

**Contemporary Issues in Philosophy of Mind & Cognition**

**Prof. Ranjan K. Panda**

**Prof. Rajakishore Nath**

**Department of Humanities & Social Science**

**Indian Institute of Technology, Bombay**

**Lecture No. # 36**

**Reduction & Realization – I**

Today, we are going to discuss about two important concepts in philosophy of mind that is reductionism and realizability thesis. Today's lecture is titled reduction and realization, Searle on irreducibility of consciousness. What is reduction and who advocates reductionism or who are the people, who adhere to reductionism. What is reductionism and who are the people, who adhere to this particular thesis called reductionism.

That is, what we are going to see in the beginning and what Searle's defense is against an irreducible thesis irreducible thesis of consciousness, why consciousness is irreducible according to Searle. This is what we are going to discuss today, but when we talk about reductionism and when we try to examine Searle's thesis on reductionism. We must also keep in mind this concept of realization, how consciousness is being realized is an important aspect of Searle's hypothesis.


So, that is what we are going to discuss and following this discussion on realization in the next lecture. I will be discussing about Kim's multiple realizability thesis so what I have in my mind is that reduction and realizations are two important concepts which are interrelated concepts and we need to delve into these two concepts seriously.

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## Reductionism

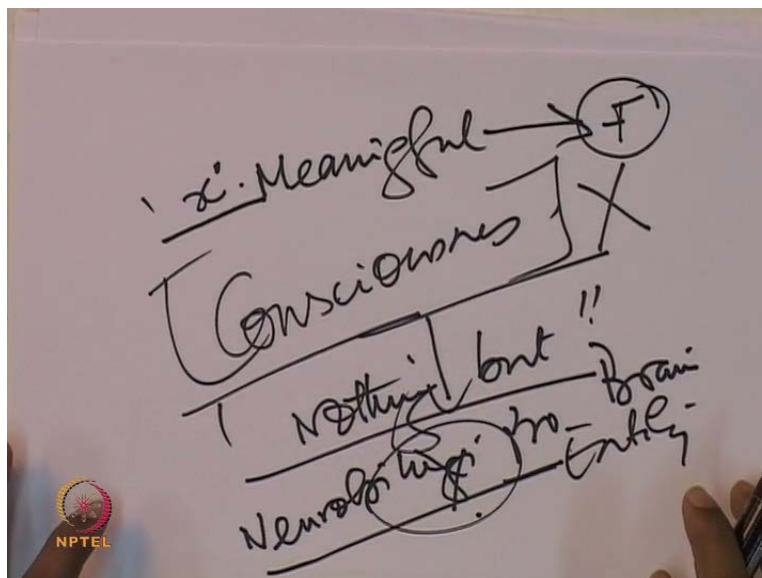
- Trend in Positivist Philosophy of Science
- X is defined as Y , in other words,
- X is *nothing but* Y
- **x is reduced to y iff x is nothing but y**  
– (Searle, "The Irreducibility of Consciousness" 1992)



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Now, what is reduction? Searle, in his paper the irreducibility of consciousness which is featured in the rediscovery of mind published in 1992 and it is also a part of John Hillis edited book of philosophy of mind a guide and anthology published in 2004. Now in this paper, Searle argues that consciousness is irreducible but whenever this term reduction has been used in the studies of consciousness, what we mean generally we mean that x is defined as y, in other words x is nothing but y.

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x: Meaningful → (F)

Consciousness X

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Nothing but !!

Neurobiology (F) in Brain Entity



So, this very fact that when we talk about conciseness say conciseness is x here, conciseness is nothing but y. So we need to define conciseness with the help of y which is a separate entity altogether.

This kind of analysis is very much there in physicalism, the physicalist theory of mind talk about conciseness in terms of some other entities, when they try to explain conciseness or define conciseness what exactly it is. Then they try to show that conciseness is nothing but something else that it will be something like the neurobiological processes of the brain. So the brain processes that are going on in our head are nothing but what we call or what we define as conciseness.

So, conciseness which is been classically considered as an ontological reality is denied by the physicalists that it is nothing but this now this kind of trend. Searle calls it a trend which appears in the positivist philosophy of science, now you all know about the positivist notion of meaning advocated by the likes of Wittgenstein and many other philosophers when they talk about the concept of meaning something is meaningful.

For example, x as a term is meaningful. If it is meaningful if and only if it corresponds to a fact, if it does not correspond to fact then it is a meaningless term x, becomes a meaningless term so in that particular context positivists have argued about how metaphysics is nonsensical.

The metaphysical debates in philosophy has been considered as nonsensical debates, because metaphysical concepts like self, god etcetera are not representing any particular observable fact. Hence, they are epiphenomenal terms they are the terms which have no existence, they are not considered something real. So, in that particular context if somebody try to understand how positivist notion of mind developed following Wittgenstein, following Quine and many others.

So the analytic philosophy today the analytic philosophy of mind today particularly is emphasizing analytic naturalism, where reality is considered as something true if and only if it is observable. If and only if it exists and that can be verified and that can be known directly, so this kind of accessibility which positivists philosophers are arguing for is something very interesting.


