

Foundational Issues in Cognitive Science

Symbolic Systems Small Seminar

This is a preliminary syllabus and will change!

SymSys 207

Spring Term 2019

Instructor: Paul Skokowski

Stanford University

Mondays 3:30am-5:20pm

Room: 260-003

Office Hours: By Appointment

Office: Philosophy Bldg 100, Room 102M

Grading: 70% Participation (discussed 1st day of class); 30% Final Paper

Week 1, April 1st: 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, April 8th: Review of Theories of Mind II

Schlick, [Positivism and Realism](#)

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

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

Further Suggested Reading:

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

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

Carnap, [Psychology in Physical Language](#)

Week 3, April 15th: Tool Use and Causation

Visitor: John Campbell, UC Berkeley Philosophy & Cognitive Science

Campbell, J., *Why Do Language Use and Tool Use Both Count as Manifestations of Intelligence?*

Further Suggested Reading:

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 - and [here](#). (Read from section 1.0 "One characterization of functionalism" through section 1.2, ending with "Call this argument the Absent Qualia Argument." p. 63-73.)

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

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

Week 4, April 22nd: Neuroimaging

Coltheart, M, *What has functional neuroimaging told us about the mind (so far)? Cortex* 2006.

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

Cortex, 2002.

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

Hardcastle and Stewart, *What Do Brain Data Really Show?*, *Philosophy of Science*, 2002.

Further Suggested Reading:

Klein, C., *Images are not the Evidence in Neuromaging*, 2010.

Week 5, April 29th: 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 6, May 6th: Time, Experience, and Experience of Time

Visitor: Craig Callender, UCSD Philosophy

C. Callender, *Do We Experience the Present?* (Ch 11 of *What Makes Time Special?*)

J. Hartle, *The Physics of Now* - [here](#)

Introductory Readings on Special Relativity & Time:

Online Resource: Norton, J., [Einstein for Everyone](#)

Read [Chapter 10 - Spacetime](#)

Further Suggested Reading:

Norton, J., any combination of [Ch. 2](#), [Ch. 3](#), [Ch. 5](#)

Week 7, May 13th: 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 8, Thursday May 23rd: Neuroscience and Free Will

*** * * Note Different Date - Class held at Skokowski House in Palo Alto * * ***

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.

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 9, May 27th: Memorial Day - No Class

Week 10, June 3rd: 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, [Is the Pain in Jane Felt Mainly in her Brain?](#)