makes an assertion he/she refers to some actual or possible belief of her/him, as the above account would imply. In order to explain how Searle overcomes these problems, it is necessary to have a look into some of his technical terminology he has introduced.

One is intention in action, the second is direction of fit, and yet the third is condition of satisfaction. By the first, Searle means the intention, which causes and controls an intentional action that is not caused by a prior intention, it is the intention, which governs and controls a spontaneous and undeliberated action. For example, anyone playing baseball or cricket who is swinging a bat at a ball flying towards him/her may make him/her movements intentionally, but without prior intention. The intention in the action is to swing the bat just so, hitting the ball over there. Second is the manner in which a match between mind and world is supposed to be achieved. Assertions and beliefs are supposed to match the world, and so have mind-to-world direction of fit. If they fail to match the world, it is the mind that has gone wrong, not the world. Imperatives and desires, on the other hand, are supposed to get the world to match them, and so have world-to-mind direction of fit. If they fail to match the world, it is the world that is wrong, not the mind of the agent.

Third is roughly the idea corresponding to that of truth-conditions for assertions and beliefs, only generalized to cover all forms of contentful linguistic act and mental state. It is the condition of the world, which is represented by a contentful act or mental state. For example, the condition of satisfaction for the belief that the door is open, the desire that the door should be open, and the hope or wish that the door should be open, are all that the door is open. With these tools, Searle fashions his theory of meaning and intentionality. He explains the conditions of satisfaction as follows. The notion of condition of satisfaction applies quite generally to both speech acts and intentional states in cases where there is a direction of fit. We say, for example that a statement is true or false, that an order is obeyed or disobeyed, that a promise is kept or broken. In each of these, we ascribe success or failure of the illocutionary act to match reality in the particular direction of fit provided by the illocutionary point. To have an expression we might label all these conditions 'conditions of satisfaction' or 'conditions of successes'. So, we will say that a statement is satisfied if and only if it is true; an order is satisfied if and only if it is obeyed and so on. Now, this notion of satisfaction clearly applies to intentional states as well. My belief will be satisfied if and only if things are as I believe them to be, my desires will by satisfied if and only if they are fulfilled, and my intentions will be satisfied if and only if they are carried out. That is, the notion of satisfaction seems to be intuitively natural to both speech acts and intentional states and to apply quite generally, wherever there is direction of fit.[15]

For Searle, the intentions, which confer meaning on our utterances, do not have the concept of belief already embedded in their contents. He maintains that most adult forms of intentionality are essentially linguistic. They are linguistically charged or linguistically loaded. Besides, the meaning of language can be explained in terms of the intentionality of the mind, because the intentionality of the mind is broader. For example, there are kinds of intentionality present in the minds of animals and young children that do not presuppose natural language. Searle lays foundation to his intentionalist meaning theory by means of the following argument. It is the intentional states of consciousness, such as for example, convictions, wishes, fears, hopes and (action) intentions in the narrower sense, which ultimately determine the condition of satisfaction, with the help of which the meaning of speech acts can be understood.[16] According to Searle, the determination of the 'conditions of satisfaction' of speech acts by intentional states of mind occurs in the following way. The intentional states can express themselves in 'physical entities such as noises or marks on paper' and impose on the 'expressions', which arise in this way the 'conditions of satisfaction of special speech acts'. For him, in the case of a statement, the speakers underlying conviction lay down the direction of fit of the conditions of satisfaction, and this in fact occurs in the direction of 'word-to-world direction of fit'. In the case of an 'order' and have 'promises' by contrast, the direction of fit of the conditions of satisfaction is established in terms of an actively produced adaptation of the world to the expression ['word-to-world direction of fit']. Searle summarizes the

main semantic import of this argument as: the key to the problem of meaning is to see that in the performance of the speech act the mind intentionally imposes the same conditions of satisfaction on the physical expression of the expressed mental state, as the mental state has itself.

On the basis of these arguments regarding the determination of the conditions of satisfaction of speech acts by underlying intentional states of mind, Searle explains the relationship between intentionality and linguistic meaning. He writes: so construed, speaker's meaning should be entirely definable in terms of more primitive forms of intentionality. And the definition is non-trivial in this sense that we define speakers meaning in terms of forms of intentionality that are not intrinsically linguistic. If, for example, we can define meaning in terms of intentions, we will have defined a linguistic notion in terms of a non-linguistic notion even though many, perhaps most, human intentions are in fact linguistically realized. It is in this rudimentary sense that philosophy of language is a branch of philosophy of mind. In its most general form, it amounts to the view that certain fundamental semantic notions such as meanings are analyzable in terms of even more fundamental psychological notions such as belief, desire and intention.

In *Speech Acts: An Essay in the Philosophy of Language* (1969), Searle defines a speech act by bringing together modified versions of Frege's distinction between the force (*F*) and content (*P*) of a sentence, and between singular reference and predication, Austin's classification of speech acts into constatives (truth-bearing)

and performatives (non-truth-bearing), as well as Grice's analysis of speaker or intentional meaning.[17] Searle points out that the semantics of a natural language can be regarded as a conventional realization of underlying constitutive rules and that Illocutionary acts are acts performed in accordance with these rules. His *Expression and Meaning* (1979) extends this analysis to non-literal and indirect illocutionary acts also. Searle may be said thus to ground the theory of Speech Act and Illocutionary Act on the theory of intentionality. For, speech acts are sub-class of human actions and human actions are themselves expressions of human intentionality: intentions, beliefs, desires etc. It also provides the connecting link between the theories of mind, including the theory of action, on the one hand and the theory of speech acts, as a special case, on the other i.e., the notion of 'conditions' of satisfaction. Thus, Searle claims that we have very good reasons for supposing that the attempt to ground speech act theory in the theory of the mind is well motivated. Accordingly, the semantics of a natural language is seen as the result of the mind (intrinsic intentionality) imposing conditions of satisfaction or aboutness on objects (expressions in a language), which have intentionality only derivatively. Perception and action rather than belief are taken as fundamental. In a sense, Searle 'disparages' as-if intentionality and favours derived intentionality. It is exactly here the above-said interface between language and mind becomes apparent.

His major argument is that what stands to statements being true is what stand to order being obeyed, and what stands to promises being kept etc. And where

psychological states are concerned what stands to beliefs being true, is what stand to wishes being fulfilled, is what stands to intentions being carried out etc. Every intentional state and every speech act that has a direction of fit will be satisfied or unsatisfied depending on whether or not the actual fit comes about. Searle points out that there is nothing essentially semantic, in the linguistic sense, about the notion of conditions of satisfaction, since we need this notion to account for the intentionality of psychological states quite independently of the expression of intentional states in language. He thinks that the notion of conditions of satisfaction helps to elucidate semantic notions precisely because it is a psychological notion applied to semantics. We know what it is for a belief to be true or false or a wish to be fulfilled or unfulfilled, an intention to be carried out or not carried out, quite independently of our theory of speech acts. [18]

Searle introduces the above changes in his analysis of the structure of illocutionary acts in his earlier book, as seen more poignantly, in his two essays 'A Taxonomy of Illocutionary Acts' and 'Indirect Speech Acts'. A more perceptible change in his book on *Intentionality* is that he has used his account of illocutionary acts as a turn towards a general theory of intentionality. Earlier, he has developed his theory from an analysis of one type of illocutionary act, promising.

Searle uses the terms 'input' and 'output' to cover the large and indefinite range of conditions, under which any kind of serious and literal linguistic communication is possible.[19] The 'input' covers the condition for intelligible

speaking and 'output' covers the condition of understanding. Together they include such things as that the speaker and hearer both know how to speak the language; both are conscious of what they are doing; they have no physical impediments to communication, such as deafness, aphasia or laryngitis; and they are not acting in a play or telling jokes etc. [20] His condition for sincere and non-defective promising is thus open to charge that there are very many ways in which promises can be defective. A promise involves an expression of intention, whether sincere or insincere, says Searle. So, to allow for insincere promises, we need only to revise our conditions to state that the speaker takes responsibility for having the intention rather than stating that he actually has it. A clue that the speaker does take such responsibility is the fact that he could not say without absurdity. [21] The essential feature of a promise is that it is the undertaking of an obligation to perform a certain act. He thinks that this condition distinguishes promises from other kinds of illocutionary acts, and he calls this the 'essential condition'.

While Searle's *Speech Act* is thus restricted to take the analysis of promising as a model for analyzing the structure of other illocutionary act concepts, his 'Taxonomy of Illocutionary Acts', extends this to cover the following categories of illocutionary acts: Assertives, Directives, Commissives, Expressives and Declaratives. The dimensions of difference that he chiefly relies on to differentiate and characterize these categories are: point (or purpose); direction of fit between words and the world; psychological state expressed etc. The

direction of fit means some illocutions have as part of their illocutionary point to get the words (more strictly, their propositional content) to match the world and others to get the world to match the words. [22] The former direction of fit is termed 'word-to-world' and is illustrated by assertives. The latter direction is termed 'world-to-word' and directives and commissives illustrate this. It is to be noted that the direction of fit is explained as an aspect of the illocutionary point. The members of the assertive class of speech acts are supposed in some way to match an independently existing world. But the members of the directive class of speech acts and the members of the commissive class are not supposed to match an independently existing reality. But which are supposed to bring about changes in world so that the world matches the propositional content of speech act. If the statement is not true, it is the statement, which is at fault, not the world. If the order is disobeyed, or the promises are broken, it is not the order or promise which is at fault, but the world in the person of the disobeyer of the order or breaker of promise. Intuitively, we might say the idea of direction of fit is that of responsibility for fitting. [23] The third dimension of variation i.e., expressed psychological state can be understood in the following way. He wants to make it explicit that one can be expressing a belief e.g.: even if one has no such belief, so it is clear that this is not the notion of manifestation, evincing or betrayal of the state in question. With respect to the direction of fit, Searle makes the point that there is a two- way direction. He explains that since the illocutionary point of the declaration is to bring about some new state of affairs

solely in virtue of the utterance, declarations have both directions of fit. One brings it about that *p* by way of representing it as being the case that *p*.[24] Searle takes a declaration to be a combination of an assertive and something extra-linguistic convention that saying something of the right sort, in the satisfaction of certain further conditions, is sufficient to bring it about that *p*. This analysis has the consequence that a declaration expresses both belief and desire. Thus, a declaration contains all three basic features of an assertive: the illocutionary point, the direction of fit and the psychological state expressed.

Searle's category of expressive takes the illocutionary point as expressing the psychological state specified in sincerity condition about a state of affairs specified in the propositional content. Presumably, this is supposed to be the same sense of 'express' as that in which assertives, commissives, directives and declarations express psychological states of various kinds. Searle says that since the truth of the proposition, for example: 'I thank you for writing a letter of recommendation for me or congratulate you on getting the fellowship', is presupposed rather than asserted, we are not trying to get the words to match the world in the expressive act. But a general criticism here is that Searle's specification of propositional content is incomplete.

In a sense, his book on intentionality thus, renounces any supposition about the intention to communicate with, or be understood by a hearer is necessary for illocutionary act performance and he denies in his speech act that any intention to produce other effects on hearers was required.[25] The intention required for an

(intentional) illocutionary act is said to be an intention to represent. This representing intention is a matter of imposing the condition of satisfaction of an intentional (psychological) state on an overt act, and thereby expressing that intentional state. For him, the different types of speech acts must be analyzed in terms of the different ways in which they can be related to the satisfaction condition for the originally mentally represented states of affairs. He writes 'Different kinds of illocutionary acts in so far as they have propositional contents can be regarded as different modes in which utterances represent reality----if we see the basic form of the illocutionary act as (*F*) (*p*)---then the illocutionary points will determine the different ways in which '*P*'s are related to the world....'[26]

The mode of speech act changes with the propositional attitude of the speaker and with the kind of satisfaction conditions that he imposes on the propositional content. In other words, truth conditions give the meaning of a statement, the meaning of a command is given by its obedience conditions and the meaning of a promise is given by its fulfillment conditions. It is not very clear whether he moves away from cognitive conceptions towards a communicative conception of language. If so, then Searle's approach to semantics of natural language may not be similar to the view that beliefs and desires are relations to sentences of Mentalese, an innate language of thought. Such a view is championed by, Fodor in his version of intentional realism. Nevertheless, there are arguments to show that he paved way for a marriage between Fodor and Searle for further the cause

for Folk-Psychological Realism. Naturalism is an adaptable term for all these types of approaches.

For Searle, original act of meaning constitutions on the part of the intentionality of mind is separated from the communicative purposive rationality, which is directed towards the production of effects in the consciousness of hearers. It is also uncoupled from that intentionality which is directed toward 'illocutionary effects' i.e. toward the communication of meaning in general. He formulates that communicating is a matter of producing certain effects on one's hearers, but one can intend to represent something without caring at all about the effects on one's hearers. One can make a statement without intending to produce conviction or belief in one's hearers or without intending to get them to believe that the speaker believes what he says or indeed without even intending to get them to understand it all. Therefore, there are two aspects to meaning intentions, namely the intentions to represent and the intention to communicate. Representation is prior to communication and representing intentions are prior to communication intentions. Part of what one communicates is the content of one's representations, but one can intend to represent something without intending to communicate.[27] It is for the above reason of a derived notion of intentionality, the plausibility of thinking that it is possible to marry Searle's approach to the semantics of natural language with Fodor's view that beliefs and desires are relation to sentence of Mentalese, an innate language of thought is not clearly laid out.[28] If the opposite is true, then the meanings of natural-language

utterances will be inherited from the prior contents of a speaker' and the contents of those intentions, in turn, reflected the meaning of the sentence of Mentalese through which they are primarily, and constitutively, expressed. Moreover, it is plausible to maintain that those propositional attitudes are relations to sentences of Mentalese, if the account appeared successful in other respects. But the intentions in question, which are appealed to, while accounting for the meanings of natural language utterance, had better be non-conscious ones. Because when one thinks aloud spontaneously he/she is surely not aware that his/her intention is both, to utter a sentence under a certain description and to impose a particular meaning on it. Fodor maintains that we should be able to give an account of the meaning of each Mentalese term without mentioning any other mental state. The natural language is a mere public expression of a thought, which was antecedently, and non-consciously, expressed in a sentence of Mentalese and from which it inherits its content. Here, I would like to mention one more similarity between Searle and Fodor, i.e. both defend the causal efficacy of the mental. At the same time, Searle opposes functionalist views of Fodor and attacks Strong Artificial Intelligence.

1.3 Searle's Challenge To Strong Artificial Intelligence:

Searle first formulated his challenge to strong AI in his paper 'Minds, Brains and Programs', published in 1980. [29] Ever since, it has been a mainstay of debate over the possibility of what Searle called 'Strong Artificial Intelligence'. Strong AI states that thinking is merely the manipulations of formal symbols. Thus, by

designing the right kind of programmes with the right inputs and outputs, we can literally create conscious intelligence. In other words, the computer is not merely a tool in the study of the mind, rather, the appropriately programmed computer really is a mind, in the sense that computers given the right programmes can be literally said to understand and have other cognitive states. It was also called 'computer functionalism'. [30] In strong AI, because the programmed computer has cognitive states, the programmes are not mere tools that enable us to test psychological explanations: rather the programmes are themselves the explanations. Supporters of strong AI believe that a correctly programmed computer is not simply a simulation or model of a mind; it actually would count as a mind. That is, it understands, has cognitive states and can think. In contrast, Weak AI is the view that brain processes (and mental processes) can be simulated computationally. According to weak AI, the principal value of the computer in the study of the mind is that it gives us a very powerful tool. For example, it enables us to formulate and test hypotheses in a more rigorous and precise fashion. He agrees with Weak AI's claim that the mind functions somewhat like a computer. [31] We can see a contradiction here. Even though Searle accepts weak AI, he rejects the view that the formal syntax of a computer programme is not intrinsically semantic. Searle says, 'what the computer does is a formal representation of real phenomenon, and it is a mistake to think that a formal simulation is the real thing'. [32] Hence, for the purpose of

refuting strong AI, he introduces his Chinese Room Argument, which is by no means uncontroversial.

It goes as follows: A monoglot English-speaking person is confined to a room containing a typewriter keyboard, a printer, and an operation manual written in English. The keyboard is designed to produce Chinese characters rather than letters of the Roman alphabet. Outside the room, a monoglot Chinese-speaking person has another such keyboard and printer, allowing him to send messages written in Chinese into the Room. The Chinese speaker is permitted to ask whatever questions he likes in these messages. On receiving a message, the English speaker inside the room has to consult the operation manual, which tells him what string of Chinese characters to type out in response. Let us suppose that the manual has been so written that, when the Chinese speaker receives the responses to his questions, he in unable to distinguish them from those of a native Chinese speaker. In that case, it seems, the Turing test has been passed. By the standards of that test, the Chinese speaker outside the room ought to conclude that he is communicating with an intelligent being inside the room. However, the English speaker inside the room has no understanding of Chinese whatever. The implication is that passing the Turing test demands no understanding of the questions posed in the course of that test. Consequently, the test is not a test of genuine intelligence, since genuine intelligence does demand understanding. [33]

Now, we are in a position to examine the strong AI claims in the light of this thought experiment. Strong AI claims that the programmed computer understands the stories and that the programme in some sense explains human understanding. As regards the first claim, it is obvious that Searle doesn't understand a word of the Chinese stories. He has inputs and outputs that are indistinguishable from those of the naive Chinese speaker, but still he understands nothing. As regards the second claim we can see that the computer and its program do not provide sufficient conditions of understanding since the computer and the programme are functioning, and there is no understanding. [34] Searle examines six important replies to this thought experiment and answers to them.

Briefly, the Systems Reply is simply that though Searle himself doesn't understand Chinese in the thought experiment, it is perfectly correct to say that Searle plus look up table understand Chinese. In other words, the entire computer would understand Chinese though perhaps the central processor or any other part might not. It is the entire system that matters for attributing understanding. [35] In response, Searle claims that even if we simply imagine the person in the Chinese room to memorize the look-up table, we have not produced a counter-example to this reply. Let the individual internalize all of these elements of the system. He memorizes the rules in the ledger and the data banks of Chinese symbols and he does all the conclusions in his head. The individual then incorporates the entire system. There is not anything at all to the

system that he does not encompass. We can even get rid of the room and suppose he works outdoors. All the same, he understands nothing of the Chinese, and *a fortiori* neither does the system, because there is not anything in the system that is not in him. If he does not understand, then there is no way the system could understand, because the system is just a part of him.

The Robot Reply, that is similar to the above, notes that the reason we don't want to attribute understanding to the room or a computer as described by Searle is that the system does not interact properly with the environment. This is also a reason to think the Turing test is not adequate for attributing thinking or understanding. If, however, we fixed this problem i.e. we put the computer in a robot body that could interact with the environment, perceive things, move around etc. We would then be in a position to attribute, understanding properly.[36] In reply, Searle notes that proponents of this reply have partially given up the tenet of AI that cognition is symbol manipulation. More seriously, he proposes that he could be in a Chinese robot, just as easily as a Chinese room, and that he still would not understand Chinese.

The Brain Simulator Reply is stated as follows. In the case of machine operating with a whole set of programmes operating in parallel, in the manner that actual human brain presumably operate when they process natural language, we would have to say that the machine understood the stories. Searle's answer is that machine is not sufficient to produce understanding. The problem with the brain simulator is that it is simulating the wrong things about the brain. As long

as it simulates only the formal structure of the sequence of neuron firings at the synapses, it won't have simulated what matters about the brain, namely its causal properties, its ability to produce intentional states. And, that the formal properties are not sufficient for the causal properties in the machine. We can have all the formal properties carved off from the relevant neurobiological causal properties.

The Combination Reply points out that in the case of robot with a brain-shaped computer lodged in its cranial cavity, having computer programmed with all the synapses of the human brain, and the whole behaviour of the robot is distinguishable from human behaviour with the whole thing as a unified system and not just as computer with inputs and outputs, we would have ascribe intentionality to this system. According to strong AI, instantiating a formal programme with the right input and output is sufficient condition of, indeed is constitutive of intentionality. But Searle replies that the concept of intentionality, that is attributed to the robot in the example, have nothing to do with formal programmes. They are simply based on the assumption that if the robot looks and behaves sufficiently like us then we would suppose until proven otherwise, that it must have mental state like ours that cause and are expressed by its behaviour and it must have an inner mechanism capable of producing such mental states. Further, if we knew independently how to account for its behaviour without such assumptions we would not attribute intentionality to it, especially if knew it had a formal programme.

The Other Minds Reply notes that we know that other people understand Chinese only by their behaviour. Now, the computer can pass the behavioural tests as well as they (can in principle), so if one is going to attribute cognition to other people, then he must in principle also attribute it to computers. The thrust of the argument is that it couldn't be just computational processes because the computational processes and their output can exist without the cognitive state, says Searle. It is no answer to this argument to feign anesthesia. In cognitive science, one presupposes the reality and knowability of the mental in the same way that in physical science one has to presuppose the reality and the knowability of physical objects.

The Many Mansions Reply points out that Searle's whole argument presuppose AI is only about analog and digital computers. But that just happens to be the present state of technology. Whatever these causal processes are that he says are essential for intentionality, eventually we will be able to build devices that have these causal process, and that will be AI. So his arguments are in no way directed at the ability of artificial intelligence to produce and explain cognition. [37] For Searle, no purely formal model will ever be sufficient by itself for intentionality because the formal properties are not by themselves constitutive of intentionality and they have by themselves no causal powers, except the power, when instantiated to produce the next stage of formalism when the machine running. And any other causal properties that particular realizations of the formal model have are irrelevant to the formal model because we can always put

the same formal model in a different realization where those causal properties are obviously absent.

So, the Chinese Room argument is based on the point that 'just manipulating the symbols is not by itself enough to guarantee cognition, perception, understanding, thinking and so forth. And, since computers qua-computers are symbol-manipulating devices, merely running the computer programme is not enough to guarantee cognition'. [38] The main thrust of this thought experiment is to show that the syntactic manipulation of formal symbols doesn't by itself constitute semantics. Besides, formal symbols manipulations by themselves don't have any intentionality they are quite meaningless. They aren't even symbol manipulations, since the symbols don't symbolize any thing. Thus, the aim of this experiment is to show this by showing that as soon as we put something into the system that really does have intentionality (a man), and we programme him with the formal programme and this formal programme carries no additional intentionality, it adds nothing for example to a man's ability to understand Chinese. The implications for computationalism and strong AI are held to be the following.

First is that in real cognitive system, the symbols have real semantic contents, not contents that are nearly assigned by a programmer. In other words, real or intrinsic, semantic contents are necessary for the real cognitive achievements. Thus, it is wrong to say that cognition is just a matter of symbol manipulation. This leads to the point that the computer programmes are formal, because a

computer processes information, which is encoded in the symbolism that the computer uses. Then through a set of precisely stated rules, the symbols are manipulated. These rules constitute the programme. His Chinese Room Argument shows that even though a system inside a room can manipulate symbols, it does not necessarily operate on the level of meaning. In short, programmes are defined purely formally or syntactically.

Secondly, strong AI fails because a system's behaving as if it had mental states is insufficient to establish that it does in fact have these states. He adds that human minds have mental contents. This shows that the symbols of the programme can stand for anything the programmer or user wants, because the programme has syntax but no semantics. On the other hand, understanding thought and perception etc have mental content. But symbols are manipulated without reference to any meanings. Thus, minds cannot be equivalent to programmes.

Thirdly, syntax by it self is neither constitute of nor sufficient for semantics. Interestingly, Searle's assertions that syntax is insufficient to establish semantics predates the Chinese Room argument and in fact represent one of the main objections to the generative grammar program that he voiced back in the early 1970's. Chinese Room argument is based on the fact that a programme by itself is not constitutive of thinking, for the programme is purely a matter of formal symbol-manipulation. These symbol manipulations by themselves are not sufficient to guarantee the presence of meanings. The idea is that, computing functions syntactically or otherwise is not sufficient to endow the arguments and

values of the functions with intrinsic semantic content.[39] That is, since computers are just formal symbol-manipulators, they can not qualify for mental ascription.

More recently (1997), Searle has argued that the Chinese Room argument granted too much to computationalism. As he sees it now, the argument wrongly took as unproblematic the assumption that computer programmes are syntactic or symbolic in the first place. Instead, he argues that there is no fact intrinsic to the physics of computers that makes their operations syntactic or symbolic; rather, the ascription of syntax or symbolic operations to a computer programme is a matter of human interpretation. Comparing this thought experiment with the Turing test, Searle argues that a computer can pass the Turing test even without a faint understanding for consciousness or intelligence on its part. According to him, this will be evident if we consider that the question (bunches of 'inputs' symbols) may in Chinese mean example 'what is your favourite colour?' And the answer (the bundles of 'output' symbols) may mean in Chinese. 'My favourite is blue, but I also like green a lot'. So a person/machine can pass the Turing test (which is meant for testing conscious intelligence), even without a distinct understanding of Chinese or any other language. Digital computers are also doing this kind of symbol manipulation nearly by following the syntactic rules, which is predefined and pre-programmed through relevant programmes.

The conclusion is that if Searle does not understand Chinese solely on the basis of running a 'programme' for understanding Chinese, then neither thus any other digital computer merely on the basis of the manipulation formal symbols

according to rules in the programme. A brief look at the Turing test will again confirm the above controversial nature.[40]

Turing test as a kind of imitation game was proposed by Alan M. Turing as a test for machine intelligence in his article 'Computing Machinery and Intelligence.' It may be described in essence as follows: Imagine that one is confined to a room equipped with a typewriter keyboard and printer on one side and another keyboard and printer on the other side. By means of these devices she can send and receive typewritten messages to and from the occupants of the two adjoining rooms. One of the occupants is another ordinary human being who speaks formers language, while the other occupant is a computer executing a programme designed to provide responses to questions expressed in that language. She is allotted a limited period of time, say ten minutes or so, during which she is at liberty to send whatever questions she likes to the two occupants and to scrutinize their answers. Her task is to try to determine, on the basis of those answers, which room contains the human being and which the computer. The computer is said to pass the test if she cannot tell except by chance which of the two occupants is human. Here, the question arises: 'can machine think?' [41] There are a number of variations of this test that limit the domain of discourse and give a chance to computers to pass this test. But the problem lies not in making 'real' answers to restricted and domain specific technical details, but to give the capability of answering questions that involves 'common sense'. This is what critics like Hubert Dreyfus state that any computing machine lacks. As P.M

Churchland observes, now the question 'Could a machine think?' has been replaced by a more improved and approachable question. 'Could a machine that manipulated physical symbols according to structure-sensitive rules think?' The debate initiated by John. R. Searle and the Churchlands during 1990 have helped us to fully appreciate the distinction between these two questions in the context of portraying a weak AI. Let us now turn to his equally interesting critique of cognitive science.

1.4 Searle's Critique of Cognitive Science:

Searle rejects cognitive science on the grounds that neither the study of the brain as such nor the study of consciousness as such is of much interest and importance to it. The basic assumption behind cognitive science is that the brain is a computer and mental processes are computational. [42] Besides, consciousness is purely cognitive and that these cognitive activities can be construed in functional terms. [43] For the cognitive scientist, mind will be understood, if it is understood by our best science. According to Searle, these views involve the following four difficulties.

(1) Syntax is not intrinsic to Physics: Searle points out that; cognitive scientists are not concerned with the implications of multiple realizability. They think that it is typical of functional accounts that the same function admits of multiple realizations. The multiple realizability is a consequence not of the fact that the same physical effect can be achieved in different physical substances, but that the relevant properties are purely syntactical. The physics is irrelevant except in so

far as it admits of the assignments of 0's and 1's and of state transitions between them. This has two consequences. First, the same principle that implies multiple realizability would seem to imply universal realizability. If computation were defined in terms of the assignment of syntax, then everything would be a digital computer, because any object whatever could have syntactical ascriptions made to it. One could describe anything in terms of 0's and 1's. Second, the ascription of syntactical properties is always relative to an agent or observer who treats certain physical phenomena as syntactical. Searle argues that on the standard definition of computation, it is hard to see how to avoid the following results from these consequences: (1) For any object, there is some description of that object such that under that description, the object is a digital computer. (2) For any programme and for any sufficiently complex object, there is some description of the object under which it is implementing the programme. He thinks that the reason that the cognitive scientists do not see hat multiple or universal realizability is a problem is that they do not see it as a consequence that 'syntax' is not the name of a physical feature, like mass or gravity. On the contrary, the talk of 'syntactical' and 'semantical' engines rests, on a fallacy. According to Searle, syntax is essentially an observer-relative notion. The multiple realizability of computationally equivalent processes in different physical media is not just a sign that the processes are abstract, but that they are not intrinsic to the system at all. They depend on an interpretation from outside. A physical state of a system is a computational state only relative to the

assignment to that state of some computational role, function or interpretation. The same problem arises without 0's and 1's because notions such as computation, algorithm, and programme do not name intrinsic physical features of systems. Computational states are not discovered within the physics, they are assigned to the physics.

The above argument goes a step further than the Chinese Room Argument that showed that semantics is not intrinsic to syntax. Now, he makes a separate point that syntax is not intrinsic to physics. His point is that there is no way to discover that something is intrinsically a digital computer because the characterization of it as a digital computer is always relative to an observer who assigns a syntactical interpretation to the purely physical features of the system. Generally, the characterization of a process as computational is a characterization of a physical system from outside; and the identification of the process as computational does not identify an intrinsic feature of the physics; it is essentially an observer-relative characterization. To understand this argument fully, it is essential to understand the distinction between features of the world that are intrinsic and features that are observer relative. Searle gives certain examples to these features. The expressions 'mass', 'gravitational attraction', and 'molecule' name features of the world that are intrinsic. The expressions such as 'nice day for a picnic', 'bathtub' and 'chair' name objects by specifying some feature that has been assigned to them, some feature that is relative to observers and users. Briefly, the aim of natural science is to discover and characterize features that are intrinsic to

the natural world. By its own definitions of computation and cognition, there is no way that computational cognitive science could ever be a natural science, because computation is not an intrinsic feature of the world. It is assigned relative to observers.

