

Cognitive Neuroscience of Consciousness
Semester: Spring 2017
Copenhagen
Credits: 3
Core Class
Study Tour: Florence & Bologna
Days: Tuesdays & Fridays
Time: 08.30 – 09.50
Classroom: N7-C23
Major Disciplines: Neuroscience, Psychology

Course Information and Purpose

1. Instructor:

Claudia Carrara-Augustenberg, Ph.D.

Ph.D. in Cognitive Neuroscience from University of Copenhagen (Denmark) and M.Sc Psychology (Major in Clinical and Neuropsychology). Interests are focused on the neural mechanisms that mediate and modulate human consciousness and subjective perception, and on the functional and neural distinctions between conscious and unconscious cognitive and emotional processes. With DIS since 2013.

Psychology Program Director:

Carla Caetano, Ph.D.

DIS Contact:

Psychology Program Assistant:

Kate Giddens

Email: kg@dis.dk

Phone: +45 33 76 57 64

Guest Lecturer:

Jennifer Bruder, Ph.D., M.Sc

Date: February 21st

Topic: Self-Consciousness and ToM. Jennifer is specialized in neurodevelopmental disorders with particular focus on learning disorders and language acquisition. She will talk about the connection between autism and theory of mind (ToM), the latter representing a crucial aspect of an individual ability to acquire consciousness of self and of the world.

2. Course Description

Prerequisites: One semester of neuroscience, physiological psychology, biological psychology, or cognitive psychology at a university level.

Co-requisite: Enrollment in [Cognitive Neuroscience of Consciousness Research Lab](#)

This course introduces the main theoretical models and the empirical methods employed to explain and measure consciousness. Students are offered the opportunity to learn about the neurobiological mechanisms possibly underlying the emergence of consciousness and to grasp why science needs to embrace also conceptual and [Cognitive Neuroscience of Consciousness](#) | DIS – Study Abroad in Scandinavia | 1
Related Majors: Pre-Medicine/Health Science

philosophical levels of analysis. The course outlines the multi-faceted nature of consciousness by discussing different aspects of the phenomenon in normal as well as in abnormal conditions. Students are encouraged throughout the course to actively participate in discussions and to make critical thinking regarding the current state of knowledge about how the brain relates to the mind.

3. Course Learning Objectives

By the end of this course, students will be able to:

- Appreciate the multi-faceted nature of consciousness
- Identify the conceptual and methodological problems in studying consciousness
- Discuss some of the key approaches to consciousness
- Recognize the strengths and weakness of current methodologies
- Trace the neurobiological mechanisms possibly underlying the emergence of consciousness

The following topics will be covered during the course:

Theme 1: Framing consciousness

- What do we mean by 'conscious'?
- The hard vs. the easy problem
- Mapping different aspects of consciousness
- Consciousness and Accessibility

Theme 2: Theoretical Approaches to the study of consciousness

- Globalist vs. localist models
- Theories: Baars; Damasio; Zeki; Tononi; Lamme; Edelman; Carrara-Augustenberg
- The emergence of consciousness and the problem of binding
- Understanding consciousness from the social psychology perspective

Theme 3: Methodological challenges

- Objective and Subjective assessments of consciousness
- Consciousness and Emotions
- Disorders of consciousness: coma, vegetative states, locked-in syndrome
- Anesthesia and brain default network

Theme 4: Consciousness applied (selected topics)

- Schizophrenia
- Somnambulism and Crime
- Non-human consciousness
- Infant consciousness

Course Components

1. Course mandatory readings

- **Journal Articles** available on Canvas. Reference list at the end of the syllabus.

2. Approach to teaching

This course outlines the multi-faceted nature of consciousness by discussing different aspects of the phenomenon in normal as well as in abnormal conditions, and it comprises both lectures and open discussions. Students are therefore expected to participate actively to the discussions throughout the course: to make critical thinking regarding the current state of knowledge about how the brain relates to the mind.

The schedule will list reading materials for each class meeting. Please be prepared by having read and thought about the material before coming to class. By reading the material beforehand, you will better understand the points I make, you will be better prepared for discussion, and you will be able to ask thoughtful and productive questions.