In the sense that they talk about the notion of accessibility from the third persons perspective, whereas the Cartesian thesis which propounds a kind of a metaphysical thesis of the mind

shows that mind can be only accessible from a first persons prospective. So here the experience is given more importance not the observable experiences, but the experience that I do the experience in the sense of feeling what do I feel about myself as a human being, now this very feeling which is there in every individuals human beings case is something very interesting epistemic mode of analysis according to metaphysical thesis.

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**Reductionism: A *physicalist* approach**

- “Traditionally, physicalism has taken the form of reductionism – roughly, that all scientific terms can be given explicit definitions in physical terms. Of late there has been growing awareness, however, that reductionism is an unreasonably a strong claim.”  
• (Hellman & Thompson 1975)

  
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Now, we are going to see how physicalist talks about the theory of reductionism. Traditionally, physicalism has taken the form of reductionism roughly, that scientific terms can be given explicit definition in physical terms. Of late there has been growing awareness, however, that reductionism is an unreasonably a strong claim. It is unreasonably strong claim, because there has been tremendous development happening in the field of neuroscience, happening in the field of cognitive science and many other special sciences like a psychology social theory etcetera.

Now, when these special sciences try to study the notion of mind from a third persons point of view, applying the scientific methodology and making a proper investigation to every aspects of brain functioning shows that this tremendous development in terms of the result, in terms of the scientific findings coming out every day. So this kind of approach has been very successful, but Searle is saying that sometimes the scientific advancement the growth in scientific development

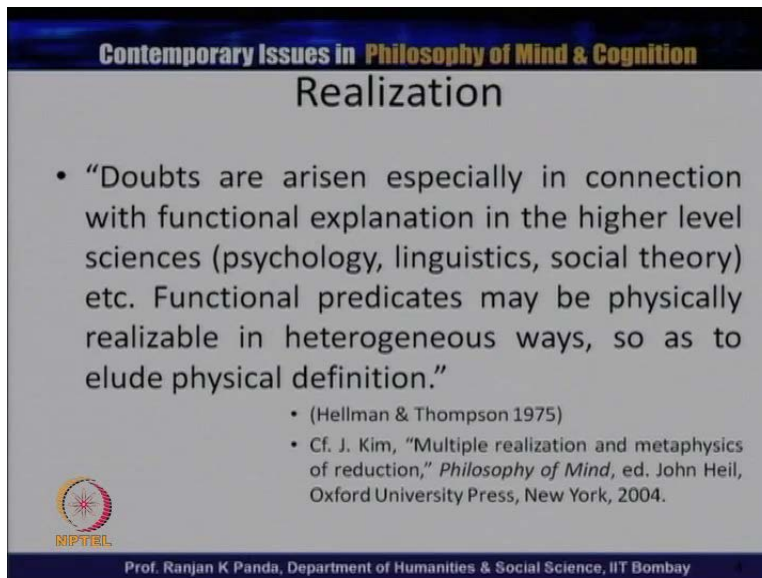
does not negate, does not discard a kind of reality which we encounter in our everyday experience.

So, hence conciseness is that kind of a reality which we will find you know something very significant, but this is something different where Searle is not denying the very fact that conciseness cannot be explained scientifically. It is very much evident from this development of science particularly, the kind of investigations which is going on in the field of neuro-sciences biological sciences in general coming out with newer experiences, coming out with newer evidences and solving problems of everyday life.

That is, amounts to make this suggestion make this claim very strong. In the case of the scientific study of human mind that conciseness can be explained scientifically. So this claim supports in the sense justifies reductionism, but Searle is not accepting reductionism. Searle only accepts that the scientific explanation of the mind is possible. We can come out with an explanation that how conciseness is been caused by brain processes, but would not deny this very fact that my subjective experience about me or about any object in the world is reducible to certain brain facts.

That is why, Hellman and Thompson in this particular essay the metaphysics of reduction, where science Kim quotes Hellman and Thompson and stress is to point out this how reductionism going day by day is going very strong.


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## Realization

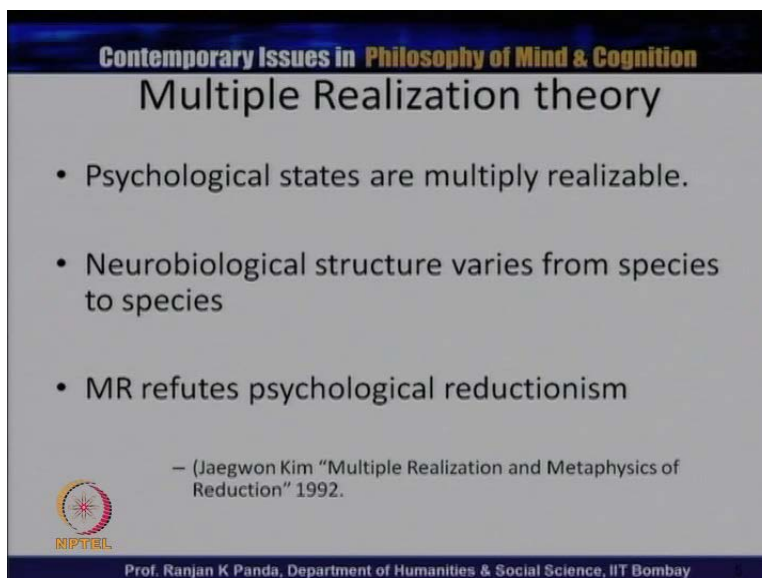
- “Doubts are arisen especially in connection with functional explanation in the higher level sciences (psychology, linguistics, social theory) etc. Functional predicates may be physically realizable in heterogeneous ways, so as to elude physical definition.”
  - (Hellman & Thompson 1975)
  - Cf. J. Kim, “Multiple realization and metaphysics of reduction,” *Philosophy of Mind*, ed. John Heil, Oxford University Press, New York, 2004.