(2) The Homunculus Fallacy is endemic to cognitivism: Homunculus Fallacy is the idea to treat the brain as if there were some agent inside it using it to compute with. A typical case is David Marr (1982), who describes the task of vision as proceeding from a two-dimensional visual array on the retina to a three-dimensional description of the external world as output of the visual system. The difficulty is: who is reading the description? Many think that the homunculus fallacy is not really a problem because, with Dennett (1978), they feel that the homunculus can be 'discharged'. The idea is that because the computational operations of the computer can be analyzed into progressively simpler units, until eventually we reach simple flip-flop, 'yes-nc', '1-0' patterns, it seems that the higher-level homunculi can be discharged with progressively stupider homunculi, until finally we reach the bottom level of a simple flip-flop that involves no real homunculus at all. In short, the recursive decomposition will eliminate the homunculi. Searle advocates that without a homunculus that stands outside the recursive decomposition, we do not even have syntax to operate with. The attempt to eliminate the homunculus fallacy through recursive decomposition fails, because the only way to get the syntax intrinsic to the physics is to put a homunculus in the physics. Cognitive theorists are cheerfully

conscious that the higher levels of computation, for example, 'multiply 6 times 8', are observer relative; there is nothing really there that corresponds directly to multiplication; it is all in the eyes of the homunculus beholder. But they want to stop this concession at the lower levels. The electronic circuit, they admit, does not really multiply 6x8 as such, but it really does manipulate 0's and 1's and these manipulations, so to speak, add up to multiplication. But to concede that the higher levels of computation are not intrinsic to the physics is already to concede that the lower levels are not intrinsic either. Typical homunculus questions in cognitive science are such as the following: 'How does the visual system compute shape from shading?' 'How does it compute object distance from size of retinal image?' The parallel question would be 'How do nails compute the distance they are to travel in the board from the impact of the hammer and the density of the wood?' In both sorts of cases, the answer is the same. If one is talking about how the system works intrinsically, neither nails nor visual systems compute anything. One, as outside homunculi, might describe them computationally, and it is often useful to do so. But one cannot understand hammering by supposing that nails are somehow intrinsically implementing hammering algorithms and vision by supposing the system is implementing, for example, the shape from shading algorithm.

(3) Syntax has no causal powers: The thesis of cognitive science is that there are a whole lot of symbols being manipulated in the brain, 0's and 1's flashing through the brain at lightning speed and visible not only to the naked eye but even to the

most powerful electron microscope, and it is these that cause cognition. But the difficulty is that 0's and 1's as such have no causal powers because they do not even exist except in the eyes of beholder. The implemented programme has no causal powers other than those of the implementing medium because the programme has no real existence, no ontology, beyond that of the implementing medium. Physically speaking, there is no such thing as a separate 'programme level'. Searle shows that the human computer is consciously following rules, and this fact explains his behaviour, but the mechanical computer is not literally following any rules. It is designed to behave exactly as if it were following rules so far practical, commercial purposes it does not matter that it is not actually following any rules. It could not be following rules because it has no intentional content intrinsic to the system that is functioning causally to produce the behaviour. Cognitivism tells that the brain functions like the commercial computer and that this causes cognition. But without a homunculus, both commercial computer and brain have only patterns, and the patterns have no causal powers in addition to those of the implementing media. Thus, there is no way cognitivism could give a causal account of cognition. In other words, the attribution of syntax identifies no further causal powers are fatal to the claim that programme provides causal explanations of cognition. There is just a physical mechanism, the brain with its various real physical/mental causal levels of description.

(4) The brain does not do information processing: Searle argues that it is a mistake of cognitive science to suppose that in the sense in which computers are used to process information, brains also process information. In case of the computer, an outside agent encodes some information in a form that can be processed by the circuitry of the computer. The computer then goes through a series of electrical stages that the outside agent can interpret both syntactically and semantically even though, the hardware has no intrinsic syntax or semantics. It is all in the eyes of the beholder. Finally, an output is produced in the form of physical phenomena, for example a printout, which an observer can interpret as symbols with a syntax and semantics. It follows that you could not discover that the brain or anything else was intrinsically a digital computer, although, you could assign a computational interpretation to it as you could to anything else. The point is not that the claim 'the brain is a digital computer' is simply false. Rather, it does not get up to the level of falsehood. It does not have a clear sense. The question 'Is the brain a digital computer?' is ill defined. At the same time, in the case of brain, none of the relevant neurobiological processes are observer relative and the specificity of the neuro-physiology matters desperately. In short, the sense of information processing that is used in cognitive is as much too high a level of abstraction to capture the concrete biological reality of intrinsic intentionality. The 'information' in the brain is always specific to some modality or other. It is specific to thought, or vision, or hearing, or touch, for example. On the other hand, the level of information processing described in the cognitive

science computational models of cognition is simply a matter of getting a set of symbols as output in response to a set of symbols as output. Briefly, the brain as far as its intrinsic operations are concerned, does no information processing. It is a specific biological organ and its specific neuro-biological processes, which cause specific forms of intentionality. In the brain, intrinsically, there are neuro-biological processes and sometimes they cause consciousness. All other mental attributions are either dispositional, or they are observer relative. In the traditional cognitive science paradigms, there is supposed to be a deep unconscious mental cause that is supposed to produce the desired effect such as the perceptual judgment or grammatical sentences. What such an inversion actually does is that they eliminate the mental cause altogether from the project. They are brute physical explanations, which exclude mind as ***terra incognita.***

Searle's views are opposed by, Churchland. Searle's thought experiment has been criticized most forcibly on the ground that it is the overall system that is appropriately compared to a programmed computer. And also, on the ground that the strong A1 research programme, is entitled to develop ways of bringing symbols into further interaction both with the environment and with behaviour of the machine. These together generate a better model of the cognitive subject. Searle's own response insists that anything characterized as a thinker must have appropriate causal powers, but he also suggests that such powers essentially require 'biology' or 'wetware' rather than hardware.

For Churchland, Searle is in no position to state that rule-governed symbol manipulation never constitutes semantic phenomena. Because, people have a uniformed common-sense understanding of the semantic, and cognitive phenomena and that need to be explained. He further adds that, given proper inputs, a system would think not that it couldn't. [44] But Searle points out that there is a distinction between syntax and semantics i.e., the distinction between the formal symbol-manipulation that is done by the computer and the mental contents biologically produced by the brain. The idea is that computing functions is not sufficient to endow the arguments and values of the functions with intrinsic semantic content.

There is nothing in Chinese Room corresponding to the functional structure of the human mind -that is out of distinctively human interactions between perception, belief, desire, intention, and action (to name but a few of the more salient mental categories). The moral of this thought experiment is that possession of beliefs and desires is not constituted by the fact that the subject is interpretable as acting out of beliefs and desires. [45] Searle's strategy is to say that although the brain causes conscious states, any identification of conscious states with brain activities are unsound. Traditionally, it has been opined that the best the reductionist can hope for are correlations between subjective states and brain states, and although correlation can be evidence for causality they are not evidence for identity. Searle has tried to bolster that objection by saying that whereas *a/b* identification elsewhere in science reveal the reality behind the

appearance, in the case of awareness, the reality and appearance are inseparable.[46] There is no reality to awareness except what is present in awareness. There is, therefore, no reduction to be had. But Churchland argues that Searle fails to appreciate why scientists opt for identifications when they do. Depending on the data, cross-level identification to the effect that *'a is b'* may be less troublesome and more comprehensible scientifically than supposing *'thing a causes thing b'*.

According to Churchlands, neuroscience can reveal the physical mechanisms subserving psychological functions in the sense that it is indeed the brain that performs those functions. That is, capacities of the human mind are in fact capacities of the human brain. It is highly probable hypothesis based on evidence currently available from physics, chemistry, neuroscience and evolutionary biology. [47] The intricacies of brain function may be subjectively opaque to us now, but they need not remain that way forever. Neuroscience may appear to be defective in providing a purely 'third person account' of mind, but only familiarity of idiom and spontaneity of conceptual response are required to make it a 'first person account' as well. What makes an account a 'first person account' is not the content of that account, but the fact that one has learned to use it as the vehicle of spontaneous conceptualization in introspection and self- description.

Briefly, the weakness of Searle's position is that he offers no clear way to tell when genuine meaning has vanished from the system. He merely insists that some systems have intentionality by virtue of their 'causal powers' and that

some don't. He vacillates about what those powers are due to some times it seems that the brain is composed of 'the right stuff' but other times it seems to be something else. It is whatever seems convenient at the moment; it is the slippery essence that distinguishes 'form' from 'content', another that separates syntax from semantics and so on. Searle seems to believe that any system whatsoever can be ascribed as beliefs, feelings and the like. If one looks hard enough for a way to describe the system as instantiation of an Artificial Intelligence programme, obviously, that would be a disturbing notion, leading the way to panpsychism. Indeed, Searle believes that the Artificial Intelligence people have unwittingly committed themselves to a panpsychic vision of the world. His escape from his self-made trap is to maintain that all those 'beliefs' and 'feelings' that one will uncover in inanimate objects and so forth when one begins seeing mind everywhere are not genuine but 'pseudo'. They lack intentionality and causal powers of the brain. Certainly, minds come in different grades of sophistication, but minds worth calling minds exist only where sophisticated representational system exist, and no describable mapping that remains constant in time will reveal a self-updating representational system in a machine. Minds exist in brains and may come to exist in programmed machines. If and when such machines come about, their causal powers will derive not from the substances they are made of, but from their design and the programmes that run in them.

Thus, Searle's philosophy of mind is based on his earlier views in the philosophy of language and also that implicitly he makes a bridge between these two. It is very much clear when he argues that the philosophy of mind is concerned with nature of mind and consciousness, perception and intentionality of intentional action and thought. In the same way, philosophy of language is interested in meaning, truth, reference and necessity, and analogously should use any epistemic method that comes to hand to try to figure out how these phenomena work in the minds of actual speakers and hearers. Even though, Searle looks less successful in his attempt to give satisfactory answers to the problems within the philosophy of language, it is difficult to answer the above question without discussing his defense of the weak AI in philosophy of mind. This is what we characterize as a system with conceptual constraints and defends the above interface as we move ahead. Indeed, this becomes an analytical model for his mature theory of intentional causation with gaps. Later, we shall have occasion to see how his semantics outlives at least as an interface in the general defense of non-reductive materialism also as illustrated in Ned Block. The conclusion here is Searle himself tramples his semantic investigations under his feet in his zeal to counter reductive programmes. Thus, a perspective around the above-mentioned two questions will be developed in the next two chapters to point at the major flaws in his arguments.

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CHAPTER - 2

THE EXPLANATORY GAP: CHALLENGES AND RESPONSES

2.1 The so-called Explanatory Gap:

The hard problem of consciousness is due to the problem of explanatory gap. The explanatory gap can be described as occurring between either two set of substances or two set of properties, or else, it might be about the relation between these set of properties or, still again, it might even be the relation between two events. The hitherto history of philosophy of consciousness shows that philosophers have been exerting their energy either to close or reveal the explanatory gap between physical and mental states in either one or more of these ways. There still exists the doubt as to whether the problem of explanatory gap is just a squabble? The term explanatory gap was first coined by Levine (1983) to show that consciousness cannot be explained simply by telling that it accompanies physical facts. [1] Though physicalism as such is acceptable, it cannot prove that the explanatory gap is closable. An argument to this effect is due to Levine and it has its adherents even today.

A spectrum of views is evident between the two extremes, which either accepts that it is closable, or unclosable. If it is closable for the physical world which is causally closed and it is not closable for a world, which excludes the mental world. This is what is termed as the problem of causal exclusion. Efforts were on in the last three to four decades to demonstrate that mental causation is a species

of physical causation, which should be counterposed to saying that mental causation is not a species of physical causation. The reductions are hardheaded to argue that they are reducible to one another and underscores that mental states are physical states or they are simply brain states. The anti-reductionists deny this. The controversy rages between reductionists and anti-reductionists. Within anti-reductionism, they are physicalists. They are called non-reductive physicalists. Those who deny the problem of causal exclusion argue for symmetry between the two types of causations. Those who agree with the principle of exclusion harp on the asymmetry. Non-reductive physicalists ensure that such an asymmetry cannot be dispensed with a priori conceptual analysis alone. The phenomenality of consciousness, according to a recent assessment by Ned Block, cannot be solved either by phenomenalist reductionism (this will be turn out to be a type of deflationism) or by scientific reductionism (or by metaphysical or phenomenal realism). It is difficult to map the field of controversy between these rival groups. Reductionists believe that the physical world is causally closed. The anti-reductionists challenge this principle so as to argue there is something over and above the physical world, which cannot be causally explainable. The classical reductionists were formulated as an idealized model in conformity with the covering law model of explanation (hypothetico-deductive method) that was due to Hempel. It was advocated by, Nagel.

There were as many as five challenges to this model so much so that the Nagelian model was rather abandoned as unworkable in the last two decades.

The most important response was aimed on both fronts. That is to show that hypothetical-deductive method of scientific explanation was wrong as well as on the more particularized premise about the connection principle, the bridge principle. This was due to Churchland. Churchland reduced the method to one about inter-theoretic model of explanation, which was aimed to show the relation between the base theory and the target theory. He also reduced the connectionist philosophy of mind into one about a type of philosophy of science, which talks about the relation between two theories. This is what is evidenced in recent philosophy of science espoused by Thomas Kuhn and Paul Feyerabend. Both have their foci on the interrelation between theories within the broad framework of progress or succession of scientific theories. The next important challenge came from Davidson's anomalous monism as a philosophy of mind, which cast aspersions on the connecting bridge principle. There are nomic laws of necessity but there is no psychophysical causation. The most important challenge to strict reductionism comes from Searle's biological naturalism, which used supervenience and an alternative connective principle for developing his perspective. The other important response comes from J. Kim who attacked non-reductionism at two stages; first in his version of minimal physicalism and second in his version of physical realizationism, according to which mind is to be located in the physical world. The following response was again due to Chalmers who opted for a metaphysical viewpoint of logical dualism.

Explanatory gap arises, when we lack any bridging principle between mental facts and physical facts. This was changed into a biconditional law and thenceforward into identity which underwent yet another modification in terms of a theory of mental causation. This is exactly where our perspective on Searle receives its full impetus. The question whether Searle has succeeded to close the explanatory gap or not, requires us to address ourselves to the closely related issue of the theory of mental causation. The latter problem absorbs the former in that if Searle has a plausible theory of mental causation then he might be said to close the explanatory gap within the purview of his outlook on biological naturalism. That is, the theory of causation that depends on a connection principle in his layered model of biological naturalism must be proved to have credentials. But as we go on to enquire in the sequel, this is not the case. This is proved in the light of the theory of mental causation as developed by Kim. Hence Searle's theory is highly suspect. The impact on the issue of explanatory gap will then become in due course. The two chapters are intended therefore to deal with the challenges and responses on both of the above fronts and appropriately titled to convey their interdependence. First let us see the problem of explanatory gap.

Some people think that the explanatory gap is unbridgeable and there exists a corresponding gap in the world. At the same time, some other thinkers hold that the explanatory gap may one day be bridged but we currently lack the concept to bring the subjective and objective perspectives together. [2] On this view, it may turn out that phenomenal states are physical, but we currently have no clear

conception as to how they could be (physicalism). Still others adamantly insist that experiences and feelings are as much part of the physical, natural world as life, photosynthesis, DNA or lightning. It is just that with the concept we have and the concepts we are capable of forming, we are cognitively closed to a full, bridging explanation, by the very structure of minds. There is such an explanation, but it is necessarily beyond our cognitive grasp. Similarly, Nagel says, understanding the basis of mind lies beyond the study of the physical realization of certain aspects of it. But fundamentally, an organism has conscious mental states if and only if there is something that it is like to be that organism. [3] Thus, reductionism is impossible. Against this, Kim insists that we must retreat to the strong type reductionism. McGinn (1991) argues that a gap is unclosable because the fundamental nature of consciousness is inaccessible to us, though it might be accessible to creatures with very different sorts of minds. But the authors who favour a deflationary approach arguing that, the unclosability of the explanatory gap has to do with our concepts, not with nature itself. Horgan (1984), Levine (1993), Jackson (1993) and Chalmers (1993) have contributed to working out the idea that reductive explanation in science depends on a priori analysis of the phenomena to be explained, usually in functional terms. What underlies these theses is a kind of a priori conceptual analysis thesis. Briefly stated, it amounts to arguing that conceptual analysis entails a certain ontological independence of mind and body. According to Ned Block, within the diaspora of non-reductionism, there are thinkers like Jackson who bypass the metaphysical

implications, and there are thinkers who argue for metaphysical independence and thenceforward towards dualism. For thinkers like Lowe, as for many others, it clearly entails dualism, though it is a dualism of the non-Cartesian variety. For Ned Block, we can challenge reductionism without falling into the trap of any dualism. The upshot of some of these arguments requires an a priori conceptual analysis of the view, which holds that the closing the explanatory gap requires an a priori functional analysis of qualia. But this need not be taken at face value.

Mind-body problem has been a major analytical problematic within the philosophy of mind. While Ryle dismissed it as a tissue of conceptual confusion, others have struggled throughout the recorded history to give an obvious theory of mental causation and thereby close the explanatory gap. In modern period, first answer to the mind-body problem is proposed by Descartes, which holds that minds are wholly distinct from bodies and physical objects of any sort. This view is known as Cartesian Dualism. There is two-way psychophysical causal interaction: from mental to the physical and from physical to the mental. But this theory has no answer to the question- how states of a non-spatial substance (a mind) can causally interact with states of a substance that is in space (a brain). However, today dualism survives with a modicum of support both among scientists and philosophers. Some thinkers find a solution to this problem by arguing that mental and physical realms run in parallel, in that types of mental phenomena co-occur with certain types of physical phenomena, but these co-occurrences never involve causal interactions. Liebniz has espoused a brand of

parallelism called pre-established harmony. Against this, Spinoza holds a dual-attribute theory known as dual-aspect theory. According to this theory, the mental and the physical are distinct modes of a single substance, God. Materialists reject this. For them, everything is material or physical. Still other thinkers bring another solution, known as epiphenomenalism. They point out that, physical states cause mental states, but mental states do not cause anything. It implies that there is only one-way psychophysical action- from the physical to the mental. In the final run, Searle also claims to be a modified form of epi-phenomenalist, which can explain the psychological processes that causes the illusion of freewill. If so, Searle would choose the third among the following distinguishable strategies that are floated for either closing the gap or for not closing it:

1.Mental states is realized by physical states;

2.Mental properties supervene on the physical properties; and

3.Mental properties are emergent from the physical properties.

The mind-body identity thesis, otherwise called 'central-state materialism', 'type physicalism or 'the brain state theory' appeared with J.J.C Smart's 'Sensation and Brain Processes' and Herbert Feigl's 'The Mental and the Physical.' It points out that, as a matter of empirical fact, conscious states are physical states, always seems to appear at the same place in the causal scheme of things and that they must therefore be identical.

Hilary Putnam's objection against the identity theory comes through his machine functionalism. The core thesis is that mental kinds are functional kinds, not physical kinds. Functionalism views mental properties and kinds as functional properties, properties specified in terms of their role as casual intermediaries between sensory inputs and behavioural outputs. This is usually taken to be a conceptual truth arising from our notion of what it is to be a mental property. Another claim is that, as things are in this and other relevantly similar worlds, physical states and properties are the only occupants, or realizers of these causal roles definitive of mental properties. This theory made it possible to wash out the restrictive constraints of physicalistic reductionism without returning to the discredited dualism of Descartes and others. The advent of cognitive science was boosted the morale on this side. It advocates that consciousness is purely cognitive and that these cognitive activities can be construed in functional terms. [4] For the cognitive scientist, mind will be understood, if it is understood by our best science. They advocate that:

(1) The processes, which explain cognition, are unconscious not only in fact, but also in principle.

(2) The basic assumption behind cognitive science is that the brain is a computer and mental processes are computational.

(3) The definition of computation given by Alan Turing is that 'A Turing Machine can carry out certain elementary operations. It can rewrite a '0' on its tape as '1', it can rewrite a '1' on its tape as a '0'or it can shift the tape '1' square

to the left or it can shift the tape '1' square to the right. It is controlled by, a programme of instructions and each instruction specifies a condition and an action to be carried out if the condition is satisfied. [5]

Functionalists use the term 'realization' to describe the relation between mental properties and physical properties, i.e., mental properties are realized or implemented by physical properties, though not identical with or reducible to or definable in terms of them. These terms get popularized chiefly on the basis of computational analogies. Functionalists have made an explicit effort to explain what the realization relation consisted in or what this relation implied in terms of the traditional option on the mind-body problem since its inception.

Physicalism faces some challenges. The questions such as 'How is it possible for conscious states to depend on brain states?' 'How can technicolour phenomenology arise from soggy grey matter?' pose an unanswerable challenge to physicalism. They argue that there is no way of bridging the explanatory gap between the material brain and the lived world of conscious experience, and that physicalism about the mind can therefore provide no answer to the 'hard problem' of why brains give rise to consciousness.

When the materialistic theories of mind could not combine materialism with multirealisability (mental states are multirealisable) and the identity (central states-brain states) cannot bring out the necessary relation between bodily sensations and mental states, the natural tool that was chosen was called supervenience (mental states supervene brain states). The crucial question here

was whether mental causes must make a difference in physical processes. The concept runs through Kim, [6] Davidson and later, in Searle (causal type) and Chalmers[7] (natural/logical type). The idea of supervenience was introduced in the 70's and 80's. It is usually thought to have originated in moral theory, in the works of such philosophers as G.E Moore and R.M. Hare. Donald Davidson (1970) was perhaps the first to introduce supervenience into discussions of the mind-body problem, when he wrote mental characteristics are in some sense dependent or supervenient on physical characteristics. Such supervenience might be taken to mean that there cannot be two events alike in all physical respect but differing in some mental respect or that an object cannot alter in some mental respect without altering in some physical respect.[8] The mental properties are supervenient on physical properties seemed perfectly to meet the needs of the post-reductionist physicalists in search of a metaphysics of mind. Ned Block called this is an, 'anti-reductionist' consensus by the mid 70's. This position, standardly called 'non-reductive physicalism', has been the most influential and widely shared view about the relationship between 'higher-level' properties and their underlying 'lower-level' properties.

Supervenience can be defined in various ways. Strong supervenience is the claim that set *A* of properties supervenes on set *B* of properties just in case necessarily, for any property *F* in *A*, if anything has *F*, there exist a property *G* in *B* such that thing has *G* and necessarily anything that has *G* has *F*. Another version of normative supervenience is the doctrine that normative or evaluative properties

supervene on non-normative, non-evaluative properties. Various meta-ethical positions accept normative or constitutive supervenience, but they have different accounts about its source. For instance, R.M. Hare (non-cognitivist) would attempt to explain it as a form of consistency condition essential to the regulative character of the language of commending and prescribing. Some others may try to explain it as arising from the very concept of normative evaluation, maintaining that evaluative or normative properties must have non-normative descriptive criteria. As against this constitutive supervenience, Searle claims to use causal variety, which holds that mental states are higher-order features of the brain.[9] David. J. Chalmers claims that almost all states and properties of the natural world supervene logically on the total microphysical state of the world. He writes 'it is plausible that every supervenience relation of a high-level property upon the physical is ultimately either (1) as a logical supervenience relation of either the primary or secondary variety, or (2) a contingent natural supervenience relation. If neither of these holds for some apparent supervenience relation, then we have good reason to believe that there are no objective high-level facts of the kind in question.' [10] Others who advocate versions of the logical supervenience thesis include Jackson (1993), Kirk (1974) and Lewis (1994). Jackson's 'Mary' experiment claims that the physical facts do not exhaust all the facts.

The third view 'emergentism' is a form of dualism that takes mental properties to be non-physical intrinsic casual powers. They accept the fundamental physicalist

ontology and the supervenience of higher-level properties on the lower level ones and they are not concerned about the multiple realizability of the former in relation to the latter. Emergentists have advocated that from a complete knowledge of the basal conditions, it is not possible to predict what properties will emerge at higher levels. For example, from a complete knowledge of the hydrogen and oxygen atoms in isolation, it is not possible to predict that they will bond in the ratio of 2 to 1 to form water, or that the resulting substance will be transparent and dissolve sugar but not copper. The problem of multiple realizations is that in most cases there will be more than one first-order property satisfying the functional specification. In other words, there will be multiple occupiers of the casual role. But Kim persuasively argues that multiple realizability argument is flawed.

Terence Horgan critiques the casual exclusion problem in Kim's work. If we seek to accommodate casual exclusionary considerations, then we are inevitably driven towards a psycho-physical type-type identity theory. Against Kim, Horgan favours non-reductive materialism, which asserts that mental properties can be physically multiply realizable not just across different species but within creatures of the same species. He repudiates psychophysical type-type identities and maintains that causal exclusionary reasoning is mistaken. Churchland and Dennett reject all these and their view is known as eliminativism, which we shall discuss in the next section. There are some responses to the above challenges.

Currently, the debate is between reductive and anti-reductive materialism. The other responses are given as follows:

Firstly, explanatory gap reflects a limitation on our cognitive capacities (McGinn). For McGinn, we just do not have, and are constitutionally incapable of forming, the requisite concepts to bridge the gap.

Secondly, the gap is real, but that it is to be expected given certain peculiarities associated with our first-person access to experience.

Thirdly, advocates of explanatory gap just do not appreciate how much one could explain given a sufficient amount of neurological detail.

Finally, some see in the explanatory gap evidence that the very notion of qualitative character at issue is confused and probably inapplicable to any real phenomena. On this view, qualia literally do not exist.

There is no explanatory gap, says Churchland and Dennett. At the early stage Dennett argued that a person's body should be considered as an integral part of his mind. Later, he changed his views in his book *Kinds of Minds* saying that mind is distributed throughout the body. His famous Multiple Drafts Theory advocates that a number of distinct partial and partially conflicting accounts of reality will be construed in different regions of the brain at any one time. [11] The only way to explain consciousness is to take it as the centre of narrative gravity. [12] For him, explanatory gap is due to our difficulty in understanding.

Churchland also argues that explanatory gap is closed by neuro-biological terms. He adds that a neuro-computational perspective will be adequate to explain how

the brain has a neuronal architecture, supported by the connectionist cognitive modeling of the brain.[13] Churchland holds that we are hornswoggled into believing that there exists something over and above the neuronal architecture and the nature of consciousness is an empirical problem (The Hornswoggle Problem).

To suppose that there is an explanatory gap between phenomenal aspects of experiences and underlying physical and functional states is a cognitive illusion, says Michael Tye. When the subjective feelings are experienced, there occurs corresponding physical and functional changes, but we doubt the phenomenology is missing. He accepts that experiences are physical and there is no explanatory gap posed by their phenomenology. The gap is unreal for Tye; the so-called 'explanatory gap' derives largely from a failure to recognize the special features of phenomenal concepts. Tye's solution would not find favour with Block.

He refutes self as an immaterial substance by showing the vulnerability of Searle-like Family of Arguments advanced to the effect that something is left out and hence the physical world is not causally closed (called the 'Left-Out Hypothesis'). Tye upholds a thesis that the physical world is causally closed. It precludes therefore, any causal interaction between spirit and matter. [14] For him, it is necessary to distinguish the following ten problems within the approach to consciousness. What it is to be what it is representing? Such a theory has explanatory power. The ten problems are: (1) The Problem of Ownership (Why

can't you feel my pain?), (2) The Problem of Mechanism (Why does brain cause mental sates?), (4) The Problem of Phenomenal Causation (Why felt experiences make a difference?), (5) The Problem of Super Blind-Sight (Why imaginary blind subjects lack something in relation to others?), (6) The Problem of Transparency (Why attention reveals only what is experienced of e.g. visual experiences?), (7) The Problem of Duplicate (Could there be functional duplicates or Zombies?), (8) The Problem of Inverted Spectrum (Could experiences be phenomenally inverted?), (9) The Problem of Phenomenal Vocabulary and Felt Location (How do we refer to pain the leg?), and (10) The Problem of the Alien Limb (How do I get the phenomenality of my own feelings?). [15]

Michael Tye defends a perspectival subjectivity of phenomenal states. For him, perspectival subjectivity of phenomenal states goes hand in hand with perspectival character of phenomenal concepts. He rejects that phenomenal concepts are identical. But phenomenal concepts are conceptually irreducible. Only one state exists, conceived of in two ways and that state must be identical. The answer to the question why does so-and-so physical state feels such-and-such way lies beyond our current grasp.[16]

Here, remains the question: 'why we still feel there is a gap?' It is argued that most people are simply not prepared to accept that phenomenal concepts refer to material properties. Even when faced with the strong (causal) arguments that phenomenal concepts must refer to material properties, most people remain convinced that they refer to distinct conscious properties. And then, of course,

they do have something to explain. For, once they suppose that phenomenal concepts refer to conscious properties, distinct from material properties, then they are faced with the extremely hard conundrum of why certain material properties should always 'give rise to' these special conscious properties. People are disinclined to accept mind-brain identity, because the phenomenal concepts may be similar to proper names in not invoking descriptions, but they are also dissimilar in that they refer by simulating their referents. This peculiar feature of phenomenal concepts gives rise to a powerful illusion of mind-brain distinctness. This illusion is known as 'the antipathetic fallacy'. The antipathetic fallacy arises because of the imaginative uses of phenomenal concepts share their 'what-its-likeness' with the experiences they refer to.[17]

In short, all the above arguments show is that we can never conceal the problem itself, i.e., either the consciousness is a mind body or mind-computer, or a mind-brain variety. This compels us to search for the arguments through which we can either support or reject above relations. In clear terms, for the materialists consciousness can be explained scientifically: the mind is what the brains do. For the new mysterians (for example, F. Jackson, D. Chalmers, Nagel and McGinn) consciousness is so far outside the domain of conventional science that is may be one pattern we never understand. They establish that there is something over and above the physical correlate of mind Churchland calls these arguments as Searle-like Family of Arguments.[18] Explaining consciousness will turn out to be no more of a physical problem than explaining life, says neuroscientist, hence,

exists the explanatory gap. Let us briefly recount the argument of each of the philosophers, before settling for an answer, whether Searle closes the gap.

2.2 The so-called Family of Arguments:

T. Nagel, F Jackson, John Searle, D Chalmers and McGinn all can be grouped with new mysterians. Churchland groups all these ten arguments together and calls under Searle-like Family of Arguments for a non-reductive type of materialism. Within Searle, there is a family of seven arguments urging the ontologically distinct and physically irreducible nature of conscious phenomena. These are joined by three arguments from Frank Jackson and David Chalmers. Within the family of arguments dissent is expressed by Ned Block for a more thoroughgoing anti-reductionism. One may hazard a hypothesis by saying that with this, the harder problem of consciousness has come to the center stage. Let us review some of these positions.