Classes will consider a few specific topics in depth and will typically not repeat the assigned readings, but will serve as a foundation for the lectures and it will be expected that they are included in class discussions. Thus, most of the materials in the text you will learn on your own outside of class. Concretely speaking, I will present topics and probe questions that still engage the scientific community and I will expect students to relate to these matters in a critical perspective, both by drawing at what they learn through the course readings but also at their own personal judgment.

It is imperative that you keep up with the readings, because you can:

- 1) ask questions about reading material you find confusing or unclear, and
- 2) continuously prepare for the exam.

3. Field studies

Field studies serve to complement your course work by placing you in the professional field. Students will be asked to compare, extend and rethink what we read about and discuss in class.

Date: Thursday, February 9th

Time: 9:30 – 12:00

Topic: Workshop with Thomas Christiansen from The Nudging Company

Objective: To explore the principles of nudging, i.e. the power that unconsciously detected stimuli can apply on our choices, preferences and decisions

DIS - Classroom N7 – C24

Date: Thursday, February 9th

Time: 13:30 - 15:00

Topic: Workshop at the Center for Inner Response

Objective: To examine the relationship between spirit and body

Date: Wednesday, March 29th

Time: 09:00 – 12:30

Topic: “Ex-Machina”

Objective: We will watch together the film “Ex-Machina”, one of the best fiction pictures ever made to define the challenges of creating sentient artificial intelligence. A thorough discussion will follow the movie.

4. Expectations of the students

Class attendance is mandatory. Students are expected to have done the reading for each class and to come with notes and questions for me and for the other students. This will give us material to generate conversation. It is also expected that during classes the students are able to discuss and to present topics and to respond questions providing references to our readings to support their points. Active participation during classes will constitute 10%

of the grade. Finally, it is expected that students hand in their assignment on time (late papers will not be accepted) and that they contribute significantly to planned group activities.

5. Class representatives

Each semester DIS looks for class representatives to become an official spokesperson for their class group, addressing any concerns that may arise (in academic or related matters), suggesting improvements and coming up with new ideas. Class representatives are a great way for DIS faculty to ensure better and timelier feedback on their courses, assessments and teaching styles, and as such perform an invaluable role in connecting student needs with faculty instruction during term time. Class Representatives will be elected in class at the beginning of the semester.

6. Study Tours

Core Course week and study tours are an integral part of the core course as we take the classroom on the road and see how theory presented in the classroom is translated to practice in the field. You will travel with your classmates and DIS faculty/staff on two study tours; a short study tour during Core Course Week and a long study tour to Amsterdam.

Expectations for study tours:

- Participate in all activities
- Engage in discussions, ask questions, and contribute to achieving the learning objectives
- Respect the destination, the speakers, DIS staff, and your fellow classmates
- Represent yourself, your home university and DIS in a positive light

While on a program study tour DIS will provide hostel/hotel accommodation, transportation to/from the destination(s), approx. 2 meals per day and entrances, guides, and visits relevant to your area of study or the destination. You will receive a more detailed itinerary prior to departure.

Core Course Week and Short Study Tour:

Themes: Merging the science of consciousness with the reality of our perceptions

Purpose: The aim of the Core Course Week is to contextualize some among the most influential theoretical frameworks and empirical models that underline our scientific understanding of human consciousness. In addition to the academic activities on study tour, the study tour program is supplemented with cultural visits and events. In the past, cultural visits have included touring castles, museum visits, and experiencing traditional Danish food at a local restaurant.

- **Timing:** Core Course Week Short Study Tour February 6th – February 10th
- **Orientation:** The study tour activities will be presented to you in the week before departure and you will be handed the booklet on the bus on departure day.

Long Study Tour- Florence & Bologna:

Themes: Senses and Perception

Purpose: The tour probes the following questions: “Why and how is this experience unique to me?” (i.e. Introspection), “How does the brain turn my objective perception into subjective sensation?” (i.e. The Self as Subject), and “How does this perception and/or sensation affect the way I am, think and act?” (i.e. The Self as Object).

- **Timing:** February 27th – March 5th
- **Orientation:** The study tour activities will be presented to you in the week before departure and you will be handed the booklet at the airport on departure day.

