Introduction to Philosophy

Philosophy 110W
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Problems with Functionalism

Motvations for Functionalism

- Avoid the identity theorist's chauvinism and non-relational construal of mental states

- Avoid the behaviorist's denigration of internal states
  - ‣ "Since mental states interact in generating behavior, it will be necessary to find a construal of psychological explanations that posits mental processes: causal sequences of mental events" (Fodor 454a).

- Type mental states according to behavior

- Abstract away from the particular hardware

- The mind is the software of the brain.
  - ‣ "In the functionalist view the psychology of a system depends not on the stuff is it made of (living cells, metal or spiritual energy) but on how the stuff is put together" (Fodor 451).

Generalizing Over the Hardware

- Functionalist definition of pain
  - ‣ A thing is in pain if it has been affected in certain relevant ways, and if it has other concomitant mental and behavioral states (like wincing or crying) which are causally related to it.

- When we are researching the mental states of a particular organism, we will of course look at the specific causal processes involved.

- But, when we generalize to a functionalist theory of mind, we abstract away from physical particulars.

- Ramsification: a logical trick to eliminate irrelevant vocabulary from the theoretical identity sentences of a formal theory of mental states.

- Replace references to the specifically mental parts of this theory, pains and color terms and beliefs, with variables.

Functionalist Psychology

- $T(s_1...s_n, i_1...i_m, o_1...o_k)$
  - ‣ i_{7345} = having an orange soda can in front of you
  - ‣ s_{2342} = seeing the cylindrical orange patch
  - ‣ s_{4873} = desiring orange soda
  - ‣ s_{92357} = enjoying an orange soda
  - ‣ o_{983} = Saying, 'Ahh, I enjoyed that orange soda'
- E.g. Whenever a person is in state s_{4873} and receives input i_{7345} so that she develops state s_{2342}, she also moves into state s_{92357} and produces output o_{983}.

Behaviorist Psychology

- $B(i_1...i_n, o_1...o_m)$
- Look, Ma, no mental state terms!
- Parsimony

Identity Theory

- $T(s_1...s_n, i_1...i_m, o_1...o_k)$
- Differs from functionalism only in the interpretation of the internal states
- The $s_1...s_n$ refer to particular brain states.
  - ‣ Or, brain and body states
- But multiple realizability
- The functionalist satisfies the multiple realizability condition by claiming that the $s_1...s_n$ can refer to any kinds of states.
  - ‣ even states of an immaterial soul

Ramsification

- $T(s_1...s_n, i_1...i_m, o_1...o_k)$

- $\exists x_1...\exists x_n\, T(x_1...x_n, i_1...i_m, o_1...o_k)$

- p is enjoying an orange soda iff $\exists x_1...\exists x_n\, T(x_1...x_n, i_1...i_m, o_1...o_k$ and p is in $x_{92357})$
  - ‣ a functional, causal-role definition of your mental states

- x is in pain iff x has been affected by the kinds of things that cause pain, has other mental states that generally accompany pain, and exhibits the kind of behavior that are associated with pain.

- Pain is whatever has the place that pain has in your life.
  - ‣ preceded by physical or emotional blows
  - ‣ succeeded by characteristic behavior
    - • avoidance
    - • valiant confrontation
  - ‣ engenders certain other mental states
    - • fear or anger or resignation

David Lewis on Ramsification

- We are assembled in the drawing room of the country house; the detective reconstructs the crime. That is, he proposes a *theory* designed to be the best explanation of phenomena we have observed: the death of Mr. Body, the blood on the wallpaper, the silence of the dog in the night, the clock seventeen minutes fast, and so on. He launches into his story:

- X, Y and Z conspired to murder Mr. Body. Seventeen years ago, in the gold fields of Uganda, X was Body's partner... Last week, Y and Z conferred in a bar in Reading... Tuesday night at l1:17, Y went to the attic and set a time bomb... Seventeen minutes later, X met Z in the billiard room and gave him the lead pipe... Just when the bomb went off in the attic, X fired three shots into the study through the French windows...

