

PIU44054 and PIU44052 | Neurophilosophy

Credits:	PIU44054 (10ECTS) and PIU44052 (5ECTS)
Contact Hours:	2 hours seminars, 10-20 hours tutorials, 2 hours brain demonstration
Semester:	Hilary Term
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Module Outline:

Perhaps since Plato, and certainly since Descartes, there has been a thesis in philosophy that there are two substances, the one mental (the mind) and the other physical (the body). This view arose in response to certain difficulties in philosophy but has raised more problems such as how these substances interact and whether one can exist without the other.

These problems have proved so intractable that philosophers have been disposed to respond to them by rejecting one or other substance, or less dramatically by 'reducing' one to the other. None of the attempts to grapple with the 'mind-body' problem have found universal acceptance, although an ultimate reduction of the mental to the physical has been widely, if tacitly, accepted by scientists.

The rapid development of neuroscience and artificial intelligence has been considered to support this view. In these seminars we will explore that apparent support.

Topics

- The ontological problem and the rationale for physicalism
- Scientific psychology - Behaviourism
- Science of the mind - Identity theory
- Science of the mind - Neurophilosophy
- Consciousness -- Pain
- Introspection and 'First person' experience
- Non-reductive Physicalism
- Representation, language, mental imagery
- Computers, Brains and Artificial Intelligence
- The Evolution of Mind
- Scepticism regarding a science of consciousness

Learning Outcomes:

Students should have a broad understanding of the current state of science as applied to issues in the philosophy of mind, and of the historical development of ideas in this area. They should be able to discuss the topics mentioned above, referring to relevant literature(see reading list below) and current journal articles which will be recommended on a weekly basis.

Recommended Reading List

Background:

- William Lyons: Matters of the Mind (Edinburgh, 2001)
- Paul Churchland: Matter and Consciousness (MIT 1994)
- Rex Welshon: Philosophy, Neuroscience and Consciousness (Acumen 2011)
- Jaegwon Kim 'Philosophy of Mind'
- John Heil 'Philosophy of Mind' (Routledge, 2013)
- E.J.Lowe's 'An Introduction to the Philosophy of Mind' (Cambridge, 2000) is more densely argued but would repay study, and could be used selectively to help with various topics.

Useful Collections of Essays

- William Lyons: Modern Philosophy of Mind (Everyman 1995)
- David Rosenthal's 'The Nature of Mind' or more recently -
- David Chalmers' 'Philosophy of Mind: Classical and Contemporary Readings' contain much relevant material.
- 'The Nature of Consciousness' ed: Block, Flanagan and Guzeldere (MIT 1997).
- Many relevant articles are pulled together in 'Readings in Philosophy of Psychology' volumes 1 &2 ed by Ned Block

Experiments

- Benjamin Libet: Unconscious Cerebral Initiative and the Role of Conscious Will in Voluntary Action (Behavioural and Brain Sciences, 8, Cambridge 1985)
- D Dennett and M Kinsbourne: Time and the Observer (Behavioural and Brain Sciences, 15, Cambridge 1992) (reprinted in 10 above)
- T Nagel: Brain Bisection and the Unity of Consciousness

A list of readings for the topics we will think about – neither comprehensive nor exclusive

- **The ontological problem and the rationale for physicalism**

The fundamental argument for physicalism is clearly laid out in Kim's book 'Physicalism or Something Near Enough'.

There is a critique of it in Lowe's introduction (6 above).

- **Scientific psychology - Behaviourism**

The classical sources are the work of Watson and Skinner, and although people argue about Ryle, 'The Concept of Mind' embodies an approach which is congenial to behaviourists.

The decline of behaviourism started with Chomsky's 1959 'A Review of B.F. Skinner's *Verbal Behaviour*'; Putnam's 'Brains and Behaviour' (in 'Mind Language and Reality', the second volume of his collected papers) is another important critique.

'The Explanation of Behaviour' by Charles Taylor (RKP 1964) contains a detailed and closely argued critique of behaviourism.

- **Science of the mind - Identity theory**

William Lyons: *Modern Philosophy of Mind* (7 above) contains essays by Place, Smart, Armstrong which are all relevant.

This book also includes Donald Davidson's 'Psychology as Philosophy' where he develops his 'anomalous monism'; a more comprehensive account of his theories may be found in his collection: *Essays on Actions and Events* (Clarendon Press 1980).

Kripke's view is developed in 'Naming and Necessity' (Blackwell 1980).