Assignments and Evaluation

To be eligible for a passing grade in this class, the students must complete all of the assigned work. The final grade for this course will be based on two tests, a research paper, two group presentations and participation.

Assignments	How Evaluated	Due Date	Percentage of Grade
Participation (incl. group-presentation questions) and Attendance	Individual	Throughout the course	20%
Group Presentation	Individual	Refer to course schedule	10%
Study Tour Assignment (Core Course Week written assignment)	Individual	February 19 th @23.00	5%
Study Tour Assignment (Long Tour written assignment)	Individual	March 12 th @23.00	5%
Midterm	Individual	February 24 th	20%
Research Paper	Individual	March 31 st	15%
Final Exam	Individual	May 10 th	25%
Total			100%

In addition to the academic content of the written assignments(s), focus will also be placed on the structure, use of appropriate academic language, and writing skills. (See grading rubric on Canvas for further details regarding the evaluation criteria).

Participation (incl. group-presentation questions) and Attendance (20%):

Since class participation is a major component of the course, you will need to be present and participating to receive full credit.

Class participation includes, but it is not limited to: (see also evaluation criteria on Canvas)

- critically evaluating the model/hypotheses suggested in readings
- asking relevant questions that show understanding of the material – with tentative considerations/conclusions
- being prepared for class and be ready to answer questions when asked
- discussing implications as regards practical application and/or future research considerations
- contributing to class activities

Group Presentation (10%):

Groups of approx. 2-4 students will be presenting a topic in class (ca. 10 min.), after which there will be ca. 10 min. discussion with the rest of the class, addressing the prepared questions (see Group Presentation Questions below)

Contents should include (but not be limited to):

- Introduction of the key issues of the topic
- Method employed to investigate it
- Identification and discussion of key findings/knowledge
- Critique of methods and potentially of the findings
- Examples/Applied cases

Group-presentation Questions:

Students not presenting should demonstrate their participation by preparing discussion questions with focus on the presented topic; the questions should be based on the students' own reflective considerations, can be open-ended or can be in form of thought-provoking comments, e.g. (with reference to the due reading) *"Does Overgaard's idea of continuous consciousness connect to other theories we have previously studied?"*; *"Do you think that the results of today's paper support or contradict Kouider's Partial Awareness Hypothesis?"*.

Study Tour Assignments (5%+ 5%):

Due: February 19th & March 12th

Students will be expected to submit a reflective paper (max 4 pages) in which they address the questions probed by the Tours (refer to Study Tour Booklets) and the answers they reached by the end of the tours.

Midterm (20%):

Due: February 24th

7 Short-answers + 2 short essays (selected among 6 available topics)

Research Paper (15%):

Due: March 31st

Specific topics will be assigned upon beginning of the course

Final Exam (25%):

Date: May 10th

6 Short-answers + 3 short essays (selected among 6 available topics)

Policies

Attendance

You are expected to attend all DIS classes when scheduled. If you miss a class for any reason please contact the faculty no later than the day of the missed class. If you miss multiple classes the Director of Teaching and Learning, and the Director of Student Affairs will be notified and they will follow-up with you to make sure that all is well. Absences will jeopardize your grade and your standing at DIS. Allowances will be made in cases of illness, but in the case of multiple absences you will need to provide a doctor's note.

Academic honesty, plagiarism and violating the rules of an assignment

DIS expects that students abide by the highest standards of intellectual honesty in all academic work. DIS assumes that all students do their own work and credit all work or thought taken from others. Academic dishonesty will result in a final course grade of "F" and can result in dismissal. The students' home universities will be notified. DIS reserves the right to request that written student assignments be turned in electronic form for submission to plagiarism detection software. See the Academic Handbook for more information, or ask your instructor if you have questions.

Policy for students who arrive late to class

Students arriving over 15 minutes after the beginning of class will not be allowed to participate. One exception throughout the course will be allowed for students arriving within 15 minutes after beginning of class.

Use of laptops or phones in class

To establish a positive learning environment, it is important that everyone is present in body *and* mind, and not distracted by technology or other disruptive behaviors. **Therefore, students are not allowed to use laptops/Tablets/iPads in the classroom unless agreed upon for specified tasks such as article reading and/or for discussion purposes and/or note-taking. Cellular phones must be switched off during class.** Disregard of these rule will have a very negative impact on the student participation grade.

