UNIT 2  PHILOSOPHY OF MIND AND OTHER DISCIPLINES

Contents

2.0 Objectives
2.1 Introduction
2.2 Philosophy of Mind and Other Sciences
2.3 Philosophy of Mind and The Continental Tradition
2.4 Philosophy of Mind and Buddhism
2.5 Philosophy of Mind and General Philosophy
2.6 Let Us Sum Up
2.7 Key Words
2.8 Further Readings and References

2.0 OBJECTIVES

• To enable the students to see the relationship between philosophy of mind and other philosophical and scientific disciplines.
• To familiarize with some key terms and notions of General Philosophy which are useful to philosophy of mind.
• To realize the multi-disciplinary nature of philosophy of mind.

2.1 INTRODUCTION

Humans are corporeal beings and, as such, they are subject to examination and description by the natural sciences. Since mental processes are intimately related to bodily processes, the descriptions that the natural sciences furnish of human beings play an important role in the philosophy of mind. There are many scientific disciplines that study processes related to the mental. The list of such sciences includes: Psychology, biology, computer science, cognitive science, cybernetics, linguistics, medicine, pharmacology (Leudar 2009). So in this unit we first deal with some other disciplines that are directly connected to philosophy of mind. Then we take up some crucial notions from General Philosophy that are central to philosophy of mind.

2.2 PHILOSOPHY OF MIND AND OTHER SCIENCES

Here we will focus on few sciences that directly affect Philosophy of Mind.

Psychology

Psychology is the science that investigates mental states directly. It uses generally empirical methods to investigate concrete mental states like joy, fear or obsessions. Psychology investigates the laws that bind these mental states to each other or with inputs and outputs to the human organism (Christensen & Turner 1993).

An example of this is the psychology of perception. Scientists working in this field have discovered general principles of the perception of forms. A law of the psychology of forms says that objects that move in the same direction are perceived as related to each other. This law
describes a relation between visual input and mental perceptual states. However, it does not suggest anything about the nature of perceptual states. The laws discovered by psychology are compatible with all the answers to the mind-body problem already described (PoM 2011).

**Behaviorism**

Behaviorism dominated philosophy of mind for much of the 20th century, especially the first half. In psychology, behaviorism developed as a reaction to those who speak about the inner workings of the human spirit. Their inner reports on one's own interior mental life are not subject to careful examination for accuracy and cannot be used to form predictive generalizations. Without generalizability and the possibility of third-person examination, the behaviorists argued, psychology cannot be scientific. The way out, therefore, was to eliminate the idea of an interior mental life (and hence an ontologically independent mind) altogether and focus instead on the description of observable behavior. (PoM 2011).

Parallel to these developments in psychology, a philosophical behaviorism was developed. This is characterized by a strong verificationism, which generally considers unverifiable statements about interior mental life senseless. For the behaviorist, mental states are not interior states on which one can make introspective reports. They are just descriptions of behavior or dispositions to behave in certain ways, made by third parties to explain and predict others' behavior.

Philosophical behaviorism, of Ludwig Wittgenstein, has fallen out of favor since the latter half of the 20th century, coinciding with the rise of cognitivism. Cognitivists reject behaviorism due to several perceived problems. For example, behaviorism could be said to be counter-intuitive when it maintains that someone is talking about behavior in the event that a person is experiencing a painful headache.

**Neurobiology**

Philosophy of mind draws heavily from neurobiology. The theoretical background of neurobiology, as is the case with modern natural sciences in general, is fundamentally materialistic. The objects of study are, in the first place, physical processes, which are considered to be the foundations of mental activity and behavior. The increasing success of biology in the explanation of mental phenomena can be seen by the absence of any empirical refutation of its fundamental presupposition: "there can be no change in the mental states of a person without a change in brain states." (PoM 2011).

Within the field of neurobiology, there are many sub disciplines which are concerned with the relations between mental and physical states and processes: Sensory neurophysiology investigates the relation between the processes of perception and stimulation. Cognitive neuroscience studies the correlations between mental processes and neural processes. Neuropsychology describes the dependence of mental faculties on specific anatomical regions of the brain. Lastly, evolutionary biology studies the origins and development of the human nervous system and, in as much as this is the basis of the mind, also describes the ontogenetic and phylogenetic development of mental phenomena beginning from their most primitive stages.

