Fifth Winter School

Ethics and Neuroscience

Berlin, 15th – 19th February, 2016

Bernstein Center for Computational Neuroscience Berlin
Berlin School of Mind and Brain

Organizers:
Prof. Felix Bermpohl
Prof. John-Dylan Haynes
Prof. Michael Pauen
Prof. Thomas Schmidt

Local Organizers:
Dr. Robert Martin
Dr. Dirk Mende

Contact: graduateprograms@bccn-berlin.de
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Program subject to change
Program Overview

Registration and Welcome
Monday, 15th February
8:30: Registration, Ostertag-Haus (Lecture Hall 4)
9:00: Welcome for all participants, Ostertag-Haus (Lecture Hall 4)

Keynote Lecture – Walter Sinnott-Armstrong
Wednesday, 16th February, 17:30 – 19:00, Haus 2, Lecture Hall 1

Philosophical Track P1
Monday, 15th February, 9:30 – 17:00, BCCN Haus 6 (Lecture Hall)
Tuesday, 16th February, 9:00 – 17:00, BCCN Haus 6 (Lecture Hall)

Philosophical Track P2
Thursday, 18th February, 9:00 – 17:00, BCCN Haus 6 (Lecture Hall)
Friday, 19th February, 9:00 – 17:00, BCCN Haus 6 (Lecture Hall)

Empirical Track E1
Monday, 15th February, 9:30 – 17:00, Ostertag-Haus (Lecture Hall 4)
Tuesday, 16th February, 9:00 – 17:00, Ostertag-Haus (Lecture Hall 4)

Empirical Track E2
Wednesday, 17th February, 13:30 – 17:00, Ostertag-Haus (Lecture Hall 4)
Thursday, 18th February, 9:00 – 17:00, Ostertag-Haus (Lecture Hall 4)
Friday, 19th February, 9:00 – 17:00, Ostertag-Haus (Lecture Hall 4)

Good Scientific Practice
Wednesday, 17th February, 9:00 – 12:30, Ostertag-Haus (Lecture Hall 4)

Social Event for Participants
Tuesday, 16th February, 18:00, Clärchens Ballhaus, Auguststr. 24, 10117 Berlin

Speakers' Dinner
Wednesday, 17th February, 19:00, Habel, Luisenstr. 19, 10117 Berlin

Coffee Breaks
10:30 – 11:00, 15:00 – 15:30, BCCN Haus 6 (Seminar Room, ground floor)

Lunch Break
12:30 – 13:30, individually
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<tr>
<th>Time</th>
<th>Empirical Track E1</th>
<th>Philosophical Track P1</th>
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<td>8:30 – 9:00</td>
<td>Registration (Ostertag-Haus)</td>
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<td></td>
<td>Coffee Break¹</td>
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<td>11:00 – 12:30</td>
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<td>Group work/description session</td>
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<td>Lunch Break²</td>
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<td>13:30 – 15:00</td>
<td>Michael Pauen: Introduction to Applied Ethics</td>
<td>Rasha Abdel-Rahman: Ethics Committee</td>
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<td>Coffee Break¹</td>
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<td>15:30 – 17:00</td>
<td>Joint discussion session: Brain Reading</td>
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<td>17:30 – 19:00</td>
<td>18:00: Social event for participants</td>
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<td>19:00 – open end</td>
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¹ Coffee break: 10:30 - 11:00 and 15:00 - 15:30 (BCCN, Haus 6, seminar room, ground floor)
² Lunch break: 12:30 - 13:30
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<tr>
<th>Wed Feb 17, 2016</th>
<th>Thu Feb 18, 2016</th>
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<td>Empirical Track</td>
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<td>Track E2</td>
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<td>Kolja Schilt:</td>
<td>Jesse Prinz:</td>
<td>Julius Hübl/ Henriette Krug:</td>
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<td>Marc Stauch:</td>
<td>Group work/ discussion session</td>
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<td>Data Protection and Data Security: A Lawyer's View on Personal Clinical Information</td>
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<td>The Neurobiology of Values</td>
<td>Ethical Issues on Animal Experiments</td>
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<td>Group work</td>
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<td>Walter Sinnott-Armstrong: My Brain Made Me Do It – So What?</td>
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<td>Keynote Walter Sinnott-Armstrong: Are Psychopaths Responsible? HU Campus Nord, Haus 2, Lecture Hall 2</td>
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<td>Speaker's dinner: Habel Luisenstr. 19, 10117 Berlin</td>
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Program

Keynote Lecture

Wednesday, 17th February 2016 (venue K)

17:30 - 19:00 W. Sinnott-Armstrong (Duke University)
Are Psychopaths Responsible?

