



# Thinking About the Brain

Ashmolean Museum of Art and Archaeology, Thursday 20 November 2014, 5.30–8.00pm

5.30	<b>Introductory Remarks</b>	Dr Jim Harris, Andrew W Mellon Foundation Teaching Curator, University Engagement Programme, Ashmolean Museum of Art and Archaeology Professor Alastair Buchan, Head of Medical Sciences Division, University of Oxford
5.40	<b>The Mind of God</b>	Dr Joshua Hordern
6.00	<b>Compassion and the Medieval Mind</b>	Dr Ayoush Lazikani
6.20	<b>Psychiatry, Psychosis, and the Brain</b>	Dr Matthew Broome
6.40	<b>Break</b>	
6.50	<b>Pleasures of the Hunt</b>	Professor David Lomas
7.10	<b>Art, Illusions and the Visual Brain</b>	Professor Christopher Kennard
7.30	<b>Half a World: What unilateral neglect tells us about space and the brain</b>	Professor Glyn Humphreys
7.50	<b>The art of seeing</b>	Dr Chrystalina Antoniades

# Abstracts & Biographies

## **Jim Harris: Introductory Remarks**

Dr Jim Harris is Andrew W Mellon Foundation Teaching Curator in the University Engagement Programme of the Ashmolean Museum. He trained as an actor at RADA and as an art historian at the Courtauld Institute of Art, where he received his PhD for a thesis on Donatello's polychrome sculpture and later held the Caroline Villers Research Fellowship in Conservation.

The University Engagement Programme of the Ashmolean Museum comprises three Teaching Curators and a Programme Director, whose remit is to explore the ways the collections of the Museum can be used for teaching and research and integrated into the curricula of the University of Oxford. In the first two years of its life, the UEP has collaborated with 25 departments of the University, in all four academic divisions, and has welcomed over 4000 students to the Museum.

## **Joshua Hordern: The Mind of God**

To speak of the Mind of God might seem an impossible task: either the Mind of God is non-existent or it is inaccessible. Indeed both Jewish and Christian thought emphasise the unsearchable quality of God's thoughts. But the Christian emphasis on the Incarnate Mind of God strikes a new note, making the Mind of God more visible and affirming the goodness of bodily life. The incarnation provides a different angle on the value of scientific research in the brain as a feature of bodily life. Inasmuch as the Incarnate Mind of God is shown to affective, marked by distress and compassion, Christian theology is especially interested in the field of affective neuroscience. The possibility of sympathy combined with the transition from the Unsearchable to the Incarnate opens the way for an Inspired Mind of God, shareable by all humanity.

Dr Joshua Hordern is Associate Professor of Christian Ethics in the Faculty of Theology and Religion, a Fellow of Harris Manchester College and Lecturer in Theology at Jesus College. He has worked with the University Engagement Programme, using images and objects from the Ashmolean in teaching on medical ethics and he collaborates with the Royal Society of Medicine Open Section on a Knowledge Exchange project entitled 'Compassion in Healthcare', supported by the Higher Education Innovation Fund and The Oxford Research Centre in the Humanities (TORCH). More info at: [www.torch.ox.ac.uk/knowledge-exchange/compassion](http://www.torch.ox.ac.uk/knowledge-exchange/compassion)

## **Ayoush Lazikani: Compassion and the Medieval Mind**

In the past three decades, scholarship has sought to demonstrate the complexities of the 'medieval mind' in Old and Middle English literature. However, vernacular texts of the twelfth and thirteenth centuries remain relatively neglected. Early Middle English texts from this period undoubtedly indicate the cognitive-affective sophistication of medieval audiences, readers, and authors. In this brief talk situated in scholarship on the history of emotions, I will foreground the nurturance of the cognitive-affective phenomenon of compassion in religious texts. The talk will reveal the depth of compassionate activity that is encouraged in these texts. Readers and audiences are invited to nurture a rich 'co-suffering' (Miri Rubin) or 'co-feeling' (Milan Kundera) in the place of a distanced, superficial pity. They attempt to occupy the 'mind' and/or 'heart' of a suffering human being, sharing in their pain.

