

COG401H1 -- Seminar in Cognitive Science (Winter 2016)

Tuesdays 1-4 PM UC 152

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Email policy: I'm happy to answer questions via email. On weekdays, I usually reply within 24 hours. Emails from non-U of T accounts, emails addressed "yo teach" (or similar), and questions whose answers can easily be found on Blackboard will receive much slower replies.

Course Description

This course is intended to build on and extend students' existing knowledge and interests in cognitive science and philosophy of mind. The topic is *Delusions*. We will investigate a number of sensory delusions, and sensory disorders. The goal is to discover what these glitches tell us about the architecture of cognition.

We will also raise theoretical questions about the methodology this approach to studying cognition uses, and philosophical questions about the nature of perception. Can we reliably learn about "normal" minds from studying their breakdown? Is there such a thing as veridical perception, or is all perception in some sense illusion? What is the difference between illusion and delusion? Are delusions beliefs? What is the difference between neurological and psychiatric diagnoses?

Objectives

- Students develop a deeper understanding of the nature of perception.
- Students develop the ability to critically evaluate how evidence from behavioural experiments and clinical case studies bear on theories of cognition.
- Students become aware of the epistemic impact of methodological choices.
- Students hone their skills in constructing and critiquing verbal and written arguments.
- Students practice professional skills useful in graduate school and/or the workplace.

Grading Scheme

| | |
|-----------------------|-----|
| <i>Participation</i> | 15% |
| <i>Poster</i> | 20% |
| <i>3 Short Essays</i> | 30% |
| <i>Final Exam</i> | 35% |

Textbooks (on reserve at Laidlaw Library, or available online through the library website)

Gennaro, R. (2015) *Disturbed Consciousness: New Essays on Psychopathology and Theories of Consciousness*. MIT Press. [Laidlaw Library and University Bookshop]

Broome & Bortolotti (2009) *Psychiatry as cognitive neuroscience: philosophical perspectives*. Oxford University Press [Laidlaw Library]

Hirstein, W. (2005) *Brain Fiction: Self-Deception and the Riddle of Confabulation*. MIT Press [www]

Shallice, T. (1988). *From neuropsychology to mental structure*. Cambridge University Press [www]

*Additional readings will be available on Blackboard or through the library website.

Course Policies

Electronic Devices

Use of phones, laptops, or other electronic devices is not permitted during class time, except where specifically required for a classroom activity. It's distracting for everyone around you! If you require a specific device due to disability, illness or other life circumstances, please inform the instructor, and an exception will be granted. Unauthorized use of electronics during class will seriously affect your participation grade.

Communication

Information about readings, assignments, and general announcements will regularly be posted to the course Blackboard site, and occasionally sent to students' utoronto.ca email accounts. You are responsible for checking your utoronto.ca email regularly. Please check Blackboard for information before sending an email to the instructor. The Blackboard site includes a Discussion Board. This is a great place to post questions about the readings between classes, to arrange study groups, or to ask question that your classmates might be able to answer. The instructor will check the Discussion Board only periodically.

Accommodations

If you have concerns about any of the course policies, the course material, the ways in which course material is delivered, or your ability to complete course work, please do talk to the instructor. Exceptions or modifications are always possible if there is a compelling reason.

Please consult your college registrar if you have ongoing difficulties during term – health related or otherwise – that prevent you from completing your course work satisfactorily. If you require accommodation for a disability or long-term illness, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible at disability.services@utoronto.ca.

Academic Integrity

Academic integrity is fundamental to learning and scholarship at the University of Toronto. The following things are considered academic offences:

- Using someone else's ideas without appropriate acknowledgement (i.e., in-text citation)
- Copying material directly from a source and not placing the words within quotation marks
- Submitting your own work in more than one course without permission
- Making up sources or facts, or including references to sources that you did not use.
- Obtaining or providing unauthorized assistance on any assignment including:
 - Having someone else complete part or all of an assignment for you
 - Working in groups on assignments that are supposed to be individual work
 - Having someone rewrite or add material to your work while editing
 - Lending your work to a classmate who submits it as their own

The University of Toronto treats cases of academic misconduct very seriously. All suspected cases of academic dishonesty will be investigated following the procedures outlined in the Code. The consequences for academic misconduct can be severe, including a failure in the course and a notation on your transcript. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact the instructor, or other available campus resources like the U of T Writing Website. More information is available at www.artsci.utoronto.ca/osai/students.