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Now, what is the realizability thesis? The realizability thesis points out particularly quoting from Hellman and Thompson again says, doubts are arisen especially in connection with the functional explanation in the higher level sciences psychology, linguistics, social theory etcetera. Functional predicates may be physically realizable in heterogeneous ways, so as to elude physical definition. If we talk about the scientific development and if we talk about the concept of realization, how a mental states is being realized.

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## Multiple Realization theory

- Psychological states are multiply realizable.
- Neurobiological structure varies from species to species
- MR refutes psychological reductionism

– (Jaegwon Kim “Multiple Realization and Metaphysics of Reduction” 1992.

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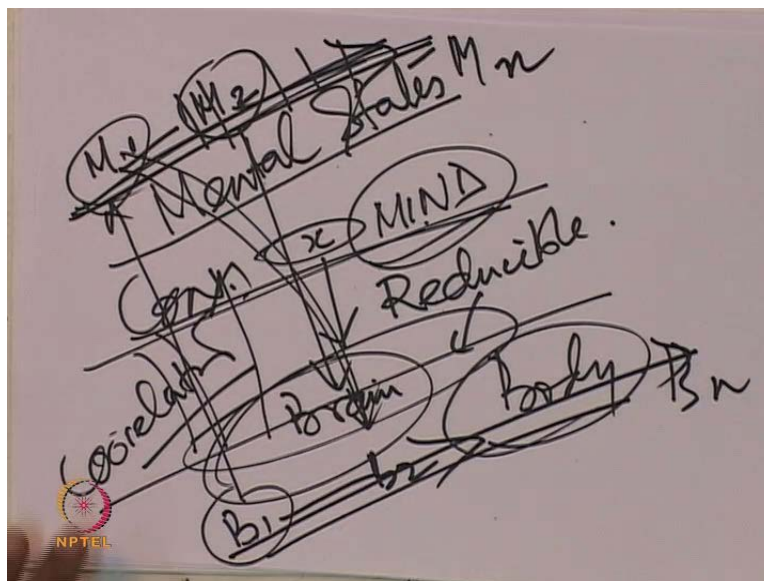
There are multiple ways in which particular mental states say for example, desire is realizable. So, for example it can be realizable in multiple ways meaning, there by the neurobiological structure of a species is different from the neurobiological structure from some other species.

So, human neurological structure and some other mammal neurological structure will differ. Since they differ they will have two different or multiple ways of realizing the same desire. Say for example, the desire to quench thirst. If I am feeling thirsty, I have one way of realizing this desire and the mammals will have like say bear would have different way in which they realize their desire, because the neurological structure of different species vary

Since, there is a variation in their structure so the mode of realization would also differ, that is why the multiple realizability thesis which Jaegwon Kim advocates in his paper, the multiple realization and the metaphysics of reduction published in 1992 in philosophy and phenomenological research tries to show that there are different ways a species will realize with respect to psychological states.

But, this multiple realizability thesis or the multiple realizability thesis which I called MR refutes the psychological reductionism.

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Now Kim is an exponent of multiple realizability thesis, but at the same time he does not talk about reductionism. He does not say that  $x$  or say for example the mind or say conciseness can be realized by brain processes; conciseness though realized in the brain processes but is not reducible to brain processes.

Kim is a kind of a soft functionalist. Kim is a person, who is talking about you know some kind of a psychophysical parallelism where modern philosophers like which advocates that mind and body are two parallel entities and their functions though differ, but still there is a kind of a pre-established harmony and it is that principle of pre-established harmony talk about how these two are co-related, there is a kind of a co-relation between the mind on one hand and the body on the other hand.

Kim interestingly is raising this is so in a very sophisticated way in a very scientific way. He introduces this concept called the bottom up causality or the bottom up causal relationship and the top down causal relationship.

According to Kim, brain processes are causing conciseness and or they are causing say mental states. Now, once this mental state is cause say for example  $b_1$  causing  $m_1$ , then in what way  $m_1$  is related to realm fair  $b_1$  exists. So, this kind of relationship figures out, when we talk about the realization of  $m_1$  if  $m_1$  is a desired state, then  $m_1$  is realized in the brain. So, therefore there is a causal link that exists between  $m$  and  $b$  and this is particularly happening also in case of Searles hypothesis that I would talk about little later.

