

Varieties of Materialism

Behaviourism, Identity theory, and
Functionalism

Some of the important questions

- Are mental events distinct from physical events?
- Does thinking occur to us?
- What will happen if you are able to literally see the mental states?

Behaviourism

- Mind is the behaviour of the body. The body therefore constitutes the mind.
- “By behaviour behaviourists’ mean the publicly observable, measureable, recordable activity of the subjects at issue: bodily movements, noise emitted, temperature changes, chemical released, interaction with the environment, and so forth.” (*MC*, p.88)

What to be understood?

Understanding the actual and **potential** pattern of behaviour is taken into account to understand the mind.

Emotion, belief, desire, etc. are not “ghostly inner episodes”, rather they are about observable behaviours.

Logical Positivism

- Logical analysis of language of science
- General application of logical method without strictly adopting formal procedures
Development of logical apparatus
- Influence of empiricism

David Hume

- “Meaningful statements about the world must be expressible as statements about the actual and possible observations.”
- Statements like
 - Bachelors are unmarried
 - $3+2 = 5$
- Above statements are concerned with concepts which are used to describe the world.
- Substantive assertions about the world are made with statements of **matters of fact**, and the assertions that concerned only with the conceptual or linguistic framework in terms of which we form substantive assertions are statement of **relation of ideas**.

Carl Hempel

- Meaningful psychological statements can be translated into propositions of physics
 - Psychology is an integral part of physics
 - Only underlying signs/ symptoms of psychological states seem to lie behind the behaviour we observe
 - The unobservable mental phenomena are the **complex psychological cause** of behaviour.

Psychology

- Introspective Psychology
- Experimental psychology
- Application of physical methods:
 - Mass, wave-length, temperature, field intensity, etc.
 - Scientific psychology should limit itself with the study of bodily behaviour with which human and the animal respond to changes in the physical environment
 - every descriptive or explanatory step which makes use of such terms from introspective or understanding psychology as feeling, lived experience, idea, will, intention, goal, dispositions, repression being prescribed as non-scientific.

Nature of expression

- ‘**p**’ – use of **concise** and **complete** description of state of affairs.
- **Meaning** of ‘**p**’ is established by the condition of its complete **verification**.
- ‘p’ not verifiable – ‘p’ is a pseudo proposition
- Finding out the symptom (specific event) of ‘p’
- symptom (specific event) taking place in the body

Methodological Behaviourism

- Behaviourism attempted to put psychology in a respectable scientific footing - emphasizing the objective observable behaviour
- Laws of behaviourist psychology are based on the stimulus of the organism with the output responsive behaviour.
- No inner qualitative mental phenomena exist
- Behaviourism is a method , not a specific ontological doctrine.

Philosophical behaviourism

- Dispositional property
- Behaviour is caused by Mental disposition
- X is water soluble
- Definition: 'if x were put in unsaturated water, then x would dissolve'
- Mental states have multi-tracked dispositions

Philosophical behaviourism

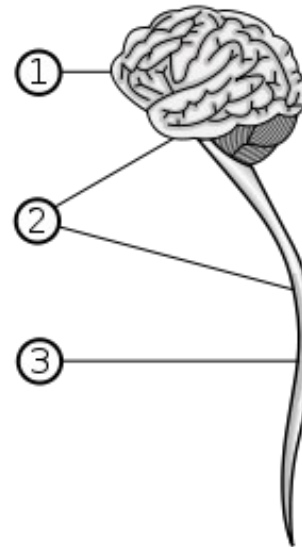
- Gilbert Ryle's "Category Mistake"
- E.g. University, team spirit, pair of gloves, etc.
 - designates to an entity which is non-material
- The trouble of locating such entity
- 'Ghost in the machine'

Philosophical Behaviourism

- Having states of mind, not only in virtue of what the agent does, but also in virtue of what he would do, what he is **disposed to do**.
- **Headache ---- disposed to moan**
- **----- rub your head**
- **----- seek out aspirin**
- **Solubility ---- dissolved in water**
- **Behaviour is a manifestation of certain disposition**
- **Mind is being disposed to behave**
- **Hence, the intrinsic qualitative nature of states of mind is irrelevant**

Identity theory

- Mind-Brain identity
- Study of central nervous system
- Mental states and process are neurological states and process



D.M. Armstrong's synthesis

- “My proposed synthesis is that the mind is properly conceived as an inner principle, but a principle that is identified in terms of outward behaviour it is apt for bringing about. This way of looking at the mind and mental states does not itself entail a materialist or physicalist view of man, for nothing is said in this analysis ...I have general scientific grounds for thinking that man is nothing but a physical mechanism... mental states are in fact nothing but physical states of the central nervous system.” (*A Materialist Theory of the Mind*,(1968, p.91)

Scientific study of the mind

- Contingent and scientific understanding of the mind
- Central – state – materialism
- Contingency is an observable fact
- Physico-chemical process of the brain
- *Mental laws*

What is a process?

- Process is a sequence of events
- Every mental property is a reality of physical property
- The possession of physical property includes the possession of the other
- We can think of events and process in the state of transition.

Identification of a property

- Feeling giddy – Brain is in a particular state- identification of brain property
- $X = Y$ (x is Y)
- Water is H₂O
- Temperature is mean kinetic energy of molecules
- Liquidity is particular kind of molecule arrangement
- Pain is firing of c-fiber in the brain.

Achievement of Neuroscience

- Human behaviour and *its causes*
 - Ostensibly physical constitution
- The body is genetically programmed
 - Structure and integration is controlled by DNA molecules
- Internal operations and interactions with rest of the universe.

Identity

- Two items are numerically identical iff their properties are same

$$(x) (Y) [(x = Y) \equiv (F) (Fx \equiv Fy)]$$

- Can they (properties) have same spatial location?
- Meaningless claim e.g. 5 is green
- Thoughts have semantic properties but brain states do not have semantic properties