The methodological breakthroughs of the neurosciences, in particular the introduction of high-tech neuroimaging procedures, has propelled scientists toward the elaboration of increasingly
ambitious research programs: one of the main goals is to describe and comprehend the neural processes which correspond to mental functions. Since the 1980s, sophisticated neuroimaging procedures, such as fMRI have furnished increasing knowledge about the workings of the human brain, shedding light on many ancient philosophical problems (PoM 2011).

Several groups are inspired by these advances. New approaches to this question are being pursued to advance these issues. Some philosophers of mind once thought that the best answer to the question “What is the mind?” is simply “The mind is the nervous system”. In defending this claim, these philosophers sometimes make an analogy between prescientific attempts to answer the question “What is lightning?” and the question of “What is the mind?” Long ago, our ancestors answered the lightning question by saying it was a manifestation of a god’s wrath or something. Modern science tells us, however, that lightning is some kind of electrical discharge. And our ancestors used to answer the question “What is the mind” by saying that the mind was the soul, or some thinking substance detached from the body and brain. So in the same way the identity theorists want to claim that, just as with lightning, the modern scientific answer to the question “What is the mind?” is simply “the nervous system”. What else could it be? (Williams 2011)

One response to this argument is the idea that the mind is not identical with the nervous system, but rather, with the functioning of the nervous system. This response is designed to answer questions of biological chauvinism e.g. If some entity does not have a human nervous system yet demonstrates intelligent behavior are we to say that it does not have a mind simply because it doesn’t have a nervous system like ours? Thus, the identity thesis seems too restricting.

But does identifying the mind with the function of the nervous system also exclude too much? What if we were to say that the mind is identical to the function of the entire body + brain and not just the nervous system alone? After all, it seems like the “internal milieu” of the body might play a functional role of such importance that it would be problematic to simply identify the mind with the nervous system and not the total system of brain + body e.g. the diffusion of hormones in the blood system seems to play a functional role in mental processes. On this view, the nervous system is simply too entangled with the body for there to be a clear-cut psychological distinction of brain and body. To acknowledge the role of the body in cognition and “what it is like” to be a human animal would be to emphasize an “embodied” perspective. So it seems we have recourse for saying that the mind is not identical to the nervous system, and that it might actually supervene on the total brain-body system given that importance of the bodily milieu for determining what it is like to be human (Williams 2011).

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1) What is the fundamental presupposition of neurobiology?

2) What is mental state for a behaviorist?

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Computer Science

Computer science concerns itself with the automatic processing of information (or at least with physical systems of symbols to which information is assigned) by means of such things as computers. From the beginning, computer programmers have been able to develop programs which permit computers to carry out tasks for which organic beings need a mind. A simple example is multiplication. But it is clear that computers do not use a mind to multiply. Could they, someday, come to have what we call a mind? This question has been propelled into the forefront of much philosophical debate because of investigations in the field of artificial intelligence (AI) (PoM 2011).

Within AI, it is common to distinguish between a modest research program and a more ambitious one: this distinction was coined by John Searle in terms of a weak AI and strong AI. The exclusive objective of "weak AI", according to Searle, is the successful simulation of mental states, with no attempt to make computers become conscious or aware, etc. The objective of strong AI, on the contrary, is a computer with consciousness similar to that of human beings. The program of strong AI goes back to one of the pioneers of computation Alan Turing. As an answer to the question "Can computers think?", he formulated the famous Turing test. Turing believed that a computer could be said to "think" when, if placed in a room by itself next to another room which contained a human being and with the same questions being asked of both the computer and the human being by a third party human being, the computer's responses turned out to be indistinguishable from those of the human. Essentially, Turing's view of machine intelligence followed the behaviourist model of the mind—intelligence is as intelligence does. The Turing test has received many criticisms, among which the most famous is probably the Chinese room thought experiment formulated by Searle (PoM 2011).

The question about the possible sensitivity (qualia) of computers or robots still remains open. Some computer scientists believe that the specialty of AI can still make new contributions to the resolution of the "mind body problem". They suggest that based on the reciprocal influences between software and hardware that takes place in all computers, it is possible that someday theories can be discovered that help us to understand the reciprocal influences between the human mind and the brain.