- And so it goes: a long story. Let us pretend that it is a single long conjunctive sentence. The story contains the three names 'X', 'Y' and 'Z'. The detective uses these new terms without explanation, as though we knew what they meant. But we do not. We never used them before, at least not in the senses they bear in the present context. All we know about their meanings is what we gradually gather from the story itself. Call these theoretical terms (T-terms for short) because they are introduced by a theory.

Functionalism and AI

- Liberal view of mind

- We might wonder if the difference between machines and human beings has some biological basis.

- Searle argues that there is something essentially biological about mentality.
  - ‣ Responding both to claims of machine intelligence and to claims that we can test functionalism by constructing models of human minds.

- To understand minds, according to the functionalist, we can examine computer models and their software.

- Computers and their software work according to purely formal, syntactic manipulation.

- They merely follow algorithms, every step of which can be specified syntactically.

The Chinese Room

Searle's Argument

1. Programs are completely describable in terms of their formal, syntactic content.

2. Minds grasp the meanings, or semantics, as well as syntax.

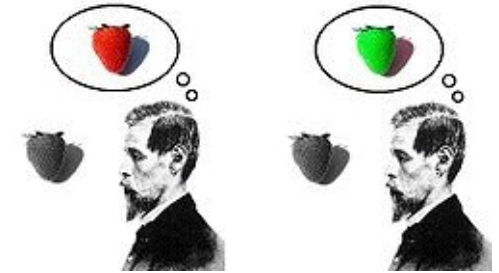3. Syntax alone can not produce semantics.

So, minds are not merely syntactic manipulators; i.e. minds are not mere programs.

There is more to our minds than algorithmic processing of sensory input toward the production of motor output.
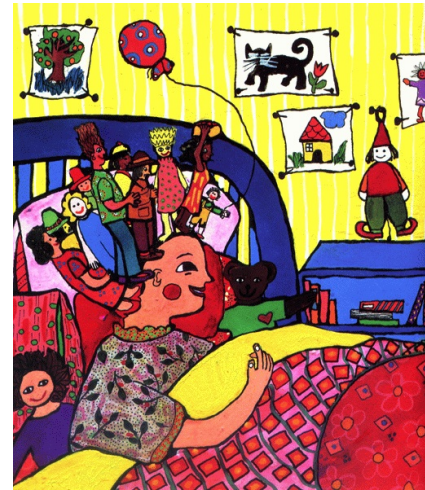
Qualia Issues

- Materialist theories of mind fail to capture our internal mental lives.

- The behaviorist rejected all first-person evidence as misleading and useless.

- The Identity theorist accepted that internal states were causes of behavior, rather than identical to behavior, but identified the mental states with their neural correlates.

- Both theories work better as third-person accounts of mental states than as first-person accounts.

- Similarly, functionalism has been criticized for failing to account for the way that mental states appear to us, for consciousness.

- absent qualia argument

- inverted qualia: two people could be identical in their behavior, and indeed in their functioning, and yet not share the same phenomenal experience.

Inverted Spectrum

- What if every time one person saw red, another person saw purple?
  - ‣ Every time one saw blue, the other saw green, etc.
- They could still use the same terms; they would be functionally isomorphic.
- But, they would be having different qualia.
- If there are cases of inverted qualia, then people with the same functional states are in different mental states.
- And, there seems to be no way to deny the possibility of inverted qualia.
- Similar problems could be constructed for all sense modalities.

Absent Qualia

- Homunculi headed robot
  - ‣ The brain of a creature functionally equivalent to me turns out to have tiny persons inside his brain, rather than neurons, performing exactly the same functions that the neurons perform in my head.

- Chinese Nation
  - ‣ The creature looks and functions just like us with an artificial processing system made out of the people in China.

- In both inverted and absent qualia cases, the functionalist seems to fail to account for occurrent sensory states.

Zombies:
Another Problem for Functionalism

Summary

- The Chinese room argument shows that functionalism has a problem accounting for our intentional states.

- The absent qualia argument shows that functionalism has a problem accounting for our phenomenal states.

- Only the dualist provided a satisfying first-person account.

- But dualism has an apparently insuperable (and spooky) problem of interaction.

- Functionalism is the most widely supported contemporary theory of mind.