

Ontology

- Ontology: the study of being.
- Guiding questions:
 - What kinds of things are there?
 - For each kind of thing, how can we best explain its nature?
 - Often, it seems the best way to answer the previous question is to ask: **what makes this thing the kind of thing that it is?**

A very important distinction

- Malcolm X is tall.
- Malcolm X is Malcolm Little.
- Malcolm X is.

The first bullet tells of a property of a particular.

The second bullet tells us that (what seemed to be two) particulars are the same thing.

The third bullet just tells us that this particular exists.

Note here we are talking about particulars, sometimes called “tokens.”

The very important distinction, for kinds

- Temperature (of an object) is a property of matter.
- Temperature (of an object) is decoherent molecular motion.

The first bullet tells of a property of properties.

The second bullet tells us that (what seemed to be two) kinds are the same kind.

Note here we are talking about kinds, sometimes called “types.”

Most ontological theories are stated in terms of identity conditions of types

- Temperature (of an object) is decoherent molecular motion.
- Temperature (of an object) = decoherent molecular motion.

Fancy ways of saying the strongest version of identity: Leibniz's Law

- First order version (the usual version):

$$\forall x \forall y (x=y \leftrightarrow \forall F (Fx \leftrightarrow Fy))$$

- My attempts at a second order version:

$$\forall F \forall G (F=G \leftrightarrow \Box \forall x (Fx \leftrightarrow Gx))$$

$$\forall F \forall G (F=G \leftrightarrow \Box \forall \Phi (\Phi F \leftrightarrow \Phi G))$$

BUT: in theories, our identity conditions will be more general than these requirements. We will identify a general property using an identity that is something like:

- Kind **K** = thing/event kind with property **P₁** and property **P₂** and property **P₃** and

Don't fall for these common confusions

- Given that: Mark Twain is Samuel Clemens.
- It is wrong (or at least confusing) to say:
 - Mark Twain is related to Samuel Clemens.
 - Mark Twain is caused by Samuel Clemens.
 - Mark Twain arises from Samuel Clemens.
 - Mark Twain is formed by Samuel Clemens.
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Aristotle on Psyche

“... the soul is the first grade of actuality of a natural body having life potentially in it.”

“... the body corresponds to what exists in potentiality; as the pupil plus the power of sight constitutes the eye, so the soul plus the body constitutes the animal.... From this it indubitably follows that the soul is inseparable from its body....”

Substance and Dualism

- “Substance” means a kind of being.
- Descartes’s criterion for two substances to be of different kinds is that each kind can exist without the other.
- Descartes view is: interactive substance dualism.

Ibn-Sina *aka* “Avicenna” (980-1037 AD)

From *On The Soul (Fi'-Nafs)*:

Let us suppose... that a person is created in an adult state, but in such a condition that he is born in a void where his body cannot touch anything and where he cannot perceive anything of the external world. Let us also suppose that he cannot see his own body and that the organs of his body are prevented from touching one another, so that he has no sense- perception whatsoever. Such a person will not affirm anything of the external world or even the existence of his own body but will, nevertheless, affirm the existence of his self as a purely spiritual entity. Now, that which is affirmed is certainly not the same as that which is not affirmed. The mind is, therefore, a substance independent of the body.

A Distinction in Behaviorisms

- Psychological behaviorism:
 - Explain behaviors as a relation between measurable responses and measurable stimuli.
 - Avoid as much as possible reference to any internal states/events, other than **conditioning**
 - Disagreements (or perhaps openness) about what can be reduced and what can be eliminated
- Philosophical behaviorism
 - (Re)define mental terms as a relation between measurable responses and measurable stimuli.
 - Committed to reductionism (each mental term will be reconstrued in behaviorist terms).

Conditioning

- Classical conditioning:

An **unconditioned stimulus (US)** is paired with a **conditioning stimulus (CS)** for some number of cases. The **US** causes some reaction **R**. After the pairing cases, the **CS** alone causes **R**.

- Operant conditioning:

A behavior is given a positive reward, and this makes the behavior more likely (or: A behavior is given a negative reward, and this makes the behavior less likely).

A Functionalist Example



Ruth
Millikan
(1933-)

A Functionalist Example

Ruth Millikan:

... a certain species of northern hemisphere bacteria ... orient themselves away from their toxic oxygen-rich surface water by attending to their magnetosomes, tiny inner magnets, which pull towards the magnetic north pole, hence pull down.... The function of the magnetosome thus appears to be to effect that the bacterium moves into oxygen-free water. [Also,] intuition tells us that what the pull of the magnetosome represents is the whereabouts of oxygen-free water. The direction of oxygen-free water is not, however, a factor *causing* the direction of the pull of the magnetosome.... None of this makes any sense on a causal or informational approach. But on the biosemantic theory it does make sense.

From: "Biosemantics."

Mental event kind A is of kind pain if and only if

- Reductive physicalist:

A = such and such a kind of physical event or state (typically a brain event or brain state).

- Substance dualist:

A = such and such a kind of event or state of the soul (which is independent of the body).

- Behaviorist:

A = an increased likelihood to withdraw, to have increased heart rate, to face towards the relevant stimulus....

- (Physicalist) functionalist:

A = a kind of brain event or state that causes an increased likelihood to withdraw, to have increased heart rate, to face towards the relevant stimulus... and that typically functions in the organism to achieve certain goals such as avoiding harm, etc....

We should always consider that some kind that we posit is a mistake

- Eliminativism about kind A: the claim that kind A does not exist. (There may be something that does exist that we call “A”, but then our beliefs about “A” will include false assumptions.)
- The simple examples are things like:
 - Demon possession
 - Caloric
 - The Ether
 - Zeus’s bolts
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The complicated or subtle examples....

- Consider a physicalist reductionist claim like: A sensation of type *pain* is brain event of type *X*.
- Someone might reply:
 - *Pain* is a private experience.
 - Brain events of type *X* are not private experiences (we can observe them with fMRIs, or electrodes, etc.)
 - So, sensation of kind pain is **not** a brain event of type *X* (because they have different properties).
- The reductionist is forced to say, if you insist that what you call “pain” is a private experience, then we say that this kind of thing doesn’t exist. (But of course we still want to explain something that they were calling “pain.”)