T. Nagel writes: 'consciousness is what makes the mind-body problem really intractable'. [19] At the same time, he acknowledges the difficulty of reconciling consciousness and objective reality. His theory is based mainly on the phenomenality of subjective experience. That is why he argues that in addition to their functional role in the explanation of behaviour and their concrete physiological basis, conscious mental states have characteristics of a third type, familiar to us all, namely their subjective experiential quality.[20] Nagel argues against various forms of reductionism, behaviourism, casual reductionism and

functionalism. Without subjective experience, objective reality remains incomplete.

He agrees that we have at present no conception of what an explanation of the physical nature of mental phenomena would be. Mind-body problem is hopeless without consciousness. Conscious experience occurs in countless forms through out the universe. An organism has conscious experience at all means or there is something it is like to be that organism. It is not captured by any reductionism for all of them are logically compatible with its absence. Nagel gives an example of a bat. The essence of the belief, that bats have experience, is that there is something that it is like to be a bat. Most bats perceive the external world primarily by sonar or echolocation, detecting the reflections from objects within range of their own rapid subtly modulated high frequency shrieks. Its brain is designed to correlate the outgoing impulses with the subsequent echoes and the information thus acquired enables bats to make precise discriminations of distance, size, shape, motion and texture comparable to those we make by vision. But bat sonar, is not similar in its operation to any sense that we possess, and there is no reason to suppose that it is subjectively like anything we can experience or imagine. This appears to create difficulties for the notion of what it is like to be a bat. In conclusion, the nature of experience is not captured unless we understand the more fundamental idea that they have objective nature.[21]

For Nagel, the views, which support neuro-physiological basis of mind, are abstract and general.[22] He examines whether it is possible for one human body

(or brain) to support two distinct persons. Brain-split experiment is an example, in which the network of nerves linking the two hemisphere of the human brain was cut. The two hemispheres then continued to function normally, but without the direct causal interaction, and exchange of information, which would usually, takes place between them. The structure of human nervous system is such that information which is received in the left-half of a person's visual field is transmitted direct to the right hemisphere, while information received in the right half of the visual field is transmitted to the left hemisphere. But when those nerves have been cut, the following kind of phenomenon can occur. When a picture of book is flashed on a screen so as to be visible only within the subjects left visual field, and they are then asked to pick out from an array of objects what they have been shown, they will say that they have seen nothing. At the same time, they pick up a book with their left hand. So one doubts whether there are really two distinct persons here - one of whom sees the picture of a book and decides to pick up what they have seen and the other of whom sees nothing and is sincere in reporting they have seen nothing. It is also possible that one human being constituted two distinct persons at a given time. Nagel finds it difficult to answer. This shows that the essence of Nagel's argument is more or less the same as the one advanced by John Searle for the irreducibility of consciousness. Both are built upon a certain analogy between the inner and outer sense. This makes Churchland to identify these groups of arguments as Nagel / Searle arguments.

Nagel's 'non-dualist' solution integrates the subjectivity and objectivity by hypothesizing about their necessary relationship. He proposes it as an a posteriori solution to the relation between mind and body. Taking the analogy from the fact that to say that sound has a physical microstructure, though we do not have it at present, he claims to advance one of the strongest arguments for a kind of physicalism. Making one of the 'Zombie' phenomenon, Nagel argues that here is no hidden verbal contradiction in the description of Zombie-even if in reality or Zombie is logically impossible ["Zombies" are the creatures identical to us in every material respect, but altogether lacking conscious experiences]. For him, it is logically impossible to have a Zombie without consciousness and contingent relation is not satisfactory. He points out that, phenomenological and physicalised features of mental states entail their functional features and not vice versa.

Jackson puts forward his 'Blind-Mary Thought Experiment' in order to show that physical facts do not exhaust all the facts and that materialism is false. In other words, subjective aspect of experience cannot be captured in either physicalist or functionalistic terms.[23] Mary has been brought up in a black and white room and has never seen any colours except for black, white and shades of gray. She is nevertheless one of the world's leading neuroscientist, specializing in the neurophysiology of colour vision. She knows exactly what takes place in someone's brain when they experience 'red', i.e., the full understanding of the behaviour of the physical system involved. Hence she knows all the objective

scientific facts about colour vision. She knows everything about electromagnetic waves, about their internal structure and causal behaviour. But she does not know what it is like to see red. No amount of reasoning from the physical facts alone will give her this knowledge. Luminous is therefore someway non-physical. And on being released from her black and white room or given a colour television, she will learn what it is like to see something red, say. This is rightly described as learning. Hence physicalism is a false. Churchland shows that the crucial divergence is here between the epistemic rather than ontological. For which, it is indeed true that Blind Mary does not know what it is like to see spectral light, it is equally true, and for exactly the same reasons, that she does not know what it is like to see electromagnetic waves at a particular scalar point of view. This is only epistemic failure.[24] He points out three objections to this:

(1) That the knowledge argument contains a defect that 'is simplicity itself'.

(2) That there must be something wrong with the argument, for it proves too much.

(3) That the knowledge argument claims that many could not even imagine what the relevant experience would be like, despite her exhaustive neuroscientific knowledge and hence must still be missing certain crucial information, a claim he goes on to argue against.

Block suggests a way out by arguing that Mary learns a new property of the concept and hence the epistemic tension requires a more epistemic solution. So,

one cannot get rid of physicalism by a priori conceptual analysis. The problem is harder than what is conceived as hard. Jackson replies that knowledge argument is valid argument from highly plausible, though admittedly not demonstrable premises to the conclusion that physicalism is false. If Mary's knowledge is defective, despite being all there is to know accordingly to physicalism, then physicalism are false, whatever her powers of imagination. For Churchland, the crucial divergence is here between the epistemic rather than ontological. Dennett takes a more extreme position, arguing that many learn nothing at all. He notes that many could use her neuro-physiological knowledge to recognize that a red object is red when she sees it, by noticing its effects on her reactions, which may differ from the effects of something blue.[25]

From the point of view of Lewis, there are two different kinds of knowledge -

(1) Propositional knowledge, i.e., knowledge of facts and

(2) Practical knowledge i.e., knowledge of how to do something.

For example, knowing British history is propositional and to know tying one's shoe-laces is practical. As a reply to Jackson's argument, Lewis argues that knowing what an experience is like is not propositional knowledge, but rather practical knowledge. [26] The objection to the Lewis argument is that facts are different if the concepts used to think that phenomenal consciousness is incapable of objective, scientifically grounded explanation.[27]

Current research faces up to the problem of consciousness with David Chalmers. Chalmers finds it useful to distinguish between 'easy' problem and the 'hard' problem of consciousness. Classified thus, it reads: [28]

(i) The easy problem of consciousness raises questions like: How can a human subject discriminate sensory stimuli and react to them appropriately? How does brain integrate information from many different sources and use this information to control between? How is it, that subject can verbalize their inferred states? We can hope that work in cognitive psychology and neuroscience will answer these.

(ii) The hard problem is supposed to throw light on the single question: How physical processes in the brain give rise to subjective experience?

Chalmers underwrites this puzzle as involving: 'The inner aspect of thought and perception the way things feel for the subject'. In other words, consciousness is about subjective experience or phenomenal experience, when we see our experience, visual sensations such as that of vivid blue. Think of the ineffable sound of distant blue, the agony of the intense pain, the sparkle of happiness on the meditative quality of a moment lost in thought.[29] Chalmers says that, 'this is what I am calling consciousness it is this phenomenon that poses, the real mystery of the mind'. [30]

The co-discoverer of DNA, having chosen to study consciousness (Crick and Koch) turned agnostic about whether the 'hard' problem can be solved by the current development in neuroscience. Though this is the best approach available

at present, Crick and Koch prefer what they call neural basis of meaning. While Chalmers prefers to have a full account of the manner in which subjective experience arises from cerebral processes, Crick and Koch think that the 'hard' problem can be broken down into several questions: Why do we experience anything at all? What leads to a particular conscious experience (such as the blueness of blue)? Why are some aspects of subjective experience impossible to convey to other people (they are private)? We have a solution; if we have explicit neuron processes the information. In other words, how do they generate meaning?

Crick and Koch suggest that 35-75 oscillations in the cerebral cortex (CK-oscillations) are the basis of consciousness. Is it correct to hold that CK-oscillation provides the basis of consciousness? According to Chalmers, Crick and Koch suggest that these oscillations are the neural correlates of experience. [31] But as pointed out by Eugene Mills, it does not adequately explain the crucial question: Why do the oscillations give rise to experience? He poses the following dilemma: If CK-oscillations are merely neural correlates of experience, then Chalmers has leap-frogged over a different explanatory question, namely, 'Why does experience occur?' If CK-oscillations are merely correlated with experience, then obviously they do not explain why experience occurs. If on the other hand, they turn the basis of experience in the sense that they cause it, then it seems a perfectly final answer to the question, 'Why did such and such experience occur to cite the occurrence of CK-oscillation?'[32] He extends Nagel's basic idea that

consciousness is not tractable neuro-scientifically. For him, every mental state is a phenomenal state; psychological states or a hybrid of the two.[33] Consciousness supervenes only naturally on the physical world, not logically. But almost all states and properties of the natural world supervene logically on the total microphysical state of the world. He offers two thought-experiments.

First is the example of alleged logical possibility of a Zombie. He considers the logical possibility of a Zombie world. It means a world physically identical to ours, but in which there are no conscious experiences at all. In such a world, everybody is a Zombie. The states of these creatures lack phenomenal properties or qualia. His Zombie twin is physically identical to him and will be certainly identical to him functionally, by virtue of the functional analysis of psychological notions. In the real world, it is likely that any replica of him would be conscious. For this reason, it is most natural to imagine unconscious creatures as physically different from conscious ones - exhibiting impaired behaviour; for example, Chalmers presents this experiment as a case of logical supervenience in which conscious experience arises from fine-grained functional organization.

Sydney Shoemaker denies Chalmers' claim that Zombie world is conceivable. At the same time, Brian Loar, like Ned Block, has conceded this conceivability claim but denied the legitimacy of inferring from it to the metaphysical possibility of Zombie world. He holds that some phenomenal facts [facts concerning the existence of consciousness in a system and facts about qualitative similarity] supervene logically on physical facts, but others [facts about the specific nature

of experience] do not. Facts in the second are entailed only a posteriori by physical facts. Chalmers thinks that it is naturally impossible for there to be creatures that are functionally like us (at a fine grained level) and qualia inverted relative to us, though it is logically possible for there to be creatures physically indistinguishable from us who are qualia inverted (e.g. Spectrum inverted) relative to us. His case for the natural impossibility of qualia inversion is his 'Dancing Qualia Argument'

One assumes for purposes of reductio that one has a functional isomorph that is qualia inverted relative to one. One constructs a series of cases intermediate between oneself and one's isomorph in the first case one of one's neuron is replaced with silicon, in the next two are replaced, and so on. The changes preserve fine-grained functional organization. Chalmers lets one of these be himself and the other someone he calls 'Bill'. Bill is the one in which more neurons have been replaced with silicon. He then imagines that, we install in him a silicon 'backup circuit' just like one in Bill that is functionally identical to a neural circuit that is already in his head. And we install a switch that can switch between these circuits. When we flip the switch, the silicon circuit takes over from the neural circuit, and he becomes in essential respects like Bill. So his experience will be qualitatively different from what it was. As we flip the switch back and forth, his experience will change, or 'done' before his eyes. But since functional organization is unchanged, he will not notice any change.

Chalmers says that on any functional construal of belief, it is clear that he cannot acquire any new belief as the flip takes place. Besides, it is extremely impossible that a single replacement of a neural circuit by a silicon circuit could be responsible for the addition circuit could be responsible for the addition of significant new beliefs such as 'my qualia just flipped'. Chalmers sums up the reductio ad absurdum as - it seems entirely implausible to suppose that his experiences could change in such a significant way, with his paying full attention to them, without his being able to notice the change. It would suggest a radical dissociation between consciousness and cognition.[34]

Chalmers' denial that there can be change of belief 'as the flip takes place' is question begging, says Sydney Shoemaker. He argues that it is apparent that anyone who thinks that qualia inversion is possible must hold that not only are individuals qualia not functionally definable but also that individual qualitative beliefs are not functionally definable. Presumably, it is part of the functional role of qualia that the instantiation of qualia produces or tends to produce the qualitative belief that it is instantiated. So if the flip changes the qualia, it will also change the qualitative beliefs. Chalmers replies that, he was focusing on the absence of a belief about the change. To have one's qualia change massively before one's eyes would be a major phenomenal event, but it would be a phenomenal event to which we have no cognitive access. Shoemaker is right that if inverted qualia are possible, we should expect unnoticed changes in this scenario. But this doesn't diminish the implausibility of the consequent here:

rather it indirectly adds to the implausibility of the antecedent. Ned Block is not very happy about many of the nuances of the above group of arguments and thus reformulates most of them with more logical acumen.

McGinn concedes that consciousness is a natural phenomenon, but emphasizes that our subjective view cannot understand its physical basis. He argues that there are physical properties of our brains that do in fact explain consciousness, but though this explanation might be available to some other types of being, the problem of phenomenal consciousness is cognitively closed to us. In his more recent book The Mysterious Flame, McGinn is skeptical about science explaining consciousness.[35] He presents reasons for thinking that the realization of phenomenal consciousness in physical brain events remains mysterious to us. For him, the problem lies in an explanatory gap between the subjective, or felt, qualities of experience and the underlying neural events in our brains. There are two ways by which we might hope to close this gap.

(1) Through introspection, we can dig deeper into the phenomenal properties of our experiences, perhaps seeking a more sophisticated set of phenomenal concepts with which to categorize and describe the subjective qualities of these experiences

(2) Through investigating the physical events in our brains hoping to achieve from there an understanding of phenomenal consciousness.

Carruthers points out two major faults in the above arguments. One is that McGinn seems to have entirely left out that, between neuroscience and common-

sense psychology, there may be many different levels of scientific enquiry and description, including a variety of forms of computationalism, together with the kinds of functional description characteristics of much cognitive psychology. For, it can easily seem mysterious how anything in nature can be physical, if one tries to jump over too many intermediate stages at once.

The other fault is that McGinn ignores the possibility that we might succeed in closing the explanatory gap between consciousness and the brain by operating with inference to the best explanation on phenomenal consciousness itself. Adopting this strategy helps to explain phenomenal consciousness in terms of some postulated underlying cognitive mechanism or architectures, which one might then hope to explain in turn, in terms of simpler computational systems, and so on until, ultimately one reaches the known neural structures and processes of the brain.

Searle offers a simple solution to the problem of consciousness that mental phenomena are caused by neuro-physiological processes in the brain and are themselves features of the brain.[36] Mental events and processor are as much part of our biological natural history as digestion, mitosis, and meiosis or enzyme secretion.[37] For him, brain causes certain mental phenomena such as conscious mental states and these conscious states are simply higher level features of the brain. Consciousness is a higher level or emergent in which solidity is a higher emergent property of H_2O molecules when they are in a lattice structure (ice), and liquidity is similarly a higher-level emergent property of H_2O molecules,

when they are rolling around on each other (water). Searle makes a distinction between ontology, epistemology and causation. In order to give foundation to this he gives the following arguments.

(1) Consciousness does matter.

(2) Not all of reality is objective; some of it is subjective.

(3) Because it is a mistake to suppose that ontology of the mental is objective, it is a mistake to suppose that the methodology of a science of the mind must concern itself only with objectively observable behaviour.

(4) It is a mistake to suppose that we know of the existence of mental phenomena.

(5) Behaviour or casual relations to behaviour are not essential to the existence of mental phenomena.

(6) It is inconsistent with what we in fact know about the universe and our place in it to suppose that everything is knowable by us.

(7) The Cartesian conception of the physical, the conception of physical reality as res extensa is simply not adequate to describe the facts that correspond to statements about physical reality.[38]

Further, Searle attacks cognitive science. He argues that the cognitive science is not interested in the study of brain and consciousness. Brain cannot be identified with computer. Because the brain does to produce intentionality and no

computer program itself is sufficient for intentionality. [39] It was discussed in the first chapter.

Searle-like Family of Arguments, are criticized by Churchland, because of their failure to size up the 'Hornswoggle Problem'. He examines all the ten arguments, which support 'Searle-like Family of Arguments' only to conclude that these arguments are known to be false in the case of light.[40]

2.3 Searle like Family of Arguments Concerning the Nature of Light:

(1) A fundamental distinction: original (intrinsic) visibility versus derivative (secondary) visibility. Light alone is visible, when directed in to the eyes, without the causal intervention of any mediating agent. Only light, itself has original visibility. A physical object is visible only when the light is somehow reflected from or emitted by that object, configuration or event. If the universe contained no light at all, then absolutely nothing would be visible, neither intrinsically nor derivatively.[41]

(2) The original visibility of light marks it off as belonging to a unique ontological category, distinct in its essential nature from the essential nature of any physical phenomenon, which must always lack original visibility. The ontology of light is ontology of things and features that are uniquely accessible from the visual point of view. This means that the phenomenon of light must be irreducible to any complex of purely

physical or not-essentially visible phenomena. One cannot get original visibility from things that have, at most, derivative visibility.[42]

(3) The consequence just reached is denied by, a celebrated research programme called strong Electro Magnetism. This programme claims not only that light can be 'instructively simulated' by the behaviour of interacting electric and magnetic fields. It makes the stronger claim that light is actually identical with electromagnetic (EM) waves. According to EM theory, an oscillating magnet or charged particle will generate an expanding sphere of oscillating. EM fields: EM wave front. But imagine a man in a pitch-black room who begins to pump a bar magnet back and forth clearly it will do nothing to illuminate the room. The room will remain wholly devoid of light.[43]

(4) The ontologically distinct nature of light is further reflected in the fact that the distinction between (visual) appearance and reality, which holds for any broadly physical phenomenon, can not be drawn in the case of light itself. It there disappears. Accordingly, where the reality at issue is light itself (as opposed to any and all physical phenomena), the appearance just is the reality.[44]

(5) The irreducibility here claimed can be further seen as follows. No description of the extrinsic wavelengths of EM waves could possibly convey the intrinsic character of (objective) visible redness and visible blueness, for the visible properties of light are distinct from the physical

properties of EM waves. This argument is ludicrously simple and quite decisive.[45]

(6) Light is always and necessarily visible: There can be no such thing as invisible light. It means that the path of the light is not leading to one's eyes. But if light exists at all, then there is some perspective from which it will be directly visible. This is the connection principle, since it unites 'being light' and being accessible-from the visual-point-of-view.[46]

(7) Considerations (1)–(6) indicate that light is a phenomenon that is ontologically distinct from and irreducible to any purely physical phenomena. It is called non-reductive physical naturalism, which holds that light is a natural (but irreducible) phenomenon caused to occur within certain special kinds of physical systems-specifically, within self-luminous objects, such as the sun, fires and incandescent filaments. The aim of a scientific account of light should be to explain how such a non-physical phenomenon is caused to occur within such highly special physical systems as stars and light bulbs.[47]

Three other Jackson/Chalmers-like arguments concerning the nature of light are the following:

(8) In the study of the nature of light, there is a distinction to be drawn between the 'easy problems and the hard problem'.

The first class concerns such problems as the emission, propagation, and absorption of light, its reflection and refraction, its velocity, its carrying energy,

its self-interference and so forth. These are extrinsic features of light. But there remains a highly special intrinsic feature of light whose explanation must be found along some other path. This intrinsic feature is luminance, and it is what is responsible for the 'original visibility' that is unique to light. Unlike all of the extrinsic features of light listed above, luminance is unique in being epistemically accessible only from the visual point of view.[48]

(9) We can illustrate and reinforce the contrast just drawn with; Blind-Mary experiment that is ever-complete knowledge of the physical facts must still leave her ignorant of the nature of luminance. Luminance must therefore be in some way non-physical.[49]

(10) Any possible physicalist story about the structure and causal functions of EM waves must still leave open an 'explanatory' gap between the physical processes and luminance. We can easily imagine a universe that is filled with oscillating EM fields propagating back and forth all over the place, a universe that is nonetheless utterly dark, because it is devoid of the additional feature of luminance. We need to know, when and why oscillating EM fields cause the ontologically distinct feature of intrinsic luminance. Until we understand that mysterious causal relation, we shall never understand the ground and real nature of light.[50]

Concerning (1): It falsely elevates, an extremely peripheral feature of light, namely, its capacity to stimulate the idiosyncratic rods and cones of terrestrial animals, into a deep and presumptively defining feature of light. This is thrice-

problematic. First, it is arbitrarily selective. Second, it is strictly false that only light will stimulate rods and cones. And third, infrared and ultraviolet light is quite invisible to terrestrial eyes.

Concerning (2): The dubious distinction legislated in (1) is here deployed to consign all physical phenomena to a class that excludes the phenomenon of light. This division certainly appeals to our default stereotype of a physical object. But it begs the question against the research program of physicalism, because some unfamiliar physical things may indeed have original visibility our common-sense expectations not-withstanding. Thus the argument (2) is a question -begging exploitation of superficial stereotypes and EM ignorance.

Concerning (3): This argument may seen highly plausible to those who have a common-sense proto-type of forces and who are ignorant of the details of EM theory, but it begs the central question against physicalism. Moreover, it is false. The 'Luminous Room' thought experiment concerning the oscillating bar magnet in the pitch-black parlor, is designed specifically to make the premise that physical forces, no matter how they are deployed, are neither identical with, nor sufficient for, original visibility—plausible. But that story illegitimately exploits the fact that, some forms of EM radiation have wavelengths that are simply too long to interact effectively with the rods and cones of terrestrial retinas.

Concerning (4): While superficially plausible, this argument refuses, to take into account the many ways in which we can be mistaken or misled about the character of the light entering our eyes. Its brief plausibility is reflections of

nothing more than our unfamiliarity with how light is perceptually apprehended and with how that intricate process can occasionally produce false perceptual beliefs. It is a reflection of our own ignorance, rather than of any unique ontological status had by light.

Concerning (5): This argument is sheer question- begging assertion rather than instructive argument. Whether objective properties of light such as spectral redness or special blueness are identical with, or distinct from, specific wavelengths of EM radiation is precisely what is at issue. And in this case, it has been plain for a century that these properties are identical. It is also plain that spectral redness, spectral blueness, and their various causal properties-their refractive and absorptive behaviour, their velocity and interference effects-are positively explained, rather than impotently "left out" by their smooth reduction to EM features.

Concerning (6): This argument also would be found plausible by, someone still imprisoned by pre-scientific prototypes of light. Invisible light may well be a conceptual impossibility against the assumptions of the strong just told, but we now know better. Most light is invisible-and not just shallow by invisible, but permanently beyond human visual apprehension.

Concerning (7): This summary attempts to find a proper place in nature for the phenomenon touted as ontologically distinct and physically irreducible in arguments (1)-(6). The place suggested is that of a nonphysical causal consequence of certain special but purely physical events. Such a move threatens

to violate well-established laws concentrating the conservation of both energy and momentum, at least if light is presumed to have any causal powers of its own. But there is no significant motivation for any such antireductionist research programme in the first place. Secondly, the proper place in nature of light has already been made clear; it has been smoothly and systematically reduced to EM waves,

Concerning (8): Light is here conceded to have a wide variety of physical features - it's so called 'extrinsic' or 'structural/ functional' features - to which some sort of physical explanation is deemed appropriate. But light is also assigned an allegedly special or 'intrinsic' feature, a feature that is epistemically accessible through vision, but not through the 'structural/functional' stories to which current physical science is limited. EM theory taught that, there is no 'hard problem' here at all and no defensible ontological distinction between intrinsic and extrinsic features. If we concede the integrity of the notion 'luminance', it is just the normal and entirely physical capacity of EM waves to excite our own rods and cones.

Concerning (9): This 'knowledge' argument equivocates on 'knows about'. It elevates two distinct modes of epistemic access to light into a false dichotomy of distinct phenomena thereby accessed - physical features by scientific description, and a special range of non-physical features by normal human vision. But for light there is only one objective feature.

What Blind Mary is missing is one common form of knowledge about light: she lacks perceptual/ discriminative knowledge of light. And yet, people who have such knowledge and accessing the very same features of reality that she is obliged to access in other ways. The difference lies in the manner of knowing not in the nature of the things known. It is true that no amount of propositional knowledge of light will ever constitute the visual apprehension of light, but that is entirely to be expected. They are different forms of knowledge. They operate with different representational 'palettes' inside Mary's brain. But they both represent each in their own distinct way, one and the same entirely physical thing: light.

Concerning (10): - This 'open question' argument begs the question in favour of the ontological distinctness of 'luminance' and then insists on our providing a causal account of how EM waves might produce it. The conceivability of a dark universe filled with EM waves shows only that the various cross - theoretic identities motivated by the EM reduction are as they should be, contingent rather than necessary identities. It is also that such an 'open question' argument will be maximally appealing to one who is minimally instructed in EM theory. This is because the more one learns about EM waves, about their effects on matter in general and on our eyes in particular the harder it becomes to imagine a consistent scenario in which a universe abuzz with EM waves of all wavelengths remains dark even so. Churchland's conclusion is that the family of arguments on which they are modeled is just as empty of real virtue.[51]

In brief, the major objective of all the mentioned theories is to explain the problem of consciousness by closing the explanatory gap. The question arises here, how much Searle is successful in his attempt to close the explanatory gap? This question is not easy to produce any answer since we are in the dark whether a non-reductive type of materialism will get necessary support from all quarters. The type of non-reductionism that Searle lays on the table is hamstrung by a number of other features. Neither are we sure whether Searle can successfully meet all the counterpoints raised by Churchland in the above formulations. So, let us examine Searle's critique of earlier theories of mind in the light of the above.

2.4 Searle's Review of Default Theories of Mind:

In order to establish his biological naturalism, Searle criticizes different theories of consciousness, such as behaviorism, type of identity theories, token-token identity theories, functionalism, strong artificial intelligence and eliminative materialism. Let us examine one by one. Behaviourists hold that the only sort of evidence that we can have concerning any one's mental status, including our own, lies in people's outwardly observable behavior, both verbal and non verbal. Scientific behaviourists take this view because they think that the science of mental states ought only to reply upon objective empirical evidence, which can be corroborated by many independent observers, whereas the introspection is necessarily a private and subjective affair. There are two kinds of behaviorism. Logical Behaviourism maintains that what it is to ascribe a mental state to a

person is nothing more or less than to ascribe to that person some appropriate behavioral disposition. [52] A behavioural disposition, in the sense understood here, is a person's tendency or propensity to behave in a certain way in certain specified circumstance. Methodological Behaviorism is a research strategy in psychology to the effect that a science of psychology should conduct in discovering the correlations between stimulus input and behavioral inputs. A vigorous empirical science, according to this view, makes no references to any mysterious introspective or mentalistic items.

Searle's objections to behaviourism can be divided into two types: they are commonsense objections and technical objections. An obvious commonsense objection is that the behaviourists seem to leave out the mental phenomenon in question. There is nothing left for the subjective experience of thinking or feeling in the behaviorist's account; there are just patterns of objectively observable behaviour. Among the technical objections, the first is that the behaviorist never succeeds in making the notion of a disposition fully clear. Secondly, there seemed to be a problem about a certain form of circularity in the analysis in that beliefs have to be analyzed in terms of beliefs. Finally, it leaves out the casual relations between mental states and behaviour.[53]

Type identity theory holds that if all the instances of a particular type of mental states are also instances of a particular type of bodily state. According to them, there was no, logical absurdity in supposing that there might be separate mental phenomena, independent of material reality. It just turned out as a matter of fact

that our mental states, such as pains were identical with states our nervous system. Here, pains were claimed to be identical with stimulation of c-fibers.

In this case, commonsense objection takes the form of a dilemma either materialism of the identity variety leaves out the mind or it does not; if it does, it is false, if it does not it is not materialism. The identity theorists in Australia tried to give an answer to this. They have made an attempt to describe the so- called mental features in a 'topic natural vocabulary' i.e. to get a description of the mental features that do not mention the fact that, they are mental. [54] For Searle, this can be done. The fact that one can mention phenomena without specifying its essential characteristics do not mean that it does not exists and doesn't have those essential characteristics.

(a) The Question of Multirealisability: first technical objection to this theory is that it is not likely that for every type of mental state there will be one and only one type of neuro-physiological state with which it is identical.

(b) No one-to-one identity: it seems to a kind of 'neuronal chauvinism' to suppose that only entities with neurons like our own can have mental states.

(c) No one-to-one Identity under Leibniz's Law: the third objection to this theory derives from Leibniz's law. Two events are identical only if they have all of their properties in common. Then it seems that the mental states cannot be identical with physical states, because mental states have certain properties that physical states do not have.

d) Searle also mentions Saul Kripke who poses an objection to this theory with the argument that each expression identifies the object it refers to in terms of its essential properties. The identification of mental states with physical states would have to be necessarily physical. As seen before, a very similar objection is advanced against Thomas Nagel. These all show that Searle's unique experience may not have prospects of a successful theory.

Identity claim might instead mean only that every instances of a mental state is identical with an instance of a bodily state, of some type or other. On this construal, the various type of mental state would not have to correspond to type of bodily state: instances of a single mental type might be identical with tokens of distinct bodily types. This weaker claim is known as token identity theory.

Searle points out the commonsense objection that, they still seemed to be left with some form of property dualism, but they had some additional difficulties of their own. The technical objection to this theory is as follows: The difficulty to this is: if two people who are in the same mental states are in different neuro-physiological states, then what it is about those different neuropsychological states, that make them the same mental state?

Functionalism acknowledges the fact that it is impossible to identify types of mental states with types of behavioural disposition, but it still wishes to characterize mental states by reference to behavior, albeit only indirectly. It tries to achieve this by characterizing mental states in terms of the causal roles they are thought to play in determining how a subject behaves in different

circumstances.[55] In other words it argues what makes a mental state the type of state it is the functional relations it bears to the subjects' perceptual stimuli, behavioural responses and other mental states.

The common sense objection is that it leaves out the qualitative subjective feel of some of our mental states. So, Searle must agree that if it is true, then functionalism leaves out the phenomenal experience. Searle criticizes what is called the 'Black box Functionalism' by saying that any system could have mental states provided only that it had the right causal relations between its inputs, its inner functioning and its outputs. What is invoked is the argument for mental causation. He shows his objection by introducing an example, say the entire population of China ,might behave so as to imitate the functional organization of a human brain to the extend of having the right input-output relations and the right pattern of inner cause-and-effect relations. But all the same, the system would still not feel anything as a system. The entire population of china would not feel a pain just by imitating the functional organization appropriate to pain. Another technical objection is that functionalism so defined failed to state in material terms what it is about the different physical states that give different material phenomena the same casual relations.

