THE SCIENTIFIC INFERENCE TO OTHER MINDS: PHILOSOPHY OF MIND MEETS PHILOSOPHY OF SCIENCE

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Master of Philosophy (Arts) in Philosophy

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Certified that the thesis entitled, **THE SCIENTIFIC INFERENCE TO OTHER MINDS: PHILOSOPHY OF MINDS MEETS PHILOSOPHY OF SCIENCE**, submitted by me towards the partial fulfilment of the degree of Master of Philosophy (Arts) in Department of Philosophy of Jadavpur University, is based upon my own original work and there is no plagiarism. This is also certified that the work has not been submitted by me for the award of any other degree/diploma of the same institution where the work is carried out, or to any other institution. A paper out of this dissertation has also been presented by me at a seminar/conference at one-day state level seminar, titled **Philosophical Explorations** held at Jadavpur University dated 10th May 2019 thereby fulfilling the criteria of submission, as per M.Phil regulation (2017) of Jadavpur University.

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On the basis of academic merit and satisfying all the criteria as declared above, the dissertation work of **SUJIT DAS**, entitled **THE SCIENTIFIC INFERENCE TO OTHER MINDS: PHILOSOPHY OF MIND MEETS PHILOSOPHY OF SCIENCE**, is now ready for submission towards the partial fulfilment of the degree of Master of Philosophy (Arts) in Department of Philosophy of Jadavpur University.

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CHAPTER I

INTRODUCTION

It is usually thought that Philosophy is a general picture of the world which provides a systematic account of it. It may also be called a critical exposition through which we achieve new insight into the universe. There are various branches of philosophy which give us a reasoned explanation of their respective subject matters. One of them, philosophy of mind, a popular branch of philosophy concerned with interesting matters, deals with different types of questions, such as, 'What is the nature of mind?', 'What does mind do?', 'What is the relation between mind and body?' 'Is there any extra-physical mind in the physical body?' etc. George Graham has forwarded a definition of this popular branch of philosophy in this way: "Philosophy of mind is the area of philosophy which strives for comprehensive and systematic understanding of that which thinks and experiences, namely the mind. It tries to understand what mind is, what it does, and how to uncover it" (Graham 1993:2).

The subject matter of philosophy of mind can be divided into two parts: metaphysics and epistemology. Metaphysics tries to understand the actual nature of a thing which remains behind all appearances. It is an attempt to explore the fundamental characteristics of the world. So metaphysics of mind discusses the nature of mind and how it works upon the body and so on. On the other hand, the epistemology of mind is concerned with an inquiry into the way of acquiring knowledge about the mind. One of the burning problems in the domain of epistemology of mind is the problem of other minds. How do we know other minds?

How do we know for sure that other minds exist? In my dissertation, I shall discuss this problem from the perspective of philosophy of mind and philosophy of science. I shall try to show how one of the most discussed methods in contemporary philosophy of science provides a means of justifying our belief in the existence of other minds.

A human being is usually guided by his common sense, which allows him to live in a society without any conflict but a person is not always confined to his common sense. Sometimes he applies his logical standpoint over common sense point of view and as a result, he occasionally falls into conflict. He feels that what is accepted from a common sense point of view it can be denied by his logical point of view. We think that another person has a mind like us and what we do in our daily life, another person also does it in the same way. They talk to us and we talk to them. Our life gets significance with communicating to them. They share their feelings, memories, thoughts, etc. with us and we share our feelings, memories, thoughts, etc. with them. We see that they feel happiness, sorrows like us. So our common sense point of view represents another person as having a mind but our logical standpoint does not represent another person as having a mind. Therefore, a conflict arises due to the different representations of different standpoints. Our commonsense admits that another person has a mind but our logical standpoint denies the existence of other minds. It shows another person as mindless automata. But the rejection of other minds will make everything impossible, even our life must be

transformed into a meaningless life. Our all activities get significance with the relationship of others. Hence, the defence of common sense is our essential duty.

One of the most contentious issues in the philosophy of mind is knowledge of other minds. How we can achieve the knowledge of other minds with defending our common sense? This is also referred to as the problem of other minds. It is an epistemological problem that begins in Cartesian metaphysics, owing to the Cartesian view of mind and matters, knowledge of other minds gets starkly contrasted with knowledge of one's own mind. This asymmetry leads different philosophers to offer different solutions because the avoidance of solipsism is at the very centre of all philosophy of mind.

In ancient time, 'mind' was better known as 'soul', which was taken to be different from the body. This distinction was first introduced by Plato when he said that body and soul are separate in his *Phaedo*. According to Plato, the soul is a non-physical entity and a person is identified with his soul. Each person consists of two types of entity- one is a material body, which is perishable; another, the soul is immaterial and immortal. The soul does not depend on the body, but to acquire knowledge soul must be associated with the body. K. T. Maslin has expressed Plato's view on the soul in his words in the following manner: "The soul, according to Plato, resembles the Forms in being 'divine, immortal, intelligible, uniform, indissoluble, unvarying and constant in relation to itself" (Maslin 2001: 36). In this way, Plato

introduced dualism of soul and body at first, which was developed along with new insights by Rene Descartes, who gave us the notion of substance dualism, where he made a metaphysical distinction between two kinds of substances-mental and physical in his *Meditations on First Philosophy*. For Descartes, the essence of the mind is thinking or consciousness and the essence of the physical is extension. Physical things have no consciousness. The physical substance or body and the mental substance or mind have other distinguishing features: the body is in space, is publicly observable while the mind is inner, private and accessible to the owner of the mind only.

This radical privacy of the mind gives rise to a leading problem, which is famously known as the problem of other minds. We can only be aware of our own mental state directly. What is going on in my mind now is what I perceive directly but we can never be aware of another person's mental state directly. So a question arises: how do we know the mental states of others? By which method we can get the knowledge of other minds. In this first chapter, I have discussed all the methods of gaining knowledge about the mental states of others from the viewpoint of philosophy of mind in detail and have tried to show that how much those methods are successful in solving the problem of other minds.

One of the popular sources of knowledge is perception, which usually comes first. Perceptual knowledge arises out of the contact of the object with sense organs. So every act of perception involves two

things- an object of perception and sense organs. There are two kinds of perception, viz, internal perception and external perception. Internal perception can be termed as introspection. It is a method of gaining knowledge but it is confined to knowledge of our mental states only. It gives an accession to the owner of the mind only. In case of knowing other minds, it plays no role but it makes a room for sceptics, who do not accept the possibility of knowledge of other minds in any way. Again, external perception also does not provide any correct knowledge about the mental states of others. External perception means observing something through our five external sense-organs. In the case of a person, what we observe is their outward behaviour only. When a stimulus stimulates a person's sense organs, through the medium of the body, especially the nerves and the brain within that body, he behaves in a particular way, which is only perceptible to us.

In this way, many philosophers have reduced mind or mental properties to bodily behaviour or physical properties directly through introducing a behaviouristic approach and have tried to give a new turn to the problem of other minds. They admit that behaviour is the only way to know another person mind. But this behaviouristic approach becomes more sophisticated when Ryle analyzes the mental states or events in terms of behaviour but not directly. He claims that talking about mental states or mind means talking about actual or possible behaviour. Mental states are a disposition to behave in certain ways and all mental concepts can be translated into behavioural concepts. The

mental term ‘pain’ refers to a specific kind of behaviour; similarly, the mental word ‘joy’ refers to a specific behaviour, what is disposed of in a situation. This view is known as logical or analytical behaviourism. Sometimes it is called ‘soft’ behaviourism in respect of Hempel’s ‘hard’ behaviourism.

Ryle’s logical behaviourism removes the dichotomy of mind-body, which was introduced by Descartes and introduces a new metaphysics of mind with establishing that mind is nothing but behaviour. So we need not accept mental states or mind in addition to behaviour. The concept of mind is a myth and a superstition. In this way, Descartes’ privacy theory of the mental states or mind becomes an accessible theory of mind by holding the hand of Ryle. In this chapter, I have tried to show that how Ryle refuted the Descartes' substance dualism and the privacy of the mental states, which is the main source of epistemological problem of other minds and established that accessibility of mind is possible. How can we solve the problem of other minds in the light of the accessibility of mind?

But Ryle’s concept of mind does not solve the problem of other minds in the right sense. It has many flaws. So neither internal perception nor external perception can provide us knowledge of other minds. Hence, in the first chapter, I have taken a turn to the road of inference after considering perception and examine this method as a second source of gaining knowledge about other minds. We can infer something on the basis of something in two ways mainly- deductively

or inductively. When we infer something deductively, we fully depend on the premises of inference because there is an entailment relation between premises and conclusion. Here the conclusion is necessary follow from the premises. But this method cannot be applicable for knowing other minds because there is no such an entailment relation possible between perceived behaviour and mental states. Again, after considering the deductive method, it is tried to show that one of the popular responses analogical inference, a version of induction, where on the basis of analogy with us we draw the mental state of other, also fails due to two serious problems: the problem of uncheckability and the problem of one case generalization.