Disability and resource statement

Any student who has a need for accommodation based on the impact of a disability should contact the Office of Academic Support (acadsupp@dis.dk) to coordinate this. In order to receive accommodations, students should inform the instructor of approved DIS accommodations within the first two weeks of classes.

Course Schedule	
Psychology Program Orientation Wednesday - January 18 th Time: 8.15-11.00 Location: Kosmopol (Fiolstræde 44, 1171 København K)	
Friday January 20 th Class 1	<p>Topic:</p> <ul style="list-style-type: none"> • General presentations • Using Canvas for this class • Introduction to the study of human consciousness: Neuroscience vs. philosophy? • What we mean by “conscious” • The conceptualizations of consciousness <p>Required Readings:</p> <ul style="list-style-type: none"> • Atkinson <i>et al.</i> (2000). Consciousness: Mapping the Theoretical Landscape, in <i>Trends in Cognitive Sciences</i> 4(10), 372-382.
Tuesday January 24 th Class 2	<p>Topic:</p> <ul style="list-style-type: none"> • The Hard vs. the Easy problem • Multiple facets of consciousness • Access, Monitoring, Phenomenal, and Self-consciousness <p>Required Readings:</p> <ul style="list-style-type: none"> • Block (2011). Perceptual consciousness overflows cognitive access, in <i>Trends in Cognitive Sciences</i> Dec;15(12):567-75. • Dehaene <i>et al.</i> (2006). Conscious, preconscious, and subliminal processing: a testable taxonomy, in <i>Trends Cogn Sci.</i> May;10(5):204-11.
Friday January 27 th Class 3	<p>Topic:</p> <ul style="list-style-type: none"> • Consciousness and the line between philosophy and neuroscience • Group 1 – Presentation of today’s readings (van Leewen) <p>Required Readings:</p>

	<ul style="list-style-type: none"> • Van Leewen (2015). What makes you think you are conscious? An agnosticist manifesto. In <i>Front. Hum. Neurosci.</i>, 07 April, pp.1-11. • Rose (2006). Chapter 2, History of Body-Mind problem, pp.16-27.
Tuesday January 31st Class 4	Topic: <ul style="list-style-type: none"> • Consciousness with/out reportable access • Group 2 – Presentation of today’s readings Required Readings: <ul style="list-style-type: none"> • Kouider <i>et al.</i> (2010). How rich is consciousness? The partial awareness hypothesis, in <i>Trends Cogn Sci.</i> Jul;14(7):301-7.
Friday February 3rd Class 5	Topic: <ul style="list-style-type: none"> • Models of consciousness • Prerequisites for a valid theory of consciousness • Theoretical models of consciousness: Baars • <u>CCW Presentation by, Kate Giddens PSY Program Assistant and Coleader</u> • Group 3 – Presentation of today’s readings (Baars, 2005) Required Readings: <ul style="list-style-type: none"> • Baars (2005). Global workspace theory of consciousness: toward a cognitive neuroscience of human experience, in <i>Progresses in Brain Research</i> 150:45-53. • Baars, Ramsøy, Laureys. Brain, conscious experience and the observing self, in <i>TRENDS in Neurosciences</i> Vol.26 No.12 December 2003, pp.671-674.
CORE COURSE WEEK February 6th – February 10th Theme: Merging the science of consciousness with the reality of our perceptions	
Short Study Tour Monday, February 6th – Wednesday, February 8th Aalborg, Denmark <i>*More information will be given in the Short Tour booklet upon departure*</i>	
Thursday February 9th Field Study	09:30-12:00 Academic Visit: Field Study Workshop with Thomas Christiansen – Field Study The Nudging Company DIS – Classroom N7-C24 Topic: Unconscious stimuli on our decision-making processes Objective: To explore the principles of nudging, i.e. the power that unconsciously detected stimuli can apply on our choices, preferences and decisions 12:15-13:15 Lunch and time on your own 13.30-16:00: Academic visit: Field Study Center for Inner Response MEET AT: Købmagergade 55
Field Study	<ul style="list-style-type: none"> • Objective: Examine the relationship between spirit and body with Tove Kofoed who leads the school for Clairvoyance in Copenhagen
Friday	9.00-12.00: Academic Activity: Movie Screening and Discussion

