COGS704
Advanced Principles of Cognitive Science: Memory, Self, and Cognitive Theory
S1 Day 2016
Department of Cognitive Science

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# General Information

| Unit convenor and teaching staff | Rochelle Cox  
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<td></td>
<td><a href="mailto:rochelle.cox@mq.edu.au">rochelle.cox@mq.edu.au</a></td>
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<tr>
<td>Contact via Email</td>
<td>Australian Hearing Hub, Level 3, Office 731</td>
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| Lecturer                         | Amanda Barnier  
|                                  | amanda.barnier@mq.edu.au |
| Contact via Email                | Australian Hearing Hub, Level 3, Office 801 |
| Lecturer                         | Vince Polito  
|                                  | vince.polito@mq.edu.au |
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| Bianca De Wit                    | bianca.dewit@mq.edu.au |

| Credit points                    | 4 |

| Prerequisites                    | Admission to MRes |

| Corequisites                     |

| Co-badged status                |

**Unit description**

This unit forms part of a four-unit core sequence covering a range of foundational and cutting-edge research topics in cognitive science, with an emphasis on active research programs at MQ. This team-taught unit is made up of a selection of 3-4 topic modules, led by experts specialising in these fields. Topics to be covered may include but are not limited to: the nature of individual and social memory from an interdisciplinary perspective; views about the relationship between memory and the self; disorders of belief formation such as delusion; and theories of consciousness.
Important Academic Dates
Information about important academic dates including deadlines for withdrawing from units are available at [http://students.mq.edu.au/student_admin/enrolmentguide/academicdates/](http://students.mq.edu.au/student_admin/enrolmentguide/academicdates/)

Learning Outcomes
1. Increase understanding of the nature of hypnosis and research methods in hypnosis
2. Increase understanding of the two-factor theory of delusions and the logic of using hypnosis to model delusions
3. Increase understanding of disruptions of self, delusions of misidentification, socially shared delusions
4. Increase understanding of theories and methods of sense of agency research
5. Increase understanding of the nature of memory and the relevance of ecological validity
6. Increase understanding of the role and mechanisms of remembering and forgetting, functions of memory, and the relationship between individual and social memory
7. Improve and/or develop ability to read an empirical paper and identify its strengths, weaknesses and relevance
8. Improve and/or develop ability to critically evaluate scientific claims, methods and data
9. Improve and/or develop ability to draw links between laboratory research and clinical conditions (within a scientist-practitioner approach)
10. Improve and/or develop ability to present research to an audience in a clear and engaging way
11. Improve and/or develop ability to design a concise and engaging scientific research poster that follows up/builds upon a published study

General Assessment Information
LATE PENALTIES
Late submission of an assignment will attract a penalty of 10% of the maximum mark for every day that the assignment is late (including weekend days). For example, if the assignment is worth 40 marks and your assignment is submitted 2 days late, a penalty of $2 \times 10\% \times 40 = 8$ marks will be applied and subtracted from the awarded mark for the assignment. Work submitted more than 7 days after the submission deadline will not be marked and will receive a mark of 0.

LENGTH PENALTIES
You will be penalised 5% for every 100 words over the word limit. For instance, if an assignment is worth 50% of the overall assessment and you exceed the word length by 100 words then you will lose $5\% \times 50 = 2.5$ marks. That is, 2.5 marks will be subtracted from the mark you receive for this assignment.
REQUEST FOR EXTENSIONS

Extensions will only be granted for medical or other extenuating circumstances. Students may request this by submitting an online request via ask.mq.edu.au with supporting documentary evidence (such as medical certificate, counsellor note, or similar). The staff in the FHSSSC will make all decisions regarding extensions. Neither individual tutors nor the course convenor are able to grant extensions. All requests for extensions must be made prior to the due date for the assignment.

