

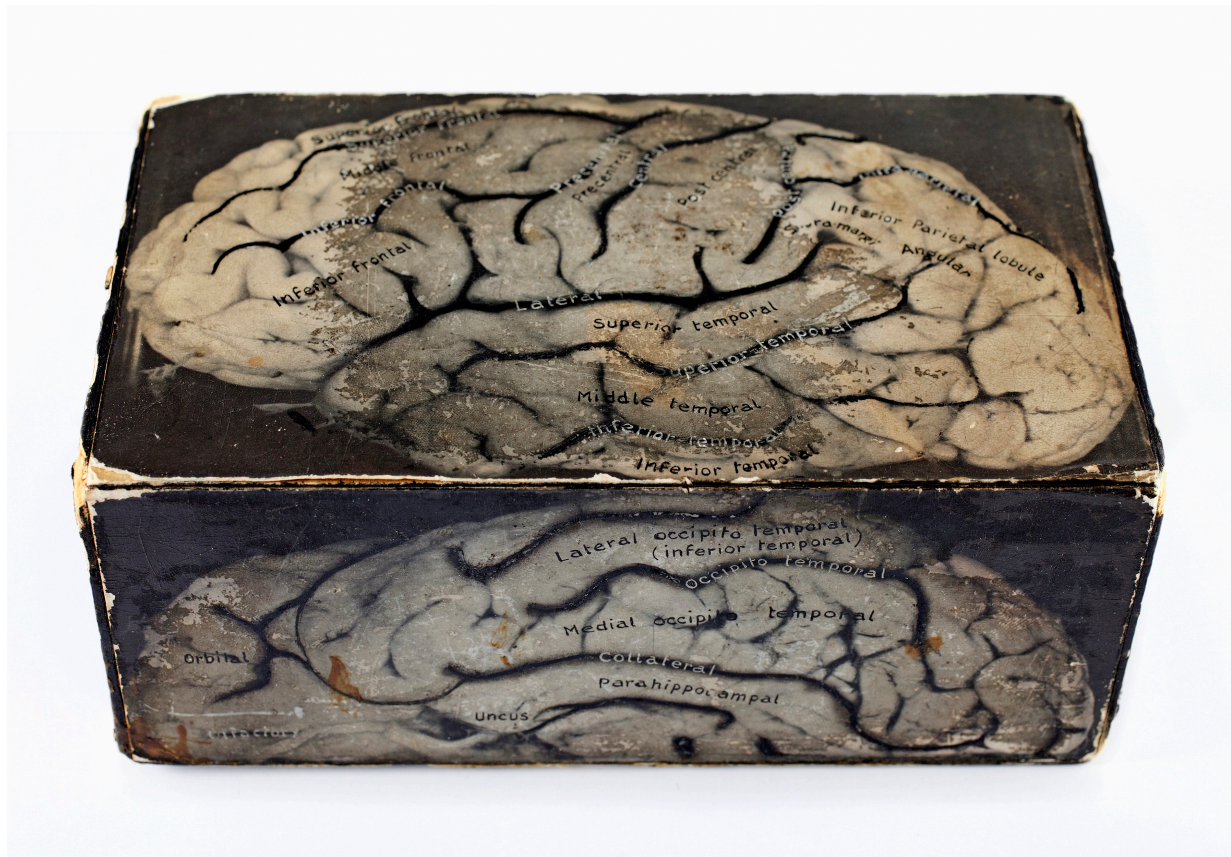
Vital Brains

The Making and Use of Models in Neuroscience

A workshop organized by the **Neuroscience and Society Network**
In collaboration with the **Critical Neuroscience network**

April 7-8, 2016

Free University of Berlin | Habelschwerdter Allee 45 | Room KL 32/202



Box model of the brain, mid-20th century. Photographic prints mounted on wood, paint. Anatomy Museum, University of Aberdeen (Wellcome Images)

REGISTER: <https://www.eventbrite.co.uk/e/vital-brains-the-making-and-use-of-models-in-neuroscience-tickets-21342189062>

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Vital Brains

The Making and Use of Models in Neuroscience

Using models to understand the human brain is hardly new. The practice has been used widely in the natural and life sciences since the 1800s, and continues today. Yet very little study by social scientists has been dedicated to how the neurosciences develop and use models to better understand what the brain is and how it works, including the complex entanglements between brains and the social. The workshop aims to understand the problems associated with modelling the brain by exploring the history and use of physical models of the brain, the development of digital models and simulations of the brain, and the development and use of animal models in neuroscience. The workshop will tackle four key questions: 1) How are brain models created and used in teaching and research? 2) What are the conceptual benefits, and limits of abstracting the brain from its context? 3) What would a 'vital' model of the brain look like? 4) What are the implications of brain modelling for the social?