<p>February 10th</p>	<p>“Temple Grandin” Location: DIS Movie Theatre</p> <p>Topic: “Consciousness and Language”</p> <p>Objective: Discuss the difference between human and non-human animal consciousness and the role that language covers in our conscious experiences. <i>Theoretical lenses:</i> social psychology theories – e.g. Rosenberg – defend the central role of language in shaping and maintaining an individual’s sense of self.</p> <p>Description: We will view the movie in the DIS movie theatre, followed by a discussion.</p> <p>About: Temple Grandin is an American professor of animal science at Colorado State University, as well as an autistic activist and a consultant in livestock industry. She claims she is a primarily visual thinker and has said that words are only her second language. Temple attributes her success as a humane livestock facility designer to her ability to perceive the world as livestock does: not in words, but in visual representations.</p> <p>12:30-13:35 Concluding lunch – provided by DIS Where: TBA</p> <p>14:00-15.30: Academic activity:</p> <ul style="list-style-type: none"> • Wrap Up and Critical Discussion • What have we learned? • Lasting experiences and impressions? <p style="text-align: center;">Short Study Tour Assignment due Sunday, February 19th @23.00</p> <p>Core Course Week Evaluations: Please complete the online survey at home by Monday at MIDNIGHT. The link and instructions will be emailed to you and posted as an announcement on Canvas.</p>
<p>Tuesday February 14th Class 6</p>	<p>Topic:</p> <ul style="list-style-type: none"> • Theoretical models of consciousness: Damasio <p>Required Readings:</p> <ul style="list-style-type: none"> • Damasio (2003). The feelings of emotion and the self, in Ann. NY Acc. Sci., 1001, 253-261. • Philippi et al. (2012). Preserved self-awareness following extensive bilateral brain damage to the insula, anterior cingulate, and medial prefrontal cortices. In PLoS One. Pp. 1-17 7(8).
<p>Friday February 17th Class 7</p>	<p>Topic:</p> <ul style="list-style-type: none"> • Consciousness and Intentions • Mid-term course summary & clarifications (prep for midterm evaluation next week) • Group 4 – Presentation of today’s reading (Abondo et al., 2009) <p>Required Readings:</p>

	<ul style="list-style-type: none"> • Pressman et al. (2007). Alcohol-induced sleepwalking or confusional arousal as a defense to criminal behavior: a review of scientific evidence, methods and forensic considerations, in <i>J Sleep Res.</i> Jun;16(2):198-212. • Abondo et al. (2009). Sexual assault and MDMA: the distinction between consciousness and awareness when it comes to consent. <i>Int. J. Legal. Med.</i> 123:155-156.
<p>Tuesday February 21st Class 8</p> <p>Guest Lecture</p>	<ul style="list-style-type: none"> • Long Study Tour Presentation by PSY Program Assistant <p>Guest Lecturer: Jennifer Bruder, PhD is specialized in developmental disorders, with a particular focus on learning disorders, language acquisition, arithmetic and auditory processing using neuropsychological assessment and EEG methodologies.</p> <p>Topic:</p> <ul style="list-style-type: none"> • Self-consciousness and ToM <p>Required Readings:</p> <ul style="list-style-type: none"> • Bird G, Viding E (2014). The self to other model of empathy: Providing a new framework for understanding empathy impairments in psychopathy, autism, and alexithymia, in <i>Neurosci Biobehav Rev.</i> Oct 18;47C:520-532.
<p>Friday February 24th Class 9</p>	<p>MIDTERM TEST</p>
	<p>LONG STUDY TOUR: Dates: Monday February 27th – Saturday, March 4th Location: Florence & Bologna Theme: Senses and Perception <i>*More information will be given in the Long Tour booklet upon departure*</i></p> <p>Long Study Tour Evaluations: Please complete the online survey at home by Monday at MIDNIGHT. The link and instructions will be emailed to you and posted as an announcement on Canvas.</p>
<p>Tuesday March 7th Class 10</p>	<p>Topic:</p> <ul style="list-style-type: none"> • Theoretical models of consciousness: Zeki & The problem of binding • Group 5 - Presentation of today's reading (Zeki, 2003) <p>Required Readings:</p> <ul style="list-style-type: none"> • Zeki (2003). The disunity of consciousness, in <i>Trends in Cognitive Sciences</i> May;7(5):214-218.
<p>Friday March 10th Class 11</p>	<p>Topic:</p> <ul style="list-style-type: none"> • Theoretical models of consciousness: Lamme and Edelman <p>Group 6 – Presentation of today's reading (Edelman)</p> <p>Required Readings:</p> <ul style="list-style-type: none"> • Edelman (2001). Consciousness: The Remembered Present, in <i>Annals of the New York Academy of Sciences</i> 929:111-122.