Class Schedule

| # | Date | Topic | Assignments |
|----|----------------------|---|--------------------------------|
| 1 | Jan 12 | Introduction: History of Psychiatry and First-Person Accounts of Delusion | |
| 2 | Jan 19 | Philosophical and Scientific Background | |
| 3 | Jan 26 | Blindsight, and Neglect | |
| 4 | Feb 2 | Phantom Limbs, Alien Limbs and Denial | |
| 5 | Feb 9 | Misidentification and Emotion | Last chance to hand in Essay 1 |
| | Feb 15-19 | Reading Week | |
| 6 | Feb 23 | Delusions of Control and Thought Insertion | Research proposals due |
| 7 | Mar 1 | Embodiment and The Self | |
| 8 | Mar 8 | Confabulation | |
| | Sunday Mar 13 | Last day to drop S courses | |
| 9 | Mar 15 | Theories of Delusion | Poster abstracts due |
| | Friday Mar 18, 10-2 | Poster Session at UC Research and Practice Day | Posters due |
| 10 | Mar 22 | Methodology: Single-Patient Studies vs. Group Studies | |
| 11 | Mar 29 | Psychiatry vs. Neurology and The Concept of Disease | |
| 12 | Apr 5 | Psychiatric Classification and the DSM | |
| | April 12-29 | Final Exam Period | |

Coursework and Assignments

Participation 15%

Students will be expected to contribute regularly to class discussions. You should come to class having read the week's readings, with comments and questions ready. The *quality* of your contributions is at least as important as the quantity: making one good point, or asking one interesting question is better than talking for a long time without making a point (although talking through half-baked ideas can be very fruitful too).

Basic courtesy will be expected in all classroom interactions, which includes listening while others speak. Use of phones, laptops, and other electronic devices in class, except where specifically required for an activity, will be considered a serious breach of courtesy, and will seriously affect your participation grade.

Classes will regularly include structured activities and small group discussions. Participation outside class also counts, including on the course Blackboard website, and in office hours.

Poster 20%

In mid-February we will divide into groups for a research project. Each group will choose a topic of research (suggested topics will be discussed in class), produce a research proposal, write an abstract, and present a poster describing their results on UC's Research and Practice Day. More details will be discussed in class and posted on Blackboard.

The idea is to simulate the process of applying for a research grant, submitting an abstract to a conference, and giving a conference presentation. Peer review will be incorporated into the evaluation of all three stages.

Due dates:

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|----------------------|--------------------|
| 1000 word proposal | February 23 |
| 600 word abstract | March 15 |
| Poster presentations | March 18, 10am-2pm |

Essays 3 x 10%

Each week (with a few exceptions) one or two questions about the following week's readings will be posted on Blackboard. Choose one of the questions and write a short (maximum 1000 word) critical essay answering it. More detailed instructions will be provided with each week's questions.

You must write 3 of these short essays. You may choose when to write your 3 essays as long as you write at least one before Reading Week. Think through how you would respond to the posted questions even for weeks when you are not submitting an essay. The final exam will consist largely of these questions.

Essays must be submitted at the beginning of class. LATE ESSAYS WILL NOT BE ACCEPTED. If you miss the deadline, submit an essay another week.

Final Exam 35%

The exam will consist of essay questions covering material from the whole course. These will be largely based on the weekly essay questions. A good way to prepare for the exam is to write something every week, even when you aren't submitting an essay, and to participate fully in class discussions. Near the end of term, revise what you wrote each week, taking into account what you learned in later classes.

COG401H1 Readings -- Winter 2016

Optional readings are marked “O”.