- **Science of the mind - Neurophilosophy**

Patricia S Churchland: *Neurophilosophy* (MIT 1989)

Paul Churchland: *A Neurocomputational Perspective* (MIT 1992)

Patricia S Churchland, Terence J Sejnowski: *The Computational Brain* (MIT 1992).

Robert N McCauley: *The Churchlands and Their Critics* (Blackwell 1996).

For an opposing view see LR Baker 'Saving Belief' (Princeton 1987)

- **Consciousness -- Pain**

David Chalmers: The Conscious Mind (Oxford 1996)

David Chalmers: The Character of Consciousness (Oxford 2010)

Thomas Nagel: What is it Like to be a Bat?

PMS Hacker: Wittgenstein Meaning and Mind (Blackwell 1990)

- especially essay XII: The World of Consciousness

John R Searle: The Rediscovery of the Mind (MIT 1992)

- **Introspection and 'First person' experience**

G.E.M. Anscombe: The First person (in 'Mind and Language', ed S. Guttenplan, OUP 1975).

Saul Kripke: The First Person (in 'Philosophical Troubles' Volume 1 of his collected papers, Oxford 2011)

J Kim: Reasons and the First Person (in his collection 'Essays in the Metaphysics of Mind'. Oxford 2010)

Galen Strawson argues that we have a sense of the self in his 'Selves' Oxford 2009,

- **Non-reductive Physicalism**

Relevant concepts of *emergence* and *supervenience* have been explored by Jaegwon Kim; detailed references to his writings may be found in Welshon. Kim's book 'Physicalism or Something Close Enough' is short and clear.

The first 4 essays in Kim's book 'Essays in the Metaphysics of Mind' deal with emergence.

Jerry Fodor's Special Sciences (or: The Disunity of Science as a Working Hypothesis) is an important essay on this topic.

The last essay in Kim's book (Metaphysics of Mind) 'No Laws in the Special Sciences' explores this issue carefully.

- **Representation, language, mental imagery**

Churchland and Sejnoski: 'The Computational Brain' Chapter 3 Representing the World.

Ned Block: Is Experiencing Just Representing? Chapter 26 of his book 'Consciousness, Function and Representation'.

Michael Tye: Michael Tye: 'A Representational Theory of Pains and Their Phenomenal Character' in Block et al eds, 10 above

- **Computers, Brains and Artificial Intelligence**

Jack Copeland: Artificial Intelligence (Blackwell 1993). A good overall introduction.

Donald Broadbent (ed.) The Simulation of Human Intelligence (Blackwell 1993). Contains some interesting essays (especially those by Roger Penrose and Margaret Boden).

Chapters 1, 9, and 11 – 19 of Brainchildren by Daniel Dennett (Penguin 1998)

For Connectionism/Parallel Distributed Processing see Paul Churchland's 'A Neurocomputational Perspective'.

- **The Evolution of Mind**

Daniel Dennett: Consciousness Explained (Penguin 1993).

Bo Dahlbom (ed): Dennett and His Critics (Blackwell 1993)

Dennett: Darwin's Dangerous Idea; Penguin 1995),

Dennett 'Freedom Evolves'; Allen Lane 2003)

- **Sceptics**

Thomas Nagel: Mind and Cosmos (Oxford 2012). Casts doubt on whether our current science lives up to the advertisements. Short and clear.

Colin McGinn: Can We Solve the Mind-Body Problem? (In Lyons - 7 above) (also in Block et al eds 10 above).

- **The Mereological Fallacy**

MR Bennett and PMS Hacker: Philosophical Foundations of Neuroscience (Blackwell 2003). Wittgensteinian attempt to clarify roles of philosophy and neuroscience.

Neuroscience

- A useful introductory book might be 'The Human Brain' by Susan Greenfield (Orion books 1997). Also,
- Francis Crick: 'The Astonishing Hypothesis'
- Patricia Churchland's 'Neurophilosophy' gives a very good account of relevant neuroscience..

For anybody who wants to get into the neuroscience, much more substantial books include -

- 'Neuroscience; Exploring the Brain' by Bear, Connors and Paradiso (Williams and Wilkins 1996).
- Kandel and Schwartz: 'Principles of Neuroscience'
- Anybody who has an interest in mathematics might find 'Theoretical Neuroscience' by Dayan and Abbott (MIT 2001).

Assessment:

Five Credits **PIU44052 (5ECTS)**

1 essay (50%)

1 examination question (40%)

Discussion of weekly readings (10%)

Ten credits **PIU44054 (10ECTS)**

2 essays (25% each)

2 examination questions (20% each)

Discussion of weekly readings (10%)