REQUIREMENT TO PASS THE UNIT

A passing grade is contingent on completion and submission of all assessments. *Failure to submit any assessments will automatically result in a fail grade and any subsequent pieces of work will not be assessed.*

FINAL GRADE

Your final grade is determined by your performance in meeting the learning outcomes for the unit. The Standard Numerical Grade (SNG) reflects the extent to which your performance matches the grade descriptors, as outlined in the Macquarie University Grading Policy. Please note that your final mark may be scaled and therefore may not necessarily be a raw sum of the marks received for the individual assessment tasks.

Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Due</th>
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<tr>
<td>500 word article review</td>
<td>20%</td>
<td>TBA</td>
</tr>
<tr>
<td>2000 word essay</td>
<td>40%</td>
<td>12th May 2016 (5pm)</td>
</tr>
<tr>
<td>Research Poster</td>
<td>40%</td>
<td>9th June 2016</td>
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500 word article review

Due: TBA
Weighting: 20%

This assessment involves writing a 500 word (approx. 2 page) review of a published journal article on topics covered in Weeks 2-4 such as clinical delusions, dissociative identity disorder, or hypnotic analogues of delusions. Potential journal articles can be selected from the Additional Reading List and will be decided in class in Week 1. You will also be asked to lead a group discussion on the article in Weeks 2-4. You will be assessed on:

- Your ability to read a theoretical, review, clinical or empirical paper and identify its strengths, weaknesses and relevance; your ability to critically evaluate scientific claims, methods and data; and your ability to capture the essence of an article and to communicate your point of view on it in a clear and logical way.
We will discuss the requirements further in class.

**Due Date:** On the day you discuss the article in Week 2, 3, or 4 (this will be decided in Week 1). Submit an electronic version to iLearn by 5pm. Assignment 1 will be doublemarked by Rochelle Cox and Amanda Barnier.

This Assessment Task relates to the following Learning Outcomes:

- Increase understanding of the nature of hypnosis and research methods in hypnosis
- Increase understanding of the two-factor theory of delusions and the logic of using hypnosis to model delusions
- Increase understanding of disruptions of self, delusions of misidentification, socially shared delusions
- Improve and/or develop ability to read an empirical paper and identify its strengths, weaknesses and relevance
- Improve and/or develop ability to critically evaluate scientific claims, methods and data
- Improve and/or develop ability to draw links between laboratory research and clinical conditions (within a scientist-practitioner approach)
- Improve and/or develop ability to present research to an audience in a clear and engaging way

**2000 word essay**

Due: **12th May 2016 (5pm)**
Weighting: **40%**

This assessment involves writing a 2000 word essay on the following question:

*What (if anything) has sense of agency research shown us so far, and what is one thing that still needs to be done?*

The point of this essay is not to simply review the research from weeks 5-8 in an uncritical way. Many aspects of sense of agency research have been contested or controversial. For example, many researchers have argued about the significance of Libet’s experimental findings or the value of Wegner’s theories (see the commentaries following the main reading in week 6). In this essay we are looking for your opinion on some of these contentious issues. You need to make a reasoned argument about whether or not research into sense of agency has helped us understand any aspects of cognition in ways that have been useful for research, clinical practice or understanding social phenomena.

- It does not matter whether you say sense of agency has been extremely useful or it has been pointless. We are looking for a clear reasoned argument either way. Please don’t sit on the fence.
• You are encouraged to use the materials and readings from weeks 5-8 as a guide, but don’t feel restricted to these ideas. You are welcome to discuss any research relevant to sense of agency.

• You do not have to write a comprehensive evaluation of everything we covered in class. A sensible strategy for this essay may be to focus only on one specific study (e.g., Libet’s volition experiment) or one theory (e.g., the comparator model) or one case of agency alteration (e.g., states of flow). Feel free to pick the topic you found most interesting and just write about that. Detailed arguments of one specific aspect of sense of agency research are very welcome.