Psychopaths are less than 1% of the population, but they commit over 40% of violent crimes. Some studies suggest that they do not understand the immorality of their acts. If not, then they should not be held legally or morally responsible. But then what should we do with them?
Philosophical Track P1

Monday, 15th February 2016 (venue P)

9:30 – 15:00 T. Schmidt (Humboldt-Universität zu Berlin)

*Ethics, Metaethics, Moral Responsibility, Ethics of Neuroscience, Neuroscience of Ethics*

The course provides a survey of important issues discussed in philosophical ethics (both normative ethics and metaethics) and introduces basic ethical concepts and theories. The overall aim is to provide a reasonably broad overview over and, at the same time, reasonable deep insights into how ethical issues are discussed in philosophy. On the basis of this, we will identify, and discuss, theoretical interfaces between ethics and empirical disciplines such as neuroscience and cognitive psychology.

All texts should be read in preparation for the course! Please have the texts with you for the discussions in class.

**Literature:**


Tuesday, 16th February 2016 (venue P)

9:00 – 15:00 T. Schmidt (Humboldt-Universität zu Berlin)

*Ethics, Metaethics, Moral Responsibility, Ethics of Neuroscience, Neuroscience of Ethics*

see above

15:30 – 17:00 **Joint discussion session** (Tracks P1 and E1)

*Brain Reading*
The Moral Mind: the Nature of Morality

The course will exam ethics from the perspective of empirically informed philosophy. More exactly, we will look at the nature of moral judgments, and use research on that question to develop a perspective on core issues in metaethics. A central theme will be the role role of emotion in moral judgment. Recent research in psychology and neuroscience suggests that moral judgments involve (embodied) emotions. But what is the nature of this involvement? Does it threaten the view that morality can be based on reason? Does it lead to relativism about morality or might there be a basis for universal values in our shared evolutionary history? What bearing does it have on moral motivation and identity? I plan to focus on the nature of moral judgments the first day and questions of relativism and origins the second day.

All texts should be read in preparation for the course!

Literature:


Empirical Track E1

Monday, 15th February 2016 (venue E)

9:30 – 12:30 **J.-D. Haynes** (Charité Medical School, Berlin)

*Brain Reading*

The ability to read another person’s thoughts has always exerted an enormous fascination. Recently, new brain imaging technology has emerged that might make it possible to one day read a person’s thoughts directly from their brain activity. This novel approach is referred to as “brain reading” or the “decoding of mental states.” This lecture will provide a general outline of the field, and will then proceed to discuss its limitations, its potential applications, and also certain ethical issues that brain reading raises.

**Literature:**


13:30 - 17:00 **M. Pauen** (Humboldt-Universität zu Berlin)

*Introduction to Applied Ethics*

Neuroscience raises a number of significant ethical issues. Two sorts of questions should be distinguished: One the one hand, ethical considerations bear on neuroscientific research and its applications. Problems concerning deep brain stimulation provide an example. On the other hand, neuroscientific results may have important consequences for ethics, e.g. in the free will debate. Starting with a brief overview over philosophical ethics in general and applied ethics, the lecture will then address both types of questions outlined above. The lecture will end with an outline of an applied ethics of neuroscience.

**Literature:**

Tuesday, 16th February 2016 (venue E)

9:00 – 10:30 J. Holthues (Jüdisches Krankenhaus Berlin)

Neuroenhancement

Healthy people are ready to use different classes of drugs, even in the absence of significant evidence for their efficacy and without complete clinical testing. In controlled clinical trials, it has been difficult to prove more than moderate neuroenhancing effects for most of these substances. A systematic pharmacological enhancement of complex brain functions such as learning, memory, attention or social interactions will be difficult to achieve as long as the neurobiological foundations of these functions are not fully understood. Why are we still willing to ‘enhance’ ourselves?