Cognitive Science

Cognitive science is the interdisciplinary scientific study of minds as information processors. It includes research on how information is processed (in faculties such as perception, language, reasoning, and emotion), represented, and transformed in a (human or other animal) nervous system or machine (e.g., computer). Cognitive science consists of multiple research disciplines, including psychology, artificial intelligence, philosophy, neuroscience, linguistics, anthropology, sociology, and education. It spans many levels of analysis, from low-level learning and decision mechanisms to high-level logic and planning; from neural circuitry to modular brain organization. Its intellectual origins are in the mid-1950s when researchers in several fields began to develop theories of mind based on complex representations and computational procedures.
The term cognitive science was coined by Christopher Longuet-Higgins in 1973. It incorporates the interdisciplinary study of mind and intelligence, embracing philosophy, psychology, artificial intelligence.

2.3 PHILOSOPHY OF MIND AND THE CONTINENTAL TRADITION

Most of the discussion in this article has focused on one style or tradition of philosophy in modern Western culture, usually called analytic philosophy (sometimes described as Anglo-American philosophy). Many other schools of thought exist, however, which are sometimes subsumed under the broad label of continental philosophy. In any case, though topics and methods here are numerous, in relation to the philosophy of mind the various schools that fall under this label (phenomenology, existentialism, etc.) can globally be seen to differ from the analytic school in that they focus less on language and logical analysis alone but also take in other forms of understanding human existence and experience. With reference specifically to the discussion of the mind, this tends to translate into attempts to grasp the concepts of thought and perceptual experience in some sense that does not merely involve the analysis of linguistic forms (Gertler 2007).

In Georg Wilhelm Friedrich Hegel's Phenomenology of Mind, Hegel discusses three distinct types of mind: the 'subjective mind', the mind of an individual; the 'objective mind', the mind of society and of the State; and the 'Absolute mind', a unity of all concepts. In modern times, the two main schools that have developed in response or opposition to this Hegelian tradition are phenomenology and existentialism. Phenomenology, founded by Edmund Husserl, focuses on the contents of the human mind and how phenomenological processes shape our experiences. Existentialism, a school of thought founded upon the work of Soren Kierkegaard and Friedrich Nietzsche, focuses on the content of experiences and how the mind deals with such experiences (PoM 2011).

2.4 PHILOSOPHY OF MIND AND BUDDHISM

"If one were to ask, 'Which aging & death? And whose is this aging & death?' and if one were to ask, 'Is aging & death one thing, and is this the aging & death of someone/something else?' both of them would have the same meaning, even though their words would differ. When there is the view that the jiva is the same as the body, there isn't the leading of the holy life. And when there is the view that the jiva is one thing and the body another, there isn't the leading of the holy life. Avoiding these two extremes, the Tathagata points out the Dhamma as the in between: From birth as a requisite condition comes aging & death."

In fact, Buddhism does not hold to the dualistic mind/body model but do assert that the mind and body are separate entities. Buddhism does not hold to the notion of an independent and eternal soul, or atman. Some forms of Buddhism assert that a very subtle level of mind leaves the body at the time of death and goes to a new life. According to Buddhist scholar Dharmakirti, the definition of mind is that which is clarity and cognizes. In this definition, 'clarity' refers to the nature of mind, and 'cognizes' to the function of mind. Mind is clarity because it always lacks form and because it possesses the actual power to perceive objects. Mind cognizes because its
function is to know or perceive objects. In Ornament of the Seven Sets, Buddhist scholar Khedrubje holds that thought, awareness, mind and cognizer are synonyms.

In fact, Buddha explained that although mind lacks form, it can nevertheless be related to form. Thus, our mind is related to our body and is "located" at different places throughout the body. This is to be understood in the context of how the five sense consciousnesses and the mental consciousness are generated. There are many different types of mind—sense awarenesses, mental awarenesses, gross minds, subtle minds, and very subtle minds—and they are all formless (lacking shape, color, sound, smell, taste or tactile properties) and they all function to cognize or know. There is no such thing as a mind without an object known by that mind. Even though none of these minds is form, they can be related to form (PoM 2011).

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Note: Use the space provided for your answers.

1) What is cognitive science?

2) Does Buddhism hold a dualistic understanding of body and mind?

2.5 PHILOSOPHY OF MIND AND GENERAL PHILOSOPHY

After seeing the relationship of philosophy of mind to other disciplines, we want to situate it in General Philosophy itself. Various useful notions from general philosophy have been related to philosophy of mind. In this section, we note some such theoretical notions that help us to understand philosophy of mind better.