You will be assessed on:

• Your knowledge of, and ability to accurately describe key experiments, theories, methods and applications of sense of agency research; your ability to develop a coherent argument that is based on empirical research; your ability to draw links between theory and research on sense of agency; your written communication skills; your critical analysis skills; and your problem-solving and creative skills

Due Date: Thursday 12th May – 5pm. Submit an electronic version to ilearn by 5pm. Assignment 2 will be doublemarked by Vince Polito and Rochelle Cox.

This Assessment Task relates to the following Learning Outcomes:

• Increase understanding of theories and methods of sense of agency research
• Improve and/or develop ability to read an empirical paper and identify its strengths, weaknesses and relevance
• Improve and/or develop ability to critically evaluate scientific claims, methods and data
• Improve and/or develop ability to draw links between laboratory research and clinical conditions (within a scientist-practitioner approach)

Research Poster

Due: 9th June 2016
Weighting: 40%

For this assessment you will be asked to design a research poster of a hypothetical study that follows from or builds upon a published journal article on topics covered in Weeks 9-12.

Your poster should consist of an Introduction (describing background research, aims, hypotheses), Method, Results (make up some pretend results), Discussion (describing implications, limitations, future research suggestions, etc).

We will hold a poster session on Thursday 9th June 12pm-2pm, where you will describe your poster to the group. You will be assessed on:
The significance and feasibility of your research proposal, your ability to design a concise, interesting research poster, your written communication skills, your presentation skills, your critical analysis skills, your problem-solving skills.

¼ of your mark for this assignment will be based upon your presentation

¾ of your mark for this assignment will be based upon the content of the poster

We will discuss the requirements further in class.

**Due Date:** Thursday 9th June (Poster presentation day). Submit an electronic version of your poster to ilearn by 5pm. Assignment 2 will be triplemarked by Amanda Barnier, Rochelle Cox, and Vince Polito.

This Assessment Task relates to the following Learning Outcomes:

- Increase understanding of the nature of memory and the relevance of ecological validity
- Increase understanding of the role and mechanisms of remembering and forgetting, functions of memory, and the relationship between individual and social memory
- Improve and/or develop ability to read an empirical paper and identify its strengths, weaknesses and relevance
- Improve and/or develop ability to critically evaluate scientific claims, methods and data
- Improve and/or develop ability to draw links between laboratory research and clinical conditions (within a scientist-practitioner approach)
- Improve and/or develop ability to present research to an audience in a clear and engaging way
- Improve and/or develop ability to design a concise and engaging scientific research poster that follows up/builds upon a published study

**Delivery and Resources**

**ABOUT THIS UNIT**

This is a team-taught unit made up of a selection of three topic modules, led by experts specialising in these fields. Topics covered include disorders of self and delusional beliefs, sense of agency, and the nature of individual and social memory from an interdisciplinary perspective. We discuss how cognitive scientists approach research questions and design experiments in these domains.

The aims of this unit are to:

1. Assist you in becoming familiar with important research, theories, methods, and recent findings in these areas;
2. Highlight interdisciplinary ways to approach and investigate these topics;
3. Assist you in developing the ability to critically evaluate scientific claims, methods and data

There will be 13 weekly seminars that run for 2 hours each.

Time: Thursday 12-2pm
Location: AHH, room 3.610

Attendance: Students must attend 80% of all seminars. If unable to attend a seminar, email Rochelle Cox BEFORE the class.

TOPICS

Weeks 1 – 4: Introduction + Hypnosis and Delusions
Here we will cover the logic of using hypnosis to model delusions, disruptions of self (e.g., identity delusions, dissociative identity disorder, mirrored-self misidentification), and socially shared delusions.

Weeks 5 – 8: Sense of Agency
Here we will explore the sense of agency - the feeling we have of controlling our actions. We will review theories and methods that are used to understand agency in cognitive science, and we’ll look at some unusual cases of agency alteration involving altered states of consciousness.