Literature:

11:00 – 12:30 J.-D. Haynes Group work with supervision

Brain Reading

13:30 - 15:00 R. Abdel-Rahman (Humboldt-Universität zu Berlin)

Ethics Committees

I will provide a description of the practical work of an ethic committee in Psychology, including a description of the composition of the committee, important guidelines for evaluating ethical and judicial aspects of psychological and neuroscientific research, and discuss examples of potentially problematic research.

Literature:
World Medical Association: Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects.

15:30 – 17:00 Joint discussion session (Tracks P1 and E1)

Brain Reading

10
Empirical Track E2

**Wednesday, 17th February 2016** (venue E)

13:30 – 15:00 **F. Bermpohl** (Charité Medical School, Berlin)

*The Neurobiology of Values - Scientific Paradigms*

This interactive lecture will focus on neuroscientific attempts to study „values“. Challenges and advantages of such empirical as opposed to a conceptual approach will be highlighted. Examples of studies investigating different types of values (e.g., esthetic, moral) will be presented. Interdisciplinary aspects and implications of the studies will be discussed.

**Literature:**

15:30 – 17:00 **J.-D. Haynes, F. Bermpohl** Group work with supervision
The topics for the group work are introduced and the “four principles plus scope” approach to ethical issues in health care is introduced.

**Thursday, 18th February 2016** (venue E)

9:00 – 10:30 **K. Schiltz** (Magdeburg University)

*A view on pedophilia from a neuroscientific perspective*

Sexual child abuse reliably causes considerable public concern and is of major importance for public health. Nevertheless, hitherto no causative factor of pedophilia has been reliably pinpointed even though different psychological and neurobiological factors have been linked to an increased liability to sexual child abuse, and, more specifically, to the development of a pedophilic sexual orientation. Etiological theories have postulated a major impact of the environment on the liability to commit sexual crimes against children. Many of the earlier studies suffer from the fact that they did not differentiate between sexual child abuse without a specific sexual interest in children from sexual
child abuse committed by offenders that have an exclusive sexual interest in children but not in adults. Recent studies have begun to increasingly discern these different groups of offenders and, moreover, to address causes of deviant pedophilic sexual interest more specifically. These more recent studies increasingly emphasize the role of neurobiological factors for the development of such a deviant sexual interest, too. However, the role of alterations in brain structures crucial in the development of sexual behavior has only scarcely been studied in pedophilic subjects yet. Different theories about the preconditions for the development of a pedophilic sexual orientation have been put forward which are based on an as yet not completely conclusive evidence from neuroscience.

11:00 – 12:30 **M. Stauch** (Leibniz Universität Hannover)  
*Data Protection and Data Security: A Lawyer's View on Personal Clinical Information*

This lecture will deal with basic principles on European data protection and data security law, including the ethical and philosophical reasoning enshrined in the law. Specific attention will be attributed to the Charter of Fundamental Rights of the European Union, Directive 95/46/EC and, in particular, the ongoing debate on a Data Protection Regulation.

Literature:  

13:30 - 15:00 **Y. Winter** (Humboldt-Universität zu Berlin)  
*Ethical Issues of Animal Experiments*

Advances in human and veterinary medicine through animal experiments have a key function. Modern medicine has benefited substantially from pioneering discoveries of basic biological research and their implementation in applied research. Current and future medical challenges will make major demands on science and require us to use all effective scientific methods. Wherever possible we use alternative methods, and only use animal experiments when absolutely essential. In animal experiments we are mindful of our responsibility
toward the animals. Scientists are trying to reduce the use of and stress on animals by “Reduction, Refinement and Replacement” (the 3R principle). The welfare of animals is also important for a best quality research results.

Literature:
The Basel Declaration on Animal Research, www.basel-declaration.org

*Nature.com*, 06.12.2010: Basel Declaration defends animal research

http://www.nature.com/nature/journal/v468/n7325/full/468731b.html

15:30 – 17:00: **Walter Sinnott-Armstrong** (Duke University)
My Brain Made Me Do So – So What?
Our brain states cause our actions. Does that show that we are never responsible for our actions? No, and I will explain why not. In particular, I will discuss the nature of freedom and moral responsibility as well as recent EEG experiments by John-Dylan Haynes and our own lab. Then I will show how neuroscience does have implications for moral and legal responsibility in certain special cases.