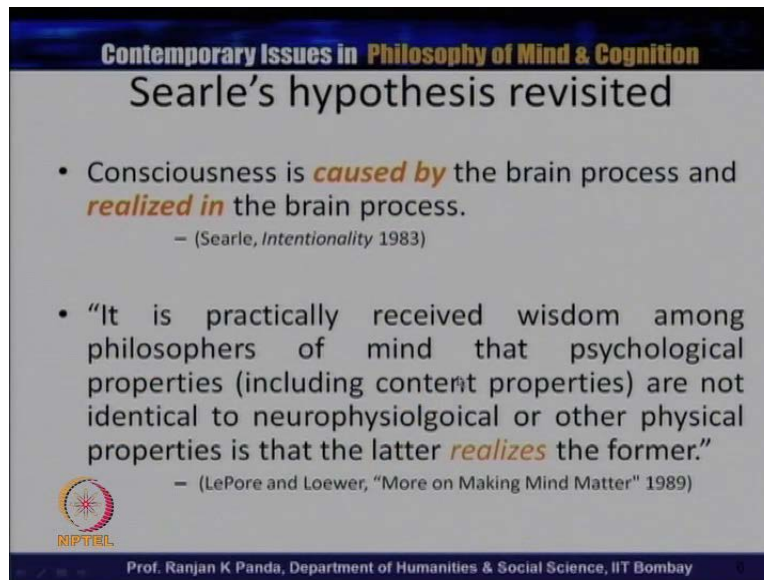
Kim though interestingly talk about the horizontal movement to  $m_1$  is one kind of a mental state, that is related to  $m_2$  and  $m_2$  related to say  $b_2$ . So, whenever there is a succession of mental states that also talk about the change in the brain state, but primarily what is responsible for  $m_1$  or  $m_2$  are only the bottom level causal powers. That is there or the bottom level changes, that are happening in the brain processes and that are causing the change you know which are occurring in the level of mind or in the level of thoughts.

Kim will be talking about a kind of a horizontal causal link between say  $b_n$  and  $m_n$ . This is what it will go on, but it will have a kind of a link though the link is not scientifically found out still. There is it is assumed that there is a link or it is in the other way will consider this case that  $m_1$   $m_2$   $m_3$  or  $m_n$  or all epi mental states which are epi phenomena.



So, that kind of you knows argument will go in details will, when we talk about the notion of realizability thesis. What Kim is advocating, but for the time being let us kept in the mind, that Kim is not in favor of reductionism.

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The slide features a dark blue header with the text "Contemporary Issues in Philosophy of Mind & Cognition" in yellow. Below the header, the title "Searle's hypothesis revisited" is displayed in white. The main content consists of two bullet points: the first states that consciousness is "caused by" and "realized in" brain processes, citing Searle's 1983 work "Intentionality"; the second quotes LePore and Loewer's 1989 work "More on Making Mind Matter", stating that psychological properties are not identical to neurophysiological or other physical properties, and that the latter "realizes" the former. A small circular logo with the text "NIPTEL" is located at the bottom left of the slide. The footer contains the name "Prof. Ranjan K Panda, Department of Humanities & Social Science, IIT Bombay" in white text on a dark blue background.

Contemporary Issues in **Philosophy of Mind & Cognition**

## Searle's hypothesis revisited

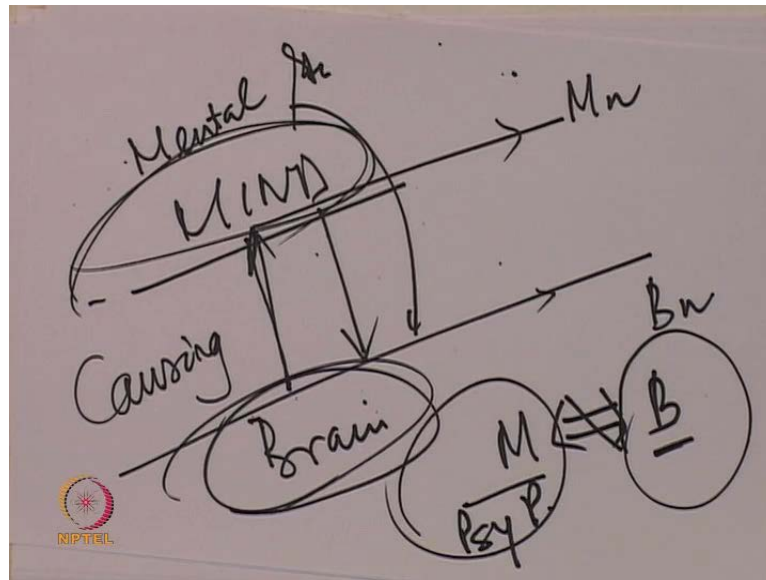
- Consciousness is **caused by** the brain process and **realized in** the brain process.  
– (Searle, *Intentionality* 1983)
- “It is practically received wisdom among philosophers of mind that psychological properties (including content properties) are not identical to neurophysiological or other physical properties is that the latter **realizes** the former.”  
– (LePore and Loewer, “More on Making Mind Matter” 1989)

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Kim talks about a kind of a parallel processes and hence he does not strongly advocate reductionism, but Searle on the other hand talks about an hypothesis and let us revisit this hypothesis consciousness is caused by brain processes and realized in brain processes.