In the third chapter, again I have striven for a solution to this problem. Hence, I have taken an entry to the door of philosophy of science by disengaging my attention to philosophy of mind and tried to solve the problem of other minds with the help of a method of philosophy of science. This method is known as inference to the best explanation (IBE) or scientific inference. Sometimes it is called 'abduction', following Charles Pierce. It is theoretical reasoning, which explains a phenomenon of the world on the basis of the principle of rationality and suggests us to accept a better explaining hypothesis. All available evidence must be explained by a hypothesis if is really good. Pargetter says: "if a hypothesis is the best available explanation of all evidence of a person a particular time than it is rational for that person to believe that hypothesis at that time" (Pargetter 1984: 159).

In this third chapter, it is tried to show that how scientific inference can be applied to other minds and how much it is successful to solve the problem of other minds The scientific inference to other minds explains the behaviour of other people by accepting the mentalistic hypothesis and tries to find out a significance of the behaviour of another person satisfactorily. Here the mental states are inferred from perceiving the behaviour of another person, which remains behind all behaviour. According to this inference, human behaviour is the best explanation of their mental states and it is only the best explanation. No other hypothesis can explain the behaviour of another person other than the mentalistic hypothesis. It is also tried to show here that a counter-hypothesis can be formed from the neurological point of view and how this counter hypothesis eliminates the idea of the mind.

In chapter four, a permanent solution to the problem has been given by analyzing all the ways of gaining knowledge and a special tress has forwarded to analogy inference. We are biologically or genetically similar to others. Even in response to a stimulus, another person's action is similar to ours. So the similarity of behaviour has been found in our daily life. If others are similar in all respect then we should accept an analogy in the mental lives of another person with us also. It can help us to understand other people in a better way. The acceptance of the analogy argument can resolve the problem easily and it is natural to our rationality.

CHAPTER II

THE PROBLEM OF OTHER MINDS: A REVIEW

A human being is a combination of physical and mental aspects. The existence of human beings involves occupying a certain space by which their physical aspect is established. But humans also have a mental aspect which distinguishes them from other material things, which are seemingly devoid of consciousness. The adjectives ‘minded’, ‘conscious’ etc. are used to describe humans. The mental aspect is a vital aspect without which humans would be like any other non-sentient entity.

In our everyday life, we use the word ‘mind’ in various ways. Sometimes we use sentences such as, ‘This person is strong-minded’, ‘That person is weak minded or open minded’ etc. to represent mental abilities or capacities of a person. Sometimes it is not used in the same sense. ‘Mind your own business’ is an expression that curtly asks you to pay attention to your stuff. ‘Mind your language’ asks you to behave decently. But instead of using the word ‘mind’ in these various senses, we could talk about a general property of mind. The general property of the mind is consciousness, which is reflected in every act of the mind. Traditionally, all activities of mind were classified into three groups- thinking, feeling, willing. For example, sensation, perception, imagination, etc. are included in thinking. Reflection, intention, attention, etc. and fear, love, greed, anger, pain, etc. are included in willing and feeling respectively.

Philosophers often talk about the mind in such a way that we may ask the questions: how do we know that we possess a mind in our

physical bodies and how do we know other people as having minds in their physical bodies? On a rainy day, I sit in my chair, looking outside through the corner of a window and recalling those school-days, which have gone from my life, thinking about my friends who were the best friends and willing to go back to my school life but being realistic I feel sad because physically I cannot go back to my past days in school. So memory, thought, feeling, willing, etc. are those activities of the mind through which we perceive ourselves as having mental states directly. Perception can be divided into two groups – internal perception and external perception or sensory perception. In an internal perception, a person knows his or her own mental states, processes, events, etc. On the other hand, sensory perception is due to external forces or stimulus. It begins when stimuli stimulate our sense organ. Internal perception is known as introspection, where no bodily organ is involved. We can introspect the contents of our mind at any time but can introspection be applied for knowing other people's mind?

Introspection is generally considered to be the method of gaining knowledge of one's own mental states or processes at the time in which they occur. The word 'introspection' has come from the Latin word 'spicere', meaning 'look' and 'intra' meaning 'inside'. So introspection is the process of looking inside of us. It helps a person to know his or her own mental state directly at the time of its occurrence. So to introspect means to be conscious about our own mental states but there is a subtle difference between introspection and consciousness. When I

pay attention to know what is passing through my mind, it occurs and it occurs occasionally when I involve myself in finding a solution to a particular problem. Whereas consciousness is a constant process of mind. Ryle has stated it in the following manner: "Introspection is an attentive operation and one which is only occasionally performed, whereas consciousness is supposed to be a constant elements of all mental processes and one of which the revelations do not require to be receipted in special acts of attention" (Ryle 1949: 146).

Introspection gives us perfect information about the contents of our own mental processes. Descartes in his *Meditations on First Philosophy* imagines an evil demon by which all his beliefs about the external world can turn out to be false. He can be deceived by this evil demon but one thing is there that he cannot be false about. It is about the contents of his *own* mental processes. He is certain about his own feelings, thinking, willing, etc. because he knows them by introspecting his own mind. Even an evil demon is unable to deceive him in this case. Our knowledge about our own minds is more certain than anything else. An individual has direct access to his or her own mind only. We cannot have a direct accession about the mental states of other people. So introspection is a method that can be applied for direct accession of our own mind only.

Now a question arises: why inner perception or introspection is not applicable for knowing other people's mind? Introspection is a privileged accession that is possible in one case only, which is our own

case, but no privilege accession is possible for knowing the mental lives of other people. Descartes thesis is that only self is directly accessible, other minds are not. The mental states of a person are radically private, not publicly accessible. We never introspect what is happening or what is taking place in another person's mind because it allows a person to know his own mind only. So scepticism about other minds arises due to the lack of direct knowledge of other person's mental states.

Scepticism has an important place in the history of philosophy and dominates every aspect of philosophy, especially epistemology. Ancient Greek philosopher Pyrrho of Elis is famous for introducing scepticism in philosophy. Scepticism about knowledge is the view that no knowledge is possible because our senses deceive us regularly. Sometimes we see a snake in a rope, silver in an oyster; a man in a tree trunk, etc. A coin appears to us as linear, though it is actually circular. Russell's famous example of the 'brown table' is cases that instil doubt about the veridicality of perception. It can be said there is a possibility of doubt in every knowledge claim. So sceptics express serious doubt about whether knowledge is attainable at all. This scepticism can be divided into two types according to scope. One is global scepticism and another is local scepticism. Global scepticism is a radical view, which holds that we have no knowledge of any matter whatsoever. The global sceptics raise an attitude of doubt in the possibility of every instance knowledge; on the other hand, local scepticism admits a particular domain where knowledge is conceivable and they doubt about the

possibility of knowledge in that domain. Scepticism about other minds is a kind of local scepticism as it recognizes that our knowledge of our own minds is possible but our knowledge of other minds is doubtful.

Scepticism about other minds is the view that we cannot have any sure knowledge of the mental states of other people. Hence, taken to its logical conclusion. It leads to doubt about the existence of other minds, hence solipsism. According to sceptics that there is only one mind exists, that is one's own mind. No other minds can exist because there is no means of gaining knowledge about another person's mental states. But this sceptic's view goes against our common-sense belief about other minds. Our daily life is connected with other people and our lives get significance with communicating to them. If we deny the presence of other minds, they must transform into mindless automata or robots but they are not so. So the problem of other minds is arisen due to a conflict with our common sense. The other-minds problem is the problem of how we know other minds or how we establish the existence of other minds by the denial of sceptical claims that no other minds exist. How do we find a way to agree with our common sense, which tells us to think that other people are not zombies?

As we have seen that internal perception or introspection fails to give knowledge of other people minds. It is the method of privileged access to our own mind and makes a doubt about the existence of other minds. If the method of introspection is not applicable to know other minds then a question arises that by following which method can we

have knowledge of other minds? There is another way of gaining knowledge of mental states of other people, that is called external perception or sensory perception and which is suggested by many philosophers.

In external perception, what we perceive is in space. Our external perception of something would be impossible without space. Space is a condition of our external perception. Out of two aspects of human beings, only body is perceived because it is in space, publicly observable but another aspect is not visible or publicly observable. It does not belong to space. So the mind is something which is different from the body. This distinction between mind and body came into prominence when Descartes separated them vividly in his philosophy of mind.

Descartes begins his *Meditation on First Philosophy* with a discussion of something, which is seemingly devoid of the nature of mind, that is called body and with introducing the method of doubt he asks a question: is there anything whose existence cannot be doubted? Out of two aspects of a man Descartes was not certain about the existence of material bodies. He doubted it and was conceiving of the body as not existing. But he found that everything in this material world can be doubted but there is one thing which is beyond the scope of doubt. It is his own existence. He failed to doubt his own existence, feelings, thinking. We may put it in one sentence: he is certain about

his mind. He was conceiving of it as existing and declared that mind is something which is fully separate from the body.