Dr Ayoush Lazikani is Stipendiary Lecturer in Old and Middle English Literature at St Anne's and Hertford Colleges at Oxford. She has collaborated with the University Engagement Programme in teaching early- and late-medieval literature, using Anglo-Saxon and later medieval objects from the Ashmolean collections. Her current research focuses on the languages of affective stirring and affective & physical pain in Early Middle English, Latin, and Anglo-Norman devotional texts of the High Middle Ages and she has published on thirteenth-century hagiographies and Passion meditations. In her forthcoming monograph, *Cultivating the Heart* (University of Wales Press) she examines the languages of compassion, love, and sorrow in a range of homiletic, hagiographic, meditational, lyric, and anchoritic texts from the twelfth and thirteenth centuries.

## **Matthew Broome: Psychiatry, Psychosis, and the Brain**

Psychiatry, understandably, has long been interested in the brain and how its function relates to mental illness. In the late nineteenth century there was a burgeoning interest in cerebral function and how it related to psychopathology – a period that Shorter refers to as ‘the first biological psychiatry’ – and in which several important discoveries were made. In this talk I will review some of the claims made at this time, and their importance for the discipline of psychiatry, as well as the movement’s subsequent critique by Jaspers. We are now in ‘the second biological psychiatry’ and I will describe the paradigm of ‘cognitive neuropsychiatry’ in which I have worked and review some of the current ways psychiatry studies the brain in an effort to understand psychotic illness, drawing upon examples from my own work and that of colleagues. I will describe how we characterise psychotic illness, at-risk states for the illness, and some of the neuroimaging techniques that can be employed to study anatomy, function, and neurochemistry in those across the continuum of psychosis.

Dr Matthew Broome studied Pharmacology and Medicine at the University of Birmingham and undertook his postgraduate psychiatry training at the Maudsley and Bethlem Royal Hospitals, the National Hospital for Neurology and Neurosurgery, and the Institute of Psychiatry, where he also completed his PhD. He is currently Senior Clinical Research Fellow in the Department of Psychiatry at the University of Oxford, and Consultant Psychiatrist at the Warneford Hospital, Oxford Health NHS Foundation Trust. He is Associate and Handling Editor for the *British Journal of Psychiatry*. In 2009 he co-edited, with Lisa Bortolotti, *Psychiatry as Cognitive Neuroscience* (OUP), and his empirical work focuses on the prodromal phase of psychosis, delusions and mood instability and utilises epidemiology, functional neuroimaging and cognitive neuropsychology to understand psychopathology.

## **David Lomas: Pleasures of the Hunt**

Neural imaging studies have revealed areas of the brain that are activated when a subject is ostensibly resting in between experiments where they are instructed to carry out a particular task. The mental activity engaged in at such moments is typically introspective and deals with personal memories as well as future plans. It is thus intimately connected with our sense of self. In my case, such thinking is routinely activated in the museum; the works of art encountered there are its trigger. My talk will refer to an art practice that I have only recently resumed. The images in question, generally revolving around other works of art, employ layering as an analogue for memory and incorporate neural diagrams as a web or matrix within which assorted other images – memory fragments, so to speak – are embedded. My discussion of these works will try to suggest that there are areas for future research about art not limited to the facts of visual perception and cognition where artists, art historians, and neuroscientists might profitably cooperate.

Professor David Lomas is Head of the Department of Art History and Visual Studies in the University of Manchester. He was born and brought up in Australia where he took his first degree, leading to a qualification as a medical doctor, later moving into art history with a Master’s degree and PhD from the Courtauld Institute of Art. He was Associate Director of the AHRC Research Centre for Studies of Surrealism and its Legacies until 2007 and co-edits the Centre’s online journal, *Papers of Surrealism*. He has organised a number of conferences and other events under the auspices of the Centre, including a conference on the theme of experimentalism in science and avant-garde culture. He co-curated the major loan exhibition, *Subversive Spaces*, at the Whitworth Art Gallery, in 2009, exploring the legacies of surrealism within contemporary art. More recently, Professor Lomas has returned to his own artistic practice and the making of images.