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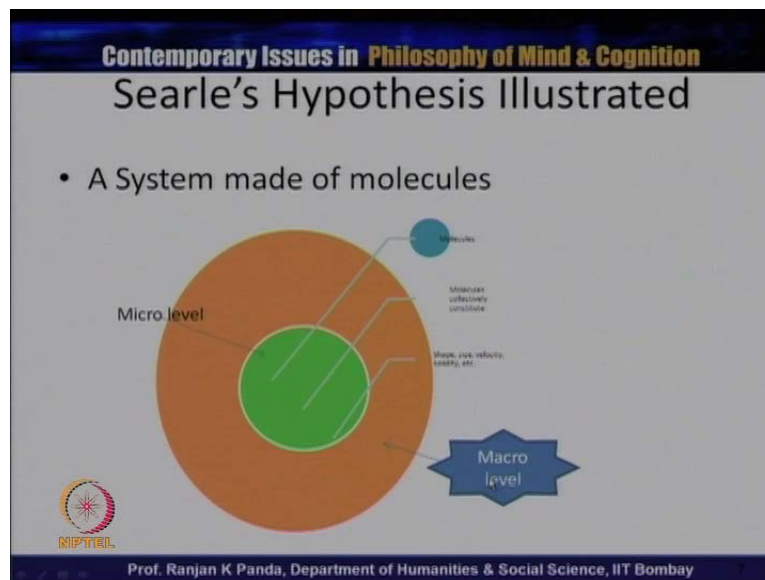


So, this mind brain relationship which is a kind of a parallel relationship in the Kims thesis, Searle says if there are neurological states and these neurological states, have a kind of a bottom up causality and that causality is, in fact it is causing mind and these mental states. I have already discussed it earlier in my lectures and these mental states are further realized here with reference to the physical states.

Now, a similar thesis in support of what you call parallelism or the realizability thesis which has a kind of a you know which gives us an impression of parallelism is been pointed out by unnecessary sleep or and the lower. What do they suggest? They suggest, it is practically received wisdom among philosophers of mind that psychological properties in the bracket including content properties are not identical to neurophysiological or other physical properties are that the latter realizes the former.

That is the psychological properties, they are not identical m is not identical with b. The mind is not identical with brain, because the psychological properties of the mind which are all mental properties are different from the neuro-physiological properties, if the properties differ and we still argue this that psychological states are realizable with reference to the neurological states then or make this case that psychological states are realized in neurological functions, that are happening in the brain if that case is made.

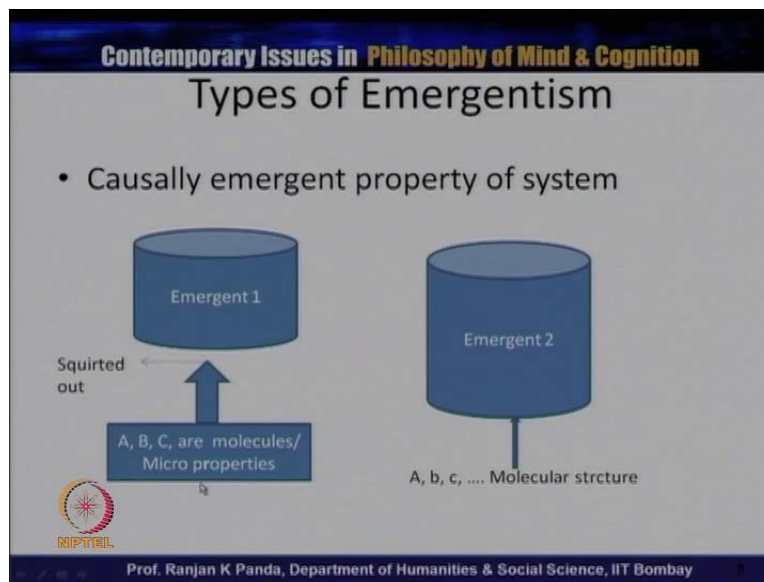
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Then what kind of reductionism follows, that is what we need to look at but at least the searlean hypothesis makes a case which is acceptable to all kind of a naturalist. I think that is the case for the notion of mind which is been caused by brain processes and Searle makes a case which is very clear in this figure, that there are the reality is constituted and the constituents are having two different aspects.

At one level of this aspect, we refer to certain micro level entities, certain molecules that collectively constitute things, certain molecules which collectively constituting things. Let us call them they are all happening at the micro level that is also a level where we call size etcetera. Now, that what Searle calls is the macro level reality, so that aspect of reality is different from what is being constituted of so a reality is constituted of certain micro level elements and that is causing.