The defining character of a body is that it is extended in space. So bodies are visible and divisible. It has a certain figure and dimensions. We can quote what Descartes said on the body in his own words: “By body I mean everything that is capable of being bounded by some space, of existing in a definite place, of filling a space in such a way as to exclude the presence of any other body within it; of being perceived by touch, sight, hearing, taste, or smell, and also of being moved in various ways” (Descartes 2008:19). On the other hand, Descartes refers to the soul or mind as res cogitans, a thinking thing, which is devoid of all features of physical bodies. The thinking not merely the features of the mind, it is the essence of mind. A person without thinking is nothing. The mind has neither length nor width. So it cannot occupy space. Descartes has presented his view on the mind in the following manner: “Thinking is another attribute of the soul, and here I discover what properly belongs to myself. This alone is inseparable from me. I am-I am exists: this is certain: but how often? As often as I think; for perhaps it would even happen, I should wholly cease to think, that I should at the same time altogether cease to be. I now admit nothing that is not necessarily true: I am, therefore, precisely speaking, only a thinking thing” (Descartes 1986: 88). In this way, Descartes introduces substance dualism with a distinction between two kinds of substances, namely physical substance or body and mental

substance or mind. They are separate from one another according to their nature.

In the history of philosophy of mind, we find that many philosophical problems have been arising on the basis of Descartes' separation of mind and body. This metaphysical distinction gives rise to the problem of mental causation. If two substances are radically different from one another then how can they interact with each other? In our daily life, we see their interaction. Suppose I wish to take a glass of water from the table, which is in front of me. Here my wish moves me to get it. On the reverse, when I get hurt by physically, we feel bad.

In addition to this problem, there is another crucial epistemological problem that was originated by the substance dualism of Descartes; that is called the problem of other minds. If minds are private, secret and the only mind to which I have direct access is my own mind then a question arises that how do we know that other people have minds? This distinction makes us unable to acquire knowledge about other minds. For this reason, philosophers have felt that they need to change the metaphysics of Descartes because metaphysics creates the epistemological problem as they are closely related.

The changing of one's metaphysical stance is very much important for epistemology as the metaphysics of Cartesian dualism makes the knowledge of other minds almost impossible. Hence, in the twentieth century, we find that some philosophers have forwarded a new metaphysical orientation to mind. One of them is Gilbert Ryle's

whose contribution can be considered as most significant in the domain of philosophy of mind. He introduces the theory of logical behaviourism by refuting the metaphysics offered by Descartes. He labelled substance dualism as “the dogma of the Ghost in the Machine”. The concept of mind in a physical body is a myth and a superstition just like a ghost in a machine. But in order to criticize the dogma, he first presented the official doctrine of Descartes in the following manner: “Human bodies are in space and subject to mechanical laws which govern all other bodies in space. Bodily processes and states can be inspected by external observers… But minds are not in space, nor are their operations subject to mechanical laws. The workings of one mind are not witnessable by other observers; its career is private…. A person, therefore, lives through categorical histories, one consisting of what happens in and to his body, the other consisting of what happens in and to his mind…. The events in the first history are events in the physical world, those in the second are in the mental world” (Ryle 1949: 1).

Ryle thinks that this view of Descartes is an example of what he terms, ‘category mistake’. A category mistake is to treat a thing belonging to one class or set as belonging to another class or set, in which the thing actually does not belong. Ryle claims that Descartes made such a mistake by saying that mind is something different from the body. According to Ryle, the mind is nothing but dispositions or tendencies to behave under certain circumstances. When we talk about

the mind or mental states, we talk about behavioural dispositions or tendencies. Therefore, according to Ryle, we need not accept the mind as a separate entity other than bodily behaviour or dispositions of bodily behaviour. But when a person accepts mind in addition to bodily behaviour he makes a category mistake. Ryle explained it with an example of a university visitor. Suppose, a foreign visitor has come to visit Jadavpur University and after visiting the various colleges, the departments, the libraries and the administrative sections he asks a person: where is the university? I have seen the canteens, the departments, the libraries and the administrative sections only. According to Ryle, here the visitor has made a category mistake because he misunderstood the concept of university. He is thinking that university is something which is different from the various canteens, departments, libraries and the administrative sections. But the university is nothing but an organized whole of what he has seen. In the same way, Descartes made a mistake with introducing the concept of mind as a separate entity from the body. By separating mind from body, Descartes has also distanced mind of oneself from other minds, which has given rise to the problem of other minds. So the problem of other minds is a result of both Cartesian metaphysics and Cartesian epistemology.

To avoid this problem, Ryle has taken a unique turn with his logical behaviourism in the philosophy of mind. Logical behaviourism is a type of physicalism. It is usually thought that physicalism is a

theory that reduces everything to matter. Physicalism about the mind is the view that mind can be reduced to the material body directly but logical behaviourism does not make an attempt to reduce mind or mental states to the physical body directly. It is said that mental states or events are dispositions or tendencies to behave in a particular situation. When a person is hit by a car, he exhibits a certain pattern of behaviour, which expresses that he is in pain. So pain is the tendency to cry or wince. Happiness is the tendency of joy behaviours.

According to Ryle, a disposition, in its simplest form, is simply how something will or is likely to behave under certain circumstances. For example, sugar is soluble- it means it is soluble when we add sugar in a cup of tea and even when it is not actually in a cup of tea. The solubility of sugar is a dispositional state. Similarly, Ryle said that any predicates about the mind are a dispositional or actualisation of disposition. When we expose ourselves with a certain pattern of behaviour it is called the actualization of our tendencies. Dispositions are tendencies but all tendencies of a person may not be expressed through his behaviour. Suppose, we all know that Ram is in pain because what he gathered in his whole life by working hard has lost everything in a moment but when we talk with him , he expresses himself as nothing happened in his life. He behaves with us normally like before. Hence, Ryle said that mental states are dispositions or tendencies to behave in certain ways.

Substance dualism emphasises on the radical privacy of mental states but behaviourism is a reaction against the privatization of mental states. According to behaviourists, we watch what others do and notice their responses when a stimulus stimulates their sense organs. Especially, we perceive their behaviour in certain circumstances that he produces. When my friend comes to interact with me and when in the course of any discussion he is queried, he produces a certain pattern of behaviour that represents his anger at having been queried. We never see his anger, a type of mental states but we see only certain behavioural patterns that he produces by being angry. Therefore mental states or mind can be reduced to physical state or body. To be specific, mental states terms mean physical-behavioural terms.

Gilbert Ryle's logical behaviourism is a specific form of behaviourism, which is very much involved in the solution to the problem of other minds. According to him, mental states are not private, even introspection can never be a method of accessing the mind because it is unable to reveal the secret of the mind. According to Ryle, we all know that there are two things in introspection. One is the object that is introspected and another is the process of introspection but we can attend to only one thing at any given moment. If we attain ourselves to the object of introspection then the process of introspection remains unattainable to us and vice versa but introspection is possible when we can attain both things at a given moment. So Ryle claims that introspection is impossible. Again he raised another objection against

this method of gaining knowledge. The theory of introspection is suffered from the problem of infinite regress. Introspection can be considered as a mental process and if it is considered as a mental process then another introspection is required to perceive the previous introspection as a mental process and so on. In this way, the infinite regress will occur, which cannot be removed anyway.

Hence, Ryle introduced the term ‘retrospection’ instead of introspection to mean all mental states of our own and others are not private. It can be accessible to all of us. Any statement about the mind or mental states can logically be explained in terms of behaviour and disposition of behaviour without any loss of meaning. When people talk to others, playing with his friends, arguing in a debate, reading a book in a library they exhibit their intelligence and all thoughtful activities of their represent their mental states. So the mind is nothing but thoughtful activities or dispositions to perform activities thoughtfully. His analytical behaviourism is the view that what we call a person’s mental state is nothing but his or her actual or potential public behaviour. He explains this with an example: “Overt intelligence performances are not clues to the workings of minds; they are those workings. Boswell described Johnson’s mind when he described how he wrote, talked, ate, fidgeted and fumed” (Ryle 1949: 57). So Ryle has tried to solve the problem of other minds by proving the mind is publicly accessible; it is not private; it should be equated with the notion of a disposition to behave.

Two objections can be raised against this behaviourist approach of mind. One is the possibility of pretence, another is indirectness. The case of pretence is a case where one is not actually having a particular mental state but might exhibit certain behaviour associated with a particular mental state. For example, Madhu is not in pain. When someone goes to talk with him, he reveals himself as though he is in pain. He cries and moans but actually, he is just fine. He may be doing this to gain pity. According to Gomes, it is the first cause of the sceptical problem about other minds. He puts it in his words: "…sceptical challenges to our knowledge of other minds which focus on the possibility of pretense or deception" (Gomes 2011:354).

Indirectness is another objection which can be raised against the behaviourist view. Behaviourists emphasise only on observing the outward behaviour of another person. But the inner-outer distinction is important in the proper understanding of mind. The mind is inner, even if we do not think of mind in any Cartesian or abstract, immaterial sense. People cannot crawl into other people's minds and what is suggested is only on the basis of what is observed through the expression of other people. So there is a lack of directness and indirect knowledge is unable to give proper information about the mental states of others.

Hence any perception, either internal perception or external perception, cannot provide us with the knowledge of other minds. Internal perception has no directness to access other minds. It gives the

accession to the owner of the mind only. Moreover, the external perception has a lack of directedness to other minds and what people express through their behaviour, it may be a pretended expression, which can mislead us for knowing other minds. But what is the actual way of getting knowledge about other minds?