Weeks 9 – 12: Autobiographical, Social and Collective Memory
Here we will discuss memory research from theoretical inspiration to methodological innovation to empirical implementation and to real world relevance. We will consider remembering and forgetting, what memories are for, and social scaffolding of memory especially as we age.

Week 13: Poster Presentation Session

Unit Schedule

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<th>Week</th>
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<tr>
<td>1</td>
<td>3</td>
<td><strong>Introduction + Delusions and instrumental hypnosis</strong>&lt;br&gt;Aim of course; Assignments; Introduction to hypnosis and delusions; Logic of using hypnosis instrumentally&lt;br&gt;&lt;br&gt;&lt;br&gt;Read: Cox &amp; Barnier (2010)</td>
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<td>2</td>
<td>10</td>
<td><strong>Disruptions of self</strong>&lt;br&gt;Dissociative Identity Disorder; hypnotic identity delusions&lt;br&gt;&lt;br&gt;&lt;br&gt;Read: Kihlstrom (2005); Students review papers</td>
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| 3 Mar | 17 | **Mirrored-self misidentification** | Pathways to the delusion; Modelling the delusion with hypnosis; Applying and testing the two-factor theory  
**Read**: Barnier et al. (2008); *Students review papers* |
| 4 Mar | 24 | **Socially transmitted delusions** | Features of folie a deux; Modelling folie a deux with hypnosis; Links with socially shared false beliefs  
**Read**: Freeman, Cox, & Barnier (2013); *Students review papers* |
| 5 Mar | 31 | **Sense of agency, free will and time perception** | Introduction to study of sense of agency; What does science tell us about free will?; How can we measure agency?  
**Read**: Libet, Gleason, Writh & Pearl (1983) |
| 6 Apr | 7 | **Theories of agency** | What does a theory of agency need to explain?; the theory of apparent mental causation; the comparator model account.  
**Read**: Wegner (2004); *Students review papers* |
| 14 Apr | | **MID SESSION BREAK** | |
| 21 Apr | | **MID SESSION BREAK** | |
| 7 Apr | 28 | **Altered states, flow and possession** | Altered states of consciousness and extreme cases of agency change; automaticity and flow; rituals and possession  
### Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

- **Academic Honesty Policy**
  


Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.

In addition, a number of other policies can be found in the Learning and Teaching Category of 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/support/student_conduct/

**Results**

Results shown in *iLearn*, 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.

**PLAGIARISM**

Plagiarism is a serious breach of the University's rules and carries significant penalties. Plagiarism is defined as: Using the work or ideas of another person, whether intentionally or not, and presenting this as your own without clear acknowledgement of the source of the work or ideas. This includes, but is not limited to, any of the following acts:

- copying out part(s) of any document or audio-visual material or computer code or website content without indicating their origins
- using or extracting another person's concepts, experimental results, or conclusions
- summarising another person's work
- submitting substantially the same final version of any material as another student in an assignment where there was collaborative preparatory work
- use of others (paid or otherwise) to conceive, research or write material submitted for assessment (eg ghost writing)
- submitting the same or substantially the same piece of work for two different tasks (self-plagiarism)
Student Support
Macquarie University provides a range of support services for students. For details, visit [http://students.mq.edu.au/support/](http://students.mq.edu.au/support/)

Learning Skills
Learning Skills ([mq.edu.au/learningskills](http://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 Enquiry Service
For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

Equity 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.

IT Help
For help with University computer systems and technology, visit [http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/](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](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/). The policy applies to all who connect to the MQ network including students.

