Identity Theory

"Sensations and Brain Processes"

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Smart Against Dualism

- “I cannot believe that mental events, like having sensations, are outside of the physical realm.”
- If mental events were outside of the physical realm, then they would be "nomological danglers", they would not be explained by the laws we use to explain everything else

Smart Against Behaviorism

- Assertions of pain do just display pain, they report something
- But, if behaviorism is true, assertions do not report anything, because behavior just is the mental

Identity Theory

- "It seems to me that science is increasingly giving us a viewpoint whereby organisms are able to be seen as physico-chemical mechanisms: it seems that even the behavior of man himself will one day be explicable in mechanistic terms. There does seem to be, so far as science is concerned, nothing in the world but increasingly complex arrangements of physical constituents." (Smart)
- **Identity Theory**: Any mental state X is identical with some brain state Y
  - E.g. Pain mental state = C-fibre (neuron) firing

The Grander Vision

- Scientific 'Reductions'
  - Thermodynanics (bulk level) reduced to Mechanics at molecular level
    - Thermodynamics: temperature, pressure, volume, energy
    - Mechanics: energy and entropy at molecular level
    - Temperature = mean molecular kinetic energy of molecules (atoms)
  - Not all scientific theories are reducible in this way
- Identity Theory is the theory that the mental can be reduced in a similar way to brain states

Advantages over Dualism

- No positing abstract objects – they are too mysterious to some
- Causal interaction between mental and physical events intelligible
  - Since, mental events are brain processes, there is no mystery how a pain interacts with say the moving an arm. The same goes for the other direction; e.g. how a pinch causes a mental event.

Objection 1

- **Objection**: the mental state of having a toothache is the same thing as a certain brain state, X. But we can know about toothaches without knowing anything about brain states.
- **Reply**: According to Smart, the identity between a toothache and brain-state X is something we do not necessarily know about before we do science. It's like the identity between water and H20. We can know all about water without knowing anything about H20, but that doesn't mean they're not identical. We just have to do some science to find out that they are.

Objection 2

- **Objection**: Brain processes can be fast or slow, can form shapes in the brain etc. but we can't talk about sensations in this way
- **Reply**: The fact that it seems to us that pain does not have a shape is a sign of our ignorance of our brain. Some day it will make sense to talk of sensory experiences in the same way we talk about brain processes.

Objection 3

- **Objection:** Sensations are privately accessibly only, brain processes are publicly accessible. Only I have privileged access to my sensations, whereas other people can observe my brain processes.
- Reply: sufficient empirical evidence about one's own brain, one would, in principle, be able to gain access to one's own sensations, and phenomenal experiences.

Objection 4: Multiple Realizability

- Obj: mental states are multiply realizable
  - Imagine a Martian that that also Imagine a martian is very different from our. The Martian may not have C-fibre neurons or even neurons of any kind.
  - It is still conceivable that the Martian has mental states (e.g. pain states)
  - So, mental states are not identical with brain states
- Less drastic example: an elephant, a human, and a poodle can experience the same mental states, e.g. pain, but their brain make up is presumably very different.
- if pain is identical with a human brain state (human C-fiber firing), and mental state X is identical to brain state X then a poodle does not have pain because it doesn't have human brain states

Analogy: Money

- Consider the diversity of things that count as money
  - A signed check
  - A French 100 franc note
  - A US silver dollar
  - A wire transfer by computer
  - Bits in a computer
  - Etc.
- So, money can't be identical with the physical stuff that it is made of, because the above examples of money have no common physical properties.