



PHIL707

Research Topics in Philosophy and Cognitive Science

S1 Online 2019

Dept of Philosophy

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>Assessment Tasks</u>	3
<u>Delivery and Resources</u>	4
<u>Unit Schedule</u>	5
<u>Policies and Procedures</u>	8
<u>Graduate Capabilities</u>	9
<u>Late submission</u>	12

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General Information

Unit convenor and teaching staff
Credit points 4
Prerequisites Admission to MRes
Corequisites
Co-badged status
Unit description This unit explores some of the cutting edge research questions at the forefront of cognitive science and the philosophy of cognition. The unit explores philosophical problems that arise from the core disciplines of cognitive psychology, cognitive neuropsychology, linguistics, neuroscience and AI and robotics. Topics to be covered may include: embodied and distributed cognition; disorders of the mind; folk psychology and theory of mind; the use of FMRI to understand brain function; is the brain massively modular; can cognitive science explain consciousness, or the self?

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy.

Articulate, clearly and coherently, philosophical arguments in written and oral form at an advanced level

Analyse and critically evaluate philosophical arguments at an advanced level

Demonstrate advanced knowledge of course content and develop a coherent and extended philosophical argument in a research essay

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Weekly discussion of reading</u>	10%	No	Each week online
<u>Essay Plan</u>	10%	No	week 9
<u>Presentation</u>	30%	No	Week 11
<u>Research Essay</u>	50%	No	Week 12

Weekly discussion of reading

Due: **Each week online**

Weighting: **10%**

Each week a summary of the weekly readings will be posted online. You will be expected to post your discussion points and comments and engage in discussion of the readings each week.

On successful completion you will be able to:

- Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy.
- Analyse and critically evaluate philosophical arguments at an advanced level
- Demonstrate advanced knowledge of course content and develop a coherent and extended philosophical argument in a research essay

Essay Plan

Due: **week 9**

Weighting: **10%**

Brief plan and outline of your essay.

On successful completion you will be able to:

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Presentation

Due: **Week 11**

Weighting: **30%**

Presentation to the class or posted online on the background to your essay topic and an outline of your essay. 20 minute presentation

On successful completion you will be able to:

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- Analyse and critically evaluate philosophical arguments at an advanced level

Research Essay

Due: **Week 12**

Weighting: **50%**

Research Essay on a topic covered in the course. Title and topic to be agreed with the course leaders by week 10.

On successful completion you will be able to:

- Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy.
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- Analyse and critically evaluate philosophical arguments at an advanced level
- Demonstrate advanced knowledge of course content and develop a coherent and extended philosophical argument in a research essay

Delivery and Resources

2- hour weekly seminar plus online discussion and assessments.

Topic of the unit:

Social Learning and Traditions in Animal and Humans

Social learning allows the spread of new knowledge and skills, and is the basis for traditions in a wide range of animal species. These traditions may, in turn, form the basis of culture. Although often used synonymously with social learning, imitation denotes a distinctive social learning mechanism, which many researchers hypothesize allows particularly high-fidelity transmission of information. This unit examines a range of social learning mechanisms that have been

distinguished and reviews how they have been investigated. Current debates on the definition and identification of imitation and other forms of social learning are outlined, addressing differences in their usage across different animal species and impacts on the spread of traditions and culture

Unit Schedule

Social Learning and Traditions in Animal and Humans

Social learning allows the spread of new knowledge and skills, and is the basis for traditions in a wide range of animal species. These traditions may, in turn, form the basis of culture. Although often used synonymously with social learning, imitation denotes a distinctive social learning mechanism, which many researchers hypothesize allows particularly high-fidelity transmission of information. This unit examines a range of social learning mechanisms that have been distinguished and reviews how they have been investigated. Current debates on the definition and identification of imitation and other forms of social learning are outlined, addressing differences in their usage across different animal species and impacts on the spread of traditions and culture

Week 1. General Overview I: (38 pages)

1. Galef, Bennett G. (2012). Social learning and traditions in animals: evidence, definitions, and relationship to human culture. *Wiley Interdiscip Rev Cogn Sci*.3(6):581-592. (9)
2. Galef, Bennett G. (2013). Imitation and local enhancement: detrimental effects of consensus definitions on analyses of social learning in animals. *Behav Processes* 100:123-30. (6)
3. Heyes, Celia M. (1994). Social learning in animals: Categories and mechanisms. *Biol. Rev.* 69: 207-231. (23)