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Now look at this figure, if a, b, c are the molecules or the micro properties of particular object. These molecular movements or the configuration of the molecules cause a particular reality say x, then we talk about that x and y are causally linked particularly, in this particular case. In the case of emergent two which would be a thesis of Kim says the brain is causing mind, in the sense that the mind is emerging from the brain processes. In other words mental states are emerging, from certain molecular movements or the chemical movements that are happening in the brain.

Now, if that is a thesis and this thesis emphasizes that there is the emergent phenomena are causally linked with the micro level properties. If that is true, then how Searle defers from this kind of emergent thesis now, Searle says it is certainly true that certain micro properties are causing consciousness, but once consciousness is caused then it is coated out.

It is coated out as an independent reality, hence there is there is a gap and Searle calls it is an explanatory gap. So for the epistemic analysis of these two realities are concerned there will be an epistemic gap and that gap is shown with reference to these two levels of functions. At a micro level we find that the solidity of the table is constituted of certain micro properties or the molecules movements.

But, at the macro level what I find is that the table is solid. So the solidity is different from how it is caused I can experience the solidity of the table, but I do not really experience the

movements if that is so then these two labels demand two different kinds of explanations which I have already talked about in my previous lectures.

Searle, finds that there is an explanatory gap between these two levels, so consciousness is emergent as a kind of a reality and it is getting squirted out from this micro level phenomena and that reality constitutes its constituents, how the network of mental states whatever you call it a mind a network, Searle calls it that network is nothing but the mind.

Now, let us come back to this idea of reductionism the question is whether these caused mental states are reducible to the molecular states, so for the hypothesis is concerned. Searle of course, says and adheres to this hypothesis thoroughly in his entire this course on concept of mind; he claims again and again that consciousness and brain processes are connected.

But, we at present are not sure of this fact that, how they are connected. At least we can say that the mental states are causally realizable. He also emphasizes his fact that how mental states when they are realized they have a different kind of properties. Hence, he talks about mental causations and you know there are many people who are working in the field of action accepts that there are mental causations, where mental causations are different from physical causations.

So, the mind does cause action. For example, if I am feeling thirsty I just rush to get a glass of water or I request somebody to give me a glass of water. Now this kind of expressions or the physical movement is the evidence of how a particular desired state is being realized.


So, that is the case then let us find out why Searle is not accepting reductionism and why does he again and again argue in the favor of an irreducibility thesis. Before taking up these two questions, let me discuss what are the types of reductionism that Searle talks about when Searle one finds the Searle tries to explain different types of reduction or if there is something theory called a reductionism then what are the kinds of you know reduction possible.

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## Reductionism

- Ontological
- Property
- Theoretical
- Logical or definitional
- Causal

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One kind of reduction is ontological reduction; there could be property reduction, theoretical reduction, logical or definitional reduction and the causal reduction.


Now, what kind of reductionism Searle is opposing to it is important tool understand, if we need to have a critical study of Searles objection to reductionism?

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## Ontological

- Object of *X type* consists of objects *nothing but* collection of object *Y type*
- E.g. *Genes* consist of *DNA* molecules

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So, first is an ontological reduction. Ontological reduction argues that the object x type consists of objects nothing but collection of objects y type and Searle says in an example genes.

Genes consist of DNA molecules, now if gene is one type of phenomenon and DNA is another type of phenomenon then these two types of reality. If somebody says no, gene is nothing but DNA, once we talk about what is DNA structure, what is the molecular structure of DNA? Then we can determine what is or what are the functions happening at a particular level called gene.

So this kind of thing analogy is fitting analogy to talk about mind and brain. If somebody tries to suggest this particularly, the functionalist would try to suggest us this; if you can determine what is happening in the neural structure then we can of course determine that what are functions happening at the mental level. How thoughts change so the change of you know mental states from desire to say believe to intension etcetera. All these mental states, which are linked and constitute a kind of a network mental states, how they are connected and one how one succeeds the other so that is possible.

If I taking the that example of quenching thirst, if I am feeling thirsty and I want a glass of water to quench my thirst when I am thirsty if I believe that, yes I can go to the table and get a glass of water or fetch a glass of water or if I request you would bring me a glass of water. So I have this belief in my that if I request you would at least go or if I go myself I can fetch a glass of water; so I must believe so my desire must link with my belief states and I intend to say or when I intend to make this suggestions to you then desire is about to produce a kind of a action state.

So in that case the change in the label of the mental the change could be possibly determined by the change that are happening and the neural states or the brain and once we have a clear science of mind or the science of brain, we can have the clear science of mind. So that is, where we talk about or Searle tries to figure out, what could be the state of ontological reductionism. Now we all know that following this analysis that there are molecule properties there are micro level properties, these properties constitute certain macro level features.

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The slide is titled "Contemporary Issues in Philosophy of Mind & Cognition" and "Property Reductionism". It features a bullet point: "• Heat is nothing but mean kinetic energy of molecule movements". Below this, there is a diagram with the text "» Properties corresponding to theoretical terms" and "Result of theoretical Reduction" connected by a downward-pointing arrow. The slide also includes the NIPTRIL logo and the name "Prof. Ranjan K Panda, Department of Humanities & Social Science, IIT Bombay" at the bottom.