Locations:

For some readings that are not easy to find, pdf files will be provided on Blackboard. Books from which we will be reading several chapters will be placed on reserve in Laidlaw Library (marked “LL”). The Genarro book is also available at the University Bookshop. Many of the papers and books can be found online through the U of T library website. You will be responsible for finding these on your own, or in cooperation with classmates. Feel free to upload links or pdf files to the Discussion Board on Blackboard.

1. History of Psychiatry, and First-Person Accounts

- O Shorter, E. (1997) *A History of Psychiatry: From the Era of the Asylum to the Age of Prozac*.
- O Foucault, M. (1964) *Madness and Civilization*.

2. Philosophical and Scientific Background

- O Descartes, R. (1641). First Meditation. *Meditations on First Philosophy*. First Meditation. <http://selfpace.uconn.edu/class/percep/DescartesMeditations.pdf>
- Austin, J.L. (1962) *Sense and Sensibilia*. Chapter 2.
- Shallice, T. (1988). *From Neuropsychology to Mental Structure*. Cambridge University Press. Chapter 1.
- Coltheart (2007) *Cognitive neuropsychiatry and delusional belief*. *The Quarterly Journal of Experimental Psychology*. 60 (8), 1041–1062. [O after p. 1043]

3. Blindsight and Neglect

- Cowey, A., & Stoerig, P. (1995). Blindsight in monkeys. *Nature*, 373(6511), 247-249.
- Bisiach, E., & Luzzatti, C. (1978). Unilateral neglect of representational space. *Cortex*, 14(1), 129-133.
- Macpherson, F. (2010). A Disjunctive Theory of Introspection: A Reflection on Zombies and Anton’s Syndrome. *Philosophical Issues*, 20, 226 – 265.

4. Phantom Limbs, Alien Limbs and Denial

- Ramachandran & Hirstein (1998). The perception of phantom limbs. *Brain* 121, 1603–1630.
- O Nightingale, S. (1982). Somatoparaphrenia: a case report. *Cortex*, 18(3), 463-467.
- Fotopoulou, A., Jenkinson, P. M., Tsakiris, M., Haggard, P., Rudd, A., & Kopelman, M. D. (2011). Mirror-view reverses somatoparaphrenia: dissociation between first-and third-person perspectives on body ownership. *Neuropsychologia*, 49(14), 3946-3955.
- LL Gennaro, R. (2015) Somatoparaphrenia, Anosognosia, and Higher-Order Thoughts. In Gennaro, R. (Ed.) *Disturbed Consciousness: New Essays on Pathology and Theories of Consciousness*, 55-74.

5. Misidentification and Emotion

- O Hirstein, W., & Ramachandran, V. S. (1997). Capgras syndrome: a novel probe for understanding the neural representation of the identity and familiarity of persons. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 264(1380), 437-444.

Fine, Craigie & Gold (2005), Damned If You Do; Damned If You Don't: The Impasse in Cognitive Accounts of the Capgras Delusion. *Philosophy, Psychiatry, & Psychology*, 12(2), 143-151.

Pacherie, E. (2009). Perception, Emotions, and Delusions: The Case of the Capgras Delusion. In T. Bayne & J. Fernandez (Eds.) *Delusions and Self-Deception*, Psychology Press, 105-123.

6. Delusions of Control and Thought Insertion

Frith, C. (2005). The self in action: lessons from delusions of control. *Consciousness and cognition*, 14(4), 752-770.

○ Synofzik, M., Thier, P., Leube, D. T., Schlotterbeck, P., & Lindner, A. (2010). Misattributions of agency in schizophrenia are based on imprecise predictions about the sensory consequences of one's actions. *Brain*, 133(1), 262-271.

○ LL Gerrans, P. (2015) Passivity Experience in Schizophrenia in Gennaro, R. (Ed.) *Disturbed Consciousness: New Essays on Pathology and Theories of Consciousness*, 325-346.

Hoffman, R. (1986). Verbal hallucinations and language production processes in schizophrenia. *Behavioral and Brain Sciences*, 9, 503-517.

