

Vision and Opticality: The Humanities and Neuroscience

PUBLIC FORUM
AND CONTINUING
PROFESSIONAL
DEVELOPMENT
SEMINAR FOR
TEACHERS



Anne Noble, *Dead Bee Portrait # 14*, 2016, No Vertical Song and Reverie, Bundanon Trust Collection, image reproduced courtesy of the artist.

DATE: Saturday 17 March 2018

VENUE: Gallery D, University of Queensland Art Museum, University Drive, St Lucia Campus, Queensland 4072.

TIMING: Registration and coffee: 9.30–10am.
Presentations: 10am–1.10pm (morning tea: 11.30am–12pm)

RSVP: Free. All welcome. Please rsvp by 15 March 2018: <https://survey.its.uq.edu.au/checkbox/Vision-and-Opticality-The-Humanities-and-Neuroscience.aspx>

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The Oxford English Dictionary defines 'vision' as 'the faculty or state of being able to see', and 'opticality' as a 'visual quality or effect, especially in relation to art'. This cross-disciplinary Public Forum and Continuing Professional Development Seminar explores the concepts of 'vision' and 'opticality' to reanimate the conversation between the divided realms of the humanities and science. Scientists, artists and humanities scholars from across the disciplines of neurophysics, psychology, art history and literary studies will draw on examples from their current research to illustrate some of the different ways of representing and understanding the world, different approaches to vision and truth, and different patterns of animal vision, navigation and creativity to encourage a potential change in how we view the humanities and science. Twenty-minute presentations will address the following themes: new photographic approaches that illuminate the fragility of natural biological systems; the relationship between nineteenth-century Indian photography and British colonial science; the psychology of vision and how patients with mental health issues represent the world around them; navigating space and the insect compound eye; poetry and insect vision; and ocular experiences of humans and insects across different imaging technologies. Continuing Professional Development certificates of participation will be available for teachers.

Speakers include:

Dr Trish Adams (RMIT University); Sushma Griffin (The University of Queensland); Professor John McGrath (Queensland Brain Institute, The University of Queensland); Professor Anne Noble (Whití o Rehua School of Art, Massey University) and Professor Mandyam V. Srinivasan (Queensland Brain Institute, The University of Queensland).

The forum will count towards Continuing Professional Development targets for primary and secondary school teachers of Visual Art, History, English, and Science, including the disciplines of Physics, Chemistry and Biology.

SATURDAY 17 MARCH 2018	
9.30–10am	Arrival and coffee
10–10.10am	Welcome
SESSION ONE	
10.10–10.40am	Sushma Griffin (The University of Queensland), 'Indian Photography and the Lens of Revolution'
10.40–11.10am	Trish Adams (Artist and Art/Science Researcher), 'Of Many Worlds in this World'
11.10–11.40am	John McGrath (Queensland Brain Institute, The University of Queensland), 'A Window into the Troubled Mind – What We Can Learn from Art by People with Mental Illness'
11.40am–12.10pm	Morning Tea
SESSION TWO	
12.10–12.40pm	Anne Noble (Whiti o Rehua School of Art, Massey University), 'Seeing Blind – Ambiguity and Certainty in the Dialogue Between Art and Science'
12.40–1.10pm	Mandyam V. Srinivasan (Queensland Brain Institute, The University of Queensland), 'Facets of Vision: The Insect Compound Eye'

ABSTRACTS

Indian Photography and the Lens of Revolution

Sushma Griffin

Beginning with a critical description of the revolutionary opticality of early photography, my talk considers how Karl Blossfeldt's (1865–1932) botanical close-ups, and Eadweard Muybridge (1830–1904) and Étienne-Jules Marey's (1830–1904) photographic experiments of human and animal locomotion straddle the intersections between art and science. I then expand the discussion to explore the way that affect shapes photographic meaning by examining the dynamics of control and coercion propagated in the state-sponsored documentation of colonial land and peoples. I read early Indian photographs through the lens of sociologist W. E. B. Du Bois' concept of double consciousness and cultural theorist Walter Benjamin's notion of optical unconscious to reveal how these images evade articulations of colonial power. Focusing on select works, this presentation provides a reinterpretation of the colonial domination of the newly emergent technology by drawing attention to Indian photographers who turned to the camera to disarm and unsettle entrenched colonial histories of war and rebellion.

