

# Brain and Mind – from Concrete to Abstract

**BELIEF AND THE BRAIN | JANUAR 31ST 2023**

AN INTERDISCIPLINARY WORKSHOP BETWEEN MSH AND  
ST HILDA'S COLLEGE OXFORD UNIVERSITY

## **Dr Anita Avramides**

Anita Avramides is Senior Research Fellow in Philosophy at St Hilda's College in Oxford. She is the author of »Other Minds«, published by Routledge, »Meaning and Mind: An Examination of a Gricean Account of Meaning«, published by MIT Press, and co-editor of »Knowing Other Minds«, published by Oxford University Press. She has written many articles in the philosophy of mind.

## **Prof Dr Jan Beucke**

»Functional neuroanatomy of irrational decision-making in OCD«

Obsessive-compulsive disorder (OCD) is a disabling psychiatric condition which often starts early in life and leads to high individual suffering and interference in many areas of life, for example education and work, as well as other health problems. Despite the fact that symptoms of OCD are quite heterogeneous, they typically involve aspects of decision-making, for example, when patients decide to return to their apartment to check whether they left the stove on, or when they continue to wash their hands even though they are already clean.

In his talk, Prof Dr Beucke will describe that altered decision-making in patients with OCD is not limited to symptomatic contexts, but may also be observed under experimental laboratory conditions in the absence of symptoms. Further, findings from functional neuroimaging and neurosurgical treatment studies will be presented, which reveal a striking overlap of brain systems associated with OCD and decision-making processes in the healthy brain, respectively. Finally, the importance

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## **TIMETABLE**

**18.00**

Introduction by Dr Anita Avramides,  
St Hilda's College, Oxford, UK

**18.10**

»*Functional neuroanatomy of irrational  
decision-making in OCD*«

Prof Dr Jan Beucke, Professor of Medical  
Psychology at MSH Medical School Hamburg

**18.30**

»*Bayesian brains without probabilities*«

Prof Nick Chater, Professor of Behavioral  
Sciences at Warwick Business School, London

**18.50**

Discussion and break

**19.25**

»*Choosing for changing selves*«

Prof Richard Pettigrew, Professor of  
Philosophy at University of Bristol

**19.45**

Discussion and Dinner

**20.15**

End

of understanding whether irrational decision-making represents a cause or consequence of OCD will be highlighted.

*Prof Dr Jan Beucke studied Psychology at the Humboldt-Universität zu Berlin where he also obtained his PhD after working at the Massachusetts General Hospital in Boston for a couple of years. He is now Professor of Medical Psychology at Medical School Hamburg (MSH), and affiliated with Karolinska Institutet, where he initiated the OCDTWIN project. In Stockholm and Hamburg, the OCDTWIN project recruits and studies monozygotic twin pairs discordant for obsessive-compulsive disorder (OCD) from all over Sweden and Germany, respectively, in order to identify biological abnormalities likely to be in the causal pathway of OCD. The aim of Jan Beucke's research is to contribute to improved treatment and prevention of OCD by increasing knowledge of its etiology.*

### **Prof Nick Chater**

»Bayesian brains without probabilities«

Lots of models in the cognitive and brain sciences assume that the brain deals with uncertainty using Bayesian inference, whether in perception, common-sense reasoning, or scientific inference. But the calculations required to carry out Bayesian inference exactly are computationally intractable. Prof Chater will explore the idea that we may have a »Bayesian brain« that doesn't represent, let alone calculate with, probabilities at all. Instead, it approximates Bayesian reasoning by sampling from implicit probability distributions to which it has no direct access. The sampling account predicts that people will diverge from »correct« probabilistic reasoning in specific systematic ways – which they do. This talk will report on a team research project running over the last few years at Warwick (<https://sampling.warwick.ac.uk/>), with Chater's colleagues Adam Sanborn, Zhu Jianqiao, Jake Spicer and many others.

*Nick Chater is Professor of Behavioral Science at Warwick Business School. He is interested in the cognitive and social foundations of rationality, and implications for business and public policy.*

### **Prof Richard Pettigrew**

»Choosing for changing selves«

Sometimes the things we value, the ways we want the world to be, and the sort of person we are changes over the course of our lives. Sometimes they change as a predictable result of decisions we make: as a result of pursuing a particular career, we might know that we'll become more conformist than we are now; as a result of moving to a new country, we might know that we'll adopt many of the values that are most prevalent there. Is it possible to make such decisions in a rational way? When we make them, to which values should we appeal? Our values now, at the point we're making the decision; or our values in the future, after the decision is made and our values have changed? Prof Pettigrew will be asking how to address these questions.

*Richard Pettigrew is a Professor of Philosophy at the University of Bristol. In his research, he has worked in the philosophy of mathematics, the foundations of rational reasoning under uncertainty, and the theory of rational decision-making. Together with his colleagues, Josie McLellan and Tom Sperlinger, he designed and ran the Foundation programme in Arts and Humanities from 2013.*