Thursday 7 April 2016

14:00 - 14:15 **Introduction**

Tara Mahfoud and Sam McLean, *King's College London*
Jan Slaby, *Free University of Berlin* and Philipp Haueis, *Berlin School of Mind and Brain*

14:15 - 16:15 **Keynotes**

14:15 - 15:15 **Bridging the Gap between System and Cell: the Role of 7T MRI in Human Neuroscience**

Robert Turner, *Director Emeritus, Department of Neurophysics, Max Planck Institute for Human Cognitive and Brain Sciences*

15:15 - 16:15 **Vitalism, Neuroscience, and the Problem of Translation**

Nikolas Rose, *Professor of Sociology and Head of the Department of Social Science, Health and Medicine, King's College London*

16:15 - 16:30 **Coffee Break**

16:30 - 18:30 **ANIMATING ANATOMY: STRUCTURE, FUNCTION, AND SPACE-TIME**

Your Brain on a Plate: Towards a History of 3D Models of the Brain

Marius Kwint, *Reader in Visual Culture, School of Art and Design, University of Portsmouth*

Models of What Exactly? Tales from the Workbenches of Contemporary Imaging Neuroscience

Johannes Bruder, *Postdoctoral Researcher, Institute of Experimental Design and Media Cultures and the Critical Media Lab, Academy of Art and Design FHNW*

Epistemic Virtues of Visualization: The Living Brain Revisited

Cornelius Borck, *Professor and Director of Institute for History of Medicine and Science Studies, University of Lübeck*

Friday 8 April 2016

09:00 - 11:00

COGNITIVE PROCESSING: KNOWLEDGE, INFORMATION, AND SIMULATION

Models, Machines, and Mental Labour: Information Processing, 1950-1980

Max Stadler, *Postdoctoral Researcher, Chair for Science Studies, Swiss Federal Institute of Technology, Zurich*

What is Vital to Model? Negotiating Tops and Bottoms in the European Union's Human Brain Project

Tara Mahfoud, *PhD Candidate, Department of Social Science, Health and Medicine, King's College London*

Knowledge by Large-Scale Neural Simulations

Maria Serban, *Postdoctoral Researcher, Centre for Philosophy, Department of Media, Cognition and Communication, University of Copenhagen*

11:00 - 11:30

Coffee Break

11:30 - 13:30

ABSTRACT CONDITIONS: CONCEPTS, PRACTICE, AND EXPERIMENT

Living with Indiscernible Matter: Modelling Drug Memories

Sam McLean, *PhD Candidate, Department of Social Science, Health and Medicine, King's College London*

Connectomes as Constitutively Epistemic Objects

Philipp Haueis, *PhD Candidate, Berlin School of Mind and Brain*

Jan Slaby, *Junior Professor, Institute of Philosophy, Free University of Berlin*

Drugged and Dreaming Brains: Two Opaque Models to Explore the Neurobiological Basis of Mental Phenomena

Nicolas Langlitz, *Associate Professor, Department of Anthropology, New School for Social Research*

13:30 - 14:30

Lunch Break

14:30 - 16:30

ANIMAL AGENCIES: THE NORMAL, THE ETHICAL, AND THE MARKET

Slicing the Brain to Study Mental Illness: Reflecting with Alois Alzheimer on the Normal and the Pathological Brain

Lara Keuck, *Postdoctoral Researcher and Branco Weiss Fellow, Department of History, Humboldt University Berlin*

Animal Models, Economic Decision-Making, and the Length of the (Primate) Work Day

Gail Davies, *Professor in Human Geography, University of Exeter*

Marketing the Model: Patents and Mouse Strains in Alzheimer's Research

Bronwyn Parry, *Professor of Sociology, Department of Social Science, Health and Medicine, King's College London*

16:30 - 17:00

Conclusion