	<ul style="list-style-type: none"> Lamme (2006). Towards a true neural stance on consciousness, in <i>Trends in Cognitive Sciences</i> 10(11), 494-501. <p>Long Study Tour Assignment due Sunday March 12th @23.00</p>
<p>Tuesday March 14th Class 12</p>	<p>Topic:</p> <ul style="list-style-type: none"> Theoretical models of consciousness: Carrara-Augustenberg <p>Required Readings:</p> <ul style="list-style-type: none"> Carrara-Augustenberg (2013). Endogenous Feedback Network: Summary and Evaluation, in <i>The development of a comprehensive model of human consciousness</i>, pp. 15.23, ISBN 978-87-7611-591-3.
<p>Friday March 17th Class 13</p>	<p>Topic:</p> <ul style="list-style-type: none"> Objective Vs subjective assessments methods Group 7 – Presentation of today’s readings (Sandberg et al.) <p>Required Readings:</p> <ul style="list-style-type: none"> Sandberg <i>et al.</i> (2010). Measuring consciousness: Is one measure better than the other? In <i>Consciousness and Cognition</i> Dec;19(4):1069-78.
<p>NO CLASS- Travel Break March 20th – March 26th</p>	
<p>Tuesday March 28th Class 14</p>	<p>Topic:</p> <ul style="list-style-type: none"> Focus on subjective assessments methods The validity of verbal reports Group 8 - Presentation of today’s readings (Overgaard et al. 2006) <p>Required Readings:</p> <ul style="list-style-type: none"> Johansson <i>et al.</i> (2005). Failure to detect mismatches between intention and outcome in a simple decision task. <i>Science</i>, 310(5745), 116-119. Overgaard <i>et al.</i> (2006). Is conscious perception gradual or dichotomous? A comparison of report methodologies during a visual task, in <i>Conscious Cogn.</i> Dec;15(4):700-8.
<p>Wednesday – March 29th Field Study: “Ex-Machina” Time: 9:00 – 12:30</p> <p>Topic: Movie screening of “Ex-Machina” and discussion to follow</p> <p>Objective: Examine one of the best fiction pictures ever made to define the challenges of creating sentient artificial intelligence. A thorough discussion will follow the movie.</p> <p>Location: Cinema, DIS Library</p>	
<p>Friday March 31st Class 15</p>	<p>Topic:</p> <ul style="list-style-type: none"> Disorders of consciousness: Coma, vegetative states, locked-in syndrome <p>Required Readings:</p> <ul style="list-style-type: none"> Laureys (2005). The neural correlate of (un)awareness: lessons from the vegetative state, in <i>Trends in Cognitive Sciences</i>, Dec;9(12):556-9. <p>Research Paper Due</p>

Tuesday April 4th Class 16	<p>Topic:</p> <ul style="list-style-type: none"> • Schizophrenia <p>Required Readings:</p> <ul style="list-style-type: none"> • Sass & Parnas (2003). Schizophrenia, consciousness, and the self, in <i>Schizophr Bull.</i> 29(3):427-44.
Friday April 7th Class 17	<p>Topic:</p> <ul style="list-style-type: none"> • Non-human animal • Infant consciousness <p>Required Readings:</p> <ul style="list-style-type: none"> • Edelman, DB & Seth, AK (2009). Animal consciousness: a synthetic approach, in <i>Trends Neurosci.</i> Sep;32(9):476- 84. • Biro S, Leslie AM. (2007). Infants' perception of goal-directed actions: development through cue-based bootstrapping. <i>Dev Sci.</i> May; 10(3):379-98.
<p>NO CLASS – Travel break April 11th – April 17th</p>	
Tuesday April 18th Class 18	<p>Topic:</p> <ul style="list-style-type: none"> • Course Summary • Open discussion with regard to topics covered during the course • Clarification of eventual matters with regard to final <p style="text-align: center;">No Required Readings for Today</p>
<p>Psychology Concluding Dinner Date: May 1st Time: TBA Location: TBA</p>	
<p>FINAL EXAM Date: Wednesday, May 10th Time: 9.00-11.00 Location: TBA</p>	
<p>DIS Showcase Date: Monday, May 8th Time: 16.00-18.00 Location: TBA</p>	

