

# Mind/Body Overview

## 1. Physics and Folk Psychology

- a. Physics: hard-nosed, particles, observables, repeatable
- b. Folk Psychology: Beliefs, hopes, desires, sensations, subjective, consciousness

## 2. Issues

### a. *Ontological*

- 1. What are mental states and processes?
- 2. What are physical states and processes?
- 3. How are the mental and physical related?
- 4. Example: Replace NS with silicon starting at retina. Still conscious?

### b. *Semantical*

- 1. Where do propositional attitudes get their meanings? Ex: Belief; Belief that p.
- 2. Where do qualia get their meanings? Ex: pain, red, warmth
- 3. Where do other terms get their meanings? Ex: horse, electron

### c. *Epistemological*

- 1. How do we know anything?
- 2. How do we know if something has a mind? (Problem of other minds)
- 3. How do I know my own mental states? (Problem of self-consciousness)

### d. *Methodological*

- 1. What are appropriate methods for studying psychology?
- 2. What determines their propriety?

## 3. Ontologies

### a. *Substance Dualism*

- 1. Descartes: Mind is a distinct substance from matter
- 2. Matter: extended in space; has length, width, breadth, and position.

3. Mind: essence is thinking; has no extension or position in space.
4. Reasons: how could matter ever use language or reason mathematically?
5. Problem: How can mind interact with matter, and not violate conservation laws?
6. Problem: Electrons have no extension or determinate position in space. Yet physical.
7. Eccles and Popper: mind affects probabilities of exocytosis at all synapses

b. *Popular Dualism*

1. Mind is a “ghost in a machine”; machine=body; mind=spiritual substance
2. Mind is inside body (probably brain)
3. Mind interacts with brain by some form of energy exchange
4. Advantage: survival of bodily death
5. Problem: not a precise theory

c. *Property Dualism*

1. Brain/certain complex systems have special properties: like “in tune” guitar
2. Properties are not reducible to physical properties: try to reduce “money”
3. Epiphenomenalism: mind emerges from brain, but has no causal effects
4. Interactionist: Mind emerges but causally affects brain
5. Elemental-property dualism: mental is fundamental property, like mass, charge, etc.

• *Arguments For Dualism*

1. Religious backing
2. Introspective plausibility
3. Irreducibility of the mental

• *Arguments Against Dualism*

1. Ockham’s Razor
2. Explanatory impotence
3. Psychological deficits from brain damage
4. Argument from evolution: start simple/mindless, evolve to complex with mind

d. *Logical Behaviorism*

1. Psychological talk is a shorthand for complex behaviors
2. Analysis by dispositions: Thirsty= If water, would drink; says "thirsty"; etc.

• *Arguments Against Behaviorism*

1. Ignores qualia and inner experience
2. Could never specify the dispositions—infinately long

e. *Identity Theory (Reductive Materialism)*

1. Mental states just are brain states
2. Type physicalism: All properties the sciences study are physical properties
3. Intertheoretic Reduction
4.  $T_N$  reduces  $T_O$  if  $T_N$  plus boundary conditions yields  $M_O$  isomorphic to  $T_O$

• *Arguments For Identity Theory*

1. We are purely physical beings: start from fertilized egg and accrete molecules.
2. Argument from evolutionary history
3. Neural dependence of all known mental phenomena
4. Success of neurosciences in explaining behavioral capacities and deficits

• *Arguments Against Identity Theory*

1. How could mental states be brain states? Love = 40 Hz of left limbic lobe?
2. Mistakes symbol for reality: Brain is symbolic construct of perception
3. Requires mental properties to be physical: Too strong. Take money example again.
4. Nothing without brain can have mentation. What about silicon creatures from Mars?

f. *Functionalism*

1. Mental states defined by causal relations of (1) stimuli, (2) behavior, (3) mental states
2. Ex: Headache. Groans, beliefs about aspirin, take aspirin, avoid bright light etc.
3. Ex: Turing coke machine
4. Difference with behaviorism: Admits causal interactions of mental states

5. Difference with identity theory: only says mental token=physical token (not type)
  6. Token physicalism: All events the sciences study are physical events
  7. Allows minds to be in computers, not just brains
  8. Grants the autonomy of psychology relative to physics;
  9. Psychology has own irreducible laws and subject matter
- *Arguments Against Functionalism*
    1. Spectrum inversion argument
    2. Absent qualia problem: Block's Chinese simulation of mind using  $10^9$  people
  - g. *Eliminative Materialism*
    1. Folk psychology is a false theory and will be eliminated in favor of neuroscience
    2. Ex: caloric, phlogiston, starry sphere of the heavens
    3. Learn to interpret our experiences neurally. "I have a 40 Hz limbic oscillation"
  - *Arguments For Eliminative Materialism*
    1. Explanatory failures of folk psychology: Why sleep? How learn? Mental illness?
    2. Many other folk theories have been wrong: folk physics (impetus), earth center
    3. Folk psychology has not improved much in over 2000 years
    3. Reducing folk psych to neuroscience is demanding; elimination is more likely
  - *Arguments Against Eliminative Materialism*
    1. Introspection does not reveal neural states, only psychological states
    2. How shall we believe eliminative materialism if we eliminate beliefs?
    3. Folk psych is powerful; revised, not eliminated. Ex: invited to talk in L.A.
  - h. *Idealism*
    1. Berkeley: Physical objects don't exist unperceived: ideas in the mind.
    2. Kant: Mind's knows itself mediately (like it knows the world).

3. Hegel: Mind is to body as universal is to particular. Reality=self consciousness.
  4. Phenomenalism: physical object = actual/possible experiences
- *Arguments For Idealism*
    1. Argument from illusion: veridical percept could be nonveridical & vice versa
    2. Ex: Hallucinations, dreams. We see our own creations.
    3. Physical objects can't resemble our percepts:<sup>1</sup>
    4. Modern view that perception is symbolic construction.
    5. Recent theory / experiments in quantum theory<sup>2</sup>
  - *Arguments Against Idealism*
    1. Armstrong: What is the relation of mind and its "ideas"?
    2. What makes two different minds two (not spatial location!)?
    3. If no physical reality, what do we mean by illusions?

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<sup>1</sup> Berkeley, *The Principles of Human Knowledge*, section 8: "But, say you, though the ideas themselves do not exist without the mind, yet there may be things like them, whereof they are copies or resemblances; which things exist without the mind, in an unthinking substance. I answer, an idea can be like nothing but an idea; a colour or figure can be like nothing but another colour or figure. If we look but never so little into our thoughts, we shall find it impossible for us to conceive a likeness except only between our ideas. Again, I ask whether those supposed *originals*, or external things, of which our ideas are the pictures or representations, be themselves perceivable or no? If they are, then they are ideas, and we have gained our point: but if you say they are not, I appeal to any one whether it be sense to assert a colour is like something which is invisible; hard or soft, like something which is intangible; and so of the rest.

<sup>2</sup> Wheeler, in *The Ghost in the Atom* (Eds. P. Davies and J. Brown) p. 60: "the Everett interpretation takes quantum theory in its present form as *the* currency, in terms of which everything has to be explained or understood, leaving the act of observation as a mere secondary phenomenon. In my view we need to find a different outlook in which the primary concept is to make meaning out of observation and, from that *derive* the formalism of quantum theory."