Eliminative materialism regards propositional attitude vocabulary as belonging to a pre-scientific theory of mind, disparagingly described as 'folk psychology'. [56] On this view, there really are no such states as beliefs, desires and intentions. This theory has been defended by, Patricia and Paul Churchland. According to

Churchlands, talk of mind is merely a time-honored way of trying to come to grips with the complexities of intelligent behaviour. Churchlands conclude that most physiological categories and modes of explanation are either 'reducible' to more fundamental neuro-biological categories, or apply to nothing, hence are expendable.

Searle's attack on eliminative materialism moves in the direction of defending folk psychology. The commonsense objection is that it seems to be crazy to reject mental states such as desire, pain etc. Without this, to attack folk psychology is unfair, because folk psychology is not such a bad theory; many of its central tenets are quite likely to turn out to be true. Still, the question, whether Searle makes folk psychology problematic, remains.

2.5 Status of Folk Psychology:

Folk psychology is commonsense psychology that is concerned with the expressions of belief, hopes, fear etc. There are mainly two distinct views to the discussion of folk psychology. The first has identified the relevant scientific theory as a theory, deriving from neuroscience and has fairly single-mindedly focused on the claim that folk psychology will be eliminated in favour of this theory. Second is that we explain and predict our own and others behaviour not by adverting to a folk psychological theory but by engaging in a form of mental stimulation. To take folk psychology is an empirical thesis and as such it is subjected to empirical confirmation and disconfirmation, is to subsume it under a narrow methodology. There is unlikely to be a smooth reduction of thee entities

of folk psychology to the more basic science of neurobiology, so it seems that elimination is the only alternative.

Searle tries to re-evaluate folk psychology by pointing out that 'folk theories have to be in general true or we would not have survived'. [57] Further, he adds that the actual capacities that people have for coping with themselves and others are Background capacities, and you distort theses capacities if you think of them as theories. For him, we simply experience conscious beliefs and desires to account for anything. Though the beliefs and desires sometimes cause actions, there is no essential connection. He lists some propositions of folk psychology and shows that they are not just empirical hypothesis, but are more like constitutive principles of the phenomena in question. They are: (1) In general, beliefs can either true or false. (2) Sometimes people get hungry, and when they are hungry they often want to eat something and (3) Pains are often unpleasant. For this reason people often try to avoid them.

Referring to these, Searle goes on to comment that 'it is hard to imagine what kind of empirical evidence could refute these propositions'.[58] Since they are constitutive, not empirical, the only way to show them false would be to show that they have no range of application. This never means that folk psychology doesn't exist. Consider an example: commonsense tells us that our pains are located in physical space within our bodies that for example, a pain in the foot is literally inside the area of the foot. But it is not true. The brain forms a body image and pains, like all bodily sensations, are parts of the body image. The

pain-in-the-foot is literally in the physical space of the brain. It doesn't mean that pains do not exist. The major opponent of FP, Churchland, has cited three major empirical failings of FP.

(1) It fails utterly to explain a considerable variety of central psychological phenomena: mental illness, sleep creativity, memory and the many forms of learning.

(2) FP has not progressed significantly in at least 2500 years.

(3) FP shows no sign of being smoothly integrable with the emerging synthesis of the several physical, chemical, biological, physiological and neuro-computational sciences. He also adds that Folk psychological discourse is theoretical.[59]

But Churchland lacks specific philosophical interpretation of the term 'theoretical' to establish his eliminativism. In order to reject FP, he supports connectionism. This is also not fair. It is true that folk practices neither aims to reveal the details of the underlying mechanism, nor does the apparent success of either practice depend on its revealing such details. This doesn't mean that FP is ripe for replace-ment or elimination by any scientific psychology. A support-ing view can be seen in Andy Clark. His major contention is that FP does not seek to model computat-ional processes, and its dignity does not depend on there being in-the-head analogues to the propositional attitudes. It is difficult to see how cognitive science, in so far as it pertains to cognition as such, can avoid characterizing in FP terms the cognitive tasks whose performance by humans seeks to explain. [60]

In conclusion, we have outlined a Family of Arguments, all of which are aimed to explain the science of consciousness by closing the gap. We have also mentioned the enormous challenges they come across in the way. Here the question remains is: With all these credentials, can Searle close the explanatory gap? This question squarely depends upon the way his intentional theory of mental causation is to be understood. A sketch of the theory with elaborate mechanism for comparison is to be mobilized to give a final verdict. As we said earlier, the question about causation subsumes the question about explanatory gap. The gap is closable if Searle is said to have a viable theory mental causation. We shall address ourselves to the question of mental causation in the coming chapter. Searle's intentional theory is opposed to Kim's physical theory of mental causation. It by no means follows that he fails to close the gap. But he maintains a non-reducibility of self. So, the general preview is that he does not close it at the expense of his non-reductive physicalism. But at the same time, he is a realist about mental states and is opposed to any trace of anti-realism. Let us look forward to examine more of his defense of realism against the critics in the following chapter.

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CHAPTER - 3

THE PROBLEM OF MENTAL CAUSATION: CHALLENGES AND RESPONSES

3.1. The Intentionalist Case for Mental Causation:

For Searle, the claim to work out a full-blooded intentional theory of mental causation would amount an exaggerated claim. Nevertheless, he produces the 'connectionist' case for multi-layered model on the one hand, and, on the other hand, he supports it with a claim about lower-order features of brain causing higher-order features of consciousness. There is no evidence for any claim that consciousness has an ontological existence, but there is some claim about its being a 'fact' in Searle's sense. Even granting that there ought to be a point of clarification between what he calls a supervenient causation and mental causation, his theory becomes open to attack. Given his distinction between 'causal' and 'constitutive supervenience', it would still be difficult to know whether it warrants any sharp distinction so as to take it as an 'independent assumption'. In fact, as he later frankly admits, his usage vacillates between the constitutive and causal supervenience.[1] As Kim takes it, his supervenience cannot be anything more than 'same cause and same effect'. Thus when he places supervenience and same cause and same effect on the table, especially in the context of mental causation, without as much denying it, his theory requires to be evaluated in terms of a full-blooded theory of mental causation like the one

developed by Kim. It becomes an 'acid test' for the hierarchically layered model of consciousness.

The connectionist case for mental causation, must argue for the causal relation involving mental events. [2] The crucial questions here are: How is it possible for the mind to cause a change in a material body? Through what mechanism or process does a mental event manage to initiate, or insert itself into, a causal chain of physical events? How is it possible that a chain of physical and biological events and processes terminates in a full-blown conscious experience? How is it possible for sensory experience to arise out of the electrochemical processes in the gray matter of our brain? As we understand it, two master arguments play a role for achieving the explanatory potential. One is the supervenience argument and the other is the overdetermination argument (called the Master Argument). These arguments provide the rallying point between the robust reductionists (e.g. Kim) as well as robust non-reductionists (e.g. Ned Block). The 'supervenience principle' is understood to affirm a relation of dependence or determination between the mental and the physical. In other words, our psychological character is wholly determined by our physical/biological nature. This is often read to imply a dependency thesis of this kind; for it says that once the physical nature of a thing is completely fixed, that fixes its mentality in every detail. The idea is variously used to prove ontological primacy of consciousness (subjectivity), realism about mental states, as well as reducing the mental to the physical. So also the theory of mental causation is worked out within the theory

of intentionality or within a theory of the physical world. J. Kim counters the use of causal supervenience by Searle first, in his so-called simple solution, second, in his variant of 'minimal physicalism', and finally, in his more recent account of physical realizationism. [3] In all these counters, he demonstrates the weakness of the idea by pointing out the dilemma. The dilemma is shown in the following way:

Suppose that an instance of a mental property, *M*, causes another mental property, *M**, to be instantiated -an instance of 'going left to right from macro to macro' as Searle calls it. According to Searle's biological naturalism, every mental phenomenon is caused by a neurobiological phenomenon. This means that this instance of *M** is caused by (an instance of) a neural property *P**. Here the questions arise are: where does this instance of *M** come from? And how does *M** get instantiated on this occasion? The two answers are: (1) ex hypothesi, *M** was caused to be instantiated by *M*, and (2) according to Searle's biological naturalism, *M** was caused to be instantiated by neural property *P**. It looks as though the instantiation of *M** is causally overdetermined. This generalizes to all mental phenomena. But Searle argues that the same system admits of different causal descriptions at different levels all of which are consistent and none of which implies either overdetermination or failure of causal closure.[4]

Quite opposed to the above, supervenience is also used as an explicit affirmation of the ontological primacy, or priority of the physical in relation to the mental. Accordingly, this theory opens the possibility of explaining the mental in terms

of the physical. Thus, minimal physicalism can be thought of as the philosophical basis of such explanatory practices. Since this is quite opposed to the kind of dependence thesis of supervenience used by Searle, it becomes an easy target. This is how his idiosyncratic use of 'causal supervenience' has become a target for attack in unambiguous terms. Consequently, it is shown that his solution is fraught with ambiguities and difficulties. Searle's use of supervenience requires type-type identity. Type-identical neuro-physiological causes would have type-identical mentalistic effects. Accordingly, supervenience is assigned the task of inter-level relationship. Mental states are supervenient on physical states means that higher-level properties are explainable in terms of lower-level properties. That is, mental properties are explainable in terms of physical properties. While Searle provides a biological reason for a psychological explanation. The option of reductionism is as much open to him as the option of non-reductionism. For this reason, Searle does not claim to be a non-reductionist nor is he a magical emergentist in the sense in which Lowe claims. There are many characteristics that are common to the approach made by Lowe and Searle. Emergentism is one and the principle 'nothing is uncaused' is yet another. The non-reductionism takes on dualism in Lowe which is still an option for Searle, but levelism rejects dualism without disposing reductionism as a live option. In the final run, it seems that Searle defends a modified form of epiphenomenalism.

Reductionism itself is acknowledged to be a failure. No one has reduced mental properties to physical properties. [5] One of the main obstacles is qualia, or what it

is to be in that state, or phenomenal state. Kim's use is rather different. For him, mental states are totally dependent on corresponding neuro-physiological states in the sense that, a difference in mental states would necessarily involve a corresponding difference in neuro-physiological states. For Searle, it may not. For Chalmers, no explanation, given wholly in physical terms, can ever account for the emergence of conscious experience. Supervenience is used here as a relation between two sets of properties: B-properties, the high-level properties and A-properties, low-level properties.[6] He favours the notion of 'logical supervenience' for arriving at a defense of logical and not ontological dualism. We learn that supervenience can be used both by reductionists as well as non-reductionists. Just as supervenience cuts both ways, overdetermination also does so.

Sturgeon gives the Overdetermination Argument. It runs as follows:

(1) Every physical effect has its chance fully determined by physical events alone.

(2) Mental events have physical effects.

(3) The physical effects of mental events are not generally overdetermined.

Therefore,

(4) Mental events are physical events.

Then he considers the appeal of these propositions in order to reject the overdetermination. (1) Completeness-of- physics: Every physical effect has a fully revealing, purely physical history. (2) Impact-of-the-mental: Mental events

have physical effects. (3) No-Overdetermination: The physical effects of the mental events are not generally overdetermined. (4) Dualism: Mental events are not physical events.[7] This is the reason why one should make them as much robust as possible. Within Searle's perspective, supervenience is used not only to provide both the causal relation between intentionality and consciousness, but also, to cut off the relational link. As Kim himself acknowledges, Searle provides no link between brain and consciousness. This seems to generate a paradox about his theory of mental causation. In fact, Searle is willing to agree that same cause, different effects. Searle develops a theory of causation with gaps and constraints and thus his usage is radically different from the one Kim adopts in his account.

This becomes clearly evident in his later discussion on freewill. Even while accepting free will or voluntary action, which he identifies with volitional consciousness, he set out to remark that the acceptance is not possible without gaps. He makes a distinction between seeing my left hand which is a passive act and raising my left hand which has causal antecedents of freewill. He admits a first gap between reason for the decision and the making of the decision and the second gap between the making the decision and the actual onset of the action. Freewill, as it is traditionally known cannot be identified with anything else, according to Searle. In fact, he is much more specific in mentioning three gaps in the structure of normal, voluntary human action. The gap between the reflection on the reasons and the decisions constitutes the prior intention of the action. The

gap between prior intention and the actual initiation of action is the second, and the third is the gap in the execution of action through time. So the psychological antecedents of a human action cannot be said to be causally sufficient for the performance of the action. They function causally, but they do not function by way of causally sufficient. They are causally antecedent but not causally sufficient. This is due to the element of randomness and chance. A contrast between the psychological explanation of action (reason explanation) and a causal explanation of action is imminent. Consequently, Searle's way of addressing to the problem of causal exclusion is radically different from that of Kim's. It is this contrast that accounts for the distinction between their respective logical forms. The contrast requires the positing of self in the logical form of reason explanation though the same logical form is shared by causal explanation. The reason explanation is non-deterministic and hence the demand for a non-reducible or irreducible non-Humean self. Such a self is not an element of the unified field, but it rather requires a unified field in order to function.

From this, Searle goes on to hypothesize that libertarianism is compatible with determinism. In other words, compatibilism is a view which holds that freewill and determinism are compatible. Freewill is not without external constraints. Searle's way of making explicit is that while the neuro-biological underpinnings of a human action are causally sufficient, they are not psychologically sufficient. If both are so causally sufficient, then we have no freewill. We have no freewill

because of psychological constraints, and hence they are not both causally sufficient.

What follows from this, on Searle's understanding, is that the problem of freewill is a neuro-biological problem. This is what lies at the background of his two thought experiments as well as his discussion on aspect seeing or seeing as. Searle argues that there are a number of purely philosophical obstacles to getting a satisfactory neuro-biological solution to the problem of consciousness. The single most important obstacle to getting a solution to the traditional mind-body problem is the persistence of a set of traditional but obsolete categories of mind and body, matter and spirit, mental and physical the inner and outer, subjective and objective, the private and public. He adds that as long as we continue to talk and think as if the mental and the physical were separate metaphysical realm s, the relation of brain to consciousness will forever seem mysterious, and we will not have a satisfactory explanation of the relation of neuron firings to consciousness. Thus the first step on the road to philosophical and scientific progress in these areas is to forget about the bifurcated model of Cartesian dualism and replace it with a hierarchically layered model so as to just remind ourselves that mental phenomena are ordinary biological phenomena in the same sense as photosynthesis or digestion.

It is not necessary to worry about how the brain could cause consciousness and begin with the plain fact that it does. The notions of both mental and physical as they are traditionally defined need to be abandoned as we reconcile ourselves to

the fact that we live in world and all the features of the world from quarks and electrons to nation states and balance of payments problems are, in their different ways, part of that one world. Many scientists feel that they can only investigate the 'physical realm and are reluctant to face consciousness on its own terms because it seems not to be 'physical' but to be 'mental', and several prominent philosophers think it is impossible for us to understand relations of mind and brain. So we need a similar conceptual change to break the bifurcation of mental and physical, says, Searle.

Accordingly, he uses causation as a purely analytical tool so as to put forward a very provocative solution about the mind-body problem. We can assert that the famous mind-body solution has a semiotical thrust as seen in the wake of his background work on speech act philosophy of language. The two these, namely that (1) Brain processes cause mental states and (2) Mental states are higher-level features of the brain; convey that consciousness is a causally emergent property of certain systems of neurons in the same way that solidity and liquidity are emergent features of systems of molecules. The existence of consciousness can be explained by the causal interactions between elements of the brain at the micro-level, but consciousness cannot itself be deduced or calculated from the sheer physical structure of the neurons without some additional account of the causal relations between them.

Here, the idea is that consciousness gets squirted out by the behavior of neurons in the brain but once it has been squirted out, it then has a life of its own. But at

the same time, consciousness cannot be causally reducible to the brain process. He cannot however exercise this option. Because a perfect science of the brain would still not lead to an ontological reduction of consciousness in the way that our present science can reduce heat, solidity, colour or sound. The term 'caused by', used in a peculiar semiotical sense, has much problem within his framework, but Searle's way of overcoming this is by developing a version of notation of supervenience along with multi-layered model of the description of the system which is called 'levelism' by Searle himself.[8]

He accepts levelism in order to ensure that the causation is from neuro-physiological process in the brain to the features of mental phenomena. [9] It is in this sense; mental phenomena are also features of the brain. [10] He also adds that once you recognize the existence of bottom up micro-to macro-forms of causation, the notion of supervenience no longer does any work in philosophy. The formal features of the relation are already present in the causal sufficiency of the micro-macro- forms of causation.

But, at the same time, he is against the view that mental phenomena are having an internal connection to behaviour. The mental states are supervenient on neuro-physiological states. In the case of mind-brain supervenience, the neural phenomena cause the mental phenomenon. In order to explain the relationship between consciousness, behaviour and the brain, Searle employs at least two thought-experiments.

Thought experiment 1 asks us to imagine that one is slowly going blind and doctors try to plug silicon chips into his/her visual cortex. Then imagine that it restores the vision to its normal state. Imagine further that for the better result his/her brain is entirely replaced by silicon chips rotating around inside the skull. In such a situation, there would be various possibilities. [11] One logical possibility is the sequence of his mental life remains unaffected. In this case, we are imaging that silicon chips have the power to duplicate the mental phenomena also. But empirically, we cannot prove it.

Another possibility is that he finds his area of consciousness experience is shrinking, but that this shows no effect on the external behaviour. From the outside, it seems to observers that he is just fine, but from the inside, he is gradually dying. In other words, he is becoming unconscious, but his behaviour remains unaffected. In the third case, we imagine that his thoughts feelings, experience, memories etc. remain intact but the observable external behaviour reduces to total paralysis. Thus if the above sketch is acceptable, then the following three propositions are acceptable:

1) Brain causes conscious mental phenomena.
2) There is some sort of conceptual or logical connection between conscious mental phenomena and external behaviour.

But the thought experiments illustrate that these arguments can be held consistently with a third.

3) The capacity of the brain to cause consciousness is conceptually distinct from its capacity to cause motor behaviour. A system could have consciousness without behaviour and behaviour without consciousness.

Thus, the first point to be derived from our thought-experiments is what we might call the principle of the independence of consciousness and behaviour, says Searle.[12] Further, behaviour is not a sufficient condition for mental phenomena. Thirdly, behaviour is not a necessary condition for the presence of the mental either.

Similarly, the thought experiment 2 asks us imagine that we are designing robots. Now, imagine also that, we know enough about the electro-chemical features of human consciousness to know how to produce robots that have a rather low level of consciousness, and so we can design and manufacture conscious robots. These conscious robots are able to make discrimination that unconscious robots could not make and so they do a better job on the production line. Suppose that these conscious robots are absolutely miserable and our neurophysiology is sufficient for us to establish that they are extremely unhappy. We give our robotics research group the following task: Design a robot that will have the capacity to make the same discriminations as the conscious robots, but which will be totally unconscious. Our scientists try to design a robot with a 'hardware' that they know will not cause or sustain consciousness, but that will have the same input-output functions as the robot that has a 'hardware' that does cause and sustain consciousness. We might suppose then that they succeed, that

they build a robot that is totally unconscious, but that has behavioural powers and abilities that are absolutely identical with those of the conscious robot.

This experiment shows that, as far as the ontology of consciousness is concerned, behaviour is simply irrelevant.[13] They are irrelevant to the existence of conscious mental phenomena? This is so because, 'the ontology of the mental is essentially first-person ontology'.[14] It is the very subjectivity of consciousness that makes it invisible in a crucial way. 'If we try to draw a picture of someone else's consciousness, we just end up drawing the other person. If we try to draw our own consciousness, we end up drawing whatever it is we are conscious of'.[15] epistemologically, we learn about other peoples' conscious mental states in part from their behaviour. Causally, consciousness serves to mediate the causal relation between input stimuli and output behaviour and the conscious mind functions causally to control behaviourism from the evolutionary point of view. In short, that the ontology of consciousness is concerned with behaviour is simply irrelevant. We could have identical behaviour in two different systems, one of which is conscious and the other totally unconscious. But Searle opposes physicalistic reductionism and argues that consciousness is irreducible. He writes: 'consciousness is a higher-level or emergent property of the brain in which solidity is a higher-level emergent property of H_2O molecules....[16] He completely neglects the yawning gap between patterns of neuron firings and perceiving a patch of pink. The most important pillar of Searle's perspective is the Connectionist Principle, for, his main thesis is supported by this principle.

3.2. The Connectionist Support to Consciousness / Unconsciousness:

This connectionist principle has two versions. The first version of this principle is related to consciousness: (a) that no being could have intentionality unless that being was capable of consciousness. The second is related to the relation between unconscious states and conscious states: (b) that all unconscious states are potentially conscious. Obviously, Searle is running two strands of his thinking together. The first is the connection between mind and consciousness, and the second is the connection between consciousness and unconsciousness. In support of his connection principle, firstly, Searle formulates a connection argument and presents it in seven-numbered steps. They are stated as follows:

(1) There is a distinction between intrinsic intentionality and as-if intentionality; only intrinsic intentionality is genuinely mental.

(2) Unconscious mental states are intrinsic.

(3) Intrinsic intentional states, whether conscious or unconscious always have aspectual shape. This aspectual shape is part of its identity. He explains, 'whether we perceive anything or think about anything, we always do so under some aspects and not others'.

(4) The aspectual feature cannot be exhaustively or completely characterized solely in terms of third person, behavioural or even neuro-physiological predicates.

(5) But the ontology of unconscious mental stages, at the time they are unconscious, consist entirely in the existence of purely neuro-physiological phenomena.

(6) The notion of an unconscious intentional state is the notion of a state that is a possible conscious thought or experience, and

(7) The ontology of the unconscious consists in the objective feature of the brain capable of causing subjective conscious thoughts.[17]

J. Kim and Robert Von Gulick criticize the above principle. Kim may be said to have sponsored a three-stage attack while counterpoising his physicalist case for mental causation with a view to refute multirealisability thesis and to establish a case for disjunctionism. The first part is presented in his account of the distinction between top-down and downward causation. Levelism favours the former and not the latter because the former closes the gap and the latter does not. In his reply, Searle agrees that downward causation exists and questions Kim for saying that if there is no downward another biological cause (B^*). So, M^* has M as well as B^*. In its generalized form it poses causation, then causal closure is impossible. So, a layered model of mental causation meets its fate: it turn out to be idiosyncratic theory of causation. In order to be a viable theory of causation, it must decide on the competition between the following two apparently contradictory theses: mental causation is a species of physical causation and physical causation is a species of mental causation (downward causation). This is exactly where overdetermination is introduced. Consider a

biological property (*B*) causes a mental property (*M*). *M* has causal powers to instantiate another mental property (*M**). This might have the following question: Does it mean that all mental-to-mental causation has two causal properties? If so, it is overdetermined.

Searle apparently accepts both types of causation and hence thus two sufficient causes, and hence mental-to-mental causation is overdetermined in its effects. This warrants causal closure at the lower level. The conclusion is that it is not a complete theory of lower-level phenomena. So the solution points to the way *M** inherits a causal principle. This is the first formulation of the causal inheritance principle. The only alternative is emergentism, which is magical and obsolete. In the second formulation, Kim claims that there are three types of causation mental-mental, physical-to-mental and mental-to-physical and the mental-to-mental causation presupposes physical-to physical causation. In the third part, after clearing the objections to overdetermination, he gives the third formulation of the causal inheritance principle. The origin of this principle is traceable to his critique of the so-called simple solution. The principle is stated as follows: if mental property *M* is realized in a system at t in virtue of physical realization base *P*, the causal powers of this instance of *M* are identical with the causal powers of *P*.[18]

There is an endorsement of this idea in Lowe but differences persist. While Kim denies the premise about overdetermination, Lowe accepts non-overdetermination for deducing a non-Cartesian type of dualism, even while

taking the overdetermination as commonplace.[19] The reason for such a position is causal relation is transitive. The major advantage of this causal inheritance principle is that it can demonstrate the identity of causal powers. The causal inheritance principle no doubt is a direct consequence meandering through the three different types of causation. It is seen that this does not require any confusion between top-down or downward and bottom-up causation. So the multilayered model accepts the bottom-up and neglects the top-down causation. But it is not necessary that Searle should necessarily accept if our above portrayal is correct. We shall discuss this in detail in the next chapter.

For Searle, an essential pre-requisite for successful research in cognitive science is to keep a clear distinction between those processes that are genuinely cognitive, hence mental, from those are not. Here, he put forward a question: what is the criterion that distinguishes unconscious thought process from all the other 'information processing' events in the brain and in the rest of nature that have no psychological reality at all? For him, if an unconscious mental state is intrinsically mental then it must be the sort of intentional state that in principle is accessible to consciousness. In short, there is an obvious relation between consciousness, unconsciousness and intentional state. It is only from such a point of view that Searle is called as a property dualist, even though he denies it. The major reasons for emphasizing consciousness in an account of the mind are that it is a central mental notion. All other mental notions, i.e., intentionality, subjectivity, mental causation, intelligence etc. can only are fully understood as

mental by way of their relations to consciousness. [20] Searle tries to locate consciousness within the overall scientific conception of the world. He advocates that consciousness is a biological feature of human and certain animal brains. It consists of inner qualitative, subjective, unified states of sentience, awareness, thoughts and feelings. For every conscious state, there is a certain qualitative aspect of the state. There is something that it is like, or something that it feels like, to be in a state that type. They are furthermore subjective in the sense that they only exist as experienced by a human or animal subject. They have an additional feature that is worth emphasizing: in the normal non-pathological forms of consciousness, conscious states come as part of a unified conscious field. This unified field of conscious, subjective awareness is not reducible to any third person phenomenon. It has first-person ontology, in the sense that it only exists as experienced by some 'I', some human or animal that has the experiences.

At the same time, Searle argues that it is caused by neuro-biological processes and is as much part of natural biological order as any other biological features, such as photosynthesis, digestion, or mitosis. Besides, because consciousness is entirely caused by the behaviour of lower-level biological phenomena, it would in principle be possible to produce it artificially by duplicating the causal powers of the brain in a laboratory situation. In other words, any system capable of causing consciousness must be capable of duplicating the causal powers of the brain.

Searle adheres that all of our states of consciousness are caused by bottom-up neuro-biological processes in the brain. They themselves can cause subsequent conscious states or bodily movements because they are grounded in the neurobiology. Thus, in cases, where there are no gaps, the left-right causation through time at the top level, are exactly matched by left-right causation through time at the bottom level.

His solution is that if we have an adequate science of the brain, an account of the brain that would give causal explanation of consciousness in all its forms and variety and if we overcome our conceptual mistakes, no mind-body problem would remain. He is against the view that, explanations in science imply necessity and necessity implies inconceivability of the opposite, as Nagel says. [21] Nagel gives an example: we understand how the behaviour of H2O molecules causes water to be in a liquid form, because we see that the liquidity is a necessary consequence of the molecular behaviour. [22] Opposing this, Searle advocates that, (1) not all explanations in science have the kind of necessity that can be found in the relation between molecule movement and liquidity. For example, the inverse square law is an account of gravity, but it does not show why bodies have to have gravitational attraction. (2) The apparent necessity of any scientific explanation may be just a function of the fact we find the explanation so convincing that we cannot conceive of the molecules moving in a particular way and the H_2O not being liquid.

Accordingly, Searle rejects McGinn's assumption that (1) consciousness is a kind of stuff, (2) this stuff is known by the faculty of introspection, and (3) in order that we have an understanding of mind-body relations, we would have to understand 'the link' between consciousness and the brain. [23] Searle's view is that consciousness is not stuff; it is a feature or property of the brain in the sense that liquidity is a feature of the water. It is not known by introspection in a way analogous to the way object in the world are known by perception. Refuting the third assumption of McGinn, he holds that there is no link between consciousness and brain, any more than there is a link between the liquidity of water and H_2O molecules. Searle's efforts of explaining consciousness will complete only after giving the structural features of it.

Searle gives a dozen structural features of consciousness. They are: (1) finite modalities, (2) unity, (3) intentionality, (4) subjective feeling, (5) the connection between consciousness and intentionality, (6) the figure-ground Gestalt structure of conscious experience, (7) the aspect of familiarity, (8) overflow, (9) the center and the periphery, (10) boundary conditions, (11) mood, and (12) the pleasure/unpleasure dimension.

Human consciousness is manifested in a strictly limited number of modalities. But there is no a priori reason why consciousness should be limited to the number of modalities. We have bodily sensations and the stream of thought, in addition to the five senses of sight, touch, smell, taste and hearing and the sixth 'sense of balance.' Each modality can occur under the aspect of

pleasant/unpleasant and the way in which it is pleasant/unpleasant, is in generally specific to the modality. Hence, in the case of visual experience, it is intentionality that is internal to experience rather than purely sensory aspects that is pleasant or unpleasant.

Conscious states come to us as part of a unified sequence. This unity exists in at least two dimensions and Searle calls these as 'horizontal' and 'vertical'. Horizontal unity is the organization of conscious experiences through short stretches of time. Vertical unity is a matter of the simultaneous awareness of all the diverse features of any conscious state. But it is difficult to understand how the brain achieves this unity. In neurophysiology, it is called the 'binding problem'. In his matured phase, Searle claims that this unified field of consciousness is specifically, the presupposition of the operation of the self just as the self is a presupposition of the reason as well as explanation and the freedom of will arises where, there is no unity. Recently, he finds that the operation of rationality presupposes the freedom of will. For Searle, most, but not all, consciousness is intentional, and all intentionality is aspectual (that is seeing from a point of view). The first premise conveys the idea that since consciousness is indeed consciousness of something the 'of' in 'consciousness of' is the 'of' of intentionality. The second premise conveys idea that conscious experiences are always perspectival, i.e. they are always from a point of view. It reminds us that all intentionality is aspectual. [24] Further, Searle adds that there are some capacities, which he calls 'Background Capacities', enable our mental

states to function. Intentional states do not function autonomously; instead it requires a set of back ground capacities for its functioning. The same type of intentional content can determine different conditions of satisfaction.

The most important puzzle about consciousness is the puzzle about subjectivity. Conscious states have subjective feeling. Subjectivity necessarily involves the what-it-feels-like aspect of conscious state. This is what is called the phenomenal aspect. There is a conceptual connection between consciousness and intentionality. It means that a complete theory of intentionality requires an account of consciousness. Only a being that could have conscious intentional state could have intentional state at all, and every conscious intentional state is at least potentially unconscious.