After perception comes inference, a popular method of acquiring knowledge. I will consider this method now as a source of knowledge about other minds. An inference is a process where we arrive at a conclusive proposition on the basis of some other propositions deductively or inductively. So inferences are divided into two categories - deductive inference and inductive inference. Now the question is: which method of inference will be able to provide knowledge about other minds? “A deductive argument is one whose premises are claimed to provide conclusive grounds for the truth of its conclusion” (Copi 2011: 100). If the conclusion of inference is logically entailed or supported by its premises it is called ‘deductive’. In other words, the conclusion of a deductive inference necessarily follows from the premises because there is an entailment relation between the premises and conclusion. An entailment relation is where something necessarily follows from something. For example, A = B & B = C. Therefore, A = C. Here, A and B are equal, B and C equal and so it necessarily follows that A and C are equal also. The general structure of a deductive inference is:

All mammals are animal.

All dogs are mammals.

Therefore, all dogs are animal.

Here the conclusion is absolutely supported by its premises and logically entailed from its premises. So ‘all dogs are animal’- it is validly inferred from the premises ‘all mammals are animal’. Now if we employ it for knowing other people as having mind it takes the below structure:

All behaviours of a man exhibit his mental states.

Others people produce behaviour.

Therefore, other people exhibit their mental states.

But we never deductively infer mental states of others from observing their exhibit behaviour. There is no logical connection or entailment relation between exhibit behaviour and mental states. Sceptics also have raised the same argument against the knowledge of other minds. According to them, we are not justified in believing other minds because the application of mental predicates never be applied to others only through observing behaviour due to the lack of any logical or entailment relation. This sceptical argument can be put clearly as follows:

1. The application of mental concepts to others is possible only through a connection between bodily behaviour and mental states.

2. There is neither an entailment relation nor any logical connection between bodily behaviour and mental states.
3. Therefore, mental concepts cannot be applied to others and so we don't have the knowledge of other minds.

In contrast, when we draw a universal conclusion by observing a few instances in our daily life it is called inference by induction. Inference by induction does not fully or absolutely guarantee our conclusion. For instance, *Gitanjali* is a good book and written by Rabindranath Tagore. *Religion of Man* is a good book and written by Tagore and *Sadhana* is a good book and written by Tagore. Therefore, all the books of Rabindranath Tagore are good. The conclusion of this argument cannot go beyond doubt or uncertainty because it is impossible for us to consider all the cases.

Induction can again be divided into two kinds- Induction by simple enumeration and induction by analogy. Induction by simple enumeration is an inductive generalization where we experience two phenomena or circumstances as occurring together in many cases. According to Copi "A type of inductive generalization in which the premises are instances where phenomena of two kinds repeatedly accompany one another in certain circumstances, from which it is concluded that phenomena of those two kinds always accompany one another in such circumstances" (Copi 2011: 369).

Case 1- phenomenon E is accompanied by circumstance P.

Case 2 - phenomenon E is accompanied by circumstance P.

Case 3 - phenomenon E is accompanied by circumstance P.

Therefore, every case of phenomenon E is accompanied by circumstance P. We can formulate enumerative induction for other minds in the following way:

Case 1- I observe that my A-type behaviour is followed by feeling B.

Case 2- I observe that my A-type behaviour is followed by feeling B.

Case 3- I observe that my A-type behaviour is followed by feeling B.

In another case, I observe that another person exhibiting A-type behaviour. Therefore, I conclude that for all human beings, A-type behaviour is followed by feeling type B.

Alvin Plantinga and Michael Stole have also stated this type of induction for other minds in the below form:

"Every case of pain behaviour such that I have determined by observation whether or not it was accompanied by pain in the body displaying the behaviour in question *was* accompanied by pain in the body. Therefore, probably every case of pain behaviour is accompanied by pain in the body displaying it" (Budlong 1975: 111).

But in enumerative induction, we are confined to a small number of cases where we observe one thing is followed by another thing. Suppose, the case P is followed by the case Q. We are not able to follow all the cases where P is always caused by Q. So a small number of observing cases does not provide a guarantee to draw a conclusive

proposition successfully. Again a repeated observation in those few cases is not enough for a satisfactory conclusion. According to Budlong, the generalization is possible only for one case where the P is caused by the Q through their repeated observation but not for all about P cases. Hence Budlong, claims that Plantinga and Stole made a mistake of generalization by observing the correlation between pain and pain behaviour repeatedly in one person only. Therefore, this argument cannot be applied to other minds.

Analogical Inference to Other Minds

When people engage yourself in finding out a solution to the problem of other minds, i.e. how do we know the existence of other minds than our own, they naturally follow an analogy and on the basis of analogy with him they draw an inference to make themselves assure in believing the existence of other minds. So the analogical inference is the most popular and easiest argument to an ordinary man as well as a philosopher which keeps us away to think that another person is a mindless robot who does work automatically. Let us start with what inference is before entering into the discussion about analogical inference.

By ‘analogy’ we mean a resemblance or a comparison between two things or objects. The analogical inference is an inductive inference but there is a subtle difference between induction and analogical inference. In inductive inference, we arrive at a universal proposition from observing some particular facts but in an analogical

inference, we arrive at a particular conclusion from the experience of particular facts. Here perceiving the similarity between two or more things we assume the same similarity must have in another thing and it is inferred on the basis of the law of uniformity of nature. The general structure of this argument is:

1. The planet earth and mars both have water, heat, soil, sea and the same weather. Both are moving around the sun and lighted up by the sun.
2. The earth is inhabitable for man.
3. Therefore, the mars must also be inhabitable for man. We can easily infer it from the similarity with the earth.

In the case of believing the existence of other minds, the analogical inference provides a similarity with ourselves and exhibits the same sort of behaviour of another person in a particular situation what we do. This argument claims that other people made of the same stuff as me and behave as I do in a similar situation. Their outward body is similar to me biologically, all the internal parts of their body are exactly the same to me and the functions of every part of their body the same as the functions of my body. I think and experience because I am minded. Another person has the same body as me, produce the same behaviour as me and they feel and experience. So I can conclude that they have a mind too. When we watch a cricket match and our supported team wins the match against our unsupported team we react loudly and embrace each other with happiness in that particular

moment, in the same way, another person does same react with happiness when their supported team wins the match at that moment. Again when we touch a hot pot unconsciously, we immediately remove our hand and moan loudly, similarly when other people do it unconsciously they do the same thing as I do in that situation. They produce the same behaviour exactly like us in a particular situation. The argument from analogy deals with this problem on the basis of observing the similarity of body and behaviour with ourselves in this way.

In the case of other minds, J. S. Mill has given an argument where he has tried to establish a relationship between our outward body and behaviour and another person's outward body and their behaviour on the basis of the same similarity. The argument from analogy for other minds can be stated in the words of J. S. Mill and it clearly shows that the problem of other minds is not a problem at all. He has said "I conclude that other human beings have feelings like me, because, first, they have bodies like me, which I know in my own case, to be the antecedent condition of feelings: and because, secondly, they exhibit the acts, and other outward signs, which in my own case I know by experience to be caused by feelings" (Mill 1889:243).

The famous philosopher Bertrand Russell also supported the analogy argument to bridge the gap between our mind and other minds. He says that what other people do in many ways is analogous to our own. The thoughts and feelings of other people are qualitatively similar

to our own. He puts it in his words with an example of two friends where both of them are involved to recall past memories and shared their thoughts together in this way: “they behave in ways in which we behave when we are pleased (or displeased) in circumstances in which we should be pleased (or displeased).We may talk over with a friend some incident which we have both experienced, and find that his reminiscences dovetail with our own; this is particularly convincing when he remembers something that we have forgotten but that he recalls to our thoughts” (Russell 1948:482).

The argument by analogy infers mental states of other people with the help of the uniformity of nature. The law of uniformity of nature helps us to draw a universal proposition from the experience of some particular facts as we know that nature behaves the same in all similar situations. We perceive the same response as me to stimuli when it stimulates to others. If we want to state the analogy argument for believing the existence of other minds very clearly then it will take the figure as below:

1. I feel, experience and produce behaviour in a situation.
2. My behaviour about something is due to my mental states and it is directly experienced. So I conclude that I have a mind.
3. Other people are biologically similar to me and behave similarly as I do in a particular similar situation.
4. We can infer by analogy that their behaviour is produced by their certain type of mental states.

5. Therefore, we conclude that other people have minds too.

The correlations between mental states and a certain pattern of behaviour can be established in one case, namely our own. This correlation cannot be set up in the case of other people because the mental states of others cannot be observed. All that is observed is their behaviour only. So philosophers have tried to establish a correlation between the behaviour of other people and their mental states by analogy with my own case inductively. This correlation warrants us in believing the existence of other minds.

Generally, two objections have been raised against the analogical inference to other minds. The first classical objection is that it is a generalization from one case. 'Other people have minds'- this conclusion is based on single case instance, only on the case of mine, but we know that generalization can be possible by observing many instances. For instance, by observing the relationship between smoke and fire in many cases e.g. kitchen, hill etc. we draw a generalized proposition "whatever there is smoke, there is fire". But the analogical inference to other minds has drawn a conclusion that is based on a single case. So it is accused of single case generalization and its base is very feeble. Against analogical inference In this context, Anil Gomes Malcolm has stated Norman Malcolm's view in the following way: "the argument from analogy no more justifies my believing that other people have thoughts and feelings than my having a mole under my left arm

justifies my believing that everyone has a mole under their left arm" (Gomes 2013: 12).

