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 Hampel

• 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 indentified 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 $\text{H}_2\text{O}$

• 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