As per the Gestalt psychology, our perception experience comes to us as a figure against a background. Generally, what are the characteristics of perception seems to be characteristics of consciousness. Related to the figure-ground structure of conscious experience is the fact that our normal perceptions are always structures. The consequence is that all consciousness is consciousness of something as such and such.

Much of the organization and order of conscious experience are made possible by the aspect of familiarity. It comes in varying degrees: it is a scalar phenomenon. At the top of the familiar scale, according to Searle, are the objects, scenes, people and sights of ordinary and everyday life. Lower down are strange

scenes in which the object and people are not easily recognizable, and categorisable.

Conscious states in general refer beyond their mediate content and Searle calls this phenomenon 'overflow'. In such a case, the immediate content tends to spill over, to connect with other thoughts that in a sense, were part of the content but in a sense, were not.

We have to distinguish between those things that are at the centre of our attention and those that are at the periphery. It means we are conscious of a very large number of things that we are not attending to or focusing our attention upon. An example of this is the different levels of attention one may require for different tasks.

Any conscious state is characteristically located. But the location may itself not to be at all the object of consciousness, not even at the periphery. This is what is called the sense of disorientation.

The mood provides the tone or colour that characterizes the whole of a conscious state or sequence of conscious state. It seems that we can get a good neurobiological or biochemical account of mood. A good example is given by the way drugs control depression.

There is always a dimension of pleasure and unpleasure in conscious state. In addition to this, within the pleasure-unpleasure dimension, there are many sub-dimensions also.

For Searle, without making the idea unconscious clear, we cannot explain consciousness and there is a close relation between these two. He says 'the notion of unconscious mental state implies accessibility to consciousness. We have no notion of the unconscious except as that which is potentially conscious'. [25] If they are in principle inaccessible to consciousness, they cannot be mental states nor have intentionality content in anything other than a metaphoric or pretended sense. This is exactly the context in which Searle comes to formulate what he calls the 'connectionist argument'. This is purported to establish a bridge or a link between consciousness, unconsciousness and intentionality. As reviewed already earlier, Robert Von Gulick argues that its intended states is a little less than clear, since Searle explicitly denies that it should be understood as a simple deduction from axioms. [26] So it is not a simple deductive argument. Is this an inference to the best explanation? It is so if one takes the main inference from (1) to (5) as leading towards simple inference in (6) and (7).

But since there is an unresolvable contradiction in the first five premises, we cannot take that the last two will resolve the problem by showing how to ground aspectual shape in neuro-physiological fact. So, the apparent contradiction seems to be the lack of coherence between the first five, which talks about the unconscious, and the last two, which draws an inference about the consciousness. Is the divide real? If so there is an apparent cleavage between the way Searle talks about the unconscious and the way he talks about the conscious.

Are there two versions of the connectionist argument, one for the conscious and another for unconscious?

Searle's escape route consists of comparison of his consumption of the unconscious and its relation to consciousness with that of Freud's. Searle's view is that mental phenomena are higher-level features of the brain. The unconscious mental states are those features of the brain that are capable of causing the state in a conscious form. In other words, there are a group of neurons embedded in glial cells inside our skull, and sometimes this vast and intricate system is conscious. Consciousness is caused by the behaviour of lower-level elements, presumably at neuronal synaptic and columnar levels. A crucial question needs to be explored with reference to the perspective of biological is that whether it has the necessary potency for coming to terms with functionalism like the one developed by Churchland? Thus, the only escape route lies in the way he wants to contrast his position with that of Freud's.

The contrast in ontology comes through by following a non-ontological way of looking at the constituents. In sharp contrast, Freud thinks that our unconscious mental states exist both as unconscious and as occurent intrinsic intentional states, even when it is unconscious. For him, all mental states are unconscious in themselves, and consciousness is just a mode of perception of states that are unconscious in their mode of existence.[27] In Freudian concept, the unconscious is a 'place,' 'a realm,' as described by A.C. MaCntyre. Freud postulates an unconscious mental state, as the cause of behaviour that is not just neuro-

physiological, but is not conscious either. On Searle's view, the ontology of the unconscious is strictly the ontology of a neurophysiology capable of generating the consciousness. [28] There are 'as-if' metaphorical attributions of intentionality to the brain, but there are Freudian cases of shallow unconscious desires, beliefs etc. only as the cases of repressed consciousness.

Searle has two important objections against Freud. Firstly, we continue to be in darkness about the way the ontology of the unconscious is supposed to match the ontology of the neurophysiology. Secondly, we do not have a clear notion of how to apply the perceptual analogy to the relation between consciousness and unconsciousness. It is this specific connection that impinges on his connectionist argument, which we have mentioned earlier. This is also what forces Searle to conclude that we have no unified notion of the unconsciousness, but we have as many as four different notions. Searle distinguishes them as follows:

1. There are 'as-if' metaphorical attributions of intentionality to the brain, which are not to be taken literally.
2. There is repressed consciousness, such as Freudian cases of shallow unconscious desires and belief etc.
3. There are unproblematic cases of shallow unconscious mental phenomena that just do not happen to form the content of one's consciousness at any given point of time.

4. There is supposed to be a class of deep unconscious mental intentional phenomena that are not only unconscious but that are in principle inaccessible to consciousness.

So, there naturally arises a pointer to the connection between the conscious and the unconscious. This is what is captured by the connectionist argument.

3.3. The Structure of Intentionality and the Background Capacities:

Most conscious states are intentional, for they represent things, whether they exist or not. For Searle, all intentional states can function. In other words, they determine their conditions of satisfaction against background capacities, abilities, tendencies, dispositions and other causal structures that could not be analyzed in terms of other intentional states. This condition of satisfaction provides the connecting link between the theory of mind, including the theory of action on the one hand and the theory of speech acts on the other. [29] Such is the interface between philosophy of language and philosophy of mind as it was discussed in the first chapter.

Searle proceeds to draw certain important distinction within the notion of intentionality. He examines the similarities and differences among intrinsic, 'as-if' and 'derived intentionality'. Intrinsic intentionality is a phenomenon that humans and certain other animals have as part of their biological nature. How they are used, or how they think of themselves or how they choose to describe themselves, it doesn't matter. 'As-if' intentionality does not ascribe any

intentionality at all, intrinsic or other. It is used merely to speak figuratively or metaphorically. It is important to emphasize here that as- if intentionality is as if it had the intentionality. There is nothing metaphorical or as-if about saying that certain sentences means certain things. These forms of intentionality are real, but they are derived from the intentionality of human agents. Thus, the third sort, i.e. derived intentionality, literally endows non-material phenomena with intentional properties.

Searle claims that perspectival character of conscious experience indicates that all intentionality is aspectual. For example, seeing an object from a point of view is seeing it under certain aspects and not others. In this sense, all seeing is 'seeing as'. And what goes for seeing goes for all forms of intentionality, conscious and unconscious. Here, it is important to mention the distinction between intrinsic, as-if and derived intentionality. In order to explain these distinctions, Searle gives three examples.

a) I am now thirsty, really thirsty, because I have not had anything to drink all day.

b) My lawn is thirsty, really thirsty, because it has not been watered in a week.

c) In French 'j ai grand soif' means 'I am very thirsty'.

In the above sentences, first ascribes intrinsic intentionality. If such a statement is true, there must be an intentional state in the object of the ascription. Second sentence is used to speak figuratively or metaphorically. The intentionality in this ascription is merely 'as-if'. 'As-if intentionality' is not a kind of intentionality,

but, rather a system that has as-if intentionality, which is as-if-it-had intentionality. The intentionality in the French sentence is not intrinsic to that particular sentence construed just as a syntactical object. It is derived from the intrinsic intentionality of the users of the language.

In other words, intrinsic intentionality is a phenomenon that humans and certain other animals have as part of their biological nature. It is not a matter of how they are used or how they think of themselves or how they choose to describe themselves. 'As-if intentionality' does not imply the presence of any mental phenomena. Derived intentionality is something that is the result of somebody else's uses of or attitudes towards the thing. [30] Searle maintains that we cannot deny these distinctions. In order to prove this, he gives an example from the journal of pharmacology. 'Once the food is part the chrico-pharyngus sphincter, its movement is almost entirely involuntary except for the final expulsion of feces during defecation. The gastrointestinal tract is a highly intelligent organ that senses not only the presence of food in the lumen but also it's chemical composition quantity, viscosity and adjusts to the rate of propulsion and mixing by producing appropriate patterns of contractions. Due to its highly developed decision making ability the gut wall comprised of the smooth muscle layers, the neuronal structures and paracrine-endocrine cells is often called the gut brain. [31]

The above example shows that any attempt to deny the distinction between intrinsic and as-if intentionality faces a general reductio ad absurdum. That is, denying the distinction is absurdity because it makes everything in the universe

mental. With this, Searle attacks the motivations underlying the sort of seperationist view that Fodor promotes with respect to consciousness and intentionality. The urge to separate intentionality from consciousness, says Searle is that, we do not know how to explain consciousness, and we would like to get a theory of the mind that will not be discredited by the fact that it lacks a theory of consciousness. For him, there are capacities that enable our mental states to function on the consciousness and intentionality. They are called 'The Background Capacities'. Searle begins to remind us of the essential backdrop within which he undertake the task of building up a science of consciousness. The interface between philosophy of language and mind comes via two claims namely, the claim about literal meaning and the claim about compositionality of meaning. Here, his point is that intentional phenomena such as meanings, understandings, interpretations of beliefs, desires and experiences only function within a set of background capacities that are not intentional in themselves. That is, the same intentional state can determine different conditions in which they are satisfied. Searle calls this as conditions of satisfaction. We discussed it in the first chapter. So, another way of stating the thesis is that intentional phenomena only determine condition of satisfaction. To pursue this idea to its logical limit, he firstly proceeds to show some features of the background and the network. They are as follows:

1. Intentional states do not function autonomously and it is impossible for them to determine the conditions of satisfaction in isolation.
2. Each intentional state requires for its functioning a Network of other intentional states. Conditions of satisfaction are determined only relative to the Network.
3. The Network only functions relative to a set of Background Capacities.
4. These capacities are not part of the content of intentional states.
5. The same intentional content can determine different condition of satisfaction relative to different Background and relative to some Backgrounds it determines none at all.

Now, Searle wants to examine the understanding of sentences to see that representation presupposes a non-representational background of capacities. The literal expression will be interpreted differently in the different sentences. For, each sentence is interpreted against a Background of human capacities and those capacities will fix different interpretation, even though the literal meaning of the expression remain constant. Further, the meaning of a sentence is a compositional function of the meanings of its component parts and their syntactical arrangement in the sentence. It follows from these two premises that the principle of compositionality and the notion of literal meaning are absolutely essential to any coherent account of language. The notion of literal meaning thus becomes an important tool not only in his analysis of philosophy of language but also crucial to any study of cognitive science as it is understood by Searle. He

gives another argument for the Background. There are perfectly ordinary sentence of English and other natural languages that are uninterpretable. We can understand the meanings of the words but cannot understand the sentence.

Searle's next claim is that sentence meaning radically underdetermines the content of what is said. Literal meaning determines truth-conditions absolutely and in isolation. But literal meanings are vague and literal descriptions are always incomplete. For Searle, the above argument is powerful and appealing, from philosophy of language point of view. Two questions arise here. One is about the incompleteness. The second question is posed by taking a cue from another philosopher of language Recanati. [32] Recanati's argument is that any actual situation admits of an infinite number of true descriptions. The above point just extends Searle's earlier cluster theory of descriptions according to which a name is just equivalent to a cluster of descriptions. If they are logically equivalent, then the statement itself will become analytic.

But now Searle puts a different gloss. He recommends that we must proceed from a view according to which any linguistic representation will always be incomplete. [33] If so, then the argument for generalizing from literal meaning to all forms of intentionality will pose considerable difficulties. Searle's reply to the first one is that, incompleteness is not the main problem, because efforts to complete the description don't help. He adds that if you postulate a situation totally devoid of Background presupposition, you cannot fix any definite interpretation. His reply to the second appears in at least two forms.

(1) Incompleteness can be overcome only if we add further forms of incompleteness, without this, we cannot fix any definite interpretation.

(2) It is useful to have a taxonomy that captures our intuition that there is a match between thought and meaning.

A crucial step in understanding the Background is to see that one cannot be committed to the truth of the proposition without having any intentional state, whatever with that proposition as content. It means to have a conscious thought; one has to have the capacity to generate a lot of other conscious thoughts. If we want to add these conscious thought all still we require further capacities for their application.

It is in this context that Searle gives certain laws of operation of the Background. They are as follows:

(1) In general, there is no action without perception, no perception without action.

(2) Intentionality occurs in a coordinated flow of action and perceptions and the background is the condition of possibility of the forms taken by the flow.

(3) Intentionality tends to rise to the level of Background ability.

(4) Though intentionality rises to the level of the Background ability, it reaches all the way down to the bottom of ability.

(5) The Background only manifest when there is intentional content.

These all show that, we can not make a distinction between Background and the Network, because the network is that part of the Background which we describe in terms of its capacity to cause conscious intentionality. To have a conscious thought one has to have the capacity to generate a lot of other conscious thoughts. And these conscious thoughts all require further capacities for their application. [34]

He wants to eliminate the misunderstandings, related with the hypothesis of the Background. One is the mistaken supposition that all understanding must involve some act of interpretation. That is, from the fact that whenever one understands something, one understands it in a certain way and not in other ways, and the fact that alternative interpretations are always possible, it does not thereby follow that in all discourse, we are engaged in constant 'acts of interpretation.' A similar mistake is made in those theories of cognition that claim that we must have made an inference if when we look at one side of a tree, we know that the tree has a backside. On the contrary, what we do is simply see a tree as a real tree.

But Background is emphatically not a system of rules. But the rules only have application relative to the Background capacities. The rules are not self interpreting, and in consequence, they require a Background to function; they are not themselves explanatory or constitutive of the Background. According to Searle, we need the following distinction, i.e., a distinction between those features of the Background that are common to all human beings and those

features that have to do with local, cultural practices. Thus he opposes these two as 'deep Background' versus 'local practices.' Difference in local Backgrounds makes translation from one language to another difficult; the commonality of deep Background makes it possible at all.

Many philosophers who became aware of the Background are extremely disconcerted by it, says Searle. It seems to them that meaning, intentionality rationality etc. are somehow threatened if their application depends on contingently existing biological and cultural facts about human beings. He argues that background does not show that meaning and intentionality are unstable or indeterminate; that we can never make ourselves understood, that communication is impossible or threatened. He merely shows that all of these functions against a contingently existing set, of Background capacities and practices.

Searle's theory of mental causation gets completed with the two important hypotheses he formulates in the context of the problem of freedom of the will. Searle accepts that this is essentially a problem about a certain aspect of consciousness, namely that form of consciousness that manifests these sorts of gap. Searle's two hypotheses are stated as follows (1) Psychological indeterminism coexists with neurobiological determinism; and (2) Psychological indeterminism is matched by neurobiological indeterminism. The type of causation theory that corresponds to the formulation (1) recommends that the psychological indeterminism goes all the way up even under circumstances that

neurobiological causation is deterministic. This is just to enable us cause the formulation of the second hypothesis. There is no question that any rational explanation of human behaviour, that is, explanations that cite the reasons the person acted on, are both non-deterministic in form and at the same time, completely adequate as explanation.

He believes that the existence of the gap, and the adequacy of non-deterministic explanations presupposing the gap, require us to postulate an irreducible, non-Humean self. He adds that the unified field of consciousness is precisely the presupposition of the operation of the self, just as the self is the presupposition of the effectiveness of reasons in acts and explanations where the action involves the gap. [35] For him, the problem of the freedom of the will arises for those parts of the conscious field in which we experience the gap. These are the cases that are traditionally called 'volition.' We experience our own normal voluntary actions in such a way that we sense alternative possibilities of action open to us, and we sense that psychological antecedents of the action are not sufficient to fix the action. On this account, the problem of free will only arises for consciousness, and it only arises for volitional or active consciousness.

The argument is pursued further in his recent book *Rationality in Action,* where Searle argues that the very operation of rationality presupposes the gap, and it explains how irrational actions that exhibit weakness of will are possible. [36] The gap is that feature of the consciousness of voluntary actions, whereby the actions are experienced as not having sufficient psychological causal conditions to

determine them. It is found in three experiential locations: in our experiences of not being causally determined (1) to decide what we decide, (2) to try to do what we have decided to do, and (3) to continue doing what we are trying to do. [37] The 'manifestation' of the gap is said to lie 'between the reasons for a decision and the decision', the second 'between the decision and its execution' and the third 'between the initiation of an action and its continuation to completion'. Searle reports that this gap has a traditional name, 'the freedom of the will'.

He appeals to the gap both in attacking what he calls the 'Classical Model of Rationality' and in defending his own position on rationality. Searle shows following theses in his book. (1) Concerning rationality, the greatest single difference between human beings and other animals is our ability to create, recognize, and act on desire-independent reasons for actions. (2) There are irreducible, conscious selves. (3) The subject matter of philosophy of rationality, a goal-directed activity of conscious selves. (4) There are desire-independent reasons and they can motivate actions, and (5) Owing to certain features of desire, there will not be a deductive logic of practical reasons even in the limited sense in which [there can be] a deductive logic of theoretical reason.

The above viewpoints show that his earlier concept of disbelieving in free will has changed now. [38] He thinks that there is an absence of causally sufficient conditions at the psychological level that is matched by a parallel lack of causally sufficient conditions at the neurobiological level. He formulates this view in following three principles (here, t_1 is the time at which an agent is presented with

some options, t_2 the time at which he makes a relevant decision, and t_3 the time at which he completes his execution of that decision).

(1) At any given point in time such as t_1, the total conscious state of the brain is entirely determined by the behaviour of the relevant microelements.

(2) The state of the brain at t_1 is not causally sufficient to determine the state of the brain at t_2 and t_3.

(3) The move from the state at t_1 to the state at t_2 and t_3 can be explained only be features of the whole system, specifically by the operation of the conscious self.

According to Searle, the gap is not synchronic. There is no gap between 'the behaviour of the relevant micro-elements' and 'the total conscious states of the brain': the former 'uniquely fix [CS]' the latter. [39]

3.4 The Other Minds Problem:

Searle claims that there is an empirical basis for supposing that other people and higher animals have conscious mental phenomena more or less like our own. Even though many solutions are proposed by various thinkers, none of these solutions is satisfactory. Empiricists believe that the only evidence we have for attributing mental states to other systems is behaviour of those system. For them, we know of existence of consciousness in other people by inference is based on observation of their behaviour, especially their verbal behaviour.

A specimen argument from Peter Carruthers explains the difficulty of solving the problem of other minds.

(1) It is impossible to have direct awareness of the mental states of another human being. (C1) So our knowledge of such states (if it exists) must be bared upon inference from observable physical state.

(2) Because of the ever-present possibility of pretence, no such inference can ever be valid. (C2). So [from (C1) and (C2)] it cannot be reasonable to believe in the mental states of other human beings. [40]

The above arguments are false, says Searle. He points out that we believe that other people are conscious is the fact their causal structure is like ours. We cannot reduce the first-person ontology to the third-person facts. That is why Searle disposes of different types of reductionism. Some of which are classifieds as follows.

(1) Ontological reduction by which objects of certain types can be shown to consists in nothing but objects of other types. . [41]

(2) Property Ontological Reductions: This concerns properties.

(3) Theoretical reduction is primarily a relation between theories, where the laws of the reduced theory can be deduced from the laws of the reducing theory.

(4) Logical or Definitional Reduction: It is a relation between words and sentences, where words and sentence referring to one type of entity can be translated without any residue into those referring to another type of entity.

(5) (5) Causal Reduction: It is a relation between any two types of things that can have causal powers, where the existence and a fortiori the causal powers of

the reduced entity are shown to be entirely explainable in terms of the causal powers of the reducing phenomena.

Thus, Searle makes the conclusion that no description of the third person, objective physiological facts would convey the subjective, because the first-person features are different from the third-person features. Nagel states this point by contrasting the objectivity of the third-person features with the what-it-is like features of subjective states of consciousness. [42] Jackson states the same point by calling attention to the fact that someone who had a complete knowledge of the neurophysiology of mental phenomena such as pain would still not known what a pain was if she or he did not know what it felt like. [43] But Searle differs from all these Family-like Arguments and hence he does not seem to have an axe like others to grind while developing a new science of consciousness.

Further, he adds that having the actual intentional thought process is one thing, and the behaviour is some thing else. This distinction gets lost in the behaviourist and functionalist account. Searle says that 'it is mistake to suppose that we know of the existence of mental phenomena in others only by observing their behaviour'.[44] The 'behaviour' only makes sense as the expression or manifestation of an underlying mental reality. The behaviour is considered as the sole basis because of the connection between behaviour and the causal structure of other organisms that behaviour is at all relevant to the discovery of mental states in others. If we understand the causal basis of the ascriptions of mental

states to other animals, then several traditional skeptical problems about 'other minds' have an easy solution.

According to him, except when doing philosophy, there really is no 'problem' about other minds. Because we do not hold a 'hypothesis', belief or 'supposition' that other people are conscious and those chairs, tables, computers and cars are not conscious. Searle declares that we are having certain Background Capacities, which enable our mental states or consciousness to relate to consciousness of other people. Now, we shall examine how Searle extends his theory of mental causation so as to have a wider base that includes an account and the role of intentionality in constructing social reality. Thus the difficulties of overcoming the gap between mind and body are laid at the door of constructing social reality. Searle thus makes an earnest attempt to bridge his philosophy of language and philosophy of mind and the consequent non-reductive type of physicalism with a brand of realism. It is necessary therefore to examine the credentials of his realism to see how it strikes a congenial chord to the above perspective of mind-body problem.

3.5 The Construction of Social Reality:

This phase brings language more close to intentionality and social reality. For, Searle's concept of social reality is established on his philosophy of language and it gives a basis to the concept of consciousness and intentionality. It is in his book *The Construction of Social Reality,* that Searle comes to develop his realistic worldview, starting with an independent world of particles and forces, up

through evolutionary biological systems capable of consciousness and intentionality, to institutions and social facts, which are created when persons impose status-features on things, which are collectively recognized and accepted.[45] He tries to show that intentionality and reality is complementary to each other. It includes the ontology of social and institutional facts. The ontology of institutional reality can be explained using three concepts. They are collective intentionality, the assignment of function and constitutive rules of the form '*X* counts as *Y* in context *C*.' Here at least six features are accounted to picturize the logical structure of human institutional reality.

They are as follows:

(1) The self-referentiality of social concepts.

(2) The use of performative utterances in the creation of institutional facts.

(3) The logical priority of brute facts over institutional facts.

(4) The requirement of systematic logical relationship among institutional facts.

(5) The primacy of social acts over social objects.

(6) The linguistic component of many institutional facts. Language not only describes but also is partly constitutive or institutional reality.

His aim is to 'assimilate social reality to our basic ontology of physics, chemistry and biology'. [46] He thinks that philosopher have failed to understand the social world because they have posed a false dilemma. They have taken states of collective intentionality to be manifestations of parts of a Hegelian world sprit. This is implausible, says Searle. The intentionality that exists in our individual

heads has the (simple) form 'we intend'. In his worldview, the mental states can be thought of as intrinsic feature of reality because they are higher-level features of the brain, and brains are among the systems of particles. Besides, 'we consciousness' cannot be reduced to individual intentionality.

For him, language is the first institution, a pre-condition of all the others, our use of language rather than any distinctive form of thinking or of sociability, is what distinguishes us from non-human animals. In his account of language and meaning, a layer of convention is build upon intentions to represent. There are communicative intentions also. Since the success of declarative, status imposing speech acts is communicative success such intentions also play a part in the construction of institutional reality.

In Speech Act, he has given an account of a 'some extra-ordinary' properties of human communication. According to him, on the hearer's side, understanding the speakers' utterance is closely connected with recognizing his intentions. The close connection is such that a speaker's being taken as doing what she/he intends is enough for her/his automatic illocutionary success. 'We'- intentions per se don't have a place here. The logical structure of speech acts must then make a transition to the logical structure of social facts.

Searle presents two different aspects or ideas about social institutions and institutional facts. The first emphasizes the function of social institutions and the second the deontic powers involved. These aspects have been integrated together with what we have termed as the semiotic thrust of Searle's perspective,

criticisms notwithstanding. The general criticism is that such integration does not work very well. The first basic ideas is that the members of a collective, so to speak, collectively construct a social institution semiotically by conceptually or semiotically giving some thing a new status and a function to accompany it. Searle employs 'constitutive rules' of the form '*X* counts as *Y* in *C*' to effect this. He gives the example of money. Some thing is only money or property if people think it is money or property. Simplifying greatly, *X* could here be a certain kind of piece paper with status and functions that have nothing to do with money, the collectively accepted new constitutive rule. 'This kind of piece of paper (*X*) counts as money (*Y*) in our community (*C*)' gives *X* the new status *Y* with a new function (something like quantitative, transferable unit of value for use in certain kinds of exchange) to go with this status. He requires that money is not money unless collectively thought to be money- this is the self-referentiality of social institution concepts he stresses.[47] Accordingly, collective acceptance must be taken to entail shared belief in this sense. It can still be noted that at the bottom the thing (object, fact, etc.) to which the new status is given is a physical or material thing (or in any case a non-institutional thing)

According to him, a part of society (including at least institutional facts) is conceptually created by us from our collective intentionality in a language-dependent way. He argues that functions are agent relative (relate to goals and ends of a system) and 'normative' (relate to what somebody is supposed to do). Whenever the function *X* is to *Y*, *X* and *Y* are parts of a system where the system

is in part defined by purposes, goals and values generally. Whenever the function of *X* is to *Y*, then *X* is supposed to cause or otherwise result in *Y*.

In his analysis of social reality, he takes collective intentionality as a fundamental notion. But 'we-intentions' cannot be reduced to 'I-intentions'. He needs an account of collective intentionality, which is consistent with methodological individualism. The existence of this collective intentionality as a psychological primitive in the individual heads of individual agents does not commit one to a primitive ontology of actual human collectives. On the contrary, the basic ontology is that of individual human organisms and their mental states. The collective arises from the fact that collective intentionality is in the individual heads of individual organisms. The actual social collective consists entirely of individual agents with collective intentionality in their heads, nothing more. Ontologically speaking, collective intentionality gives rise to the collective and not the other way round. Searle's view is that physical reality exists totally independently of our representation of it, in a way that institutional reality does not exist independently of our representations of it. Since institutional reality is in some sense our creation, we ought to be able to state precisely the mechanisms of that creation and ontology of the resulting structure. Further, 'the Background', the set of pre-intentional capacities, abilities and dispositions enable human intentionality to function in the construction of institutional reality.

Institutional reality consists of status functions and these are almost entirely positive and negative deontic powers: rights, duties, obligations, entitlements, authority, penalties, hierarchies and institutional power generally. And institutional facts have a more complex constitution. Searle believes that social behaviour is a biological given, common to many species. Often the imposition of status functions proceeds without any experience, conscious or otherwise, that is what is happening. The imposition and maintenance of status functions by collective intentionality is not something which just causes institutional reality, it is constitutive of that reality precisely because it is constitutive of the ontology according to the constitutive rules. He further adds that intentional causation is both logical and causal and phenomenology is unable to reveal this fact. In the case of institutional facts, the logical structure in the form of the constitutive rule, the ontology and the collective intentionality all come together in one unified phenomenon.

Searle connects social institutions with deontic powers by holding that they are collectively conferred on people since these powers are to be taken as being enablements and requirements. The basic hypothesis in this context is: there is one primitive logical operation by which institutional reality is created and constituted. It has this form: we collectively accept, acknowledge, recognize, go along with etc, that [*S* has power (*S* does *A*)]. Thus he accepts that many different kinds of activities fall under his notion of collective acceptance. However, Searle

says too little about the applicability and interconnection of these different notions. In any case, mutual belief is required to be always present.

On his analysis, there is a distinction between two kinds of rules, i.e. a distinction between two kinds of actions descriptions. The idea of constitutive rule is a theme that goes back to Searle's own 'How to Derive Ought from Is' (1964) and Speech Acts (1969). The contrast between constitutive and regulative rules is that, a regulative rule 'regulates', but merely regulates, a type of behaviour, which is logically independent of those rules. Constitutive rules also regulate, but they do more as well: they create or define new forms of behaviour, which could not possibly exist independently of those rules.[48]

One of the ways in which Seale tries to make this more precise is this. Consider these two action sentences: 'he sent out the invitation at least two weeks in advance' ('He R-ed') and they played football ('They C-ed'). There may be a rule of etiquette specifying advance notice for invitations, but from the fact that some person R-ed, it does not logically follow that any rules exist which regulate his R-ing. Searle claims that if there were no rules of football, there is no sense in which their behaviour could be described as playing football, so from the fact that they C-ed, it logically follows that some set of rules exist that regulates their behaviour. [49]

What Searle provides is an account of two different types of action description namely, rule-involving and non-rule-involving ones. Just as actions are intentional, basic or non-basic, only relative to a description, so too actions are

not rule-involving or non-rule involving per se, but only relative to a description. The distinction he has in mind marks no difference in types of rules, but only between types of action description.

He speaks a great deal about the roles of agreement, acceptance and collective imposition of function, in the creation and continued existence of institutional facts. Without these, there is a logical priority of act over institutional object. 'What we think of as social objects... are in fact just placeholders for patterns of activities'. [50] In other words, where institutional reality is concerned, the noun phrases tend to name placeholders for patterns of activity rather than independent entities. This is because the point of having institutional reality is to facilitate action. Institutional entities are more like a floating crap game than they are like Mount Everest. The above reflections pave way for recommending a realistic account of social reality in a much simpler way than anything than has been thought about before.

Thus while defending external realism, Searle pursues the view according to which there is a reality that exists totally independently of our representations of it. Together with a version of correspondence theory of truth, the idea that statements, if they are true, are true in virtue of how things are in the world that exists independently of the statement, the realism about social reality thrusts forward.