Intentionality

The rich concept of intentionality, taken from phenomenology, is the capacity of mental states to be directed towards (about) or be in relation with something in the external world. This property of mental states entails that they have contents and semantic referents and can therefore be assigned truth values. When one tries to reduce these states to natural processes there arises a problem: natural processes are not true or false, they simply happen. It would not make any sense to say that a natural process is true or false. But mental ideas or judgments are true or false, so how then can mental states (ideas or judgments) be natural processes? The possibility of assigning semantic value to ideas must mean that such ideas are about facts. Thus, for example, the idea that Herodotus was a historian refers to Herodotus and to the fact that he was an historian. If the fact is true, then the idea is true; otherwise, it is false. But where does this relation come from? In the brain, there are only electrochemical processes and these seem not to have anything to do with Herodotus (PoM 2011).
**Functionalism**

Functionalism is another concept from general philosophy that has been reformulated by Hilary Putnam and Jerry Fodor and used in philosophy of mind. Putnam and Fodor saw mental states in terms of an empirical computational theory of the mind. At about the same time or slightly after, D.M. Armstrong and David Kellogg Lewis formulated a version of functionalism which analyzed the mental concepts of folk psychology in terms of functional roles. Finally, Wittgenstein's idea of meaning as use led to a version of functionalism as a theory of meaning, further developed by Wilfrid Sellars and Gilbert Harman. Another one, psychofunctionalism, is an approach adopted by naturalistic Philosophy of Mind associated with Jerry Fodor and Zenon Pylyshyn.

What all these different varieties of functionalism share in common is the thesis that mental states are characterized by their causal relations with other mental states and with sensory inputs and behavioral outputs. That is, functionalism abstracts away from the details of the physical implementation of a mental state by characterizing it in terms of non-mental functional properties. For example, a kidney is characterized scientifically by its functional role in filtering blood and maintaining certain chemical balances. From this point of view, it does not really matter whether the kidney be made up of organic tissue, plastic nanotubes or silicon chips: it is the role that it plays and its relations to other organs that define it as a kidney.

**Emergentism**

Emergentism is a form of "nonreductive physicalism" that involves a layered view of nature, with the layers arranged in terms of increasing complexity and each corresponding to its own special science. Some philosophers hold that emergent properties causally interact with more fundamental levels, while others maintain that higher-order properties simply supervene over lower levels without direct causal interaction. The latter group therefore holds a less strict, or "weaker", definition of emergentism, which can be rigorously stated as follows: a property P of composite object O is emergent if it is metaphysically impossible for another object to lack property P if that object is composed of parts with intrinsic properties identical to those in O and has those parts in an identical configuration.

Sometimes emergentists use the example of water having a new property when Hydrogen H and Oxygen O combine to form H2O (water). In this example there "emerges" a new property of a transparent liquid that would not have been predicted by understanding hydrogen and oxygen as a gas. This is analogous to physical properties of the brain giving rise to a mental state. Emergentists try to solve the notorious mind-body gap this way. One problem for emergentism is the idea of "causal closure" in the world that does not allow for a mind-to-body causation (PoM 2011).

Expressional Philosophy states that there are no dualisms, only that which is expressed, as Water is to the dualistic H20 in the above example. Mind emerges from processes of Matter and the Energies these processes bring about. Al Engleman proposes in "Expressions: A Philosophy of Mind", a finality to William Blake's "I am My Mind", by stating that all Matter and Energy is Mind, what he calls Proto-Mind, and from this Proto-Mind's processes, a threshold barrier is overcome, and Life emerges as Self-Working Energy (Mind). This is called Expressional
Emergence, in much the same way Genetic Biologists understand the Genotype-Phenotype Expression.

Eliminative materialism

If one is a materialist and believes that all aspects of our common sense psychology (or “folk psychology”) will find reduction to a mature cognitive-neuroscience, and that non-reductive materialism is mistaken, then one can adopt a final, more radical position: eliminative materialism.

Also called eliminativism, it is a materialist position. Its primary claim is that people's common-sense understanding of the mind (or “folk psychology”) is false and that certain classes of mental states that most people believe in do not exist. Some eliminativists argue that no coherent neural basis will be found for many everyday psychological concepts such as belief or desire, since they are poorly defined. Rather, they argue that psychological concepts of behaviour and experience should be judged by how well they reduce to the biological level.[1] Other versions entail the non-existence of conscious mental states such as pain and visual perceptions (EM 2011).

