

Consciousness, AI and Philosophy

How to proceed?

- ◆ Introduction
- ◆ Global Workspace
- ◆ A philosophers debate:
Functionalism or Physicalism?
- ◆ Society of Mind
- ◆ The future of AI?
- ◆ The assignment



Questions? Something not clear?
Just ask!

Introduction



- ◆ Philosophy? Rubbish!
- ◆ The mysteries of life, body, mind and soul
- ◆ What is it 'to be'?
- ◆ What makes us 'tick'?

Introduction (2)

- ◆ **Conscious:**
- ◆ Having a feeling or knowledge (of ones sensations...);
- ◆ knowing or feeling (that something is happening or existing...)
- ◆ Aware of oneself as a thinking being



What is consciousness? Can you describe it?
It's happening in your head, right now! (hopefully...)

Introduction (3)



- ◆ AI: the search for intelligence
- ◆ Haven't we found it already?
- ◆ Ultimate goal: human intelligence!
- ◆ Is intelligence all we need?
Consciousness maybe? More?!

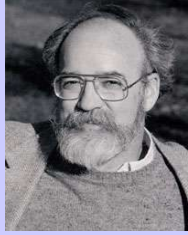


Global Workspace

- ◆ B. Baars
- ◆ Broadcasting system
- ◆ Specialistic experts (vision, speech, but also memory, other internal functions)



Global Workspace + Experts + 'Context' = consciousness?



Functionalism

- ◆ D. Dennett
- ◆ Based on Global Workspace
- ◆ Mental state == Functional state
- ◆ Functional state == state of system + input + potential output methods
- ◆ No control, as system **is** control!
- ◆ Fame in the brain
- ◆ The debate metaphor



Global Accessibility **is** consciousness

Physicalism



- ◆ N. Block
- ◆ Rooted in psychology
- ◆ Consciousness can be located... and can't be located!
- ◆ Consciousness is minutely timescale-dependent (== X?)
- ◆ Global broadcasting...
- ◆ but enabled by phenomenality
- ◆ Consciousness is only possible in biological 'robots'!





Society of Mind

- ◆ M. Minsky
- ◆ Agents and Frames
- ◆ Functionalism... or is it?
- ◆ Sensing **inside** the brain
- ◆ Global workspace, short-term memory 'agencies'
- ◆ “Consciousness always concerns the mind's past!” - communication takes time
- ◆ Little self-insight, not truly self-aware!

Back to AI! (sort of)

- ◆ ~~Physicalism~~
- ◆ Functionalism then?
- ◆ SoM: bring connectionist and symbolists together! (agents **and** frames)
- ◆ Multi-Agent Systems?
- ◆ Doubts remain... or do they?

Conclusion

- ◆ Still no definition of consciousness...
- ◆ Functionalism + (parts of) Physicalism?
- ◆ Society of Mind, even after nearly two decades still not fully exploited
- ◆ Consciousness isn't the end, merely one part of the sum!

The assignment

- ◆ Do you believe that Artificial Consciousness is possible?
- ◆ Do you believe that consciousness is necessary for something truly intelligent?
- ◆ What do you think? Is my dog in the paper conscious or not?