7. Embodiment and The Self

○ Blanke, O., & Metzinger, T. (2009). Full-body illusions and minimal phenomenal selfhood. *Trends in cognitive sciences*, 13(1), 7-13.

○ Sierra, M & Berrios, G. (1998) Depersonalization: Neurobiological Perspectives. *Biological Psychiatry*, 44(9), 898-908.

Bayne & Levy (2005). Amputees By Choice: Body Integrity Identity Disorder and the Ethics of Amputation. *Journal of Applied Philosophy*, 22(1), 75-86.

de Vignemont, F. (2011). Bodily immunity to error. *Immunity to error through misidentification: New essays*, 1-27.

8. Confabulation

Hirstein, W. (2005) *Brain Fiction: Self-Deception and the Riddle of Confabulation*. Chapters 1, 8, 9. [Chapter 1, 9 ○]

LL Droege, P. (2015) From Darwin to Freud: Confabulation as an Adaptive Response to Dysfunctions of Consciousness in Gennaro, R. (Ed.) *Disturbed Consciousness: New Essays on Pathology and Theories of Consciousness*, 141-166.

9. Philosophical Theories of Delusion

Hohwy, J. (2004) Top-down and bottom-up delusion formation. *Philosophy, Psychiatry, & Psychology*, 11(1), 65-70.

Bayne, T., & Pacherie, E. (2005). In defence of the doxastic conception of delusions. *Mind & Language*, 20(2), 163-188.

○ Gerrans, P. (2013) Delusional Attitudes and Default Thinking. *Mind & Language*, 28(1), 83-102.

○ Coltheart, M. (2013) On the Distinction between Monothematic and Polythematic Delusions. *Mind & Language*, 28(1), 103-112.

10. Methodology: Single-Case Studies vs. Group Studies

○ Shallice, T. (1988). *From neuropsychology to mental structure*. Cambridge University Press. Chapters 9, 10.

- Caramazza, A. (1986). On drawing inferences about the structure of normal cognitive systems from the analysis of patterns of impaired performance: The case for single-patient studies. *Brain and cognition*, 5(1), 41-66.
- Caramazza, A., & McCloskey, M. (1988). The case for single-patient studies. *Cognitive Neuropsychology*, 5(5), 517-527.
- Bub, J. (1994). Testing Models of Cognition Through the Analysis of Brain-Damaged Performance. *British Journal for the Philosophy of Science*, 45(3), 837-855.

11. Psychiatry vs. Neurology and The Concept of Disease

- Wachbroit, R. (1994). Normality as a biological concept. *Philosophy of Science*, 61, 579-591.
- Margolis, J. (1976). The concept of disease. *The Journal of Medicine and Philosophy*, 1, 238-255.
- Wakefield, J. (1992). The concept of mental disorder: on the boundary between biological facts and social values. *American Psychologist*, 47, 373-388.
- LL Murphy, D. (2009) Psychiatry and the Concept of Disease as Pathology. In Broome & Bortolotti (Eds.) *Psychiatry as cognitive neuroscience: philosophical perspectives*.

12. Psychiatric Classification and the DSM

- Kendler, K. (2009). An historical framework for psychiatric nosology. *Psychological Medicine*, 39, 1935–1941.
- Poland, J (2015). DSM-5 and Research Concerning Mental Illness. In Demazeux and Singy (Eds.) *The DSM-5 in Perspective: Philosophical Reflections on the Psychiatric Babel*, 25-42.
- Tabb, K. (2015) Psychiatric Progress and The Assumption of Diagnostic Discrimination. *Philosophy of Science*. 82(5), 1047-1058.
- LL Parnas, J. (2012) DSM-IV and the founding prototype of schizophrenia: are we regressing to a pre-Kraepelinian nosology? In Kendler & Parnas (Eds.) *Philosophical Issues in Psychiatry II: Nosology*. Oxford University Press, 305-322.
- Dangers of Diagnostic Inflation: Interview with Dr. Allen Frances.
<http://brainsciencepodcast.com/bsp/2013/dangers-of-diagnostic-inflation-bsp-102>