In conclusion, on the positive side, the explanatory gap is closable so long as a mental theory of causation is made to work. We can have an equally plausible

negative attitude to both. What falsifies the latter however is the way the intentional theory of mental causation with its entire widened base converges on a view of rationality and a realistic view of social reality. Before concluding we will have to examine what are the further challenges Searle has to meet with all these features of biological naturalism. One peculiarity of Searle's critics is that there is none, which could play down the total perspective. This is altogether a fortune for Searle. His critics can be classified into many divisions where each one looks a loophole in at least one segment of the perspective. Hence, in the next chapter I shall explain the different criticisms of Searle's views by different thinkers.

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CHAPTER - 4

SEARLE AND HIS CRITICS

4.1 Saving the Semiotical Thrust of Searle's Perspective:

The strength of Searle's multi-layered model of consciousness, that depends on the perspective, known as biological naturalism, can be criticized for its failure to live up its expectations either as a non-reductive physicalism or for its shortcomings on its modified character of epiphenomenalism. It is the latter that was shown to be poised to overcome the relative vagueness of the earlier naturalism. It is neither biological in the sense in which it partakes of reductionism. Nor is it physically or neuro-biologically epi-phenomenal in its core. It appears that his final perspective leaves much to be discussed or else, it was not properly understood by his so-called critics.

As demonstrated in the foregoing pages, his adoption of supervenience led him into one dilemma. And the over-determination might equally be turning it into confronting yet another dilemma (this was coherently argued for the impossibility of proving physicalism on all formulations of overdetermination by Sturgeon). Consequently, when his intentional theory of causation requires more strength, he cannot be said to close the gap. As a result, his solution to the mind-body problem is likely to face the danger of extinction unless it is shown that the modified form of epi-phenomenalism survives the attack. This is what has been

shown in the previous chapter where his theory was counterpoised to that of Kim.

There is indeed a way of arguing that notwithstanding Kim's criticisms, the strength of the modified trait of his variety of epi-phenomenalism lies in what we have called its semiotical thrust in philosophy of language. Thus the best way his perspective can be defended is from an unusual angle of philosophy of language, even though it is not answerable to many other questions his critics might pose in this domain. We can explain the semiotical thrust by holding that his paradigm on philosophy of language provides the necessary model of not only the analysis of intention, but also his account of the construction of social reality. It looks as if two huge columns arise from language itself touching on the logical structure of intentional action and the logical structure of social reality, which Searle christens as external realism.

Thus, Searle's perspective is posed enough to withstand the onslaught from critics who overlook how the two columns represent a restatement of the modern dichotomy between pure and practical reason. What they tend to overlook is the semiotical element which sustains his non-Husserlian account of intentionality. One may hazard a guess in arguing that certain integration is achieved on the sole grounds of a semiotical approach.

In fact Searle goes to the extent of disowning the semiotical thrust in response to the criticism made by Tuomela, in favour of some sort of ontologizing social reality calling it as a kind of realism. But the contrary is true. This is what one can

gather from the many re-statements Searle has offered for sustaining his so-called perspective given as modified epi-phenomenalism. The modified format, for example, looks like a last-ditch effort to save a perspective, which is fundamentally oriented from a philosophy of language point of view. It is also criticized from the failure to secure an interface of philosophy of language and mind.

To some extent, we have conceded this at the beginning by proposing that if his premises in philosophy of language are agreeable, then his conclusions in philosophy of mind could be saved. But still this could not be done for two reasons. On the one hand, Searle himself has relegated his contributions under the rug. On the other, it is doubly difficult to sustain his biological perspective from a language point of view. This is especially so since the critics come under distinct categories. Thus there are broadly from two distinct fronts from which it draws fire. The sector from the point of view of philosophy of language and the sector from different standpoints of cognitive modeling seem to be independent of each other. It is equally difficult to know whether we make them all fall into a coherent order so as to put in question the overall perspective of the above model. One thing however is clear. All of these criticisms somehow uniformly concur in making either Searle's intentional model of consciousness or the intentional model of causation as a target of attack. The former group includes criticisms of his analysis of the logical structure of speech acts and its intentional basis accusing him of a return to Husserlian phenomenology as well as the

criticisms from dynamic cognitive modeling (as opposed to static modeling or better put, between non-linear as against the linear cognitive modeling). Thus, the critics who charge the Husserlian assumptions of phenomenology in his account of phenomenal experience fail to notice the limits within which he weaves his perspective. Thus the most illuminating Indian estimate of Searle requires a corrective. Similarly, the latter group that is more technically aiming to silence the idiosyncratic variety of intentional theory of mental causation may after all require a review.

Taken sector-wise, we may take that his early phase, i.e. speech-act philosophy of language is attacked by two hermeneutic philosophers of language namely Habermas, and Apel. Another intentionalist William P. Alston joins with yet another subsidiary criticism. Searle's middle phase of multi-layered modeling is countered by J. Kim, Brian J. Garrett, Churchland and Von Gulick with great deal of acumen. Criticism at the neuroscientific level from the dynamic point of view is advanced by Walter Freeman and Christina Skarda and the criticisms about later social construction of reality were specialized by Jennifer Hansby, Raimo Tuomela and David Hillet Ruben. There is indeed a way of not only defending Searle's perspective by holding that his biological naturalist's outlook can be saved by modified trait which offers a semiotical thrust to his external realism which in turn sustains his initial outlook, but also making him coherent. Searle's critique of cognitive science can be re-interpreted as part of the above endeavour.

In what follows, we shall single out the major criticisms made by Habermas and Apel against his earlier views on speech-act philosophy of language with a view to reexamine the semiotical foundation that provides a backdrop to the 'astonishing turn' to the intentional philosophy of mind and also to his later views on irreducibility of consciousness. While Habermas accuses him of a sort of reduction of philosophy of language to philosophy of mind, Apel finds fault for the retrogressive turn from philosophy of language to philosophy of mind. Both of the above will be satisfied if it is shown that the philosophy of language in the form of a semiotical paradigm given as a system of determinism within indeterminist system survives all attack.

What is basic to both of the above pieces of criticisms is a dichotomy between the intentionalist and intersubjectivist models of understanding the structure of speech acts or what Apel terms it as the linguistic and pragmatic turn in the understanding of intentionality and meaning. Searle's alleged demarcation between philosophy of language and philosophy of mind are the ultimate logical outcome of the above distinction. The alleged interface cannot be supposed to do its work. Once we show that the above dichotomy is a tendentious assumption then, the above interface can then be recovered. The dichotomy has its origin in the way both Habermas as well as Apel 'pragmatically' complete the argument for philosophy of language. Searle's completion argument has its terminus in philosophy of mind. There is indeed a way of understanding the two versions of completion arguments. One is the reverse of the other. Looking at this way will

take away the thorn in the criticism of both. No doubt Searle's reduction of communication to intention through the verificationist bend comes under criticism. Searle's main thesis, that conditions of satisfaction are ultimately determined by intentional states of mind, is thus equally objected from the above point of view by Karl-Otto Apel. Firstly, the same is true of the condition of satisfaction of speech acts of all types that is in relation to the 'truth-condition' of statements. In other words, the propositional contents of speech acts are dependent on intentional states of mind only to the same extent as these latter are at the same time also already dependent on linguistic meaning-conventions in their inter-subjectively intelligible meaning. Secondly, the apparently very elegant extrapolation and generalization of the verificationist explication of meaning in concepts of conditions of satisfaction or conditions of fulfillment cannot in principle do justice to the linguistic differentiation of illocutionary meaning. [1]

Thus, the conditions of satisfaction or fulfillment in the case of commands, request and demands and even of compulsions, for example, refer in like-fashions to the speaker's wishes as the determining intentional states of mind. But the linguistic differentiation of the various illocutionary meanings of the speech acts cited is clearly not explained in their relationship. All that is explicated is the specific propositional meaning which may be the same in various illocutionary acts. In addition to this, the hearer is to bring about the propositionally represented state of affairs. But in all four cases of directive

speech acts (i.e., commands, request, demands and compulsions) not only the signalization of conditions of satisfaction of a 'wish', the signalization of the reasons for compliance with it belong to the illocutionary force and thus to the explicable meaning of the speech act.[2]

To some extent Searle is justified in thinking that Karl-Otto Apel often confuses a correspondence approach to language with a verificationist approach. Besides, Searle wants to reject verificationism. For him, Apel persistently confuses the illocutionary component of the speech act with a performative component. The structure of the illocutionary act is *F (p)*, where the *'F'* marks the illocutionary force and the *'p'* marks the propositional content. A very small class of illocutionary acts is performed by way of uttering a performative expression. These are properly described as performatives. Though every speech act is indeed a performance, only a very small class is performatives. Apel consistently describes the 'illocutionary' act as a 'performative' component from a pragmatic point of view. Thirdly, there is a kind of implied and sometimes explicit idealism in Apel's account. For, Apel says 'the conditions of possibility of the description of experienceable facts ...are at the same time the conditions of possibility of the describable facts'. [3] But on a natural interpretation, this seems to be false. Apel quotes Wittgenstein to the effect that it is impossible to describe the fact that correspondence to a sentence without simply repeating the sentence. But, Searle thinks that Wittgenstein is mistaken. There are lots of ways of describing the facts, which correspond to sentence without simply repeating the sentence.

Fourthly, Apel objects to Searle's analysis on the ground that there a lot of speech acts in which the various components of the *F* in the *F*(*p*) structure of the illocutionary act cannot be explained in non-linguistic terms, but rather require what Apel calls 'the linguistic differentiation of illocutionary meanings.' Accordingly, the differences between command, request, suggestions, orders, pleadings etc. could not be intended by speakers who did not have a language, much less could they be understood by hearers who did not have a language. But Searle agrees with this position. His point is that the form of the meaning intention can be specified without any essential reference to linguistic elements. The form of the meaning-intention involves the intentional imposition of conditions of satisfaction. It thus needs to be distinguished from the communication intention, which involves the intent that the hearer should recognize the meaning intention and its content. But neither of these so far makes any reference to linguistic elements. We can state Apel's arguments as a series of steps. They are:

(1) The basic unit of speakers meaning is the illocutionary act.

(2) Illocutionary acts are constituted by validity claims.

(3) Validity claims are essentially intersubjective.

(4) Intersubjective validity claims require social conventions as a condition of their possibility.

(5) Therefore, it is wrong to try to explain meaning in terms of prelinguistic forms of intentionality, because the intentionality of meaning requires linguistic conventions as a condition of its possibility.[4]

Searle's answer is that Apel shares with Habermas a misunderstanding of the role of validity claims in the constitution of the speech act. The speech act is constituted by the fact that it meets certain conditions. Speech acts have a heavily articulated structure and one can, in general, distinguish input-output conditions, preparatory conditions, propositional-content conditions, sincerity conditions, and essential conditions. Furthermore, it is a mistake to suppose that the features, which are characteristic of successful cooperation and communication, are part of the definition of meaning.

Alston, another thinker, argues that the analysis of intentional states in terms of conditions of satisfaction essentially require a reference to the conditions of satisfaction of speech acts, which Searle leaves out. Searle answers that Alston's argument is not correct. Thus the direction of pedagogy is to explain intentionality by means of language. But the direction of logical analysis is precisely the reverse. The conditions of satisfaction of linguistic entities are derived from those of intentional states and not conversely. The representing intention is a matter of imposing the conditions of satisfaction of an intentional state on an overt act, and thereby expressing that intentional state. Furthermore, Searle assumes that the categories of illocutionary acts constitute the ways in which a speaker can mean something. He repeatedly says that the meaning

intention determines that the illocutionary acts have the conditions of satisfaction that it has. [5] But presumably he thinks that when the conditions of satisfaction of an act have been fully determined, it is thereby determined what illocutionary act that is. Alston points out that there is more to illocutionary-act performance than the satisfaction of what Searle calls 'conditions of satisfaction'. Hence the intention to endow one's utterance with such conditions does not amount to an intention to perform an illocutionary act of a certain specific sort. The conditions of satisfaction mark out broader categories and require supplementation before any particular order or promise has been uniquely picked out. He tries to show that Searle has not given proper appreciation to the normative, regulative element in illocutionary act concepts, how taking responsibility for the holding of certain conditions is at the heart of illocutionary-act performance.[6]

The inadequacy of Searle's intentionalist model is again questioned by Jurgen Habermas who accuses that his intentionality theory condemns the hearer to a peculiar passivity. It deprives him of the option of taking the utterance seriously, i.e., to accept it as valid or reject it as invalid'. [7] Habermas adds further that, certainly semantic concepts which also have correlates in the domain of mental states. But validity conditions should not be considered in isolation but in pragmatic connection with validity claims and with potential grounds for the redemption of such claims. There cannot be any declaration without a dependence on authorizing or legitimizing conditions of the sort that have the power to create new social facts. Searle elucidates the intrinsically linguistic force

of the very act of raising a claim to validity with force of an institution that enables a speaker, via his social roles, literally to call something into existence. In order to turn the elucidation into an explanation, Searle has to assimilate language to institutions. Searle's way of assimilating this looks different from that of Habermas' and hence the above dichotomy. Habermas points out that language is an institution only in a metaphorical sense. [8] He believes that there are two competing approaches to the philosophy of language namely, the 'internationalist' and 'intersubjectivist'. On the intentionalist approach, the meaning of an utterance is essentially a matter of speaker's intentions. The intersubjectivist or social view sees the successful performance of a speech act as a successful attempt to reach an understanding with a hearer about something in the world. And the intersubjectivist view emphasizes the responsibilities and the validity claims made by the speaker and responded to by the hearer in the actual social dynamics of the speech situation. Searle began with a near-approximating intersubjective model and retrogresses into an intentionalist model. On Habermas' understanding, he performs a reduction of the former to the latter. Thus Searle's perspective turns out to be a case for an isolated brain in a vat.

However, Searle denies that these are rival approaches in an apparent effort to recover the above interface. The intentionalist view tries to describe the bare skeletal structure of the basic speech acts. He further adds that in the statement of the intentionalist view, he is trying to get behind the incredible social complexity of actual speech to discover the underlying lineaments, the basic

intentionalistic form that admits of such very diverse expressions in society. The intersubjectivist merely describes an extension of the phenomena that are described by the intentionalist view.

For him, we cannot analyze meaning, communication and speech acts in terms of the attempt to achieve consensus, because unless there is actual understanding of a meaningful speech act in successful communication, there is nothing for the consensus to be about, there is no way to specify the terms of the consensus. The attempt to achieve consensus cannot constitute meaning, understanding, communication etc, because it presupposes all these phenomena. Besides, we cannot appeal to the validity claims in the explanation of the speech act, for the validity claims have to be explained in terms of the structure of specific sorts of speech acts which in turn have to be explained in terms of the underlying intentionality. Furthermore, it is philosophically back-to-front to suppose that the validity claims provide a basis for the understanding of phenomena of speech acts; rather it is the theory of speech acts that has to explain the validity claims.

In other words, the existence of elaborate social institutions that enables us to perform such complex illocutionary acts as making assertions, promises and commands, is a social development of more primitive underlying forms of intentionality. Once these logical relations are made perfectly explicit, one can see which speech acts involve which validity claims, and why the validity claims are strict logical consequence of the structure of speech act in question.

The debate between Searle and Habermas turns on the question of the basic structure of natural languages and its meaning. It becomes unresolvable. Habermas bets on the inadequacy of the Intentionalist model as against the communicative model by pointing out that the reason that we are inclined to ascribe that kind of structure to intentional states is precisely because we already find it in the structure of expressed speech, thus perhaps loading it all on the side of philosophy of language. No doubt, Searle invokes the mental or intentional causation, but foists the system of constraints on the side of philosophy of mind. Searle can accept that biological forms of intentionality are primary, and the linguistic forms are derived. For Searle, a human child first begins with pre-linguistic forms of intentionality. By a kind of bootstrapping effect, the child acquires primitive linguistic expression of the intentionality. The recognition of such complexity brings into approximation the communicative complexity set out by both of the above critics. But a little bit of a language goes a long way and the child develops a richer intentionality, which it could not have developed without linguistic forms.

This richer intentionality enables a further richer linguistic development, which in turn enables richer intentionality. All the way up to the developed adult, there is a complex series of developmental and logical interactions between intentionality and language. Most forms of adult intentionality are essentially linguistic. But the whole edifice rests on biological primitive forms of pre linguistic intentionality.

4.2. Criticism from the Neuroscientific Level:

Searle has rejected the view that, the brain produces intelligent behaviour because at the functional level of description, the brain is a device, formally manipulating symbols according to rules (classical cognitivism). He is an opponent of cognitive science in general and functionalism in particular, especially, the variety developed by neurocomputational theorists like Churchland. Searle advocates that cognitive science is established on a big mistake, 'a mistake that the mind is a computer program and the mind is to the brain as the programme is to the hardware, i.e. minds in short are computer programmes implemented in brains.'[9] There are numbers of ways to demonstrate that this is a mistake, but the simplest is to point out that the implemented computer programme is defined entirely in terms of symbolic or syntactical processes, independent of the physics of the hardware. Minds, on the other hand, more than symbolic or syntactical components, contain actual mental states with semantic content in the form of thoughts; feelings etc. and these are caused by quiet specific neurobiological processes in the brain. The mind could consist in a programme because the syntactical operations of the programme are not by themselves sufficient to guarantee the semantic contents of actual mental processes.

Evidence from our laboratory indicates that brain functioning does not resemble the rule-driven symbol-manipulating processes characteristic of digital computer. Electroencephalogram (EEG) research on pre-attentive sensory

processing taking place in the olfactory bulb suggests that brains use the functional architecture of distributed, self-organizing networks similar in many ways to some types of present-day connectionist models. The essential feature of connectionist or so-called 'neural net' models is that a distributed system of interacting simple elements can produce intelligent behaviour without the rules and programs that were previously thought to be required. Learning takes place by strengthening and weakening connection strengths between units in the network in parallel distribution. When the network is activated, each unit computes its own level of activity in terms of input from other units and a predetermined threshold value. The global pattern of activity resulting from these simultaneous, independent, parallel computations constitutes the state of the system at each moment.

To support Searle's claim with an appeal to connectionist systems, it is important to distinguish two camps of connectionist model- one typified by so-called PDP models (Hinton, 1985, Rumelhart et al, 1986) and the other characterized by self-organizing dynamical systems (Amarl, 1983; Anderson et al, 1977, Freeman, 1987; Gross Berg, 1981). [10] Not every connectionist network can be said to operate in the absence of symbols or symbol-like elements. Systems that fall within PDP class of connectionist models use globally distributed dynamics but there is a sense in which this class of systems still uses internal 'representations' in the production of behaviour. Systems like these, which rely on feed-forward connectively and back propagation for error correction, have their goals

externally imposed. They require a 'teacher' or set of correct answers to be instilled by the 'systems operator'. Self-organizing dynamic systems, because of dense local feed back connections, does not require or use teachers. No matching or comparison takes place such as by correlation or completion, and no archetypal set patterns are placed by an external operator into the system as its goals. Besides, no program-specified rule is imposed on olfactory input, the activity is self-organized, there is no central processor, and learning and memory are distributed through out the system.

Freeman argues that we agree with Searle that (pains) and other mental phenomena just are features of the brain and perhaps the rest of the central nervous system and that the important requirement for understanding this relationship is the distinction between micro- and macro levels of neural functioning. [11] The brain produces intelligent behaviour. But the crucial question for neuroscientists has always been which level of functioning is relevant for explanations of this behaviour? Our research has led us to break with a foundational concept of contemporary research on the nervous system, the neuron doctrine, that we once accepted in company with the majority of our colleagues, but which we now see as mistaken and as a source of misunderstanding in attempts to comprehend the brain as the organ of behaviour (Freeman, 1984).

The physiological basis for the view that brains employ chaotic dynamics involves a hypothesis on the way in which synaptic strengths change during

learning under reinforcement, says Freeman. Essentially, when two neurons fire together, i.e. when the action potential of the pre-synaptic neuron excites the post-synaptic neuron and generates an action potential, the synapse that connects them is strengthened. The observations that brains employ chaos to produce behaviour are important in the present discussion because phenomena that are chaotic preclude long-term predictions. Chaotic behaviour emerges from the nonlinear interaction of its parts, and global behaviour in the system cannot be reduced to or deduced from knowledge about the characteristics and interactions among individual components (Crutchfield et al, 1987). It is not individual neurons and their activities that explain or cause behaviour, it is rather the activity produced by masses of neurons that self-organize to produce new global forms of behaviour. These findings have encouraged the thinkers to break with the 'reductionist' view that the behaviour of a system can be explained in terms of the properties and relationships between individual components that constitute the system. Another feature of brain function is also important in this connection. Brains use chaotic dynamics in the production of behaviour (Skarda and Freeman, 1987).

Searle indicates that just as we need the micro-macro distinction for any physical system, so for the same reasons, we need the micro-macro distinction for the brain. [12] The brain has an intrinsically mental level of description. Because, at any given point it is causing actual conscious events and it is capable of causing further conscious events. For, the brain has both conscious and unconscious

mental events. We are also inclined to suppose that in the brain there are mental states that are intrinsically inaccessible to consciousness. [13] Then he himself admits that this thesis is inconsistent with the connection principle. Thus, we need an inversion of the explanation. Here, what is Searle has in his mind is that cognitive science requires an inversion of the explanation comparable to the inversion achieved by evolutionary biology. In the traditional cognitive science paradigms, there is supposed to be a deep unconscious mental cause that is supposed to produce desired effect, such as perceptual judgments, or grammatical sentences. But the inversion eliminates this mental cause altogether. Accordingly, it alters the ontology of cognitive science explanation by eliminating a whole level of deep unconscious psychological causes. [14] Now, the normative element that was supposed to be inside the system in virtue of its psychological content comes back in when a conscious agent out side the mechanism makes judgments about its functioning.

Freeman and Christina Skarda say that our agreement with Searle is predicted on an important caveat, namely, that he means the same thing they do by micro/macro descriptions. It isn't always clear that he does mean what they mean. They agree with Searle when he says that while it makes sense to say that a particular organism with its nervous system is experiencing a given stimulus, it does not make sense to say for any particular neuron in that brain that it is experiencing that stimulus. The brain gives rises to emergent neural phenomena that are responsible for and explains behaviour and that are not reducible to the

features and relations of its component parts. But sometimes Searle appears to make a further claim, another kind of level distinction that is not encompassed by the one which is discussed earlier. The distinction is between a micro-level that includes all levels of neuronal processing and a macro-level of purely mental processes. Searle says, 'at the higher level of description, the intention to raise my arm causes the movement of the arm. But at the lower level of description, a series of neuron firings starts a chain of events that results in the contraction of the muscles'.[15]

There are two things to say about this claim. Firstly, it bypasses the role played by global neural activity and conflates the global neural and mental levels. Secondly, although Searle argues against dualism, he seems to argue here for a level of activity that plays causal role but is not physiological, a specifically 'mental' level. This is philosophically appealing but lacks biological sense. Skarda gives the reason that as physiologists they cannot make strict causal inferences from the level of neurons to that of neural mass actions, a fortiori; cause and effect cannot be imputed between the global neural and mental levels. Quite apart from the classical problems concerning causality raised by Hume, Kant, Whitehead and others, the modern conceptions of feedback necessarily introduce ambiguity and indeterminacy. These are endlessly compounded in their efforts to comprehend distributed networks with large numbers of feedback loops. Both Freeman and A. Skarda advocate that it appears to them is that during the next decade or so, machines will be constructed that will display

useful traits heretofore restricted to biologic intelligence. Here, the irony will be that we will be unable to understand their processes in causal terms. The problem this raises for Searle is that where he wants a causal explanation there isn't one to be had.

Searle argues that his answer to the problem of consciousness lies somewhere in the neurosciences. But he cannot make strong arguments to support his viewpoints. Physiologists and psychologists who work with animals often have the illusion that they can control their behaviour by use of reinforcement. This belief is based on the model of physiological functioning developed to explain reflex behaviours and on the feed forward models that experimentalists use to explain how it is that a conditioned stimulus (CS) will elicit a conditioned response (CR) preceding the unconditioned response (UCR). The presumptions is that all behaviour can be expressed as a sum of responses to stimuli, a view that includes and is ultimately derived from such fundamental behaviour as the slaking of thirst, the satisfaction of hunger and the titillation of sex. What experimentalists have failed to note is the essential act that, in the typical experiment, it is the animal that is controlling their behaviours. These animals are continually producing behaviours from within by anticipating external stimuli to guide or pace their actions. These behaviours express internally generated activity of the nervous system and are not deterministic responses to stimuli. Skarda advocates that it is misleading for philosophical attempts to understand the biological basis of behaviour and the mind/brain relationship.

He thinks that Searle falls into this trap by focusing on the neurophysiological basis of behaviours that are reflex in nature, example the slacking of thirst or the contraction of muscles, and then adopting this model for all brain functions. If reflexes were all that were needed to produce behaviour as we know it, we would not find brains generating self-organized behaviour and chaos. Certainly, by focusing attention on reflex behaviour, Searle misses, along with many others, the most distinctive features of brain functioning in the production of goal-directed behaviour, i.e. its self-organizing creative dynamics. [16]

Searle's description of perceptual state incorporates the reflex model discussed above. In his book on *Intentionality*, Searle discusses what he terms the 'intentional contents' of perceptual states. He describes these contents as follows: vis exp (that X with certain features is before me and that X is causing this perceptual experience).[17]

It implies that what counts as far as perception (in this case visual perception) is concerned i.e. the essential features of the perceptual processes are an internal representation of the object perceived along with its features and the causal impact that the object has on the system perceiving it. Studies of physiological functioning reveal that perceptual processing involves more interesting processes that those described by traditional reflex-based theory and feed forward processing have imagined. Several features of the neural dynamics underlying perception are important to note. First is that only when the odorant is reinforced leading to formulation of a CR. Secondly, the odour-specific activity

patterns are dependent on the behavioral response: changing the reinforcement contingency changes the activity patterns previously recorded. Thirdly, the internally generated odour-specific activity is context-dependent: introducing new reinforced odorant to the animal's repertoire leads to changes in the activity patterns of all previously learned odorants. In other words, adding a new order under reinforcement introduces not only a quantitative change in the number of learned activity patterns, it also qualitatively alters each of the patterns previously learned.

As mentioned above, Searle's characterization of perceptual contents implies that what is important for the systems are the object with its features and the objects causal impact on the perceiving subject. He states that 'the story begins with the assault of the photons on the photoreceptor cells of the retina, the familiar rods and cones' (Searle, 1983). The data indicate that perception begins with an internally generated neural process that, by re-afference, lays the ground for processing of future receptor input. The neural activity patterns that we find related to perception are indicative of internal states that reflect reliable forms of interaction in a context. They are sensitive not simply to the presence of an odorant, or to the response, but to both in interaction and to the context of reinforced odorants in which this behaviour is embedded. For Searle, perception is something that happens to the systems when it is acted upon by an object. But perception is a process that occurs only when the organism initiates interaction with its environment.[18]

Two things are missing in Searle's description, neural interaction and internal context. With respect to the first, causal impact on the system should not be confused with interaction in the latter sense. Thus, the story of perception cannot be told simply in terms of feed-forward causation in which the object initiates neural changes leading to an internal perceptual state. What is missing here is recognition of the role played in perception by self-organizing neural processes and by the dense feedback among subsystems in the brain that allow the organization to initiate interaction with its environment.

Secondly, internal context is also part of the meaning of the activity pattern for the system. When a new odorant is added to the animal's repertoire all previously learned patterns undergo a change. Searle is aware that context plays a role in perception as in all intentional states. He terms this context the 'Network' and he claims that each state is embedded in this Network of other states. The problem is that nowhere within his description of the intentional content of perceptual states does he include a reference to this Network. For Searle, each perceptual state is located in a Network of other states, but the presence or absence of states in this Network does not effectively alter the content of any one. However, it is found that neural dynamics are sensitive to, and hence the characterization of their content must include information on, interrelationships within a perceptual system or subsystem. Because adding to this Network of perceptual states in the olfactory system leads to a change in the patterned activity of each and every odor-specific state. Thus, we can support

Searle's insight that perceptual states are always located in a network of states. But the evidence suggests that this network is internal to each state. Searle is on the right track, but the predominantly reflex-based conception of brain functioning that he has inherited from classical neuro-psychology has stymied him. The brain theories couched in self-organizing nonlinear dynamics will provide the keys he and others need to solve the problem of explaining how intentionality can function with the physiochemical organism.[19]

In his matured phase Searle accepts that there is an absence of causally sufficient conditions at the psychological level [that] is matched by a parallel lack of causally sufficient conditions of the neurobiological level. The consciousness of voluntary actions, whereby the actions are experienced as not having sufficient psychological causal conditions to determine them, is having the feature of a 'gap'.[20] For those parts of the conscious field in which we experience the gap, arises the problem of the freedom of the will, which is opposed to determinism.[21]

Searle's view that ascription of biological function is somehow indeterminate, if not observer-dependent, is supported by D. C. Dennett. Like Searle, Dennet also tries to place freewill in a naturalistic setting. Although Dennett's theory defends a pretty much conventional compatibilism, he is having a conception in his mind, which sees human agency as continuous with the rest of nature as understood or understandable by the empirical sciences. He thinks that such a conception is committed neither to reductionism nor to determinism.[22] But on the other, Dennett threatens the thesis that our conscious perceptions are caused by events

in our nervous system, and our conscious acts, in turn, cause events in our nervous system and control our bodily acts. In order to establish his viewpoints he gives two thought experiments. They are Color Phi and The Cutaneous Rabbit.

The Color Phi experiment has demonstrated the existence of apparent motion, or the phi phenomenon. If two or more small spots separated by as much as four degrees of visual angle are briefly lit in rapid succession, a single spot will seem move. This is the basis of our experience of motion pictures and television. Unless there is precognition, the illusory content cannot be created until after some identification of the second spot occurs in the brain. But if this identification of the second spot were already in 'conscious experience' would it not be too late to interpose the illusory colour-switching-while moving scene between the conscious experience of spot and the conscious experience of spot 2? The answer is that the intervening motion is produced retrospectively, built only after the second flash occurs and projected backward in time.[23]

The Cutaneous Rabbit experiment is given as follows. The subject's aim rests cushioned on a table and mechanical square-wave tappers are placed at two or three locations along the arm, up to a foot apart. A series of rhythmical tap is delivered, for example, 5 at the wrist followed by 2 near the elbow and then 3 more on the upper arm. These taps are delivered with interstimulus intervals of between 50 and 200 msec. So a train of taps might last less than a second, so as long as two or three seconds. The astonishing effect is that the taps seem to the

subjects to travel in regular sequence over equi-distant points up the arm-as if a little animal were hopping along the arm. Obviously, the brain cannot 'know' about a tap at the elbow until after it happens. Perhaps, one might speculate, the brain delays the conscious experience until after all the taps have been 'received' and then, somewhere upstream of the seat of consciousness, revises the data to fit a theory of motion and sends the edited version on to consciousness.[24]

Dennett further argues that our moral obligation to refrain from needlessly harming other creature's stem not from their possession of a capacity to suffer as we do, but merely from the fact that they like us, can be in pain. A capacity for pain is to be distinguished from a higher-level capacity, your capacity to reflect that you are in pain. His strategy is to analyze the qualities of conscious experience in terms of states of mind that itself lack intrinsic qualities.

