

Conceptual Issues in Cognitive Science

Symbolic Systems Small Seminar

This is a preliminary syllabus and will change!

SymSys 207

Autumn Term 2019

Instructor: Paul Skokowski

Stanford University

Wednesdays 3:30am-5:20pm

Room: 100-100K

Office Hours: By Appointment

Office: Philosophy Bldg 100, Room 101B

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

Week 1, Sept 25th: 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, Oct 2nd: 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:

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

Carnap, [Psychology in Physical Language](#)

Week 3, Oct 9th: 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](#).

Armstrong, *The Causal Theory of the Mind*, [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.)

Further Suggested Reading:

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

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

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

Week 4, Oct 16th: Panpsychism

Visitor: John Perry, Stanford Philosophy

--- All readings posted on CANVAS ---

Strawson, *What does "physical" mean? A prolegomenon to physicalist panpsychism*

Chalmers, *Panpsychism and Panprotopsychism*

Chalmers, *The Combination Problem for Panpsychism*

Perry, *Glossary*, from: *Dialogue on Consciousness* (

Further Suggested Reading:

Wishon, *Neutral Monism and Panpsychism*

Russell, *Mind and Matter*

Russell, Selections from *'The Analysis of Matter'*

Week 5, Oct 23rd: Computational Creativity

Visitor: Ron Chrisley, University of Sussex

--- Readings below are posted on CANVAS ---

One of:

Schmidhuber, *Formal Theory of Creativity, Fun, and Intrinsic Motivation*

Schmidhuber, *Driven by Compression Progress: A Simple Principle Explains ...*

Background Reading:

Margaret Boden: "In a nutshell", from *The Creative Mind: Myths and Mechanisms*

--- (also see email sent to class for further Background Readings links) ---

Further Reading:

Margulis and Beatty, *Musical Style, Psychoaesthetics, and Prospects for Entropy as an Analytic Tool*

--- (also see email sent to class for further reading links) ---

Week 6, Oct 30th: 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.*

Week 7, Nov 6th: 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, Nov 13th: Neuroscience and Free Will

***** Note Different Time & Place: Class held at 5:30 PM at Skokowski Home, Palo Alto *****

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.

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, Nov 20th: 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 10, Nov 27th: Thanksgiving Week - No Class

Week 11, Thursday Dec 4th: 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?](#)