What entails analogical inference to other minds as to its conclusion, it is logically uncheckable – this is the second classical objection. This objection is clearly put by Don Locke in the below form: "...if, in an ordinary case, we are doubtful about whether an analogy holds we can check up and see whether it does, but the whole point about other minds is that we can never test whether the analogy does hold" (Hylop 1995: 58). What we directly know it is our feelings, experience etc. but for other minds, it is known indirectly. 'I have a pain' and 'she has a pain' both sentences are not the same in nature. The first sentence is checkable by direct observation because I can establish a correlation between my mental states and outward behaviour but the second sentence 'she has a pain' is said to be uncheckable because her mental states are never directly verified or checked.

Therefore, neither perception nor inference does provide a guarantee for the presence of other minds. Again if we consider testimony or authority, another source of knowledge for other minds, it certainly goes in vain. Our all beliefs can never be justified through observation. When we believe or accept something without observation it is on the basis of testimony or authority. Testimony is the assertion of a reliable person, who is the specialist in a certain field. 'The earth moves around the sun'- we all believe it and think that it is certainly true without any doubting. We are quite sure about the truth of this

sentence for the reason that Copernicus proved it through the experiments. Similarly, we can believe the existence of other minds on the basis of a reliable person's view that other people have minds, they are not zombies or automata. So how do you know that other people have minds? One may reply that I know this from a reliable person. Again a question may be raised that what is the criterion for knowing a person as a reliable person? There is actually no such specific criterion for knowing a person as a reliable person. Hence, it is not a reliable source for believing in the existence of other minds.

All the methods of justifying our belief in the existence of other minds do not provide a satisfactory justification. Many arguments have been raised against these sources of knowledge. Internal perception or introspection has been accused of privileged access that is inconvenient for others and in external perception, there is a case of pretence. The case of pretence makes a room for doubting on the reliability of external perception. Again the analogical inference for other minds also accused of single case instance and it is logically uncheckable. But in our daily life, we perceive similarities in other people with ourselves .We share our thoughts, feelings, experience etc. with others and they also do the same with ourselves. So it is undeniable to our common sense that on the basis of analogy with ourselves we think that they have minds too.

CHAPTER III

THE SCIENTIFIC INFERENCE TO OTHER MINDS

We see that some controversial issues in the philosophy of mind have been trying to resolve with the help of the methodology of philosophy of science by many philosophers. Uncheckability of conclusion and single case reasoning are both common objections to any analogical inference to other minds, which cannot justify our belief in the existence of other minds. Hence, philosophers introduce a non-deductive theoretical scientific reasoning to avoid the problem of analogical inference, called inference to the best explanation (IBE) or scientific inference (SI), a hybrid form of analogy argument in which other minds are explained theoretically. Alec Hyslop has claimed that "there is no favoured solution to the problem of other minds; there is generally thought to be no answer currently to the problem; the solution is to treat other minds as theoretical entities" (Hyslop 1995: 29).

One of the popular methods of philosophy of science is the inference to the best explanation or scientific inference, the term introduced by Gilbert Harman in the *Philosophical Review* in 1965. Gilbert Harman says: ""the inference to the best explanation" corresponds to what others have called "abduction", "the method of hypothesis", "hypothetic inference," "the method of elimination," "eliminative induction" and "theoretical inference"" (Harman 1965:88). First, we need to know what the inference to the best explanation is before applying this method for justifying our belief in the existence of other minds.

IBE is a rule of inference, where we infer the truth of a hypothesis that gives us the best explanation of a phenomenon. In other words, the method IBE tells us which hypothesis can be correct on the basis the available evidence and we should infer the hypothesis that best explains an event of the world. It explains phenomena and provides us more information. To understand what IBE is properly, consider the two examples given below:

Suppose, there are two ceiling fans in my room and suddenly I found that one fan of my room has been stopped. For explaining this event, I draw many hypotheses-

1. The fan has been stopped because it was second hand.
2. I bought it from the local market and whatever I bought from the local market is not good.
3. It is stopped due to the damage of the motor, which remains inside the fan.

Suppose, a detective investigates a murder case, which has done in the broad daylight, for finding out who has committed the crime and after hearing all the facts, he forms some hypotheses on the basis of some person's view.

1. His wife was out of the home in the last seven days.
2. One of the neighbours of his house has seen an unknown person who was standing for long times and moving around his house just before the crime.
3. His house servant went to a market at the time of the murder.

Out of three explanations of the first example, the third hypothesis is more plausible as an explanation of a damaged fan because the third is much better and sufficient reason for believing in it than two other explanations. Similarly, the second example clearly shows that the second explanation is better and sufficient. What evidence is provided by the second explanation that can be the best explanation of that murder case because it has more explanatory power. The first and third seem to be explanations, but the second is more sufficient to explain the event better than the other two explanations.

The inference to the best explanation suggests us to accept the hypothesis which explains phenomena in a good way. In our everyday life, we use this method to find out a simple explanation of a phenomenon and even scientists also use it. They form many hypotheses for finding a relation between the two phenomena and after different examination, they accept one hypothesis which best explains that phenomena. So a hypothesis plays the most important role in forming a theory or in finding a solution to a particular problem.

A hypothesis is usually considered as a major principle, which helps us to explain a phenomenon of the world correctly. When we explain something, we use a proposition or a set of a proposition as an explanation for the occurrence of an event. So a hypothesis is nothing but a proposition or a set of the proposition, it simply means an assumption or a supposition, which can be proved or disproved by testing it. To explain our daily life events, we use hypothesis. For

examples, after perceiving the wet street, we assume or form a hypothesis to explain this event that rain has fallen during last night. ‘A dog is moving around the hotel restlessly’ to explain this we assume that ‘the dog is very hungry at now’. So it is said that a hypothesis is a belief about a particular matter that gives a description of why the matter is as it is.

The application of the IBE method is found in science also. Darwin’s theory of evolution is a famous example where inference to the best explanation is used. To explain his theory of evolution, he inferred the hypothesis of natural selection and current species are from a common ancestor. His theory gives us a description of how organisms change over time as a result of changes in heritable physical and behavioural traits and current species are naturally selected. They have not been separately created and have descended from common ancestors. The various fact of the world would be hard to explain if we assume the current species have been created separately. For example, there is a very close anatomical similarity between horses and zebras. Now if we assume that ‘they are from common ancestors’ instead of assuming that ‘they are separately created by God’, it would provide the best explanation of that fact.

Again we find that at the beginning of the nineteenth century, on the basis of Newton’s theory of universal gravitation, it was assumed that the Uranus is the last planet and there are no planets in the solar system. But after more than two centuries, two astronomers, John

Couch Adamas and Urbain Leverrier provided the best explanation of Uranus' deviating orbit and thought that Uranus is not the last planet and there is another planet in the solar system. Later it was discovered, which is known now as 'Neptune'. So inference to the best explanation plays an important role in the domain of science.

One may ask that what is the nature of inference to the best explanation? We are familiar with two types of inference: deductive inference and inductive inference. We have already seen in the earlier chapter that deduction is a necessary inference. Premises of this inference provide a guarantee to draw a conclusion. It means the truth of the premises guarantees the truth of the conclusion. There is an entailment relation between premises and conclusion. But IBE is different from deductive inference. When we draw a conclusion by using the method IBE, we found no entailment relation between premises and conclusion. So it does not provide a guarantee to the truth of the conclusion, but what premises are suggested in this inference those premises can provide a sufficient and plausible reason to draw a conclusion. The premises can better explain the conclusion. For example,

One of my books has not been found for the last two days.

I know that that book was needed for my friend for his exam.

Therefore, I conclude that he has taken that book without informing me.

This type of argument is not deductive because the conclusion does not necessarily follow from the premises. No entailment relation is found between the premises and conclusion here, but the conclusion can be the best explanation of the premises. So this inference is different from deductive inference, called inference to the best explanation or in short IBE.

Hence, it is generally said that IBE is a non-deductive method but it is different from the method of induction. Sometimes confusion arises on the relation between IBE and induction. Some philosophers have treated IBE as a type of induction. We use the term 'non-deductive' to refer any inference which is different from deductive inference. In this case, one can say that IBE is a type of induction but IBE and induction are two different types of non-deductive inference. Inference to the best explanation and induction both are ampliative and both goes beyond what is contained in the premises. Inductive inference is only based on statistical data. It means observed frequencies of occurrences of a particular event. It has no explanatory power and does not provide any logical necessity about conclusion, but in scientific inference, there is explanatory power. In induction, we arrive at a conclusion on the basis of observational data, but in scientific inference, we depend on the explanatory power in addition to observational data. For example,

The cheese from the storeroom has disappeared since last night.

Scratching noises were heard coming from the storeroom last night.

Therefore, the cheese was eaten by a mouse.