**Friday, 19th February 2016**

9:00 - 10:30 **J. Hübl, H. Krug** (Charité Medical School, Berlin)
*Deep Brain Stimulation and Ethics*

Deep brain stimulation (DBS) has become a well-established therapy in the treatment of severe and advanced movement disorders, e.g. Parkinson’s disease (PD), dystonia as well as tremor syndromes. Due to its impressive clinical results DBS is being applied to a growing number of further neurologic as well as psychiatric disorders. As DBS is a procedure intervening in the brain it raises ethical questions, particularly regarding possible influences on the personality. In this presentation an introduction in the field of DBS will be presented covering the major ethical concerns as well as risks and benefits of DBS with the focus on Parkinson’s disease.
Literature:

11:00 – 12:30 **J.-D. Haynes, F. Bermpohl** Group work with supervision
13:30 - 17:00 **J.-D. Haynes** and **P. Sterzer** (Charité Medical School, Berlin)
Discussion and participants' presentations
Good Scientific Practice

Wednesday, 17th February, 9:00 - 12:30: N. Offenhauser

Attending Good Scientific Practice (GSP) lectures is the annoying duty of a scientist. This lecture provides the opportunity to earn a GSP certificate on fast track, so that everybody can move on to do the important things in research, like p-value fishing, outlier elimination, salami publication and exaggeration of findings. In addition, this lecture will improve your time management skills as it highlights the importance to skip record keeping, data archiving and ethical considerations in response to publication pressure. Toolboxes for safe plagiarism and publishing flawed, falsified or fabricated data will be presented. Helpful phrases will be provided to discuss the high quality and reliability of biomedical research and the fact that cases of misconduct are rare and not symptoms of a systematic problem or evidence of insufficient quality control in basic research. General aim of the lecture is that participants neither need to reflect on personal responsibilities fundamental for scientific integrity nor on the small step from sloppy research practices to misconduct. 😊

Literature:

Program subject to change
Speakers

**Walter Sinnott-Armstrong**  
Studied at Amherst College and Yale University  
Chauncey Stillman Professor of Practical Ethics at Duke University  
Core faculty in the Duke Institute for Brain Sciences, the Duke Center for Cognitive Neuroscience, and the Duke Center for Interdisciplinary Decision Sciences  
Resource Faculty in the Philosophy Department of the University of North Carolina at Chapel Hill  
Partner Investigator at the Oxford Centre for Neuroethics  
Fellowships: Harvard Program in Ethics and the Professions, Princeton Center for Human Values, Oxford Uehiro Centre for Practical Ethics  
Former co-chair of the Board of Officers of the American Philosophical Association  
Research fields: ethics (theoretical and applied as well as meta-ethics), epistemology, philosophy of religion, informal logic; currently: moral psychology and brain science, uses of neuroscience in legal systems

**Rasha Abdel-Rahman**  
Scientific staff member of the Max Planck Institute for Psycholinguistics (Speech production group; head: W. J. M. Levelt) in Nijmegen, The Netherlands (2001-2003)  
Dr. rer. nat. (Ph.D) in Psychology at Humboldt-Universität zu Berlin (2001)  
Habilitation in Psychology at Humboldt-Universität zu Berlin (2008)  
Heisenberg-Professor of Neurocognitive Psychology, Institute of Psychology, HU Berlin (since 2010)  
Research fields: Language production, interface between vision, semantics and language, functional organisation of semantic memory, etc.

**Felix Bermpohl**  
Postdoctoral fellow at Harvard Medical School (2002-2005)  
Professor of Psychiatry and Cognitive Neuroscience at the Charité  
Principal Investigator in the Berlin School of Mind and Brain, the BMBF research consortium UBICA, and the BMBF research consortium BIPOLIFE  
Chief physician, Department of Psychiatry and Psychotherapy, Charité St. Hedwig Hospital  
Head of Affective Disorders Research Group, Charité Medical School  
Research fields: Neuroimaging, Psychotherapy, Affective and Addictive Disorders

**John-Dylan Haynes**  
Dr. rer. nat. (PhD) in Psychology at Bremen University  
Research Positions in Magdeburg, Plymouth, London, Leipzig (among others)  
Professor at Bernstein Center for Computational Neuroscience and Charité Medical School, Berlin (Theory and Analysis of Large Scale Brain Signals)  
Principal Investigator in the Cluster of Excellence NeuroCure and in the Berlin School of Mind and Brain  
Director of the Berlin Center for Advanced Neuroimaging  
Research fields: Neuroimaging, Decision making, Neuroethics
Jan Holthues

Julius Hübl
Graduated from Charité Med School in 2006
Working Group Movement Disorders, Department for Neurology, Charité Medical School Berlin
Clinical training in neurology with emphasis in movement disorders and deep brain stimulation (since 2010)
Research Fields: Movement disorders, deep brain stimulation.

