PHIL 255
Week 12: Meaning and Intentionality
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Emergence & Will

Meaning

Please turn off and put away all electronics.

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Emergence

Emergent properties are possessed by the whole, not by the parts, and are not simple aggregates of the properties of the parts because they result from the interactions of parts.

(from W. Wimsatt, M. Bunge)

Emergent process = series of changes that produce emergent properties.

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Examples

1. Fire: material + oxygen + heat → flame + heat

2. Consciousness: representation + binding + competition → experience + awareness + attention

3. Will: intention + motivation/emotion + consciousness → choice + action. Interaction of prefrontal cortex, basal ganglia, amygdala, etc.

Freeish Will

Will emerges from interactions of intention, emotion, and consciousness. These are all neural processes.

Your actions are FREEISH if:
1. You are not externally coerced.
2. Your internal mental processes are not disrupted by disease, drugs, etc.
3. Your actions are not randomly produced.

Freeish will suffices for moral/legal responsibility, and democratic society.

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Meaning

1. Is meaning a thing (content), relation, or a process? Or nothing (eliminativism)?

2. Does meaning belong to words, mental objects (ideas), or neural representations?

3. Does meaning come from above (Platonic forms), below (interactions with the world), or sideways (interactions with other representations)?

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Neurosemantics

Eliasmith

Meaning is a complex process involving neural representations, i.e. patterns of firing in neural populations.

Words and ideas get their meaning via neural and processes.

Semantic pointers combine relations to the world (sensory and motor inputs) with relations to other semantic pointers (inference, transformations).

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Meaning Emerges:

1. Sense experience and motor control (external, reference)

2. Interactions with other representations (internal, procedural)

3. Innate representations (genetic, evolved)

4. Interactions with other people (social, linguistic)

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Discussion Question

What are the bearers of meaning? What are the sources of meaning?

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Intentionality

Mental states are about the world because they are neural processes that interact with the world via sensory and motor processes. E.g. horses are tall.

Mental states may fail to be about the world because representations can have meaning via relations to other representations. E.g. unicorns have horns.

Computers can have intentionality if they have the same kinds of processes found in brains: robosemantics.

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Courses Winter, 2015

- PHIL/PSYCH 256: Introduction to Cognitive Science (also extended learning)

- PHIL 371: Intelligence in Humans, Animals, and Machines (eventually COGSCI 300)

- SYDE 556: Simulating neurobiological systems

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