There are several varieties of eliminative materialism, but all maintain that our common-sense "folk psychology" badly misrepresents the nature of some aspect of cognition. Eliminativists regard folk psychology as a falsifiable theory, and one likely to be falsified by future cognitive-neuroscientific research. Should better theories of the mental come along they argue, we might need to discard certain basic common-sense mental notions that we have always taken for granted, such as belief, consciousness, emotion, qualia, or propositional attitudes (PoM 2011).

Externalism and Internalism

Where is the mind located? If the mind is a physical phenomenon of some kind, it has to be located somewhere. There are two possible options: either the mind is internal to the body (internalism) or the mind is external to it (externalism). More generally, either the mind depends only on events and properties taking place inside the subject's body or it depends also on factors external to it. Proponents of internalism are committed to the view that neural activity is sufficient to produce the mind. Proponents of externalism maintain that the surrounding world is in some sense constitutive of the mind.

Externalism differentiates into several versions. The main ones are semantic externalism, cognitive externalism, phenomenal externalism. Each of these versions of externalism can further be divided whether they refer only to the content or to the vehicles of mind. Semantic externalism holds that the semantic content of the mind is totally or partially defined by state of affairs external to the body of the subject. Hilary Putnam's Twin earth thought experiment is a good example (PoM 2011).

Cognitive externalism is a very broad collections of views that suggests the role of the environment, of tools, of development, and of the body in fleshing out cognition. Embodied cognition, The extended mind, enactivism are good examples. Phenomenal externalism suggests that the phenomenal aspects of the mind are external to the body.
Qualia and Physicalism
The thesis of physicalism is that the mind is part of the material (or physical) world. Such a position faces the problem that the mind has certain properties that no other material thing seems to possess. Physicalism must therefore explain how it is possible that these properties can nonetheless emerge from a material thing. The project of providing such an explanation is often referred to as the "naturalization of the mental." Some of the crucial problems that this project attempts to resolve include the existence of qualia (PoM 2011).

Many mental states seem to be experienced subjectively in different ways by different individuals. And it is characteristic of a mental state that it has some experiential quality, e.g. of pain, that it hurts. However, the sensation of pain between two individuals may not be identical, since no one has a perfect way to measure how much something hurts or of describing exactly how it feels to hurt. Philosophers and scientists therefore ask where these experiences come from. The existence of cerebral events, in and of themselves, cannot explain why they are accompanied by these corresponding qualitative experiences. The puzzle of why many cerebral processes occur with an accompanying experiential aspect in consciousness seems impossible to explain.

Yet it also seems to many that science will eventually have to explain such experiences. This follows from an assumption about the possibility of reductive explanations. According to this view, if an attempt can be successfully made to explain a phenomenon reductively (e.g., water), then it can be explained why the phenomenon has all of its properties (e.g., fluidity, transparency). In the case of mental states, this means that there needs to be an explanation of why they have the property of being experienced in a certain way.

The 20th century German philosopher Martin Heidegger criticized the ontological assumptions underpinning such a reductive model, and claimed that it was impossible to make sense of experience in these terms. This is because, according to Heidegger, the nature of our subjective experience and its qualities is impossible to understand in terms of Cartesian "substances" that bear "properties." Another way to put this is that the very concept of qualitative experience is incoherent in terms of – or is semantically incommensurable with the concept of – substances that bear properties (Cooney 2000).

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2.6 LET US SUM UP

In this unit we saw how philosophy of mind is truly an inter-disciplinary search. It borrows from many other disciplines and works as a sub-discipline of general philosophy. We saw how it is related to the continental tradition and Buddhism.

2.7 KEYWORDS

**Behaviourism:** It is an approach to psychology that emphasizes observable measurable behaviour. It denies any independent significance for intentions and assumes that behaviour is determined by the environment.

**Emergentism:** Emergentism (or theory of emergence) is a theory concerning the nature of the material world. In contrast to reductionistic materialism, which asserts that only the tiniest components of matter have unique properties, emergentism maintains that along with complexity, and especially with structure and function, go properties that are unique and that are not to be found in the tiniest components of matter. These properties of more complex systems are therefore not reducible to those of their constituent elements, though they could not exist without them. While many of the fundamental properties of matter, such as mass, are held to be merely quantitative and additive, emergent properties are said to be qualitative and novel or non-predictable.

**Qualia:** A quality or property as perceived or experienced by a person. Such a property, such as whiteness, considered independently from things having the property.

2.8 FURTHER READINGS AND REFERENCES


