

7AAN2066 Philosophy of Psychology I
Syllabus –Academic Year 2015/2016 – Semester 1

Basic information

Credits: 20

Module Tutor: Robyn Repko Waller

Office: 707 Philosophy Building

Consultation Hours: Tuesdays 11:00-12:00; Fridays 15:00-16:00

Semester: 1

Lecture time and venue: Tuesdays 09:00-11:00; 304 Philosophy Building

Module description, aims, and objectives

[Official KCL Module description] Philosophy of psychology considers theoretical issues raised by contemporary psychological sciences. These questions are continuous with the central questions in philosophy of mind, like: how do brains give rise to minds; and how should we understand paradigmatic mental phenomena like thinking, reasoning, perceiving and experiencing? In practice, then, philosophy of psychology can be thought of as an empirically-informed perspective on philosophy of mind. This module will focus on some topical psychological or information-processing explanations, consider how they work and what they purport to explain. It will extend into areas where the rise of cognitive neuroscience and the methods of functional neuroimaging have made a major impact.

This course will cover a number of philosophical issues related to philosophy of mind, philosophy of cognitive science, and philosophy of science. Topics include the following:

- Folk psychology and the history of psychological theories of thinking
- Commitments and foundations of the cognitive sciences
- The nature and explanation of cognition: Computationalism, connectionism, and other approaches
- Applications: Models of memory, decision-making, and action production
- Realism and instrumentalism about models of cognition
- Artificial intelligence and situated cognition
- Explanations of consciousness
- The role of emotion in cognition

Course Objectives:

- To provide students with a survey of some of the historic and contemporary debates in philosophy of cognitive science and the interplay of these philosophical debates with work in related academic disciplines.
- To provide students with an understanding of the nature and methods of philosophical theorizing, including the criteria by which arguments in philosophy of mind, philosophy of cognitive science, and philosophy of science are to be assessed.
- To further foster students' abilities to think critically, analyze complex problems, evaluate arguments, and argue cogently for their own views both about philosophy of psychology and philosophical topics more generally.

There will be one weekly one-hour lecture and one weekly one-hour seminar.

Assessments and deadlines

Summative assessment: one x 4,000-word essay

Due: 12:00 noon, Tuesday 19 January 2016

Formative assessment: one x 2,000–3,000-word essay, due by end of semester or as otherwise instructed

Due: Friday 4 December 2015

Lecture topics and reading schedule

Week 1

Folk Psychology and the History of Psychological Theories of Thinking

Required reading

(i) Cummins, D. D. 1988. A History of Thinking. In R. J. Sternberg, and E. E. Smith (eds.), *The Psychology of Human Thought*. Cambridge: Cambridge University Press.

(ii) Goldman, A. 1993. The Psychology of Folk Psychology. *Behavioral and Brain Sciences* 16(1), 15-28.

Week 2

Commitments and Foundation of the Cognitive Sciences

Required reading

(i) Crane, T. 2003. Computers and Thought. In *The Mechanical Mind: A Philosophical Introduction to Minds, Machines, and Mental Representation*. London: Penguin Books.

Week 3

The Nature and Explanation of Cognition: Computationalism

Required reading

(i) Haugeland, J. Semantic Engines: An Introduction to Mind Design. 1981. In J. Haugeland (ed.), *Mind Design: Philosophy, Psychology, and Artificial*. MIT Press, 1-34.

(ii) Searle, J. 1980. Minds, Brains, and Programs. *Behavioral and Brain Sciences* 3, 417-424.

Week 4

The Nature and Explanation of Cognition: Connectionism

Required reading

(i) Shagrir, O. 2010. Computation, San Diego Style. *Philosophy of Science* 77(5), 862-874.

(ii) Excerpt from Fodor, J. A., and Pylyshyn, Z. W. 1988. Connectionism and Cognitive Architecture: A Critical Analysis. *Cognition*, 28(1), 3-71.

Week 5

Realism and Instrumentalism about Models of Cognition

Required reading

(i) Papineau, D. 1996. Introduction. *The Philosophy of Science (Oxford Readings in Philosophy)*. Oxford: Oxford University Press.