Searle rejects these arguments. For him, the attempt to analyze away the qualities of conscious experience is to argue that the move rarely represses a problem without solving it. An experience is always the experience of some conscious agent. Further, agents are conscious of their experience in so far as they can be conscious of them. According to Searle, when it comes to the mind, there can be no distinction between appearance and reality, appearance is the reality. This just seems to shift the troublesome 'phenomenal quality' from a first order perceptual experience to a second-order experience. However, this does not remove the troublesome quality. It merely shifts it from one part of the mind to another.

From this, it follows that attempts to analyze away the qualities of conscious experiences by attaching them to second-order mental states are bound to fail.[25] Dennett has denied that experiences have any qualitative character at all. Searle points out that if we distinguish carefully the qualities of objects from the qualities of our experiences of those objects, and then there is no particular incentive to introduce second-order states of mind-beliefs about our pains.

Again, Dennett supposes that the cognition of pre-verbal hominids would have consisted of great more-or-less discrete dedicated processors, each charged with the execution of particular tasks. He proposes that when these hominids began to acquire language, they could have swiftly discovered that by asking themselves overt question, they could elicit by way of answer information, which they did not know what they had. That is, two or more mutually inaccessible sub-systems would have learned to exchange information extra-cranially, provided that each had independent access to the input/output systems of speech and hearing. These hominids would have discovered that the very same could be executed intra-cranially, by means of inner, imagined vocalization. This inner vocalization enables unconnected parts of the brain to communicate with one another. In other words, it enables the various sub-systems charged with the control of different aspects of our cognition to communicate with one another. And these sub-systems then do their thinking in Mentalese, just as Fodor has maintained. Fodor accepts that there is little or no innate cognitive structure corresponding to what we mistakenly think of as central cognitive processes.[26]

But the hypothesis is criticized on the ground that the prediction about the phenomenology of inner speech is quite wrong.[27] If the function of inner speech were to serve as an inner bulletin board, communicating between specialist sub-processors, then one would expect the stream of inner speech to consist of a series of question-and answer sequence. Besides, one would expect the stream of inner speech to skip around all over the place, flitting from topic as one specialist processor after another competes for space on the central bulletin board.

Searle rejects Dennett's interpretive anti-realistic conception. As a strong intentional realist, Searle grounds the phenomena of communication in the general conditions for the successful performance of intentional actions. He gave his speech-act theory an intentionalist turn.

Dennett makes the connection between consciousness and language much more direct. For him, thought and consciousness are possible only for linguistically-endowed creatures. He also emphasizes the role of natural language in generating consciousness. Dennett thinks that cognitive explanation can be given to consciousness in terms of its availability to higher order of description (HOD). Our intuitions about phenomenal consciousness all derive, ultimately from the availability of states to linguistic description, and that the insertion of thoughts and our reports on them is both unnecessary and ill motivated. Hence, conscious states get defined as those, which are available to higher order description.

Carruthers claims that his reflexive model gives more plausible account of the role of natural language in human cognition that Dennett's HOD theory.

Reflexive thinking theory is that conscious experiences are those, which are available to acts of thinking which are reflexively available to further thinkings. Human conscious thinking involves public language. [28] Searle has a different view by which semantics for natural language in terms of a prior intention of thought is possible. But it is not in the sense of Mentalese, one used by Fodor, as we mentioned this in the first chapter. A slightly different view is held by Peter Carruthers. For him, it is our conscious thoughts, which involve natural language, rather than that they all do. [29] We can see a major difference between Dennett and Searle in their views about consciousness. The former accepts that there is no single, definitive 'stream of consciousness', because there is no place where 'it all comes together'. [30] Instead of such a single stream, there are multiple channels in which specialist circuits try, in parallel pandemonium, to do their various things, creating Multiple Drafts as they go. The latter believes that in the normal non-pathological forms of consciousness, conscious states come as part of a unified conscious field.[31]

Dennett argues that current neuro-scientific research often presupposes that there must be single representational space in the brain where the results of all the various discriminations are put in to registration with each other-marrying the sound track to the film, colouring in the shapes, filling in the blank parts. This tendency to think consciousness as the end of the line is indeed one of the occupational hazards of neuroscience. Briefly, the Multiple Drafts Model of Dennett has many implications for scientific theories of consciousness. But, the

representation of sequence in the stream of consciousness is a product of the brains interpretative processes, not a direct reflection of the sequence of events making up those processes.

4.3. Critique of Connectionist Principle:

Searle supports his major theses with connectionist principle. His connectionist arguments are challenged by many thinkers, especially by Jaegwon Kim, Pierre Jacob, Robert Van Gulick, Brian J. Garret and Churchland. The so-called Connectionist argument goes as follows: (1) Intrinsic intentionality is distinguished from as- if intentionality. (2) Unconscious mental states are intrinsic. (3) Intrinsic intentional states have aspectual shape. (4) The aspectual feature cannot be characterized solely in terms of third person, behavioural or even neurophysiological predicates. (5) The ontology of unconscious mental states, at the time they are unconscious, consists entirely in the existence of purely neurophysiological phenomena. (6) The notion of an unconscious intentional state is the notion of a state that is a possible conscious thought or experience. (7) The ontology of the unconscious consists in the objective features of the brain capable of causing subjective conscious thoughts.[32]

Searle's connectionist principle is criticized on the following grounds: here the question is even while granting that it is no argument from axioms and hence it is not an argument by deduction, is it an inference to the best explanation. Critics point out that it is not. In a two part criticism, Robert Van Gulick shows that the premises from (1)-(5) are not to be taken as true unless they are qualified and

hence they do not provide any justification for (6) and (7). It follows that it is not an inference to the best explanation.

For Gulick, the distinction between intrinsic and non-intrinsic intentionality admits only of degrees and hence, the distinction is questionable. He accuses Searle of drawing this all-or-nothing distinction just to slide down on a slippery slope into some sort of absurdity, which holds that everything is mental.[33]

Secondly, it brings into open a rough distinction between conscious and unconscious. Later, Searle attempts to meet this criticism by explaining this to be one of a continuous structure. But he fails to include visual processing as one such unconscious state and hence this impinges on the above distinction. This is what that forces another critic to remark that the distinction between conscious and unconscious is confusing it at least one sense.

Thirdly, it is basically Quinean in its approach to aspectual shape. This conveys that the specification of content is not perfectly transparent because intentional states conceptualize and characterize their objects in specific ways. Certain amount of indeterminacy enters into the scenario. It appears that Searle is facing a major problem here. The problem is about misrepresentation. Seeing a rabbit may also include seeing rabbit parts. Unless this problem is solved to the best of satisfaction, the above argument does not get off the ground. For example, having a desire for water is aspectually different from having a desire for H2O, even though water=H_2O. On Gulick's reading, what Searle misses here is the phenomenal aspect of one's own experience. Probably, what Searle wants to

achieve here by broadening the phenomenal aspect is to include both conscious as well as unconscious. This is what is identifiable with the subjectivity of all our experience. It is clearly broader than that of phenomenal experience with which many others stake their claim. Phenomenal experience requires qualia. Qualia stand for the quality of experience (our pain experience is an example to this). But he forgets the question about phenomenality of all experience. Does the intrinsicality of all experience follow from the phenomenality of all experience? Searle has no answer.

According to Gulick, premise-4 is the most problematic and controversial to the whole argument. The troubleshooter here is aspectual shape. Searle cannot concede that the first-person account will be fully determinate. He remarks that alternative hypothesis about intentional content are consistent with any other all-causal and behavioural evidence. [34] He cannot allow any objective third-person account because both are underdetermined by evidence. Since the first-person ontology is underdetermined, aspectual shape cannot have determinate content. With this, Searle clashes with functionalist accounts here. If this particular premise is rejected then no conclusion ever follows. The other steps of the first version of the argument thus become non-conclusive. Thus the connectionist argument for establishing the connection principle by way of inference to the best explanation is not non-question begging.[35]

Searle's reply is that normal aspectual shape does imply determinate content, which of course may be more or less vague. But there is nothing question

begging here. Besides, in order to prove the view, aspectual shape is constituted by third-person facts about behaviour, neurophysiology etc. Gulick has to provide the proof that aspectual shape is so constituted, he, contends.[36]

Besides, Van Gulick, Brian J.Garrett also put forward some argument against Searle. The criticism advanced by Brian. J. Garrett, which almost reads like a second version of the arguments of Van Gulick. Searle's way of showing the priority of consciousness requires that only a being could have intentional states at all and every unconscious intentional state is at least potentially conscious. According to his reading of the matter, Searle does not always distinguish the following two claims namely that (a) no being could have intentionality unless that being was capable of consciousness and (b) all unconscious states are potentially conscious states. [37] So the confusion becomes all the more apparent. The point is that it is important to distinguish between the two claims. Searle is out to show that only states that are potentially conscious can be seen as mental states. Garrett's point is that this goes against much of the theoretical stance of current cognitive science. It holds that intentional states are mental. But it is open whether they are conscious states. What it boils down to is that while, according to another reading (a) may not imply (b), according to another reading (b) may not imply (a), thus warranting a sharp separation. Garrett has mainly three objections against Searle's views.

The first objection is that, like Van Gulick, Garrett also thinks that the view, there is no constitutive characterization of aspectual shape in third-person terms may

'beg the question'. [38] The major plank of the attack of the above argument is that (a) and (b) are two parts of his connection argument, but (b) does not entail (a). This upshot shows that there is at least more than one version of the connection argument none of which is non-question begging. Searle's justification comes from Quine's indeterminacy arguments, which show that we cannot characterize the aspectual shape of intentional states in terms of behavioural and neurophysiological properties. Since the intentionality is underdetermined by the third-person facts will yield an indeterminacy which may actual first- person intentionality does not have. Garrett then questions the premise-5 in the connectionist argument that the ontology of unconscious when it is totally unconscious is purely neuro-physiological. Searle's justification is that his discussion of the connection principle is designed to answer the question about the ontology of the unconscious, given that when you subtract consciousness, you subtract the occurent reality of the mental with it. For Searle, his objection to the current cognitive science models of the unconscious is that they do not have an answer to the question, nor do they even see the difficulties.

Finally, Garrett challenges the premise 2. In his reply to Garrett, Searle defends the second premise by saying that it is simply an application of the general principle that all representation is under some aspect or then, that whenever we represent any object or state of affairs, it must be represented as such and such. Searle's argument for the connection principle is that 'the ascription of an unconscious intentional phenomenon to a system implies that the phenomenon

is in principle accessible to consciousnesses'. [39] This is to say that, while we can allow for unconscious intentional states, such as unconscious thoughts, these have to be seen as secondary and as standing in a close relation to conscious intentional states. His argument is naturally interpreted as being directed toward the conclusion that central cases of thinking are at least a kin to phenomenally conscious states.

Searle himself discusses two objections; one is put forward by David Armstrong and Pat Hayes and the other is due to Ned Block. First objection is that suppose we had a perfect science of the brain. For example, we could put our brain-o-scope on someone's skull and see that he wanted water. Then the 'I-want-water' configuration in the brain was universal. People want water if they have that configuration. Now let's suppose that we found a subsection of the population that had exactly that configuration but could 'in principle' bring any desire for water to consciousness. They engage in water-seeking behaviour, but 'in principle' they are unable to become conscious of the desire for water. There is nothing pathological about them: that is just how their brains are constructed. Here, we found a counter example to the connection principle, i.e. an unconscious desire for water that it is in principle impossible to bring to consciousness.

But Searle's answer is that characteristically in the science we define surface phenomena in terms of their micro causes. If we had a perfect science of the brain of the sort imagined, we could certainly identify mental sates by their micro-

causes in the neurophysiology of the brain. But the redefinition works as an identification of an unconscious mental phenomenon only to the extent that, the unconscious neurophysiology is still, tracking the right conscious mental phenomenon with the right aspectual shape. The difficulty is with the use of the expression 'in principle'. 'In principle', there is nothing inaccessible to consciousness about the phenomena in question.

Second objection is that; the argument has the consequence that there could not be a totally unconscious intentional zombie. If such a thing is possible then the connection principle entails a false proposition and therefore is false.

Searle, by quoting Quine, argues that there could not be an intentional zombie. For a zombie, unlike a conscious agent, there simply is no fact of the matter as to exactly which aspectual shape its alleged intentional states have. As Quine has argued the problem is not that we could not know for sure that the zombie meant, but there is no fact of the matter at all about which the zombie meant. But where there is no fact of the matter about aspectual shape, there in any aspectual shape, and where there is no aspectual shape, there is no intentionality.[40]

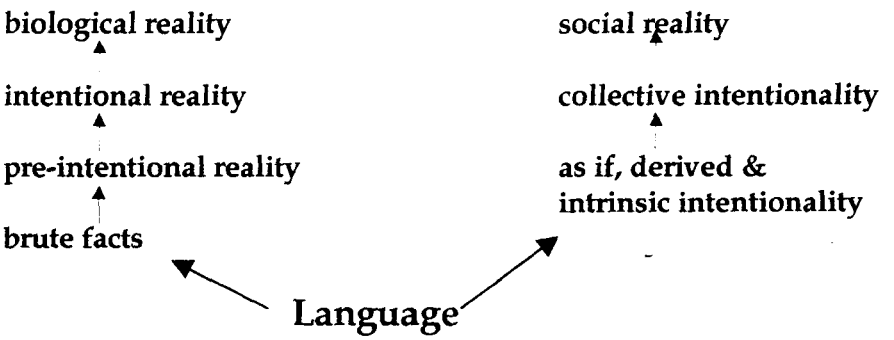
Even if one does not accept Searle's argument for the connection principle, there is a plausible argument for a weaker version of his conclusion. The intentionality of human thought involves modes of representation of objects and properties demonstrative modes of presentation afforded by perceptual experience of objects and their properties constitute particularly clear examples. For example, we think of an object as 'that [perceptually presented] cat' or of a property as

'that colour'. Suppose now that it could be argued that some theoretical primacy attaches to these 'perceptual demonstrative' modes of presentation. It might be argued, for example, that in order to be able to think about objects at all, a subject needs to be able to think about objects under perceptual demonstrative modes of presentation. Such an argument would establish a deep connection between intentionality and consciousness.

For Searle, an essential pre-requisite for successful research in cognitive science is to keep a clear distinction between those processes that are genuinely cognitive, hence mental, from those are not. Here, Searle put forward a question: what is the criterion that distinguishes unconscious thought processes from all the other 'information-processing' events in the brain and in the rest of nature that have no psychological reality at all? For him, if an unconscious mental state is intrinsically mental, then it must be the sort of intentional state that in principle is accessible to consciousness. In short, there is an obvious relation between consciousness, unconsciousness and intentional state. It is only from Searle's such a point of view that he is charged as a property dualist, even though he denies it. According to him, mental processes are supervenient as the physical, but we cannot reduce it to the physical.

4.4. Critique of the Construction of Social Reality:[41]

Searle argues that language is the basis of social reality. If so, the following picture might show how Searle makes the philosophy of language as the basis of philosophy of mind.



His concept of ontology of social and institutional facts is criticized by Jennifer Hansby, Raimo Tuomela and David Hillet Ruben. [42] Jennifer Hornsby raises the question that whether the notion of collective intentionality introduced with 'we intend' commits Searle to a denial of methodological individualism in the sense of Popper. In Popper's account of it, methodological individualism says that all social phenomena...should always be understood as resulting from the (mental states) and actions of individuals, and we should never be satisfied by an explanation in terms of so-called collectives.[43]

Jennifer argues that once the fulfillment of 'we-intentions' is in the picture, what collective intentionality introduces are not only contents of individual people's heads, but things, which show up, as it were, in action. That which engages in co-operative behaviour, when its members' each derivatively have an appropriate intentions, seem to be something irreducibly social. It seems to be constituted (partly) from people, taking themselves to belong to it-from its members each being able to speak of it using 'we'. The collective to which, Searle seems now to be committed are of a kind which Popper scoffed at with so-called 'collectives'. But they are not of any kind which Popper himself was especially concerned with. And they are not of the kind that Searle comes to be concerned with when

he notes that social entities, such as city-states and married couples, U.S. Senate and the College de France are brought into being as institutional facts are created. Searle in fact devotes no attention to the status of those collectives whose existence would seem to be presupposed specifically to successful collective intending or thinking.

Searle gives the reply is that social collectives can be constituted by the fact that individual agents think of themselves as part of a collective without thereby supposing that the collective is an ontological primitive. The collective's existence consists entirely in the fact that there are a number of individual agents who think of themselves as part of the collective.

Raimo Tuomela's argument is that Searle presents the function of social institution and deontic powers involved as two different aspects. This has something to do with semiotics and is done semiotically. [44] But Searle rejects this.

Another thinker Ruben is skeptical of Searle's distinction between constitutive and regulative rules. He says we ought to think of it not as a distinction between types of rules, but as between types of action descriptions. One action description entails the presence of a rule, another kind does not. And then he points out, that this won't work because any rule-governed behaviour admits of an action description that mentions the rule, namely, the description of the action as done in accordance with the rule. He also doubts the forms of intentionality involved in the collective imposition of status functions.

As a reply to these doubts, Searle holds that the distinction between those rules, which create the possibility of new forms of activity, and those rules which regulate preexisting forms of activity. The fact that actions within each of these kinds permit descriptions, which are, not rule entailing, is just irrelevant to the distinction. Besides we need to distinguish those institutional structures that gradually evolve, from those where there is an explicit conscious imposition.

4.5 Critique of Phenomenological Aspects in Searle:

Searle's critique of cognitive science and his non-reductive type of naturalism has forced some thinkers especially, Ramakant Sinari, an Indian thinker and Dreyfus to interpret biological naturalism in a phenomenological way. Ramakant Sinari in his article named Reflections on John Searle's Philosophy of Consciousness has made an attempt to compare Searle's concept of consciousness with that of the phenomenologist.[45] His main contention is that Searle's portrayal of the inner structure of consciousness is clearly phenomenological. In order to establish his viewpoints, Sinari gives the following arguments:

(1) Searle's concept of understanding is that operation of the mind, which is ontologically embedded in the knower's subjectivity, in the transcendental and a priori position of human consciousness (the transcendental premise).

(2) Searle uses the terms 'intentionality' and 'understanding' so widely employed by phenomenologists, phenomenologically-ontologically (the phenomenological premise).

(3) Searle's notion of understanding has a similarity with the notion of hermeneuticians (the hermeneutician premise).

(4) Searle's tie-up between consciousness and understanding and also between consciousness and intentionality has a similarity to that of Husserl's tie-up between intentionality and apprehension (the Husserlian premise).[46]

(5) Searle will reject all the (1) - (4) premises.

Sinari argues that the famous phenomenological dictum 'intentionality is the fundamental characteristic of the mental' is clearly reflected in Searle's philosophy of mind. Searle's use of Background capacities lie intertwined with understanding overlaps the Husserlian concept of Life-World. Dreyfus also holds a similar view. He argues that Searle's notion of intentionality must somehow be phenomenological. His point is that, Searle considers intentionality as a relation between 'a self-contained subject with mental content (the inner) and an independent object (the outer).' Dreyfus calls this 'subject-object conception of intentionality'.[47] He says that Searle sets forth, both a logical and a phenomenological condition for movements, being an action. He agrees with the logical condition, but denies the phenomenological requirement that that the intentional content (i.e. the conditions of satisfaction) that governs an action must be mental, i.e. propositional.

Searle rejects strongly the claim that he is a phenomenologist. He is neither a phenomenologist nor a transcendentalist. According to him, he uses the methods developed for philosophy of language to explain intentionality and not the

phenomenological methods. The combinations of causal and logical structure are beyond the reach of phenomenological analyses. He uses the same method to examine social and institutional reality. Searle rejects any wedge between abstract logical claims and concrete causal claims, as made by Dreyfus. Intentional causation is both logical and causal, and phenomenology is unable to reveal this fact. Besides, in the case of institutional facts, the logical structure in the form of the constitutive rule, the ontology and the collective intentionality all come together in one unified phenomenon. Searle's also claims that the key to understand intentionality is the conditions of satisfaction, which are determined by the contents of intentional states, and the Background capacities that enable intentionality to function [we discussed it in the chapter 2].

To say that the conditions of satisfaction are propositional is just to say that the determination of the conditions of satisfaction must be sufficient to specify a complete state of affairs, a complete fact. This fact has no phenomenological implications. In short, the notion of conditions is already propositional because the condition is always of the form 'the condition that *p*'. All social facts are constituted by collective intentionality and institutional facts have a more complex constitution. He takes that social behavior is a biological given, common to many species. Dreyfus thinks that Searle's answer to the institutional facts is that we impose meaning on meaningless stuff. But for Searle, meaning is a very special form of imposed status function. Facts about meaning are only one kind of social fact among many. Speech acts are meaningful, but in that sense hammers and dollar bills are precisely not. For example, they have no truth conditions. Searle accuses that, Dreyfus says nothing about his distinctions between status functions

and other sorts of agentive functions or about the distinction between linguistic status functions and other sorts, and indeed he says nothing about the ontology of functions. This is an important misconception because it prevents Dreyfus from seeing how constitutive rules generate power. Not just meaning but power.

Then Dreyfus argues that the essential thing for Searle is the 'experience' of imposing meaning. But, on Searle's account, the imposition of status functions often proceeds without any experience, conscious or otherwise that that is what is happening. Dreyfus also believes that these conditions play a causal role in making social reality possible. The aim of his argument is to try to drive a wedge between what he takes as the 'logical conditions of possibility' and the ontology of social facts, on the one hand, and the causation of social facts by collective intentionality, on the other. But Searle has made no such claims. Contrary to his account, there is no wedge whatever between the ontology of institutional facts and the 'causation' by way of collective intentionality. Because, Searle says, the imposition and maintenance of status functions by collective intentionality is not something, which just causes institutional reality, it is constitutive of that reality precisely because it is constitutive of the ontology according to the constitutive rules.

Describing Searle's conception of the Background, Dreyfus says that Searle's only alternatives are either 'subjective intentionality' or 'objective muscle-machinary'.[48] He compares Searle with Husserl by quoting the argument of Husserl that 'whenever there is an intentional relation, there must be an 'ego

doing the taking'.[49] Again, he says according to Searle, 'when we don't find conscious beliefs and desires causing our actions, we are justified in postulating them in our explanations'. Dreyfus also thinks that Searle's argument, that an intentional state is a representation of its conditions of satisfaction, takes the representation as a kind of thing one 'has in mind' as a 'constant accompaniment' of his activities.[50]

For Searle, he never uses the expressions like 'ego doing the taking'. He further adds that Dreyfus is misrepresenting his views. Representation is not an ontological, much less a phenomenological category but a functional category. [51] Besides, the logical structure of intentional phenomena is not discoverable by mere phenomenology. All intentional activity goes on against a Background of abilities. Those abilities make the practices possible, and the practices are not something separate from the intentional phenomena, rather they are the way that the intentional phenomena are carried out. But the phenomenological method is unable to state it. According to him, the contrast made by Dreyfus between intentional behaviour and skillful coping is wrong for three things. Firstly, Dreyfus thinks that intentionality, if it exists in skillful behaviour must exist phenomenologically as an accompaniment, as a second-level of thought-processes in addition to the actions. Searle replies that it is a misunderstanding. Second is concerned with consciousness. Dreyfus seems to be saying that 'Dasein' need not be conscious, that consciousness does not matter to 'Dasein.' But except in a few really weird epileptic cases, all skillful coping requires

consciousness. Thirdly, Dreyfus holds that in everyday skillful coping, there is awareness but no self-awareness. That is, there is no self- referential experience of acting, as this is understood by Searle (and would have been understood by Husserl). Here Searle advocates that this passage equates self-awareness with self-referentiality and thus reveals the confusion between phenomenology and logical analysis. The self-referentiality of the experience of acting has nothing to do with the phenomenology of self-awareness. Self-referentiality is a purely logical feature having to do with the relationship between the intentional state and its conditions of satisfaction.

Searle points out that his analyzing intentionality is totally different from that of Husserl and Heidegger. From this point of view, both Husserl and Heidegger are traditional epistemologists engaged in a foundationalist enterprise. Husserl is trying to find the condition of knowledge and certainty, Heidegger is trying to find the conditions of intelligibility, and they both use the methods of phenomenology. But Searle has no such aims and such methods. Instead, our consciousness and other intentional phenomena are concrete features of the physical world located inside our brains.

Philosophy starts with the facts of physics, chemistry, biology and neurobiology. There is no going behind these facts to try to find something more 'primordial'. There are some differences between Husserl and Heidegger from the point of view of Searle. Husserl thinks that intentionality is a subject/object relation between transcendental subject and an intentional object. On the other hand, for

Heidegger there is no such distinction. Both of these are more or less irrelevant to getting an adequate theory of the logical structure of the intentionality of biological brains encased in biological bodies, says Searle. Further, uncovering this logical structure simply cannot be done by phenomenology.

The deep confusion in the phenomenological method is that, it cannot start with the most basic facts of atomic physics and evolutionary biology. Dreyfus feels that he has to start with the ongoing skillful capacities of Dasein. There are independent real things, objective space and time, and assertions can agree with the way things are in themselves. But these and the detached stance from which they are revealed cannot account for the meaningful practices in which we dwell.[52] Dreyfus and Heidegger think that because the investigation presupposes the practices that therefore the practices cannot be investigated. According to Searle, it is a fallacy and he says 'just as we use the eye to study the eye, language to study the language, the brain to study the brain etc, so we can use the practices to study the practices... use the Background to study the Background.[53] These all show that Sinari and Dreyfus fail to establish that Searle is a phenomenologist. The question remains, whether Searle's Biological Naturalism would be able to defend itself against many strata of critics. We shall end our discussion by evaluating this.

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CHAPTER-5

CONCLUSION

5.1. Reductionism versus Non-reductionism:

Now, let us see, to what extent, the claim to present a biological naturalist view is contributory towards a viable model of mind/consciousness. Two criticisms are in order in the light of our investigation. One is the label represent too narrow in view. Second is that, it can hardly be said to argue for a neurobiological basis of mind in the manner of Crick and Koch. According to them, 315-75 oscillations in the cerebral cortex (CK-oscillations) are the basis of consciousness. Biological naturalism is based on two key propositions. (1) All mental phenomena are caused by lower level neuro-biological processes in the brain, and (2) Mental phenomena are higher-level features of the brain. These are supported by an important principle called the Connection Principle, which is designed to do the work of causation in an effort to develop a theory of mental causation.[1] Together with an account of causal supervenience and an account of the relation ship between consciousness, intentionality and unconsciousness, Searle has developed a major perspective.

The above features represent a reductionist strategy. Quite opposed to this, Searle claims that there is something irreducible, namely the ontological subjectivity. In this respect, Searle shares a widely prevalent view, which has

been reviewed under the Family of Arguments. To the extent that he calls irreducible, he can be said to subscribe to a non-reductive physicalism.

As Kim argues, even though reductionism has been in deep decline, the discussions of it still survive.[2] Reductionism identifies mental states with physical states. The major obstacle to mind-boy reductionism, whether global or local, is qualia- the phenomenal, qualitative characters of our experience. Physicalism supports the view that consciousness is reducible. The most influential version of physicalism is non-reductive physicalism, by which mental properties, along with other higher-level properties, constitute an autonomous domain that resists reduction to the physical domain. This kind of non-reductionist view has served as an influential philosophical foundation to cognitive science, which forms an autonomous and irreducible science with its own distinctive vocabulary and methodology and not answerable to the methodological or explanatory constraints of the more fundamental sciences, such as physics and biology. Hence, the most widely accepted form of physicalism today combines ontological physicalism with property dualism.[3] The anti-reductionist view is that consciousness is subjective. Even though Searle supports the latter, his backing of the claim that conscious states are caused by the lower-level neuronal process in the brain, has made Ned Block calls Searle's Biological Naturalism as 'Non-reductive Physicalism' or 'default Physicalism.'[4] First we all have to locate Searle in the thick of the controversy between reductionism and non-reductionism. Secondly, Searle's biological naturalist's

view can be widened to cover a perspectival outlook. This has been achieved by looking into the exact points of transition from the logical structure of speech acts towards the logical structure of social facts or institutional facts. One of the most fundamental claims of the thesis is that Searle's biological naturalism constitutes a perspective in spite of many shortcomings that need to overcome.

His Chinese Room argument brings together all strands, such as language, consciousness and even in miniature, the social reality, for we have what is going on inside the room and we have the real person outside. Through his Chinese room argument he points out that, the syntax - which defines the operation of the system - isn't sufficient to guarantee the presence of the semantics. And this is true for the individual element or for the whole system. He has attacked the claim of Strong Artificial Intelligence that, thinking is merely the manipulation of formal symbols. For him, computer lacks understanding. Accordingly, he has introduced the Chinese Room argument. The major intention behind this thought experiment was to show that the syntactic manipulation of formal symbols doesn't by itself constitute semantics. It is interesting to note his argument against the view of using computer as a metaphor for the mind. He has stated that these symbols are meaningless until some out side human programmer or user attaches an interpretation to them.[5]

For Searle, even if we are computational creatures we are not either sentient or sapient merely in virtue of that computational organization. His argument is that, a machine that shares our computational organization and is therefore

behaviourally and functionally equivalent to us- and therefore passes the Turing test -need not be an intentional system. What would make it an intentional system - intentionality is engendered by and requires consciousness- is not the functional organization, but rather the way that functional organization is implemented in the biology of the organism. Ned block has agreed with Searle that physically different realizations of human functional organization are conscious is not a priory matter and could be said to depend on whether their brains have equivalent causal powers to ours in the sense of having the power to be physical basis of conscious states. At the same time he objected the idea that neural bases of conscious states 'cause' the conscious states in any normal sense of 'cause'.