The conclusion of this inference is not derived inductively because the greater number of instances is absent here. The conclusion 'the cheese was eaten by a mouse cannot be inductively inferred from the hearing of scratching noises. So it is not inductive reasoning. But the inference is clearly a reasonable one. It is hypothetical reasoning. Here we inferred the conclusion from a hypothesis that a mouse ate cheese usually. The hypothesis is better than anyone else because it can explain satisfactorily the mouse hypothesis. Although the mouse hypothesis is not obviously true still it is more intuitively plausible to us. Thus this type of reasoning is known as "inference to the best explanation". In this case, we can consider the views of Gilbert Harman. He says: "in making this inference one infers, to the truth of that hypothesis. In general, there will be several hypotheses which might explain the evidence, so one must be able to reject all such alternatives hypothesis before one is warranted in making the inference. Thus, one infers, from the premise that a given hypothesis would provide a "better" explanation for the evidence than would any other hypothesis, to the conclusion that the given hypothesis is true" (Harman 1965: 89).

Therefore, the IBE is an argument, which is different from any type of inductive reasoning. The IBE is neither an enumerative induction nor an analogical inference. In enumerative induction, premises do not provide sufficient evidence to arrive at a conclusion

because it depends on a small number of observed evidence, where we perceive one phenomenon is accompanied by another phenomenon. So Harman says: "enumerative induction should not be considered a warranted form of non-deductive inference in its own right. I claim that, in cases where it appears that a warranted inference is an instance of enumerative induction, the inference should be described as a special case of another sort of inference, which I shall call "inference to the best explanation""(Harman 1965: 89). But in the IBE we infer conclusion which can explain all the evidence. It is formed on the basis of how much a conclusion has a power of explaining the evidence. When a detective infers that 'it is Ram who has done the crime', he does so because this hypothesis has a power of explaining all the evidence, fingerprints, blood stains and other forensic evidence. So the difference between enumerative induction and the IBE is that in enumerative induction conclusion is established by observed evidence. But in the IBE, conclusion explains the shreds of evidence.

The IBE is also considered as theoretical reasoning, A theory is what explains something and the explanation of an event explains why it occurred. So an explanation is a story about the cause of an occurred event or what caused an object to exist. The explanation is involved with the idea of causation and of inference. Some explanation expresses the causal relation between two things. When we want an explanation of an event, it means we request for a reason for that event. Why such

an event has occurred? Again an explanation can be a form of an inference. To make it clear, consider the below sentences:

Rahim is sick because he has caught a cold.

Rahim is sick because it is noon and still he is in bed.

Out of two sentences, the first sentence expresses the causal relation. Rahim's sickness is caused by catching a cold. The first sentence makes a claim of cause and effect, but the second sentence does not make a claim of cause and effect. Here it is inferred the sickness of Rahim from his remaining in bed at noon. His remaining bed at noon is the evidence for drawing a conclusion that he is sick. So the second sentence is different from the first sentence. From the fact that Rahim remains in bed at a time when he would usually be up and about, we are invited to infer that Rahim is sick.

The theoretical reasoning or IBE that explains everything with the notion of inference. It does not make a claim of cause and effect. The idea of causation is not involved here. It is generally said that inference is prior to explanation. First, we make a hypothesis and later on the basis of that hypothesis, we explain the phenomena of the world. But scientific inference or Inference to the best explanation, by contrast, claims that the explanation is prior to inference. According to IBE, before accepting a hypothesis, we need to know how far a hypothesis explains the available evidence. If available evidence can be explained by a hypothesis, then it may be accepted. In this sense, IBE makes a claim that explanation is prior to inference. According to

Peter Lipton “Inference to the best explanation, ‘abduction’ as it is sometimes called, can be seen as an extension of the idea of ‘ self-evidencing’ explanations where the phenomenon that is explained in turn provides an essential part of the reason for believing the explanation is correct” (Lipton 2007:422).

IBE suggests us to accept the best explanatory hypothesis from among a set of explanatory hypotheses. It says that you should infer a hypothesis that best explains the available data. Now the question is: what are the criteria for choosing a good hypothesis? In this context, we can consider the view of Gilbert Harman. According to him, the criteria of a good hypothesis will be based on its simplicity, more plausibility and explanatory power. He says: “There is, of course, a problem about how one is to judge that one hypothesis is sufficiently better than another hypothesis. Presumably, such a judgement will be based on considerations such as which hypothesis is simpler, which is more plausible, which explains more, which is less ad hoc, and so forth” (Harman 1965:89). In this connection, Samir Okasha also clearly says: “One popular answer is that a good explanation should be simple, or parsimonious” (Okasha 2016: 25). Consider the Darwin theory of evolution again. Darwin explains the diversity of species with the help of a hypothesis that is all current species are from one common ancestor. This hypothesis is very simple, plausible and it can help us to understand the diversity of species in the world satisfactorily than

any other hypothesis. But we are not able to provide the exact criteria for selecting a hypothesis from a set of hypothesis.

So far I have discussed what scientific inference or IBE is in general. Now a question comes to our mind that how can scientific inference, a method of philosophy of science, be applied to solve the problem of other minds, an epistemological problem of the philosophy of mind? Some philosophers have said that IBE is the most favoured successful attempt and a way to establish our belief in the existence of other minds because it solves the problem of other minds in a unique way and gives us a new explanation, which is very much awesome task. Its explanation is not conflicted with our common sense and it helps us to understand phenomena of the world satisfactorily in a very natural and simple way and suggest us to accept those things, which provides a better explanation of a phenomenon.

According to the inference to the best explanation argument, what people do or behave in a circumstance or a situation, it is the best explanation of their mental states. When we react or express our behaviour in a situation in a particular way, our mental states are responsible for them to behave as we do. Only our mental states can explain our behaviour in the best way. We go to the library, pick up books from shelves and after completing our reading, we place the books in the appropriate shelves, from where they were taken. Now the question is: how do we explain such behaviour? We explain our behaviour with the help of mental states. Generally, we say that what

we have done it is fully done by our mind and we do what our mind thinks. So it can be said that our mental states or mind is the best explanation of our behaviour, what we express in every moment. If we do not accept our mental states or mind, which remains behind all our exhibit behaviour, then we cannot explain our behaviour satisfactorily. Not only our behaviour, but all the phenomena of the world also can never be explained satisfactorily. But if we accept that we possess a mind and mind explains our behaviour, then everything of the world would be explained easily. So it is maintained that we are familiar with my mental states and our mental states are the best explanation of our behaviour.

Similarly, inference to the best explanation about other minds claims that when other people exhibit their behaviour in a particular situation, their mental states would be the best explanation of their behaviour. I see that other people also go to the library, pick up the books from library shelves and after some time they place the books in the appropriate library shelves. Now the question is why they do such things? We need to explain their behaviour in a way through which we can understand other people correctly. Hence philosophers suggest a theoretical way of explaining behaviours of other people, which is known as scientific inference or inference to the best explanation.

The scientific inference to other minds is the claim that what other people do or what they behave, their behaviour can be the best explanation of their mental states. It tells us when we need to explain

a phenomenon of the world, we must form a set of hypotheses and for choosing a hypothesis among many hypotheses follow the criteria of explanatory power. Alec Hyslop has stated the form of scientific inference (SI) in this way: "we are first to come up with a hypothesis to account for certain facts and then we seek to support that hypothesis over alternatives. In the case of other human figures and their behaviour, we need to make sense of what we observe. At its most straightforward SI starts with the problem of explaining behaviour and concludes that the best explanation of that behaviour is that human beings as they do because they have minds" (Hyslop 1995: 29). 'Others are minded'- this proposition or hypothesis provides the best explanation of their behaviour. No, any other hypotheses can explain it in a better way. Suppose we can form an alternative hypothesis is that 'other people are automata or mindless robot'. The IBE suggests us to accept that hypothesis, which has more explanatory power and can explain everything connected to those things.

Out of both hypotheses, the first hypothesis 'others are minded' has more explanatory power than another hypothesis 'others are automata'. The first hypothesis can easily explain everything and help us to understand people's behaviour, but the second does not so. If we conceive other people as a mindless entity, then they must appear to us as a programme or design to act in those ways what they do. This explanation is very complicated and implausible. So the first is superior to the second hypothesis. So the explanatory power of the hypothesis

‘others has a mind’ help us to justify our belief in the existence of other minds. Consider another example given below.

Suppose, someone asks me why is this fan running? As an answer to this question, I form three hypotheses-

Hypothesis-1. It is running because I bought it from an electrical shop.

Hypothesis-2. It is running due to electricity flow.

Hypothesis-3. It is running because it is made of copper.

It seems to us very plausible that the second hypothesis is more powerful other than two because it provides a sufficient and good reason for explaining the above event. Similarly, it is very plausible to us that ‘others are minded’ instead of saying that ‘others are mindless automata’.

Robert Pargetter has tried to justify our belief in the existence of other minds with the help of scientific inference. He says “…my clearly justified belief that other people have minds and that their minds are similar to mine, seems to be best accounted for as the result of a simple scientific inference” (Pargetter 1984: 163). He explains it with an example in the following way: “Suppose I were to see a man with a deep cut in his hand. The cut is bleeding. The man is clutching the cut hand with his other hand. He looks pale and tense, and he has beads of perspiration on his brow. He wrings his hands up and down, and utters sentences such as ‘My hand is hurting’, ‘I am in pain’ and also groans and grunts.”(Pargetter 1984: 158). He says that the one explanation of

this man's behaviour is that he is in pain and there may be another possible explanation. His behaviour may be produced by the different causal mechanism. Even there is also the possibility of no mental states are connected with such behaviour of the person. So, according to Pargetter, we can explain the behaviour of this person with the help of mental states that are connected to his behaviour or with the help of no connected mental states with his behaviour. Now the question is: which one of the hypotheses provides the best explanation of the man's behaviour? He argues that there may be other possible explanation, but the man's behaviour is the best explanation of their mental states, which represent him 'he is in pain' because it is a matter of rationality.