Reading Week

No lecture

Week 6

Applications: Models of Decision Making and Action Production

Required reading

(i) Shadlen, M. N., and Roskies, A. L. 2012. The Neurobiology of Decision-Making and Responsibility: Reconciling Mechanism and Mindedness. *Frontiers in neuroscience*, 6.

Week 7

Artificial Intelligence and Situated Cognition

Required reading

(i) Barsalou, L. W. 2008. Grounded Cognition. *Annual Review of Psychology*, 59, 617-645.

Week 8

Applications: Models of Memory in Cognitive Psychology

Required reading

(i) Glenberg, A. M. (1997). What memory is for: Creating meaning in the service of action. *Behavioral and brain sciences*, 20(01), 41-50.

Week 9

Further issues: Predictive Brains

Required reading

(i) Clark, A. 2013. Whatever next? Predictive Brains, Situated Agents, and the Future of Cognitive Science. *Behavioral and Brain Sciences*, 36(03), 181-204.

Week 10

Further issues continued: Explanations of Consciousness and the Role of Emotion in Cognition

Required reading

(i) Excerpts from Chalmers, D. 1996. *The Conscious Mind*. Oxford: Oxford University Press.
(ii) Pessoa, L. 2008. On the Relationship between Emotion and Cognition. *Nature Reviews Neuroscience*. 9, 148-158.

Suggested reading

Week 1 and 2

(i) For a general overview of the issues discussed in this course, see Clark, A. 2014. *Mindware: An Introduction to the Philosophy of Cognitive Science (second edition)*. Oxford: Oxford University Press.

(ii) Clark, A. 1987. From folk psychology to naïve psychology. *Cognitive Science*. 11(2), 139-154.

(iii) Turing, A. 1950. Computing, Machinery, and Intelligence. *Mind* 59, 433-460.

See also, Alan Turing Home Page, including Turing Machine Simulator:

<http://www.turing.org.uk/turing/index.html>

(iv) Fodor, J. A. 1975. Why There Has to be a Private Language and There could be a Private Language. In *The Language of Thought*. Harvester Press.

(v) Fodor, J. A. 1989. Why there still has to be a language of thought. In *Computers, Brains and Minds* (pp. 23-46). Springer Netherlands.

(vi) Putnam, H. 1960. Minds and Machines. In S. Hook (ed.) *Dimensions of the Mind*. New York: New York University Press.

(vii) Bechtel, B. 2008. Naturalism and Mechanism. In *Mental Mechanisms: Philosophical Perspectives on Cognitive Science*. New York: Taylor and Francis.

(viii) Block, N. What is functionalism? In N. Block (ed.), *Readings in Philosophy of Psychology, v. 1*. Cambridge: Harvard University Press.

Week 3 and 4

(i) Haugeland, J. 1997. *Mind Design II*. Cambridge, MA: MIT Press.

(ii) Thagard, P. 2012. Cognitive Architectures. In K. Frankish and W. Ramsey (eds.) *The Cambridge Handbook of Cognitive Science*. Cambridge: Cambridge University Press.

(iii) Dennett, D. C. 1989. *The Intentional Stance*. Cambridge, MA: MIT Press.

(iv) Churchland, P. M. 1981. Eliminative Materialism and the Propositional Attitudes. *The Journal of Philosophy*, 67-90.

(v) Churchland, P. S., and Sejnowski, T. J. 1990. Neural Representation and Neural Computation. *Philosophical Perspectives*, 343-382.

(vii) Rumelhart, D. E., McClelland, J. L., and PDP Research Group. 1986. *Parallel Distributed Processing: Explorations in the Microstructures of Cognition. Volume 1: Foundations*. MIT Press, Cambridge, MA.

(viii) Rogers, T. T., & McClelland, J. L. (2008). Précis of semantic cognition: A parallel distributed processing approach. *Behavioral and Brain Sciences*, 31(06), 689-714.

(ix) Jilk, D. J., Lebiere, C., O'Reilly, R. C., & Anderson, J. R. (2008). SAL: An explicitly pluralistic cognitive architecture. *Journal of Experimental and Theoretical Artificial Intelligence*, 20(3), 197-218.