The Chinese Room argument is also not without criticism. For example, Churchland has raised strong argument against this experiment that, it is the overall system that is appropriately compared to a programmed computer. In other words, the symbol manipulator doesn't understand anything but the system as a whole does. But Searle's reply was that, he has no way to know what any of those Chinese words mean. He has only the symbols. The system has no way to get from the syntax to the semantics either. It's just a bunch of meaningless symbols to him or the system. Here, it is clear that computing functions is not sufficient to endow the arguments and values of the functions with intrinsic semantic content.

Searle has also rejected Strong AI and Cognitive science. He distinguishes between strong AI and week AI. The former holds that in virtue of executing a suitably written programme a machine could literally be said to think and reason. The latter maintains that aspects of intelligent human behaviour can be usually simulated or modeled by appropriately programmed computers. Searle has accepted the week AI.[6] But one of his major attacks against computationalism was that the formal syntax of a computer programme has been shown not to be intrinsically semantic. So, his acceptance of week AI is questionable. Besides, the Chinese room argument, which Searle uses to deny the possibility of Strong AI, is not as convincing as his description of consciousness as an emergent property of the brain. For example, if the Chinese room were to operate outside of a vacuum, it may well be possible for it to attach semantics to syntax. In other words as computers do not operate in vacuums, but rather it communicates with other computers or their programmers, strong AI becomes a possibility. Cognitive scientists hold that the brain is really a computer and the mind is the software, and all that kind of stuff. The major purpose behind in his book The Rediscovery of Mind is to attack this view. Searle has claimed that once we clear away some widespread confusions about what science requires, and dismiss the misbegotten field of Cognitive Science that has been engendered by those confusions, the subjective ontology of the mind, will lose it aura of unacceptable mystery.

Basic to such a perspective is the fundamental interest in philosophy of language. This is what is explained in the so-called interface between the philosophy of language and the philosophy of mind. As against the reduction, retrogression or astonishing turn, from philosophy of language to philosophy of mind, one way to understand it as a confluence of philosophy of language and philosophy of mind is language significant. It is in this context that he was understood to provide a completeness argument in the manner in which it was claimed by Habermas and Apel. While Habermas has completed his philosophy of language in the theory of communicative action taking his departure from Searle's logical structure of speech acts. Apel has claimed to semantically transform analytical philosophy of language into a pragmatic of language use.

We have seen Searle's effort of making the interface between philosophy of language and philosophy of mind in the first chapter itself. Even though, he is less successful in his attempt to give satisfactory answer to the problems within the philosophy of language, certainly, Searle succeeds in this effort. We can find out a completion-argument in Searle, which holds that the philosophy of language is to be completed in philosophy of mind and hence philosophy of language should be a branch of philosophy of mind. There fore no theory of language is complete without an account of the relations between mind and language and how of meaning -the derived intentionality of linguistic elements- is to be grounded in the more biologically basic intrinsic intentionality of the

mind/brain. Searle himself treads on his semantic investigations under his feet in his fervor to counter reductive programmes.

As far as the speech acts are concerned, the basis of the taxonomy is that there are only a finite number of ways that the mind can represent reality. It can represent it with the mind to world direction of fit, where one represents something true or false. His argument was that there is a theory of mind implicit already in the theory of speech act. We can see retrogression here, i.e. from philosophy of language as the basis to philosophy of mind, as the basis of the former. Here, he has turned down any possibility about the intention to communicate with, or be understood by a hearer is necessary for illocutionary act performance and he rejects in his speech act that any intention to produce other effects on hearers was required.[7] The intention requires for an illocutionary act is said to be an intention to represent. This representing intention is a matter of imposing the condition of satisfaction of an intentional state on an overt act and thereby expressing that intentional state. Habermas has objected that, the basic structure of the intentional state as essentially derived from the propositional structure of sentence of natural sentence. The reason behind the inclination to ascribe that kind of structure to intentional state is precisely, for we already find it in the structure of expressed speech. Here, Searle's answer, that biological forms of intentionality are primary and linguistic forms are derived, is not satisfactory.

He has mentioned that, speech act are sub-class of human actions and human actions are themselves expressions of human intentionality, beliefs and desires etc. This brings a relation between theories of mind and theory of speech acts. Further, he claims that meaning of language can be explained in terms of the intentionality of the mind. In this sense, the philosophy of language is a branch of philosophy of mind. His confluence can be strengthened when he argues that it is the intentional states of consciousness and intentions in the narrower sense, which ultimately determine the conditions of satisfaction, with the help of which the meaning of speech act can be understood. [Conditions of satisfaction mean the idea corresponding to that of truth-conditions for assertions and beliefs, only generalized to cover all forms of contentful linguistic act and mental state]. It is within the theory of intentionality Searle grounds the theory of Speech Act and Illocutionary act. He distinguishes between perlocutionary acts and illocutionary acts. The perlocutionary act is a matter of the effect that one's speech-act has on the hearer once he or she understands it. But the illocutionary act is a matter of communicating a message. There, the illocutionary effect is one of understanding. Illocutionary acts are further divided into directives, assertives, commissives, expressives and declaratives. For him, this has to be a consequence of the nature of the mind.

Searle had to face criticisms from Habermas, Alston and Karl Otto Apel, that the propositional contents of speech acts are dependent on intentional states of mind only to the same extend as these latter are at the same time also ready dependent

on linguistic meaning conventions in their inter-subjectively intelligible meaning.[8] But we can defend Searle by arguing that his theory of consciousness and intentionality is supported only on the basis of his theory of language.

As much as Searle criticizes other people for the assumption that they make, he falls into the same trap by basing his argument on computational models of consciousness. By claiming that he already knows the mechanisms, which create or allow consciousness to operate, he digs himself a hole. For research has not concluded that our mind or brain is purely computational. In fact there are some relatively new theories, which support a network model in the brain, where links exist and are strengthened and weakened by use. Network theories divide operations more broadly across the brain and de-compartmentalize them to some extent. Fundamentally, if we find that the mind is not entirely operated computationally, and then Searle's argument does not hold. For, his example, of how the brain works, would not have any bearing on the actual mind or consciousness.

With the above purpose in mind, he examined different theories of mind and finds fault with them. The theories such as behaviourism, identity theory, functionalism and eliminative materialism are not able to explain consciousness effectively. For him, these theories leave out the problem of consciousness and intentionality and also they don't do justice to folk psychology. For them, there really no such states as beliefs, desires and intentions. In the history of materialism we can see a recurring tension between the urge to give an account

of reality that leaves out any reference to the special features of the mental, such as consciousness and subjectivity, and at the same time account for our intuitions about the mind. Hence, there are many attempts to cover over the fact that some crucial element about mental states is being left out. It is based on the false assumption that the view of reality as entirely physical is inconsistent with the view that world really contains subjective conscious states such as thought and feelings. Searle has stressed the point that consciousness has an ineliminable subjective ontology.

Searle points out those folk theories have to be general true or we would not have survived. We cannot find any empirical evidence, which refute the folk theoretical propositions, because, on a natural construal they are not empirical hypotheses, or not just empirical hypotheses. They are more like constitutive principles. Since they are constitutive and not empirical, the only way to show them false is that they have no range of application. It is difficult to show that conscious desires and pains do not exist. Our ordinary ways of talking about ourselves and other people, of justifying our behavior and explaining that of others, express a certain conception of human life that is so close to us, so much a part of common sense that we can hardly see it. It is a conception according to which each person has (or perhaps is) a mind; the contents of the mind—beliefs, fears, hopes, motives, desires, etc. cause and therefore explain our actions; and the continuity of our minds is the source of our individuality and identity as persons.

In the past couple of centuries we have also become convinced that this common-sense psychology is grounded in the brain, that these mental states and events are somehow, we are not quite sure how, going on in the neurophysiological processes of the brain. So this leaves us with two levels at which we can describe and explain human beings: a level of common-sense psychology, which seems to work well enough in practice but which is not scientific; and a level of neurophysiology, which is certainly scientific but which even the most advanced specialists know very little about. Searle couldn't solve the problem of folk psychology fully, but he leaves it aside.

Accordingly, Searle has argued that the brain is made up of all neurons cause a higher-level feature of the system, namely, consciousness and intentionality. There are different levels of description of the system. In other words, neurons, which are meaningless elements at the lower level, produce meaning at the higher level and they have causal relations among themselves. But computation is an abstract, formal, mathematical, symbolic process that one can implement in a machine. But consciousness is not just implemented in the brain. It is an actual effect of the interaction of the neurons.

The question of mind-body reduction comes to this: are there psychophysical laws, in sufficient numbers and of an appropriate form to serve as bridge laws? Here, we can see the significance of Davidson's anomalous monism, a version of nonreductive physicalism. For, if psychophysical anomalism is true there are no laws to serve as mind-body bridge laws.[9] Multiple realizability is a pervasive

feature of the relationship between higher-level properties and lower-level properties. Many non-reductionists use multiple realizability as the main weapon against the possibility of psychophysical reductions. Psychophysical laws tell us exactly how psychology is biologically implemented in human organisms. The problem of multiple realizations shows that in most cases there will be more than one first-order property satisfying the functional specification. The question whether a philosophy of language has adequate exp'anatory power is answered in the negative. In other words, it is more a verstehenist rather an erklarenist philosophy of language. This might be one of the reasons why Searle abandons his pragmatics in the wastebasket. Before addressing, ourselves to the question about naturalism, let us examine his credentials about his variant of naturalism.

5.2 Naturalizing Consciousness:

Searle has brought together a scientific view of consciousness with a naturalistic theory of the mind, which is known as biological naturalism. There are different versions of naturalism. For some it means a methodological continuity between philosophy and empirical science. Some others hold that it is a rejection of metaphysical rejection of dualism. Yet others take it as an endorsement of externalism in epistemology.[10] Ned Block for example identifies naturalism as default naturalism or non-reductive naturalism. For Searle, consciousness is an irreducible, physical feature of the brain within a non-reductive type of naturalism. The term 'caused by' creates the greatest hurdle within his

framework. He uses causation as a purely analytical tool. This shows that consciousness is a causally emergent property of certain systems of neurons and the existence of it can be explained by the causal interactions between elements of the brain at the micro-level. But there is no link between consciousness and the brain. Searle's way of overcoming these is by developing an account of supervenience along with multi-layered model of the description of the system which is called 'levelism' by Searle.

Supervenience principle is that the mental supervenes on the physical in that any two things exactly alike in all physical properties cannot differ in respect of mental properties. In other words, physical indiscernibility entails psychological indiscernibility. Further, once we recognize the existence of bottom up micro-to macro-forms of causation, the notion of supervenience no longer does any work in philosophy. Kim points out that supervenience poses a dilemma in front of Searle.[11] Searle had to choose either emergentism or overdetermination.

Emergentism was the first systematic formulation of non-reductive physicalism as well as of the multilayered model of the world. It consists of three doctrines. (1) All that exists in the spacetime world are the basic particles recognized in physics and their aggregates [Ontological physicalism]. (2) When aggregates of material particles attain an appropriate level of structural complexity, genuinely novel properties emerge to characterize these structured systems [Property emergence]. (3) Emergent properties are irreducible to, and unpredictable from, the lower-level phenomena from which they emerge [The irreducibility of the

emergents].[12] The multilayered model of contemporary physicalism is all but explicit in these doctrines. The first and the third doctrine s together make emergentism a form of nonreductive physicalism, combining as they do a physicalist ontological monism with property dualism. The emergentist holds that once the mental properties have emerged, these higher -level properties begin to lead a life of their own, so to speak, and manifest their powers by causally affecting lower-level phenomena. This is the downward causation, the causal influence exerted by higher-level phenomena on the processes going on at a lower level. Downward causation is a fundamental commitment of emergentism and the basic tenets of nonreductive physicalism lead to a commitment to mental-to-physical causation, a form of downward causation. We can see the nonreductive physicalists are a mental realist, for they take mental properties as real. Anything real must be part of the causal structure of the world and having causal powers. These causal powers are different from those of physical/biological properties. It presupposes that higher-level properties are irreducible to lower-level properties. This commits the irreducible downward causation, causation of physical processes by nonphysical properties. Accordingly, this means that the causal closure of the physical is breached.

Overdetermination argument is that actuality is made up of all the things identified by physics and anything, which is a compound of these things. So there are tables as well as their microphysical constituents. The flaw of the overdetermination argument is that the argument tries to squeeze physicalism

from competition between mental and physical causation. Since the causal efficacy of mind is secured by the macro image, while the causal hegemony of physics is secured by microphysics, we are not guaranteed competition between the two. After all, microphysics never mentions events found within the macro image.[13]

Let us have a look at Searle's discussions about various arguments of Francis Crick, Edelman, Dennett, Penrose and Chalmers in his book the Mystery of Consciousness. He has refuted Crick's idea that we only see symbolic interpretations or descriptions, and never the real object. Searle's claim was that we see the real object and do we have direct knowledge of the world. He has accused that Edelman's work and insight is not sufficient to explain consciousness. Edelman's concept of mapping of experiences does not bring about consciousness. Essentially, Searle has presented how he feels these scientists have contributed to the study of mind and consciousness. But he always concludes that the primary question of how consciousness emerges from the brain remains unanswered. In his book, the *Mysteries of Consciousness*, Searle speaks of Edelman's view that the brain functions by using selectional mechanism.[14] He has also claimed that higher order consciousness is derived ultimately from the sense of self which seems unclear and unfounded. Searle's presentation of his ideas of allowing differences in personal experiences to exist without having to disclaim a model of consciousness is much more sense making. He has compared qualia to the idea that each individual has different

fingerprints, which do not hinder the development of an understanding of skin. In the same way, an understanding of consciousness should be able to develop. Even though he has supported the neurophysiological explanation that Francis Crick gives for visual perception and its relation to consciousness, Searle has issues with his philosophical assumptions. His major misgiving with Crick's argument was that he does not understand completely the problem of qualia. Searle says that qualia or the qualitative, private, subjective experience of the more objective firing patterns of neurons is not just an aspect of consciousness. It is consciousness. But how the brain brings all these neuronal firings together and gives rise to consciousness is much more complicated and overwhelming, because of how little we know about it. As Searle takes it, jumping from electrochemistry to feelings is the hardest part of the mind-body problem. He has used the ideas from quantum mechanics to explain consciousness at a neuronal level, at the same time he objects to Penrose's argument.[15]

For Searle, consciousness is subjective in the sense that for a conscious state to exist it has to be experienced by some conscious subject. In this sense consciousness has first-person ontology, in that it only exists from the point of view of a human or animal subject, an 'I', who has the conscious experience. Science is not used to dealing with phenomena that have first person ontology. By tradition, science deals with phenomena that are 'objective', and avoids anything that is 'subjective'. Indeed, many philosophers and scientists feel that because science is by definition objective, there can be no such thing as a science

of consciousness, because consciousness is subjective. He argues that this whole argument rests on a massive confusion, which is one of the most persistent confusions in our intellectual civilization. There are two quite distinct senses of the distinction between objective and subjective. In one sense, which he has called the epistemological sense, there is a distinction between objective knowledge, and subjective matters of opinion. But in addition to the distinction between epistemically objective and subjective claims, there is a distinction between entities in the world that have an objective existence, such as mountains and molecules, and entities that have a subjective existence, such as pains and tickles. This distinction in modes of existence is the ontological sense of the objective/subjective distinction. He has added that science is indeed epistemically objective in the sense that scientists attempt to establish truths, which can be verified independently of the attitudes and prejudices of the scientists. But epistemic objectivity of method does not preclude ontological subjectivity of subject matter. Hence, there is no objection in principle to having an epistemically objective science of an ontologically subjective domain, such as human consciousness. The task of a scientific theory of consciousness would be to find the neurobiological correlate of consciousness. . There is a certain subjective qualitative feel to every conscious state. One aspect of this subjectivity, and it is a necessary aspect, is that conscious states always come to us in a unified form. They are not two separate features, but two aspects of the same feature.

These types of arguments had led to Churchland groups Searle's arguments with that of Jackson, Chalmers, McGinn and Nagel and he calls this Searle-like Family of Arguments. Then, by using the concept of light Churchland has criticized them. Nagel argues that understanding the basis of mind lies beyond the study of the physical realization of certain aspects of it. But fundamentally an organism has conscious mental states if and only if there is something that it is like to be that organism. If a creature or a mental state is conscious, then there is something it is like to be that creature or to have to have that mental state. The views, which support neuro physiological basis of mind, are abstract and general. Jackson also upholds the similar view. He has introduced his Blind Mary thought experiment to show that physical facts do not exhaust all the facts and that materialism is false. As Mary does not know the phenomenal content of the state of experiencing red, we lack the predicative phenomenal concepts necessary to conceptualize properly the phenomenal content of bat's experiences. Phenomenal experience can be captured in neither physicalistic terms nor functionalistic terms. Both accept that the first person concept is not a concept with a functional or physical content. Nagel argues that subjective experience is not captured by any of the reductive analysis of the mental, because all of them are logically compatible with its absence. Chalmers also supports this view. For him, consciousness is subjective experience or phenomenal experience. Searle agrees with them in the sense that there is no mechanism, which provides a link between the subjective and objective. It is clear in his claim that thee is no link

between brain and consciousness. But Searle differs from both when he has compared the case of consciousness and the brain with that of liquidity and H_2O molecules in which there is a mechanism.

Jackson and Chalmers have claimed that consciousness is neither identical with nor supervenient on the physical. On the other hand, Searle believes that consciousness supervenes on the physical properties of the brain. The central tenet of biological naturalism is that mental sates are both caused by the operations of the brain and realized in the structure of the brain. As Ned block argues this grouping cannot be warranted. For, Searle himself has rejected this grouping and he doesn't accept all the views of them.

This multi-layered scheme consisted of 'levels' of objects and properties, which replace antiscientific Cartesian ontology. These levels are hierarchically ordered, usually with a bottom level consisting of 'basic particles'. Here, arises the question: how the properties that belong to the lower level relates to the properties at the higher level? There are two options- reducibility and supervenience. Searle has choosed supervenience and rejects reductionism. Non-reductionist of the view that, no explanation given wholly in physical terms can ever account for the emergence of conscious experience. Nevertheless, he has offered a biological reason for a psychological explanation. So the option of reductionism is as much open to him as the option of non-reductionism. Because of this reason, Searle does not claim to be a non-reductionist nor is he a magical emergentist.

He has distinguished between two notions of supervenience: the constitutive conception of Kim and what he calls the causal conception. First he has claimed that only the causal conception of supervenience is required for understanding mind/body problem. He contrasts his views with two views that Kim holds: (1) that the supervenience of mind on brain is constitutive supervenience, and (2) that supervenient events have no causal status apart from their supervenience bases. Searle disagrees with both views. Here, we can see that Searle favoured causal supervenience. Later he has admitted that he is not a fan of the concept of supervenience. Its uncritical use is a sign of philosophical confusion, for the concept oscillates between causal supervenience and constitutive supervenience. These force some critics to interpret Searle as a property dualist, though Searle rejects it. Thus, in order to be a viable theory of causation it must take a position among the following two theses - mental causation is a species of physical causation and physical causation is a species of mental causation (downward causation). Searle apparently accepts both types of causation and hence thus two sufficient causes. Hence mental- to-mental causation is overdetermined in its effects. This warrants causal closure at the lower level. But Searle has rejected causal overdetermination.[16] He denies brain processes as causes and consciousness as effects, i.e. brain and consciousness do not have a cause and effect relationship. He denies, because it gives the brain and consciousness duality. For Searle, this view of cause and effect is misleading when applied to consciousness because it unavoidably leads to dualism, which is untenable.

Instead, he argues that the relation between consciousness and its causal brain processes involves a kind of non-event causation such as would explain the fact that gravity (a non-event) causes an object to exert pressure on an underlying surface. He has put the point another way by describing consciousness as an emergent property of brain processes in the same sense that water's liquidity is an emergent property of the behavior of H_2O molecules. It should be noted that Searle's biological naturalism does not entail that brains and only brains can cause consciousness. He is careful to point out that while it appears to be the case that certain brain functions are be sufficient for producing conscious states, our current state of neurobiological knowledge prevents us from concluding that they are necessary for producing consciousness. In the same way, he argues that a difference in mental states would not necessarily involve a corresponding difference in neurophysiological states. This leads to a kind of epiphenomenalism. Here, we can see there are at least two key labels, which represents Searle's transformation of biological naturalism into a matured philosophy of mind. They are (a) modified epiphenomenalism and (b) external realism.

5.3 Modified Epiphenomenalism as a better choice:

Epiphenomenalism holds that conscious experiences are events occurring in an immaterial substance, causally determined by events in the brain but having no physical effects. Although the links, which exist between brain events and conscious occurrences, are causal links, they cannot be causal links, which are

subsumable under purely physical laws. In his matured phase Searle has claimed that the psychological processes, though they are themselves caused by lower level neuronal processes, nonetheless not sufficient causal conditions for the subsequent psychological event of intentional action. So there is a gap at the psychological level, but not in the form of bottom-up causation between the neurobiological level and the psychological level, and not at the neurobiological level between any state of the system and the next state of the system. This would give physiological determinism with psychological libertarianism. In this sense it is modified. The modified epiphenomenalism advocates that the psychological processes of rational decision-making do not really matter. Searle argues that the entire system is determinate at the bottom level and the top level has an element of freedom, is simply a systematic illusion. There fore, he is not in favour of this labeling.[17]

For Searle, there is a close relationship between consciousness and unconsciousness. The notion of unconscious mental state implies accessibility to consciousness. This unconscious intentional state must nonetheless be intrinsically mental, and the fact that it must have a certain aspectual shape has important consequences for the conception of unconscious. For, it is called 'connection principle by Searle. He has repeated that the ontology of the unconscious is strictly the ontology of a neurophysiology capable of generating the conscious. Where non-conscious processes are concerned, we are still anthropomorphizing the brain in the same way in which we were

anthropomorphizing plants before the Darwinian revolution. It is easy to see why we make the mistake of anthropomorphizing the brain, because the brain is the home of anthropos, says Searle. Nevertheless, to ascribe a vast array of intentional phenomena to a system in which the conditions on that ascription are being violated is a mistake. All the intentional ascriptions are as-if. He distinguishes between intrinsic intentionality, derived intentionality and as-if intentionality; only intrinsic intentionality is genuinely mental. Intrinsic intentionality is a phenomenon that humans and certain other animals have as part of their biological nature. As-if intentionality is real, and is not just something more or less like the real thing. Derived intentionality is something that is the result of somebody else's uses of or attitude toward the thing. But Searle has failed to answer the question: does intrinsicality of all experience follow from the phenomenality of al experience? Another objection was that Searle's approach to aspectual shape is Quinean. Accordingly, Searle faces the problem of misrepresentation.

Searle analyzes the intentional state as consisting of a representative content in a psychological mode. Although many representative contents consist in an entire proposition, many do not, and it is not necessary that they do. He also analyzes intentional states in terms of their directions of fit (which can be world-to-mind, mind-to-world, or null) and directions of causation (which can be mind-to-world or world-to-mind).

In order to strengthen his argument he has brought the Network and Background Capacities, which again show Searle's effort to make confluence between philosophy of language and philosophy of mind. The Background is theorized to be a set of skills, capacities, and presuppositions that, while being nonrepresentational, makes all representation possible. Those capacities underlie our ability to interpret the semantic content in the network. The thesis of the Background is that: intentional phenomena such as meanings, understandings, interpretations, beliefs, desires and experiences only functions within a set of Background capacities that are not themselves intentional. Intentionality occurs in a coordinated flow of action and perception and the Background is the condition of possibility of the forms taken by the flow. The Background is only manifested when there is intentional content.

Searle has not given adequate reasons to believe the view that there are some unconscious mental states, as dispositions to produce specific conscious states from which they inherit their content. It is also true that the connectionist arguments, which hold up the connection principle, are not empirically supported for an inference to the best explanation because of the cleavage between the conscious and the unconscious. Besides, Searle hangs on Quine's indeterminacy arguments to show that we cannot characterize the aspectual shape of intentional states in terms of behavioural and neuro-physiological properties. But, these arguments, as the last few decades of scrutiny have shown are by no means watertight.

For the methodology of science, the chief significance of their layered model lies in the relationship that is thought to hold between properties at adjacent levels. The weakness of Searle's theory of mental causation lies in the fact that, he fails to establish such a relationship. According to Kim, unless there must be some identifiable features between the lower and higher-order features, they can not succeed to explain the exact mode of relationship. That is why Kim proceeds to attack Searle by asking whether his idiosyncratic notion of causes can contribute anything towards a theory of mental causation. Here, the problem is: either he allows a reductively identifiable property, then he endorses the property dualist view, or else he fails to identify the relation, then his theory of mental causation does work.

His theory of mental causation gets completed with two important hypotheses- (1) psycho-logical indeterminism coexists with neurobiological determinism and (2) psycho-logical indeterminism is matched by neurobiological indeterminism. The brain can cause subsequent conscious states or bodily movements because they are grounded in the neurobiology. Thus in cases where there are no gaps, the left right causation through time at the top level are exactly matched by a left right causation through time at the bottom level. But Searle couldn't answer to the question of neuro-scientist that, which level of functioning, is relevant for explanations of this behaviour? Skarda argues that it is misleading for philosophical attempts to understand the biological basis of behaviour and the mind/brain relationship. He thinks that by focusing on the neurophysiological

basis of behaviours that are reflex in nature and then adopting this model for all brain functions, Searle falls into the same trap.

Later Searle has advocated that the very operation of rationality presupposes the gap. The gap is the feature of the consciousness of voluntary actions.[18] The manifestation of the gap is said to lie between the reason for a decision and the decision and between the decision and its execution and the third between the initiation of an action and its continuation to completion. He has called this gap as freedom of the will. He thinks that there is an absence of causally sufficient conditions at the neurobiological level.

5.4 External Realism and Phenomenology in Searle:

Externalism maintains that our minds reach out into our physical environment, in the sense that our states of mind can depend for their very existence and identity upon what things that environment contains.[19] Searle's analysis of social reality and collective intentionality has made some thinkers to label him as an 'external realist.' He has discussed social reality in order to show that language is the first institution. Social reality is implicit in his theory of language. The basic idea in his book Construction of Social Reality is that the reality of money and property and marriage and government and cocktail parties and universities and television stations, exists only because we believe it exists; it exists because we accept it. [20]

One needs only three primitive notions in order to construct social reality (1) the notion of assigning a function to something (2) collective intentionality - the

capacity that people have to act co-operatively; and the peculiar notion which he calls a status function, where something can perform a function only by virtue of the fact that it is recognized as having a certain status. On Searle's account, each of us has his or her individual intention only as part of our collective intentionality. The point is that once the fulfillment of 'we intentions' is in the picture, what collective intentionality introduces are not only contents of individual peoples' heads, but things which show up , as it were in action. It was obvious when Searle said that an intentional object is just an object like any other. That which engages in co-operative behaviour, when its members each derivatively have an appropriate intention, seems to be something irreducibly social.

Partly it seems to be constituted from peoples taking themselves to belong to it, from its members each being able to speak of it using 'we.' It should matter to Searle whether collective intentionality commits one to collective. For, there is a claim in ontology at the foundation of Searle's project. The claim is that the world consists entirely of particles organized into systems. But if Searle has accepted that there are collectives, then it looks as though his construction of social reality does not rely, ontologically speaking, just on particles locally organized into systems.

We have also seen a metaphysical claim in Searle, that the intrinsic features of reality are either features independent of any mental states or are themselves mental stats. In Searle's worldview, mental states can happily be thought of as

intrinsic features of reality. For they are higher-level features of the brains, and brains are among the systems of particles. The assimilation of social reality to the basic ontology can be achieved, because according to him, mental state scan be efficacious in a way, which is typical of higher-level system features. That means how status functions are imposed on physical things, creating institutional facts. He appeals to the selectional advantage of cooperative behaviour in order to encourage the idea that the biological world is already a social world.

Finally, some thinkers, such as Sinari and Dreyfus have interpreted B.N in a phenomenological way. Some thinkers have argued that Searle's notion of intentionality and conspicuousness is phenomenological. Searle is not a phenomenologist. Because, unlike the phenomenologist, he advocates that consciousness is a natural biological phenomenon. Besides, the key to understand intentionality is the conditions of satisfaction, which are determined by the contents of intentional stats and the Background capacities enable it to function. When he says that conscious mental states and processes possess 'subjectivity', Searle refers to an ontological category, not to an epistemic mode. When the agent is conscious of what he is doing, his intention is realized phenomenologically as a conscious experience of acting. But those intentions have conditions of satisfaction in the sense that they are propositional. This fact has no any phenomenological implications. To say that the conditions of satisfaction are propositional is just to say that the determination of the conditions of satisfaction must be sufficient to specify a complete state of affairs, a complete fact. The conditions of satisfaction

are always conditions that such-and-such are the case or that such-and-such should be the case, etc. In short, the notion of conditions is already propositional because the condition is always of the form 'the condition that *p*'. So, Searle claims that once you grant that an intention can succeed or fail, you have already granted that the conditions of satisfaction are propositional. This result is a trivial logical consequence of the premise.

Traditionally, the topic of intentionality had been a private preserve of phenomenologists. But Searle tries to analyze intentionality without using phenomenological methods. One unexpected consequence of the enterprise is that the combinations of causal and logical structures of his analyses reveal are beyond the reach of phenomenological analysis. The phenomenological tradition, whether in the transcendental form of Husserl or the existential version of Heidegger, cannot deliver these results. Then he extends the same methods and apparatus, which he developed for language and mind, to the examination of social and institutional reality.

The major point in his Construction of Social Reality is that institutional reality consists of status functions and these are almost entirely positive and negative deontic powers: rights, duties, obligations, entitlements, authority, penalties, hierarchies and institutional power generally. But the critics think the book is about how we 'impose meaning on meaningless stuff'. This phrase is not adequate to describe Searle's project. He claims that where there is an established institution, the system of constitutive rules that define the institution is the

condition of possibility of acts performed within that system. Some of the thinkers have argued that there seems no way to bridge the gap between the conditions of possibility stated in constitutive rules and ontological reconstructions on the one hand, and a causal account of how our experience of social facts actually comes about on the other. But there is no such gap in the construction of social reality and consequently no need to bridge it. The constitutive rules do not just state 'conditions of possibility', rather they describe the constitution of each fact, and that constitution is a matter of how people regard the objects in question, even though they may not be aware of the logical structure of what is happening.

In brief, all the above points show that as a perspective, biological naturalism can with stand the major criticisms. Through out his philosophy, Searle has maintained a unique strategy, which is different from Kim, Ned Block and Lowe.

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