So, if we go this state of property reductionism, Searle is been accused by this case and Searle says that I am accused again and again and I am a property dualist. It may be true but let us see what property reduction is all about so, now when you talk about taking the case of functionalist identity theory or state identity theory which goes like this. Heat is nothing but the mean kinetic energy of molecule movements, if somebody tries to define what heat is all about then, he would refer to this and he would try to explain this state of heat in terms of this particular state.

So, that is an identity theory which functionalist also adheres too. So, properties corresponding to the theoretical terms will result a kind of a theoretical reductionism. The property reductionism are also connected to theoretical reductionism in this sense that, as I told you in the beginning that the functionalist particularly, the physicalist in general who adhere to the scientific development and try to give with the scientific explanation of the mind following certain theories or the model.

They also say that one law can be explained in terms of another law. Say for example, the scientific term in the case of heat and the kinetic mean kinetic energy of molecule movements, it is a kind of an analogy where a particular term being replaced.



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theoretical Reduction

- Scientific explanation
- Theories and laws

X (gas laws) → (Y) Statistical laws of thermodynamics

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But, when we talk about explanation in science, it is explanations are possible through laws and one particular law can be replaced by another laws. Say for example, the statistical law of thermodynamics can explain very well that what is gas law is all about. Once this kind of explanation happens, Searle calls it a theoretical reductionism is happening that one theoretical law is trying to explain another theoretical law.

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Logical Reduction

- 'A relation between words and sentences, where words and sentences referring to one type of entity can be translated without any residue into those referring to another type of entity.'
- E.g. **number** can be reduced to **sets**.

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Further, he talks about logical reductionism, while speaking about logical reductionism he says that a relation between words and sentences, where words and sentences referring to one type of entity can be translated without any residue into those referring to another type of entity.

Here is a case, in example given with reference to number and set. I can use this number 1 2 3 4 but this 1 2 3 4, if they figure in a in a set then you have a different meaning all together. So, they are no more 1 2 3 4, they are represent a kind of a entity, they are symbolic to represent something in a set number may appear, but the number will have different meaning all together.

That is how something significant is when you talk about logical reductionism. But Searle is again and again trying to bring about this particular analogy, between the surface structure and the lattice structure, the macro level phenomenon and the micro level phenomenon. These two are causally linked and if they are real. Then they are real, because causally epicusious they can bring about change in the reality.

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## Causal Reduction

- *Causal power* of **x** can be explained by the *causal power* of **Y**

Surface structure

Molecules at the lattice structure

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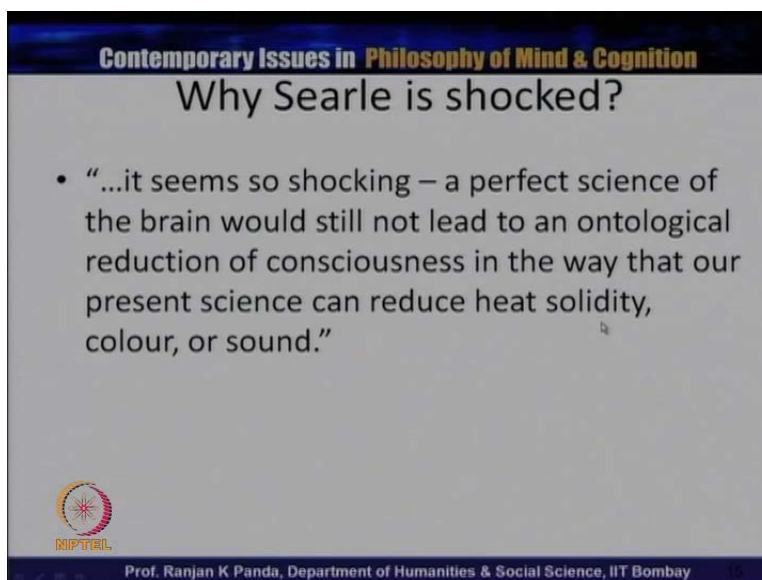
So they have the causal power, the causal power of x can be explained by the causal power of y. If we go back to this thesis of Searle, that Searles notion of mental causation that my intension in causally self sufficient to produce action. So intension is a mental state it is a representational state, my intention to pass this order or to take this request to you is causally epicusious to in the world.

Hence, any representational state are causally efficacious, they have a causal power. At a macro level, if mental facts are macro level facts if actions are macro level facts then these macro level facts; if somebody tells that these macro level facts are nothing but the neural facts, because the neural functions are causing these facts. Searle will have an objection and here is a case of causal reduction, which he opposes to causal power of x can be explained by the causal power of y and Searle says no this cannot happen, therefore this idea of an explanatory gap.

Because, the way we try to understand the brain it is not the same way, it is not through the same operators. We need to understand the mind, because the properties are different. The physicochemical properties are different from the psychological properties; the physicochemical properties are different from the mental properties or the psychological properties. I have told about it in my lecture we have discussed about it thoroughly how mental properties constitute structure.