References

Abondo *et al.* (2009). Sexual assault and MDMA: the distinction between consciousness and awareness when it comes to consent. *Int. J. Legal. Med.* 123:155-156

Almada LF, Pereira A Jr, Carrara-Augustenberg C. (2013) What affective neuroscience means for science of consciousness, in *Mens Sana Monogr.* Jan;11(1):253-73.

Atkinson, A.P., Thomas, M.S.C., Cleeremans, A. (2000). Consciousness: Mapping the Theoretical Landscape, in *Trends in Cognitive Sciences* 4(10), 372-382.

- Carrara-Augustenberg (2013). Endogenous Feedback Network: Summary and Evaluation, in *The development of a comprehensive model of human consciousness*, pp. 15.23, Ph.D Thesis, University of Copenhagen, ISBN 978-87-7611-591-3
- Baars BJ.(2005). Global workspace theory of consciousness: toward a cognitive neuroscience of human experience, in *Progresses in Brain Research* 150, 45-53.
- Bird G, Viding E (2014). The self to other model of empathy: Providing a new framework for understanding empathy impairments in psychopathy, autism, and alexithymia, in *Neurosci Biobehav Rev.* Oct 18;47C:520-532
- Block, N. (2011). Perceptual consciousness overflows cognitive access, in *Trends in Cognitive Sciences* Dec;15(12), 567-75.
- Biro S, Leslie AM. (2007). Infants' perception of goal-directed actions: development through cue-based bootstrapping. *Dev Sci. May*; 10(3):379-98
- Damasio, A. (2003). Feeling of emotions and the self, in *Ann. N.Y Acc.. Science*, 1001, 253-261
- Coleman MR, Davis MH, Rodd JM, Robson T, Ali A, Owen AM, Pickard JD. (2009). Towards the routine use of brain imaging to aid the clinical diagnosis of disorders of consciousness. *Brain* Sep;132 (9):2541-52.
- Cowey A. (2010). The blindsight saga, in *Exp Brain Res.* Jan; 200(1):3-24.
- Custers, R., Aarts, H. (2010). The Unconscious Will: How the Pursuit of Goals Operates Outside of Conscious Awareness, in *Science* 2 July 2010: Vol. 329 no. 5987 pp. 47-50
- Dehaene, S., Naccache, L. (2001). Towards a cognitive neuroscience of consciousness: basic evidence and workspace framework, in *Cognition* 79, 1-37.
- Dehaene S, Changeux JP, Naccache L, Sackur J, Sergent C. (2006). Conscious, preconscious, and subliminal processing: a testable taxonomy, in *Trends Cogn Sci. May*;10(5):204-11.
- Dienes Z., Seth A. (2010). Gambling on the unconscious: A comparison of wagering and confidence ratings as measures of awareness in an artificial grammar task, in *Consciousness and Cognition* June 19(2) 674-681.
- Dijksterhuis L.P., Nordgren L.F. (2006). A Theory of Unconscious Thought, in *Perspectives on psychological science*, 1 (2) 95-109.
- Edelman, DB & Seth, AK (2009). Animal consciousness: a synthetic approach, in *Trends Neurosci.* Sep;32(9):476- 84.
- Johansson P., Hall L., Sikström S., Tärning B., Lind A. (2006). How something can be said about telling more than we can know: On choice blindness and introspection. *Consciousness and Cognition* 15 (2006) 673-692.