Henriette Krug
Studied Protestant Theology and Humane Medicine in Berlin and Heidelberg
Since 2003: Assistant doctor and scientific assistant in the Department for Neurology at Charité Berlin, Campus Virchow
Research fields: Neuroethics, ethical and anthropological implications of Deep Brain Stimulation

Nikolas Offenhauser
Studied Medicine at the University Greifswald and FU Berlin
Doctoral studies at the Charité - Universitätsmedizin Berlin
Research Assistant Professor and Post-doctoral positions at the University of Copenhagen (until 2005) and the Charité, Dept. of Experimental Neurology
Quality Manager for the Berlin Institute of Health (BIH) and Charité representative for Responsible Conduct of Research (until 2015)
Consultant for Research Quality Management, Integrity Training and Monitoring (since 2016)
Research fields: Research quality and integrity, research organization and management

Michael Pauen
Studied in Marburg, Frankfurt and Hamburg.
Professor at the Institute for Philosophy, Humboldt Universität zu Berlin
Visiting Professor at the Institute for Advanced Study in Amherst, Massachusetts
Academic Director of the Berlin School of Mind and Brain
Research fields: Philosophy of mind, free will, neuroscience and philosophy

Jesse J. Prinz
Studied Philosophy at the New York University and the University of Chicago
Distinguished Professor of Philosophy and Director of the Interdisciplinary Committee for Science Studies, City University of New York, Graduate Center
Visiting Fellow in Budapest, Paris, and Stanford
Einstein Visiting Fellow at the Berlin School of Mind and Brain 2015 - 2017
Research fields: The relationship between morality and the self; the role of psychology in constructing the world; and the role of emotions in art.

**Kolja Schiltz**
Studied medicine and cognitive neuroscience in Hannover and La Jolla, California (graduated in 1999)
Residency in neurology and psychiatry at Magdeburg University
Board Certification in 2008
Consultant psychiatrist at Magdeburg University
Research fields: functional and structural brain alterations in schizophrenia patients, neurobiological underpinnings of forensic psychiatric disorders

**Thomas Schmidt**
Studied philosophy, mathematics and economics at Götingen and Oxford
Professor of Philosophy at Humboldt-Universität (Chair for Moral Philosophy)
Visiting Positions at Münster, St Andrews and Zurich
Principal Investigator at the Berlin School of Mind and Brain
Research fields: metaethics (objectivity, normativity, moral epistemology), normative ethics (deontology, moral principles, ethical pluralism)

**Marc Stauch**
Legal training in the UK (qualification: Solicitor)
Lecturing Law at English universities for several years
Research associate at the Institute for Legal Informatics (IRI), Leibniz Universität Hannover
Research fields: data protection law in the context of EU-FP7 and IMI bio-informatics projects

**Philipp Sterzer**
Studied Medicine at LMU Munich and Harvard Medical School
Doctoral studies at the MPI of Psychiatry Munich
Residencies in neurology and psychiatry at Goethe University Frankfurt and Charité Berlin
Scientific work at Frankfurt, London and Berlin
Founder of the Visual Perception Laboratory at Charité Berlin (DFG-funded)
Since 2011 professor for psychiatry (focus: computational neuroscience) at Charité Berlin
Research interests: processes of visual perception, alterations of these processes in mental diseases

**York Winter**
Master of Science, University of Minnesota (1987)
Doctoral degree (1993) and habilitation (1999) at University of Erlangen.
Professor for Cognitive Neuroscience, Faculty of Biology, University of Bielefeld (2006-2009)
Professor for Cognitive Neurobiology at Humboldt Universität zu Berlin (since 2009)
Principal Investigator in the Cluster of Excellence NeuroCure
Research fields: Decision making, learning, memory, cognition, virtual reality
Map: Venues of the Winter School 2016