

# Conceptual Issues in Cognitive Science

## Symbolic Systems Small Seminar

*This is a preliminary syllabus and will change!*

SymSys 207

Winter Term 2021

Instructor: Paul Skokowski

Stanford University

Mondays 10:00am-11:20pm

Virtual Office Hours: By Appointment

**Grading: 75% Participation (discussed 1st day of class); 25% Final Paper**

### **Week 1, Jan 11th: Course Overview & Review of Theories of Mind I**

Skokowski, [One Philosopher is Correct \(Maybe\)](#), or [here](#). Australasian Journal of Logic, 2010, 9(1).

Descartes, *The Passions of the Soul* - [here](#).

Huxley, [On the Hypothesis that Animals are Automata](#) - Read from "Thus far, the prepositions" through to "sum of existence." (note misspelling: 'prepositions' should read 'propositions!')

*Further Suggested Reading:*

Descartes, *Meditations on the First Philosophy* (2nd and 6th) - [here](#).

Leibniz, [The Nature and Communication of Substances](#)

### **Week 2, Jan 18th: Martin Luther King Day**

### **Week 3, Jan 25th: Review of Theories of Mind II: Logical Positivism and Behaviorism**

Schlick, [Positivism and Realism](#)

Ryle, [Descartes' Myth](#), from *Concept of Mind*, 1949.

Putnam, *Brains and Behavior*, [here](#).

*Further Suggested Reading:*

AJ Ayer, *The Nature of Philosophical Analysis*, Ch. 3 in *Language, Truth and Logic*

Carnap, [Psychology in Physical Language](#)

### **Week 4, Feb 1st: Mind as Matter & Functionalism**

Place, [Is Consciousness a Brain Process?](#), British Journal of Psychology 47:44-50, 1956.

Smart, [Sensations and Brain Processes](#), Philosophical Review 68:141-56, 1959.

Putnam, *The Nature of Mental States* (or: Psychological Predicates, *Art, Mind, and Religion*, 1965.)  
[-here](#).

Block, *Troubles with Functionalism*, in *Minnesota Studies in the Philosophy of Science* 9:261-325 (1978), and in *Readings in the Philosophy of Psychology*, Vol. 1, Ned Block (ed.) Harvard, 1980. ([Read section 1.2, p. 275-278, here](#).)

*Further Suggested Reading:*

Dennett, *True Believers*, [here](#).

Churchland, [Eliminative Materialism and the Propositional Attitudes](#)

Armstrong, *The Causal Theory of the Mind*, [here](#).

Feigl, *The Mental and the Physical*, [here](#).

**Week 5, Feb 8th: The Problem of Pain**

**Visitor: Howard Fields, UCSF Neuroscience**

M. Aydede, [Pain](#)

Tye, [Pains](#), Sec. 4.5 of *Ten Problems of Consciousness*.

Fields, H., [Setting the Stage for Pain](#).

Fields, H., [Pain: An Unpleasant Topic](#).

*Further suggested readings:*

Fields, H., [State-Dependent Opioid Control of Pain](#).

Skokowski, [Is the Pain in Jane Felt Mainly in her Brain?](#)

Kripke, [Naming and Necessity](#), Lecture III, 144-155. (Search for 'Descartes'. Read from the previous paragraph through the last paragraph before the Addendum.)

Tye, [Another Look at Representationalism about Pain](#)

**Week 6, Feb 15th: President's Day**

**Week 6, Feb 22nd: EITHER:**

**Neuroimaging**

Coltheart, M, *What has functional neuroimaging told us about the mind (so far)?*

Coltheart, M, *Perhaps functional neuroimaging has not told us anything about the mind (so far).*

Roskies, A., [Brain-mind and structure-function relationships: A methodological response to Coltheart](#)

Hardcastle and Stewart, *What Do Brain Data Really Show?*

*Further Suggested Reading:*

Klein, C, *Images are not the Evidence in Neuroimaging.*

**OR:**

**Integrated Information Theory**

Tononi and Koch, *Consciousness: here, there and everywhere?*

Oizumi et al., *From the Phenomenology to the Mechanisms of Consciousness: Integrated Information Theory 3.0*

Bayne, T., *On the axiomatic foundations of the integrated information theory of consciousness*

Pockett, S., *Problems with theories that equate consciousness with information or information processing*

*Further Suggested Reading:*

Dretske, F., *Knowledge and the Flow of Information (Ch1 - Ch3)*

Cerullo, *The Problem with Phi: A Critique of Integrated Information Theory*

**Week 8, Mar 1st: Neural Implants and Sensation**

**Visitor: Daniel Palanker, Stanford Physics**

Palanker and Goetz, [Restoring Sight with Retinal Prostheses](#)

Ramirez et al., [Creating a False Memory in the Hippocampus](#)

*Further Suggested Reading:*

Thomson, et al., [Perceiving Invisible Light through a Somatosensory Cortical Prosthesis](#)

Norimoto, Ikegaya, [Visual Cortical Prosthesis with a Geomagnetic Compass Restores Spatial Navigation in Blind Rats](#)

**Week 9, Mar 8th: Neuroscience and Free Will**

**Visitor: Bill Newsome, Director, Stanford Wu Tsai Neurosciences Institute**

Newsome, W., [Neuroscience, Explanation and the Problem of Free Will](#), in Gazzaniga (ed.), *The Cognitive Neurosciences IV*.

Haggard, P., *Nature Reviews Neurosciences*, [Human volition: towards a neuroscience of will](#), 2008.

Gholipour, B., [A Famous Argument against Free Will has been Debunked](#), *The Atlantic*, Sept. 2019.

*Further Suggested Reading:*

Roskies, G. 2010. How does neuroscience affect our conception of volition?

Libet, B. 1999. Do we have free will?

Roskies, A.. Why Libet's studies don't pose a threat to free will.

Libet et al., Subjective Referral of the Timing for a Conscious Sensory Experience.

**Week 10, Mar 15th: Qualia in a Physical World**

Jackson, [Epiphenomenal Qualia](#), Philosophical Quarterly 32:127-36, 1982.

Nagel, [What is it Like to be a Bat?](#), The Philosophical Review, LXXXIII(4), 435-450. Another version [here](#).

[Humans Can Learn to "See" With Sound](#), National Geographic, 2010.

*Further Suggested Reading:*

Tye, [Another Look at Representationalism about Pain](#)

Skokowski, *Three Dogmas of Internalism*, in Skokowski, P. *Information and Mind*, Stanford CA: CSLI Press, 2020. (Canvas)