Graduate Capabilities
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**

- Improve and/or develop ability to present research to an audience in a clear and engaging way
- Improve and/or develop ability to design a concise and engaging scientific research poster that follows up/builds upon a published study
Assessment tasks

- 500 word article review
- 2000 word essay
- Research Poster

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

- Increase understanding of the nature of hypnosis and research methods in hypnosis
- Increase understanding of the two-factor theory of delusions and the logic of using hypnosis to model delusions
- Increase understanding of disruptions of self, delusions of misidentification, socially shared delusions
- Increase understanding of theories and methods of sense of agency research
- Increase understanding of the nature of memory and the relevance of ecological validity
- Increase understanding of the role and mechanisms of remembering and forgetting, functions of memory, and the relationship between individual and social memory
- Improve and/or develop ability to read an empirical paper and identify its strengths, weaknesses and relevance
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- Improve and/or develop ability to draw links between laboratory research and clinical conditions (within a scientist-practitioner approach)
- Improve and/or develop ability to design a concise and engaging scientific research poster that follows up/builds upon a published study

Assessment tasks

- 500 word article review
- 2000 word essay
- Research Poster
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 outcomes**

- Improve and/or develop ability to read an empirical paper and identify its strengths, weaknesses and relevance
- Improve and/or develop ability to critically evaluate scientific claims, methods and data
- Improve and/or develop ability to draw links between laboratory research and clinical conditions (within a scientist-practitioner approach)
- Improve and/or develop ability to design a concise and engaging scientific research poster that follows up/builds upon a published study

**Assessment tasks**

- 500 word article review
- 2000 word essay
- Research Poster

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**

- Increase understanding of the nature of hypnosis and research methods in hypnosis
- Increase understanding of the two-factor theory of delusions and the logic of using hypnosis to model delusions
- Increase understanding of disruptions of self, delusions of misidentification, socially shared delusions
- Increase understanding of theories and methods of sense of agency research
- Increase understanding of the nature of memory and the relevance of ecological validity
- Increase understanding of the role and mechanisms of remembering and forgetting, functions of memory, and the relationship between individual and social memory
• Improve and/or develop ability to design a concise and engaging scientific research poster that follows up/builds upon a published study

**Assessment tasks**

• 500 word article review
• 2000 word essay
• Research Poster

**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**

• Increase understanding of the nature of hypnosis and research methods in hypnosis
• Increase understanding of the two-factor theory of delusions and the logic of using hypnosis to model delusions
• Increase understanding of disruptions of self, delusions of misidentification, socially shared delusions
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• Improve and/or develop ability to design a concise and engaging scientific research poster that follows up/builds upon a published study

**Assessment tasks**

• 500 word article review
• 2000 word essay
• Research Poster
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

- Improve and/or develop ability to design a concise and engaging scientific research poster that follows up/builds upon a published study

Assessment task

- Research Poster

Required and recommended reading

Each week, there will be one main reading, and a selection of additional readings. To prepare for each week, we recommend you read the main reading and one of the additional readings.

HYPNOSIS AND DELUSIONS

WEEK 1: Introduction + Delusions and instrumental hypnosis

Main Reading


Additional Readings


WEEK 2: Disruptions of self

Main Reading


Additional Readings


**WEEK 3: Mirrored-self misidentification**

**Main Reading**


**Additional Readings**


**WEEK 4: Socially transmitted delusions**

**Main Reading**


**Additional Readings**


**SENSE OF AGENCY**

**WEEK 5: Sense of agency, free will and time perception**
Main Reading


Additional Readings


**WEEK 6: Theories of agency**

Main Reading


Additional Readings


**WEEK 7: Altered states, flow and possession**

Main Readings


Additional Readings


**WEEK 8: Abnormalities of agency in psychogenic disorders**

Main Reading

**Additional Readings**


**AUTOBIOGRAPHICAL, SOCIAL, AND COLLECTIVE MEMORY**

**WEEK 9: Memory in the laboratory and ecological validity**

**Main Readings**


**Additional Readings**


**WEEK 10: Autobiographical remembering and forgetting**

**Main Reading**


**Additional Readings**


**WEEK 11: What memories are for**

**Main Reading**


**Additional Readings**


**WEEK 12: Social scaffolding of memory**

**Main Reading**


**Additional Readings**