- Johansson, P., Hall, L., Sikström, S., and Olsson, A. (2005). Failure to detect mismatches between intention and outcome in a simple decision task. *Science*, 310(5745), 116-119.
- Kouider S, de Gardelle V, Sackur J, Dupoux E. (2010). How rich is consciousness? The partial awareness hypothesis, in *Trends Cogn Sci*.Jul;14(7):301-7.
- Kuhn G, Findlay JM. (2010). Misdirection, attention and awareness: inattentive blindness reveals temporal relationship between eye movements and visual awareness. In *Q J Exp Psychol (Hove)*. 2010 Jan;63(1):136-46.
- Lamme, V.A.F. (2006). Towards a true neural stance on consciousness, in *Trends in Cognitive Sciences* 10(11), 494-501.
- Lamme V.A.F. (2001). Blindsight: The role of feedforward and feedback corticocortical connections, in *Acta Psychologica* 107 (1):209-228
- Laureys S. (2005). The neural correlate of (un)awareness: lessons from the vegetative state. In *Trends in Cognitive Sciences*, Dec;9(12):556-9.
- Monti MM, Vanhaudenhuyse A, Coleman MR, Boly M, Pickard JD, Tshibanda L, Owen AM, Laureys S. (2010). Willful modulation of brain activity in disorders of consciousness, in *N Engl J Med*. Feb 18;362(7):579-89.
- O'Regan K. J & Block N. (2012). Discussion of J. Kevin O'Regan's "Why Red Doesn't Sound Like a Bell: Understanding the Feel of Consciousness", in *The Review of Philosophy and Psychology*, 3-22
- Overgaard M, Rote J, Mouridsen K, Ramsøy TZ. (2006). Is conscious perception gradual or dichotomous? A comparison of report methodologies during a visual task, in *Conscious Cogn*. Dec;15(4):700-8.
- Owen AM, Coleman MR. (2008). Functional neuroimaging of the vegetative state, in *Nat Rev Neurosci*. Mar;9(3):235-43.
- Philippi et al. (2012). Preserved self-awareness following extensive bilateral brain damage to the insula, anterior cingulate, and medial prefrontal cortices. In *PLoS One*. Pp. 1-17 7(8)
- Pressman et al. (2007). Alcohol-induced sleepwalking or confusional arousal as a defense to criminal behavior: a review of scientific evidence, methods and forensic considerations, in *J Sleep Res*. Jun;16(2):198-212.
- Repacholi, B.M, Andrew N., Meltzoff, A.N., Olsen, B. (2008). Infants' Understanding of the Link Between Visual Perception and Emotion: "If She Can't See Me Doing It, She Won't Get Angry", in *Developmental Psychology*, Vol. 44, No. 2, 561-574
- Sandberg K, Timmermans B, Overgaard M, Cleeremans A. (2010). Measuring consciousness: Is one measure better than the other? In *Consciousness and Cognition* Dec;19(4):1069-78.
- Sass LA, Parnas J. (2003). Schizophrenia, consciousness, and the self, in *Schizophr Bull*. 29(3):427-44.

- Simons & Rensink (2005). Change blindness: past, present, and future, in *Trends Cogn Sci*. Jan;9(1):16-20
- Stoerig P. (2006). Blindsight, conscious vision, and the role of primary visual cortex, in *Prog Brain Res*. 2006; 155:217-34.
- Studerus E, Gamma A, Vollenweider fx (2010). Psychometric evaluation of the altered states of consciousness rating scale (OAV), in *PLoS One*. Aug 31;5(8)
- Tononi G. (2004). An information integration theory of consciousness. *BMC Neurosci*. Nov 2;5:42.
- Vanhaudenhuyse A, Noirhomme Q, Tshibanda LJ, Bruno MA, Boveroux P, Schnakers C, Soddu A, Perlberg V, Ledoux D, Brichant JF, Moonen G, Maquet P, Greicius MD, Laureys S, Boly M. (2010). Default network connectivity reflects the level of consciousness in non-communicative brain-damaged patients. *Brain*. Jan;133(1):161-71.
- Zeki S. (2003). The disunity of consciousness, in *Trends in Cognitive Sciences* May;7(5):214-218.
- Zmigrod & Hommel (2011). The relationship between feature binding and consciousness: Evidence from asynchronous multi-modal stimuli in *Consciousness and Cognition* 20, 586–593