Week 2. General Overview II: (35)

1. Heyes, C. M., Ray, E. D. (2000). What is the significance of imitation in animals? *Adv Stud Behav* 29:215–245. (27)
2. Gariépy, Jean-François, Karli K. Watson, Emily Du, Diana L. Xie, Joshua Erb, Dianna Amasino and Michael L. Platt (2014) Social learning in humans and other animals. *Front. Neurosci.* 8: 58. (8 ½)

Further Reading:

1. Nehaniv, Chrystopher L., & Kerstin Dautenhahn (2007). Introduction: the constructive interdisciplinary viewpoint for understanding mechanisms and models of imitation and social learning. In: *Imitation and Social Learning in Robots, Humans and Animals: Behavioural, Social and Communicative Dimensions* by Chrystopher L. Nehaniv & Kerstin Dautenhahn (Eds.), 1-18.

Cambridge University Press (18)

2. YouTube: <https://www.youtube.com/watch?v=5OsO1VHmOy0>

Week 3. Integrative studies of social learning (30)

1. Galef, Bennett G (2015). Laboratory studies of imitation/field studies of tradition: towards a synthesis in animal social learning. *Behav Processes* 112:114-9 (5)
2. Healy, S.D., I.E. Bacon, O. Haggis, A.P. Harris, & L.A. Kelley (2009). Explanations for variation in cognitive ability: Behavioural ecology meets comparative cognition. *Behavioural Processes* 80(3): 288-294 (16)
3. van Schaik, C., Graber, S., Schuppli, C., & Burkart, J. (2017) The Ecology of Social Learning in Animals and its Link with Intelligence. *Span J Psychol.* 19:E99. (9)

Week 4. Social Learning in animals: (32)

1. Holzhaider JC, Hunt GR, Gray RD. (2010). Social learning in New Caledonian crows. *Learn Behav* 38:206–219. (13)
2. Gyula K. Gajdon, Gyula K. & Ludwig Huber (2004) Testing social learning in a wild mountain parrot, the kea (*Nestor notabilis*). *Animal Learning & Behavior* 32 (1): 62-71 (9)
3. Huber, L., & Gajdon GK. (2006) Technical intelligence in animals: the kea model. *Anim Cogn.* 9(4):295-305 (10)

Further Reading:

4. O'Hara, Mark, Gyula K. Gajdon, and Ludwig Huber (2012). Kea Logics: How These Birds Solve Difficult Problems and Outsmart Researchers. In: Shigeru Watanabe (ed) *Logic and Sensibility*. Centre for Advanced Research on Logic and Sensibility, Keio University, Chapter2: 29-38

Week 5. Kinds of Social Learning I (34)

1. Whiten, Andrew, Nicola McGuigan, Sarah Marshall-Pescini, and Lydia M. Hopper (2009). Emulation, imitation, over-imitation and the scope of culture for child and chimpanzee. *Philos Trans R Soc Lond B Biol Sci.* 364(1528): 2417–2428. (9)
2. Ziemke, Tom, Nicklas Bergfeldt, Gunnar Buason, Tarja Susi & Henrik Svensson (2004). Evolving cognitive scaffolding and environment adaptation: a new research direction for evolutionary robotics. *Connection Science* 16(4): 339-350 (11)
3. Katsnelson, Edith, Arnon Lotem, & Marcus W. Feldman (2014). Assortative Social Learning and Its Implications for Human and Animal Societies. *Evolution* 68 (7): 1894-1906. (12)

4. Byrne, Richard W. (2005). Social cognition: imitation, imitation, imitation. *Current Biology* 15 (3): R498-R500 (2)

Week 6. Kinds of Social Learning II (31)

1. Carpenter, Malinda & Josep Call (2007). The question of 'what to imitate': Inferring goals and intentions from demonstrations. In: *Imitation and Social Learning in Robots, Humans and Animals: Behavioural, Social and Communicative Dimensions* by Chrystopher L. Nehaniv & Kerstin Dautenhahn (Eds.), 135-151. Cambridge University Press. (16)
2. Giorgi, Franco & Luis E. Bruni (2015) Developmental Scaffolding. *Biosemiotics* 8(2): 173–189 (15)

Further Reading:

3. Rachel L. Kendal, Jeremy R. Kendal, Will Hoppitt, Kevin N. Laland (2009) Identifying Social Learning in Animal Populations: A New 'Option-Bias' Method. *PLOS One* 4 (8): e6541
4. Huber, Ludwig (2007). Emulation learning: the integration of technical and social cognition. In: *Imitation and Social Learning in Robots, Humans and Animals: Behavioural, Social and Communicative Dimensions* by Chrystopher L. Nehaniv & Kerstin Dautenhahn (Eds.), 427-439. Cambridge University Press. (12)

Week 7. From social learning to human culture (34)

1. Hill, K. (2010). Experimental studies of animal social learning in the wild: Trying to untangle the mystery of human culture. *Learn Behav.* 38(3):319-28.(9)
2. Lyn, Heidi (2017) The Question of Capacity: Why Enculturated and Trained Animals have much to Tell Us about the Evolution of Language. *Psychon Bull Rev* 24(1):85-90. (5)
3. Pepperberg, Irene M. & Diane V. Sherman (2007). Training behavior by imitation: from parrots to people ... to robots? In: *Imitation and Social Learning in Robots, Humans and Animals: Behavioural, Social and Communicative Dimensions* by Chrystopher L. Nehaniv & Kerstin Dautenhahn (Eds.), 383-405. Cambridge University Press. (20)

Further Reading:

- Nielson, Mark, & Virginia Slaughter (2007). Multiple motivations for imitation in infancy. In: *Imitation and Social Learning in Robots, Humans and Animals: Behavioural, Social and Communicative Dimensions* by Chrystopher L. Nehaniv & Kerstin Dautenhahn (Eds.), 343-359. Cambridge University Press. (16)

Week 8 and 9:

Readings proposed and introduced by students

Week 10, 11 and 12:

Student presentations (20mins + 10mins discussion)

Week 13:

Deadline for essay

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA

student contact globalmba.support@mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcome

- Analyse and critically evaluate philosophical arguments at an advanced level

Assessment tasks

- Presentation
- Research Essay

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy.
- Articulate, clearly and coherently, philosophical arguments in written and oral form at an advanced level
- Analyse and critically evaluate philosophical arguments at an advanced level
- Demonstrate advanced knowledge of course content and develop a coherent and extended philosophical argument in a research essay

Assessment tasks

- Weekly discussion of reading
- Essay Plan
- Presentation
- Research Essay

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Articulate, clearly and coherently, philosophical arguments in written and oral form at an advanced level
- Analyse and critically evaluate philosophical arguments at an advanced level
- Demonstrate advanced knowledge of course content and develop a coherent and

extended philosophical argument in a research essay

Assessment tasks

- Weekly discussion of reading
- Essay Plan
- Presentation
- Research Essay

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Acquire a coherent and advanced knowledge of the methodology, concepts and arguments of cognitive science and philosophy.
- Articulate, clearly and coherently, philosophical arguments in written and oral form at an advanced level
- Analyse and critically evaluate philosophical arguments at an advanced level
- Demonstrate advanced knowledge of course content and develop a coherent and extended philosophical argument in a research essay

Assessment tasks

- Weekly discussion of reading
- Essay Plan
- Presentation
- Research Essay

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcomes

- Articulate, clearly and coherently, philosophical arguments in written and oral form at an

advanced level

- Analyse and critically evaluate philosophical arguments at an advanced level
- Demonstrate advanced knowledge of course content and develop a coherent and extended philosophical argument in a research essay

Assessment tasks

- Weekly discussion of reading
- Essay Plan
- Presentation
- Research Essay

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcome

- Analyse and critically evaluate philosophical arguments at an advanced level

Assessment tasks

- Presentation
- Research Essay

Late submission

Late Submissions - Guidelines T

Tasks 10% or less. No extensions will be granted. Students who have not submitted the task prior to the deadline will be awarded a mark of 0 for the task, except for cases in which an application for Special Consideration is made and approved.

Tasks above 10%. No extensions will be granted. Students who submit late work without an extension will receive a penalty. This penalty does not apply for cases in which an application for Special Consideration is made and approved.

Late Submission Text: “Unless a Special Consideration request has been submitted and approved, (a) a penalty for lateness will apply – two (2) marks out of 100 will be deducted per day for assignments submitted after the due date – and (b) no assignment will be accepted more than seven (7) days (incl. weekends) after the original submission deadline. No late submissions will be accepted for timed assessments – e.g. quizzes, online tests.”