Week 5 and 6

(i) Zahidi, K. 2014. Non-Representationalist Cognitive Science and Realism. *Phenomenology and the Cognitive Sciences* 13, 461-475.

(ii) Shea, N. 2013. Naturalising Representational Content. *Philosophy Compass* 8, 496-509.

- (iii) Sullivan, J. Forthcoming. Neuroscientific Kinds Through the Lens of Scientific Practice. In C. Kendig (ed.) *Natural Kinds and Classification in Scientific Practice*. Pickering and Chato.
- (iv) See the following book for some recent work on the neuroscience of practical decision-making: Mele, A. (ed.) 2015. *Surrounding Free Will*. Oxford: Oxford University Press.

Week 7

- (i) Poole, D., and Mackworth, A. 2010. *Artificial Intelligence: Foundations of Computational Agents*. Cambridge: Cambridge University Press.
- (i) Dreyfus, H., and Dreyfus, S. 1990. Making a Mind versus Modeling a Brain: Artificial Intelligence at a Branching Point. In M. Boden (ed.) *The Philosophy of Artificial Intelligence*. Oxford: Oxford University Press.
- (ii) Glenberg, A. M., and Kaschak, M. P. 2002. Grounding language in action. *Psychonomic bulletin & review*, 9(3), 558-565.
- (iii) Barsalou, L. 2003. Situated Simulation in the Human Conceptual System. *Language and cognitive processes*, 18(5-6), 513-562.
- (iv) Smith, E. R., & Semin, G. R. (2004). Socially situated cognition: Cognition in its social context. *Advances in experimental social psychology*, 36, 57-121.
- (v) Clark, A., and Chalmers, D. 1998. The Extended Mind. *Analysis* 58, 10-23.
- (vi) Gertler, B. 2007. Overextending the mind?. In *Arguing about the Mind*.

Week 8, 9, and 10

- (i) McClelland, J. L., McNaughton, B. L., O'Reilly, R. C. 1995. Why There are Complementary Learning Systems in the Hippocampus and Neocortex: Insights from the Successes and Failures of Connectionist Models of Learning and Memory. *Psychological Review* 102(3), 419-457.
- (ii) For responses and replies to the Clark 2013 article (required reading from week 9) such as Shea, N. 2013. Perception versus Action: The Computations May Be the Same but the Direction of Fit Differs, see *Brain and Behavioral Sciences* 36, 204-253.
- (iii) Bechara, A., Damasio, H., Tranel, D., and Damasio, A.R. 1997. Deciding Advantageously Before Knowing the Advantageous Strategy. *Science* 275: 1293-1295.
- (iv) Haidt, J. 2001. The Emotional Dog and its Rational Tail: A Social Intuitionist Approach to Moral Judgment. *Psychological Review* 108: 814-834.
- (v) Haugeland, J. 1981. Semantic Engines: An Introduction to Mind Design. In J. Haugeland (ed.), *Mind Design*. Cambridge, MA: MIT Press.
- (vi) Gleick, J. 1995. Really Remote Control. *New York Times Magazine*, December 3, 1995, 42-44.
- (vii) Montero, B. 1999. The Body Problem. *Nous*, 33(2), 183-200.
- (viii) Kind, A. 2003. What's so Transparent about Transparency?. *Philosophical Studies*, 115(3), 225-244.

Suggested essay topics

1. Familiar representations like sentences and maps depend for their significance on intelligent readers or interpreters of their content. Can information-processing psychology avoid this problem? Explain why or why not.
2. Could a person have a language or language of thought whose constituent structure is substantially different from the grammatical structure of their natural language? Explain why or why not.
3. “The productivity and systematicity of thought show that the language of thought hypothesis is the only game in town, notwithstanding the claims of cognitive neuroscience to have discovered computational processes in the brain that occur over representations without semantically-significant constituent structure.” Do you agree and, and if so, why?
4. Explain and assess the predictive coding hypothesis.

(Further suggested essay questions to be distributed during lectures each week.)