## **Christopher Kennard: Art, Illusions and the Visual Brain**

When we look at the world around us the visual areas of the brain have to process the images received by our eyes. But how does the brain achieve this remarkable feat to provide us with the full richness of our visual perception? All the attributes of the scene – form, colour, motion, depth and much else besides, are each processed in separate, but interconnected cortical areas, which then somehow generate a unitary visual percept. By focusing on the use of visual illusions, brain imaging in normal subjects and the visual consequences of damage to different parts of the visual brain in patients after a stroke. It will become apparent that the visual brain often has to generate hypotheses to interpret the inputs from the visual scene, and this may lead to discrepancies between perception and reality.

Professor Christopher Kennard FMedSci has been Head of the Nuffield Department of Clinical Neurosciences, University of Oxford, a Senior Kurti Fellow at Brasenose College and the Medicine Delegate for Oxford University Press since 2008. He was the first Professor of Clinical Neurology at Charing Cross and Westminster Medical School in 1991 and became Head of the Division of Neurosciences and Mental Health on the amalgamation with Imperial College London in 1997. He subsequently became Deputy Principal of the Faculty of Medicine. He is currently the President of the European Neuro-ophthalmological Society, and is past President of the Association of British Neurologists and past Editor of the *Journal of Neurology, Neurosurgery and Psychiatry*. From 2006–2012 he chaired the UK Medical Research Council's Neuroscience and Mental Health Board. Professor Kennard's research, which has covered aspects of vision, oculomotor control and cognition, is currently focused on developing oculomotor biomarkers for neurodegenerative diseases and developing aids for the visually impaired.

### **Glyn Humphreys: Half a World: What unilateral neglect tells us about space and the brain**

Around 60 per cent of stroke survivors can show symptoms of 'unilateral neglect' in which they only seem to be aware of stimuli on one side of space. This is a serious disorder, linked to poor long-term functional recovery. It is also most prevalent after a stroke to the right rather than the left hemisphere. Unilateral neglect is scientifically fascinating and raises many important questions such as: what is the 'space' that is neglected? Are stimuli in the neglected space processed? Why is it more frequent after right than left hemisphere damage? Which brain regions are critical? I will briefly review this disorder and discuss the implications for understanding the mind and brain.

Glyn Humphreys is Watts Professor and Head of the Department of Experimental Psychology at the University of Oxford. He has been awarded the Spearman Medal, The Cognitive Psychology Prize and the President's Award of the British Psychological Society, the Freda Newcombe Award of the British Neuropsychological Society and the Donald Broadbent Prize of the European Society for Cognitive Psychology. Professor Humphreys is a former President of the Experimental Psychology Society and the British Neuropsychology Society and Chair of the Psychology, Neurosciences and Psychiatry panel of the Research Excellence Framework. He is a member of the Academy of Social Sciences and a Fellow of the British Academy.

### **Chrystalina Antoniades: The Art of Seeing**

We might think that we can see everything that is happening around us, and it is often said that 'seeing is believing', indicating that visual perception is considered one of the most trustworthy means of obtaining information about what is happening around us. However, research has revealed that perception does not capture as much information about the world as we would think. In my talk, I will present a joint project with the Ashmolean Museum, using museum artefacts to examine precisely a phenomenon called change blindness. Can you spot the differences between similar pieces of art? Does it make a difference if you visit the museum as opposed to having an online 'virtual tour'?

Dr Chrystalina Antoniades began working with Huntington's and Parkinson's patients while at the University of Cambridge, focusing on the development of diagnostic neurophysiological and metabonomic biomarkers. She then moved to the University of Oxford, where she is now a senior research fellow in the Nuffield Department of Clinical Neurosciences and a lecturer in medicine at Brasenose college. Her research interests include the investigation of oculomotor and motor tasks in patients with early Parkinson's disease, and the use of such tasks in more advanced patients undergoing deep brain stimulation of the subthalamic nucleus and globus pallidus. Dr Antoniades has published several scientific papers and book chapters on these subjects. Alongside this she has an interest in the neurobiological relationship between visual perception and art.