According to Pargetter, a hypothesis would be the best explanation of a phenomenon if all the available evidence, which are associated with that phenomenon, can be explained by that hypothesis and it is rational to accept that hypothesis, which is the best explanation of all available evidence if there is no any other alternative hypothesis that can explain our behaviour in the best way. In my case, all the evidence is justified by the mental states of mine. Mental states are the explaining criteria of what we do. Evidence means what I do or say, more specifically behavioural evidence. Likewise, in the case of others, we can explain their behaviour by assuming that 'they have a mind' and this supposition is really plausible to our rationality. Suppose, I see a man who is talking with a person and wants to know which roads lead to the Jadavpur market and after asking he moves forward to the

direction of another person. How can we explain the behaviour of that person? If we form the hypothesis to explain the behaviour of this person- 'he is moved by mechanically', it seems to us really implausible because of our principle of rationality does not support it. Our rationality always supports the hypothesis –'he has a mind', which provides the best explanation of his behaviour. In this context, we can quote the opinion of Pargetter: "In absence of any really plausible alternative, it would seem rational to believe that this man, in fact, people in general, are minded" (Pargetter: 1984 159). Therefore it can be said that the scientific inference provides a strong justification in believing the existence of other minds on the basis of explaining the power of a hypothesis with the principle of rationality.

In the earlier chapter, we have seen that inductive inference, specifically, analogical inference fails to provide a piece of sufficient and correct knowledge about the mental states of another person. The conclusion of analogical inference is uncheckable because there is no logical necessity between outward bodily behaviour and a person's mental states. Secondly, its conclusion is based on a single case instance. So the analogical inference to other minds does not make a perfect conclusion. There is always remains a degree of insufficiency. Therefore, uncheckability of conclusion and single case reasoning are objections arising against any analogical inference. But the use of scientific inference to other minds can easily avoid both problems of analogical inference.

The difference between scientific inference and analogical inference is that in analogical inference, the conclusion is based on the limited case, where we perceive a similarity between two phenomena. But when we draw a general conclusion on the basis of the limited observed case, it does not make a strong conclusion. So its conclusion is very weak but in contrast, the conclusion of scientific inference is very strong and its strength is the explanatory power. Pargetter said that "the strength of scientific inference is depends solely on the explanatory power of its conclusion. Now the explanatory power of the hypothesis is that other people have minds qualitatively similar to my own is not in any way impaired by the fact that there is only one mind (own mind) of which I have direct knowledge. Nor it is impaired by the fact that I cannot check on the conclusion after using the inference to argue that someone else is minded. What I can check on is that this hypothesis does explain the behaviour of other people in a satisfactory way" (Pargetter 1984: 160). If there is no other hypothesis that can make a hypothesis false, then the hypothesis is correct. In believing the existence of other minds, the scientific inference has forwarded the hypothesis is that 'other people have a mind' and have tried to show that this hypothesis is not defective by any other alternative hypothesis because it has more explanatory power than any other hypothesis. 'other people have a mind'- this hypothesis explains their behaviour satisfactorily, but any other hypothesis goes in vain to explain the behaviour of other people. So explanatory power of a hypothesis means, in short, it is more justifiable than any other else. Therefore, in

scientific inference, as we draw a conclusion only on the basis of its explanatory power, not on the basis of similarity, so it can easily escape the problem of single case reasoning and uncheckability of conclusion.

Philosopher thinks that the use of scientific inference in case of knowing other people mental states is very successful and superior to the use of analogical inference. The analogical inference to other minds not only faces the uncheckability and single case criticisms, but it also has other two serious problems. The analogical inference is fully based on similarity. When it draws a conclusion that ‘other people have minds', it is on the basis of similarity between our own behaviour and the behaviours of others. It is only concerned with similarities, but there are many cases where we find the differences between our behaviour and other people’s behaviour. Sometimes in a particular situation what we do or behave, others may not express their behaviour in which way we express. Suppose, when I face an interview I feel fear, tension, which makes me nervous but my friend is always out of fear when he faces an interview. This difference between myself and another person can affect reversely to analogical inference. In this context, Graham says that “ marked differences between myself and others may discourage analogical inference, but believing that others are minded best accounts for their behaviour, then the differences are not truly important” (Graham 1993: 57).But the similarity or dissimilarity is out of a matter of scientific inference.

Again in any analogical inference, premise and conclusion is different from each other. The conclusion is concerned with another matter from the concerned matter of premises. In any argument, we know that the conclusion provides the knowledge of what premises say. But in analogical inference to other minds, the premises are about my case, but the conclusion is about the case of others. Robert Pargetter puts it in this way: “but with every version of the analogical inference to other minds there is difference: the individual base is about my case, my instances of pain accompanying pain behaviour, etc., while the conclusion is about cases, which are not mine”(Pargetter 184: 160). If the conclusion is a difference from evidential base premises then how can we arrive at the conclusion that others have minds? So the conclusion of analogical inference to other minds is very startling to us. Moreover, analogical inference destroys the uniqueness of a person because the relevant difference between our behaviour and another person’s behaviour is not important here. It goes to justify the belief that I am not unique, which is conflicted with our common sense. Our common sense is that everyman man is unique in his way. No one is similar to others.

But in scientific inference, the similarity or dissimilarity between the behaviour of our and the behaviour of others does not matter. No way it gives stress on what analogical inference does. All that is matter in scientific inferences the explanatory power of a hypothesis. The conclusion of the analogical argument is very weak

because there is a possibility of difference, which makes the base of conclusion weak. But none of the difference makes a conclusion weak. The difference does not affect the power of a hypothesis. 'Others people have minds'- this hypothesis can explain the behaviours of other people successfully because it does not depend on the similarity or dissimilarity. It only depends on its explanatory power. If the hypothesis has explanatory power then it can easily explain the behaviours of other people. According to Pargetter, "the scientific inference account allows for a holistic approach to the problem of belief in the mental lives of others. What the hypothesis explains is the whole behavioural pattern of other people in their varied circumstances" (Pargetter 184: 161). In scientific inference, we observe a person's total behaviour what he produced in different circumstances. After observing the whole behavioural pattern of that person, we explain them in terms of mental states because only his mental states can explain all the behavioural evidence satisfactorily.

Moreover, scientific inference explains a person's uniqueness with differentiating the person from any other person. The behaviour of all human beings is the best explanation of their mental states. Ram's behaviour is the best explanation of his mental states. Shyam's behaviour is the best explanation of his mental states. So it allows the individual differences and tries to explain them with their mental states.

The approach of scientific inference not only gives an account for other minds, but it also explains the behaviour of animals, alien. Even it provides a good account for an abnormal person. Generally, we think that abnormal person has no mind at all. They are mindless. But I can imagine that abnormal person, animals and other creatures have minds through explaining their behaviour by virtue of scientific inference. But in this case, we have seen that analogical inference is not applicable. It does not provide any account to explain the behaviours of schizophrenic person and other creatures because there are no similarities possible. But scientific inference can explain their behaviour in terms of their mental states. What schizophrenic person or animals do, it is the best explanation of their mental states. In this way, we make ourselves assure in believing in the existence of their minds.

So what problems cannot be avoided by the argument by analogy the scientific inference easily goes beyond the problem. It overcomes the problems in a very natural, easiest and in a unique way. Furthermore, it goes with our commonsense view of the mind. Our common sense view is that mind is responsible for our behaviour. I stop writing when I am bored. I cry because I am in pain. I go to the library because I believed that only the library can help me in writing a dissertation. Even we can explain or predict successfully what anyone will say by attributing mind to him on the basis of our common sense

like scientific inference. Hence, philosophers think that scientific inference is superior to analogical inference.

Generally, we all accept the argument of scientific inference about other minds, even many philosophers also called it a successful attempt to solve the problem of other minds because it explains our behaviour with a help of hypothesis, which explains our behaviour in the best way. 'Others have minds'- this hypothesis is the best explanation of other people's behaviour. Hence, many philosophers have tried to show that without believing in other minds we cannot describe the behaviours of others. But it just appears to us as a good account of others' behaviour. There is a difficulty with this argument. The difficulty is concerned with choosing a hypothesis from among a set of hypotheses. Let us take an example to explain it elaborately. Suppose my friend is involved in research work. But why?

1. My friend has been pursuing research work to get a degree.
2. My friend has been pursuing research work to increase his knowledge in an area.

Now the question is: which hypothesis serves a good account of his motivation? In this case, we are confused to consider a hypothesis as best because it seems that both are the best explanation of his motivation in research.

Again we are very worried about choosing a hypothesis because we don't know enough about the best explanation. The best explanation argument has no adequate criteria for selecting a hypothesis. According

to Alvin Plantinga, the idea of inference to the best explanation "is still a black and boundless mystery" (Plantinga 1967: 269). The worry about scientific inference is more troublesome when we apply it in other minds. Some philosophers claim that the scientific inference to other minds leads us to the way of scepticism. Suppose my friend produces behaviour – he is moaning. We can form at least two hypotheses to explain the cause of his moaning. First, we form a hypothesis from the mentalist point of view and second from the neuropsychological point of view.