That is, about the structure of experience, the structure of a representational states. Representational states will have different properties like subjectivity, intentionality, unity, familiarity all these are mental properties. Searle talks about dozen of mental properties, now if you look at that then that gives a kind of an evoking example. Because, Searle says how we can explain the mind with the help of the brain processes.


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## Why Searle is shocked?

- "...it seems so shocking – 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."

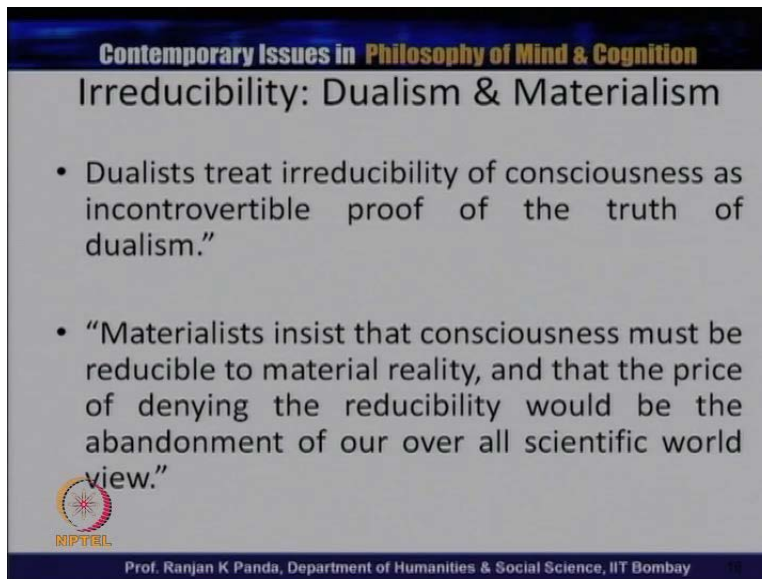
  
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I am shocked. He says I am shocked, because it seems so shocking a perfect science of brain would still not lead to an ontological reduction of consciousness. In the way, that our present science can reduce heat, solidity, color or sound. Now heat, solidity, color and sound are micro level phenomena for Searle and all these phenomena will have micro structure. So the ontological reductionism is impossible and ontological reductionism is with causal reductionism.

Searle is only projecting to us that, when we talk about reductionism all these are possible cases of reductionism and this is a shocking case that the perfect science tries to reduce the mental properties. The properties which constitute an ontological reality called mind and they are reduced in certain terms of neurological processes and that is what is very shocking.

Reductionism is happening or argued favorably for two reasons. One is the success of science following the history of materialism and another fear to commit dualism.

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The slide features a dark blue header with the text "Contemporary Issues in Philosophy of Mind & Cognition" in yellow. Below the header, the title "Irreducibility: Dualism & Materialism" is displayed in white. The main content consists of two bullet points in white text on a grey background. The first bullet point states: "Dualists treat irreducibility of consciousness as incontrovertible proof of the truth of dualism." The second bullet point states: "Materialists insist that consciousness must be reducible to material reality, and that the price of denying the reducibility would be the abandonment of our over all scientific world view." At the bottom left of the slide is the logo for NIPT@IITB, and at the bottom center is the text "Prof. Ranjan K Panda, Department of Humanities & Social Science, IIT Bombay".

- Dualists treat irreducibility of consciousness as incontrovertible proof of the truth of dualism."
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Searle is not scared of committing to this two kind of danger or threat. Searle says, one can advocate irreducibility without committing this kind of great mistakes, if at all they are mistakes one is dualism. The kind of dualism which we have seen in Descartes many Cartesians have advocated dualism, the moment you say that the mind is irreducible. You accept an ontological position, you accept this ontological position that mind is real and ontologically real whether Searle is committing that kind of Cartesian dualism this would be separately discussed.

We can discuss this we can critic our positions later, but Searle is making clear to us and this is very fundamental. Searles claim that mind or mental properties are significant, they are epistemically significant.

They are epistemically significant in this sense that it is only through those properties. We can explain mind, now if somebody suggests that materialism is real or next the case of physicalist thinking that there is nothing called mind. We can demonstrate the mental facts, that there are mental facts we cannot verify this fact that there are experiences and feelings.

What we can observe is that, there are biological processes, there are enzymes creation in the body, there are chemical processes happening in the brain all these are solid evidences to talk about how individuals behaviors are caused by certain bodily or psychophysical elements. If there are psychological elements, psychological elements are causally dependent on the physical elements.

Physicalist strongly holds to their position, scientific theory and argues that irreducibility claim is non-sensic. Reductionism is not a problem for them. Reductionism is problem for those people who strongly believe that there is mind who strongly claim that if nullify the concept and then there are serious theoretical dangers. There are mistakes and problematic situations which will jump into without making a significant analysis.

Searle belongs to that school of the philosophy of mind, where he strongly claims that mind is irreducible to the function of brain processes. So we will discuss in detail in the next class, how Searle argues out his thesis and why he is not convinced about the reductionist approach of the mind.