'Of Many Worlds in This World'

Trish Adams

Inspired by the development of optical microscopy, Margaret Cavendish's poem: *Of Many Worlds in This World*, fancifully imagined the hidden worlds that might soon be revealed with the aid of what was then 'new technology'. Laboratories continue to be a treasure trove of imaging technologies and this presentation demonstrates some of the ways my art/science research outcomes have showcased the unique visual data collected during my collaborations. My visual interrogations of both external and internal worlds began when I 'drove' a scanning electron microscope to look at moulds growing on newspaper. This was followed by *in vitro* time-lapse digital video micrograph imaging of my adult stem cells 'changing their fates' and becoming beating cardiac cells over seven days. Fast-capture cameras in Professor Srinivasan's lab revealed slow-motion details of honey bee flight and the beamline at the Australian Synchrotron captured the internal workings of the live honey bees' bodies in real time.

A Window into the Troubled Mind – What We Can Learn from Art by People with Mental Illness

John McGrath

About one in five Australians experience a mental illness during their lifetime. While we all appreciate what it feels like to be depressed or anxious, it's hard to understand how it feels to have a psychotic illness. Schizophrenia is a poorly understood group of brain disorders that affects about 1 in 100 people. People with schizophrenia describe hearing voices (hallucinations) and having unusual beliefs (delusions). Over the last 20 years, the Queensland Centre for Mental Health Research has purchased artwork from people with mental disorders. During my presentation I will explain the stories behind these paintings, and provide insights into what it feels like to have a serious mental disorder.

<http://qcmhr.uq.edu.au/gallery/>

Seeing Blind – Ambiguity and Certainty in the Dialogue Between Art and Science

Anne Noble

In this presentation Anne Noble will discuss the development of a series of artworks concerned with the decline of the honey bee which she developed during a Fulbright fellowship in the USA in 2014. While there she worked with a range of photographic approaches to develop new images and metaphors that might provide a critical and imaginative frame through which to consider the fragility of the world's natural biological systems, and our part in their rapid transformation. Considering the observational practices of artists and scientists, she will also present some thoughts on the art/science divide and her experiences of the potential of transdisciplinary research to generate new ways of engaging audiences and communities with the outcomes of innovative art/science collaboration.

Facets of Vision: The Insect Compound Eye

Mandyam V. Srinivasan

How does a honey bee see and perceive the world? This presentation will describe how the compound eye captures an image of the environment, how the insect interprets this image, and how it even experiences some of the visual illusions that we do. Flying insects use information from the moving image to acquire a three-dimensional percept of the world, and to navigate safely and accurately through it. Some of these strategies are being used to design novel, biologically inspired algorithms for aircraft guidance.

SPEAKER BIOS

SUSHMA GRIFFIN

Sushma Griffin is a PhD Candidate in Art History at the School of Communication and Arts at The University of Queensland (UQ). Her research focuses on nineteenth-century Indian architectural photography, minority Shia Muslim and Jain identity, and the politics of space in representations of architecture. In particular, she is interested in how Indian science and theories and philosophies of vision and ritual visuality shaped the modern form of Indian architectural photography. She was the 2017 Higher Degree Research Fellow at the Institute of Advanced Studies in the Humanities, UQ, and her work has been published in the *Transformations Journal of Media and Culture* and *The Asian Arts Society of Australia Review*. She works part-time as Project Officer at the UQ node of the ARC Centre of Excellence for the History of Emotions.

TRISH ADAMS

Trish Adams is a media artist who explores constructs of the 'self', representations of corporeality and links with the animal world through her collaborations in the biomedical and ecological sciences. Her art/science artworks interrogate contemporary biomedical science and pose questions about what it means to be human.

JOHN MCGRATH

John McGrath, AM, is a psychiatrist interested in discovering the causes of serious mental disorders. He is the Director of the Queensland Centre for Mental Health Research and conjoint Professor at the Queensland Brain Institute. He has a John Cade Fellowship (NHMRC) and is currently a Niels Bohr Professor at Aarhus University Denmark.

ANNE NOBLE

Anne Noble is Distinguished Professor of Fine Arts (Photography) at Massey University, Wellington, and a New Zealand Arts Laureate. Her recent projects engage with contemporary environmental issues and result in installations that incorporate still and moving images and sound. In 2014 she spent five months in the United States as a Fulbright Senior Scholar, to initiate creative collaborations with scientists, professional apiarists and members of amateur beekeeping communities.

MANDYAM V. SRINIVASAN

Mandyam V. Srinivasan, AM, is professorial research fellow at the Queensland Brain Institute and the School of Information Technology and Electrical Engineering at The University of Queensland. He holds a PhD in Engineering and Applied Science from Yale, a DSc in Neuroethology from the Australian National University, and an Honorary Doctorate from the University of Zürich. Professor Srinivasan is a Fellow of the Australian Academy of Science, the Royal Society of London and the German Academy of Science, Leopoldina.



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