1. He is moaning because he is in pain.
2. He is moaning due to electro chemistry of the brain.

In this case, the second hypothesis is much better than the first. The neurological hypothesis gives a better explanation than the mentalist hypothesis. In this context, Nathan Stemmer expresses his view in this manner: "it is not difficult to see that this neurological explanation is simpler than the one which is based on any version of the mentalist hypothesis. Instead of assuming the existence of two indirectly observable entities- the neurological state d and the mental state a- we now assume only the existence of one such entity- the state d" (Stemmer 1987: 114). But the acceptance of neurological hypothesis does not help us to warrant our belief in other minds. Moreover, according to the claim of scientific inference, we should accept the neurological hypothesis, otherwise, the acceptance of the mentalist hypothesis violates the principle of scientific inference. So the best

explanation argument is not sufficient to provide us the correct principle of choosing a hypothesis. It makes a room for scepticism. If behaviours of others can be explained by neurological hypothesis then we need not accept the mental states of others. The scientific inference proves that others have no mental states, they have only neuropsychological states, instead of proving the others have a mind. So it is not a safe source of gaining knowledge about other minds. It opens the door of scepticism again.

CHAPTER IV

CONCLUSION

It can be said that the problem of other minds is an insurmountable problem on the basis of what we have discussed in the earlier chapters. Neither any standpoint of the philosophy of mind nor any method of philosophy of science provides a guarantee of our belief in the existence of other minds. In solving this problem, scientific inference accepts a mentalistic hypothesis through which the meaning of human behaviour is explained and it is thought that it is the best hypothesis that explains a person's behaviour in the best way. But scientific inference violates its own principle by accepting the mentalistic hypothesis and rejecting the neurophysiological hypothesis. It is much better to explain a person's behaviour with the help of a neurophysiological hypothesis than a mentalistic hypothesis because it helps us to know a person in a sophisticated way. So it fails to grab its principle and the violation of principle makes it a hypocritical argument. This hypocrisy does not justify our belief in other minds.

Even one of the popular responses of philosophy of mind, known as analogical inference, which has been offered by philosophers to avoid solipsism, is also not beyond of doubt due to uncheckability of its conclusion and single case instance. Moreover, sometimes it is said that it should not be construed as an argument for other minds because it is meaningless inference. The premises of this inference is the character of one domain, namely the domain of myself, my experience etc. and conclusion of this inference belongs to another domain. The conclusion is not about myself. We cannot assume another experience

from my experience. So the difference between the matter of conclusion and premises shows its weakness, failure and as a result, we involve ourselves in doubting the analogical inference to other minds. In this context, we can quote a remark of Bruce Aune: "the reason for this suspicion has been the obvious weakness of the inference from facts about the character of one domain, where certain regularities have been observed to hold, (namely, the domain of *my* experience and its relation to the physical world), to a conclusion about the character of another domain, where not only have no such regularities could *conceivably* be observed to hold (namely, the domain of *another's* experience and its relation to the physical world)" (Aune 1961: 323). Now the question is: if analogical inference fails to give knowledge of other minds then how can we solve the problem of other minds? It is necessary to find out a way by which we can know the mental lives of another person.

All human beings are biologically similar. We are all consisted of trillions of cells, the structural and functional units of all human beings. Cells of the human body are working together for the maintenance of equilibrium of the entire body. All human beings are the same in shape due to the structural similarity of cells. Not only the same in shape but also our nervous system, brain system, respiratory system, muscular system, skeleton system, endocrine system, digestive system and all other system is similar to another person. So all physiological aspects of a person are similar to ours.

Moreover, all human beings are bearing the genetic similarity because all attribute of the human body is affected by a person's genetic code. It determines the certain physical and biochemical feature of a body. It is proved by science that gene is a trait of character that is passed from parent to offspring and can be transmitted to generation to generation. A gene consists of a small part of DNA which is contained on a chromosome and when DNA molecule is packaged into the thread-like structure it is called chromosome. In every human body, the number of chromosomes is 46 and we inherited 23 chromosomes from our father and other 23 chromosomes from our mother. Sometimes doctors depend on genetics for treatment of disease because we inherited disorders, mental abilities or disabilities from our parents sometimes. This genetic similarity shows that all human beings are similar, specifically, others are similar to me.

Medical science also proves that all human are biologically similar. The treatment method of medical science is similar for all given the same disease. Let us take an example to explain the biological similarity of all human beings with the treatment of medical science. Suppose, a person feels itching, nausea, vomiting, pain in the muscle, not feeling hungry and faces a problem in breath and in sleeping etc. He goes to a doctor and after observing, especially, examines his all symptoms doctor understand that the person is facing a serious problem and immediate treatment is needed. Otherwise, it would be impossible for the man to live. The person is suffering from chronic kidney

disease, it means kidneys are badly damaged, they are not working now. It is due to not enough blood flowing to the kidneys. The doctor advised him to take dialysis or a kidney transplant as immediately as possible. There is no other treatment for chronic kidney disease.

When in the body of another person same symptoms have been found by a doctor and after examines, it is declared that he is also suffering from chronic kidney disease, the same treatments (either dialysis or transplant) are generally arranged by a doctor. Again, when we are in fever doctor prescribes usually paracetamol medicine to get rid of fever, similarly when others suffer from fever doctor prescribe the same medicine also. The similarity of this treatment process helps us to know the similarity of others with mine biologically. If others are not biologically similar to mine then the same treatment process would be impossible. So in genetic or biological level, we find a very strong analogy, that proves that we are similar to others and others are similar to ours. No one is dissimilar to ours biologically. Even all people with abnormalities are also biologically similar to us.

Not only from a biological level, but we also find the similarity in behavioural level also. Other person's responses are very similar to us in the same circumstances. When a stimulus of the environment stimulates our sense organ we feel a sensation and give a response to the sensation. A stimulus is a condition for sensation. Similarly, other people behave the same as me when their minds stimulated by a stimulus. We close our eyes when a bright light focus on me

accidentally, likewise when another person is in the same circumstance, he does so like us immediately. Other people remove their hand from a hot object exactly like us when they touch hot object accidentally. This behavioural action of a person is known as non-voluntary action or reflex action. It is the result of the coordination of our spinal cord and nervous system. Our brain is not responsible for performing this action. Thought also is not involved here. So we cannot control this action. Even in this case, we see the same stimulus always produce the same result. So in case of non-voluntary action, what we do in a circumstance, other people also do it exactly in the same way. Their behaviour is exactly similar to us because it is out of control.

Again, in performing the voluntary action or purposive action, other people behave similarly like us and it is done by a person's thoughts or brain. A similar response to similar events. Desire and the provision of end and means are the important features of all voluntary action. Suppose, you are travelling by train with your valuable things at night. After getting up in the morning, you have no found your any valuable things. You lost everything that you carrying. In this situation, what behaviour is produced by you, we produce the same behaviour in the same situation. Again, before appearing in a job examination I feel tense, fearful, tired, similarly, another person looks tense, fear when he appears in a job examination. Another person moans and groans like us when they feel pain in any part of the body. This similarity in

producing behaviour makes the analogy argument for other minds strong.

Even a person's social inheritance similar to another person's social inheritance in addition to biological inheritance. Social inheritance means cultural inheritance, what a person learns from their society with communicating to another person. So culture is a symbolic meaning system, so it is called the semiotic system in which the functions of the symbols to communicate meaning from one mind to another. It is a way of life what is expressed by certain language. Anthropologist Edward Taylor Describes the culture of a person in the following manner- "culture that complex whole which includes knowledge, beliefs. Art, morals, law, custom, and any other capacities and habit acquired by a man as a member of society (Bennett 2015: 547). The culture of society controls the behaviour of a person in the community. The cultural communication between a society shows that another person is similar to ours. If they are different from ours we any connection would be impossible with them. Even the cultural transmission within a society is impossible if they are not analogous to us. But the successful transmission of culture proves the similarity among human beings.

The similarity is not limited to a region or a country. Even in the field of cross-cultural communication, we see how people from different cultural background behave in similar ways and interact in similar ways among them. When a person goes to another country for

business purpose and when he interacts with people of another country he behaves similarly just like the behaviour of that country's people. The cross-cultural relationship is involved with understanding by which we can construct our attitude on the entire world. So strong cross-cultural responses among human beings from different countries and different cultural backgrounds are analogous. Moreover, languages across the world have vast possibilities of translatability. In the case of translation of a language to another language, the thoughts, ideas of a translator are similar to the author. Translator accepts the ideology of the author. The acceptance of ideology is the evidence of similarity between author and translator.

What we have discussed until now it can be said that other people are analogous with us in all respect. They are similar to us in genetic or biological level, also in behavioural level and in all others level. No one can doubt the similarity between other people and themselves at these levels. A strong analogy is accepted here. Now the question is: If a strong analogy is accepted at all level then why should we not accept analogy in mental lives? If we still say "no" then strong arguments have to be given but no such argument is available to us. Therefore, it is better and easier to say "yes" than "no".

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