

## Investigating How Perception and Cognition Relate Conference

Friday 12<sup>th</sup> July 2019

University of Wollongong

Building 19.2072, Research Hub (2<sup>nd</sup> Floor)

Understanding how perception and cognition relate is one of philosophy's oldest concerns. There has been renewed interest in investigating this age-old question with the advent of new developments in the philosophy of mind and cognitive science. Contributions to this conference will examine questions such as: How can we best explain visual illusions that put perceiving at odds with cognising? Is perception distinct from other forms of cognition, such as imagination or hallucination? Are they distinct psychological kinds that carve a 'joint in nature'? Does perception communicate freely with higher forms of cognition? Is the latter capable of informing the former? Do the newly minted predictive processing theories do away with the perception/cognition divide altogether? Are they compatible with and do they support traditional modular accounts of vision?

### Conference programme

<b>10.15am</b>	<b>Welcome</b>
<b>10.30am</b>	<p><b>Fiona Macpherson</b> (University of Glasgow)</p> <p><i>Are Perception, Perceptual Imagination, and Hallucination Natural Kinds?</i></p> <p>A commonly cited characteristic of natural kinds is that they are categorically distinct. I offer three reasons to hold that perceptual experience, perceptual imagery, and hallucinations are not categorically distinct and hence not distinct natural kinds. The first argument draws on theories that explain the nature of one of these purported kinds by identifying it with another of them. The second argument focuses on a variety of non-paradigmatic cases of these purported natural kinds that have unusual features – features that they share with one of the other purported natural kinds. The third argument examines the interaction between these purported natural kinds which undermines the idea that they are categorically distinct. In so doing, I lay out a framework for characterising the nature of states with visual and visual-like phenomenal character.</p>
<b>11.30am</b>	<p><b>Inês Hipólito</b> (University of Wollongong)</p> <p><i>Why Perception and Cognition Don't Communicate: A Fresh Look at the Müller-Lyer Illusion</i> (co-authored with Daniel D. Hutto)</p> <p>Cognitivist theories assume that perception and cognition are contentful. As such, they are, in principle, assumed to be capable of communicating with one another. Traditional modular theories of perception posit special features of cognitive machinery of mind to explain why perception and cognition do not communicate</p>



	<p>freely in all directions. Predictive processing theories hold that such free communication is restricted not by fixed cognitive mechanisms but by flexible epistemic policies. Focusing on how best to explain certain kinds of visual illusion, this paper argues that we have reason to relinquish the communication assumption in favour of radical views of cognition that understand basic forms of perceiving in interactional as opposed to representational terms. It is argued that making this adjustment provides new and more powerful explanatory tools for thinking about visual illusions and also how perceiving and cognizing inter-relate.</p>
<p><b>12.30pm</b></p>	<p><b>Lunch (1 hour)</b></p>
<p><b>1.30pm</b></p>	<p><b>Venerable Dr Juewei</b> (Nan Tien Institute) <i>The Stream of Consciousness: A Buddhist Perspective</i></p> <p>A major Buddhist project involves recognising and correcting a major error in a person’s cognitive and perceptive processes. One fundamental error is the mistaken notion of a substantive “self.” Buddhists learn that “I” is a construct (consisting of form, feelings, perception, volition, and consciousness) that is being put together every moment. Further to this erroneous understanding is the identification of this false sense of self with experiences arising from sensory perceptions. Hence, most Buddhist sūtras (teachings) emphasise the sensory process and the correct understanding of such. The sense organs generate eye, ear, nose, tongue, body and mind consciousness incessantly. This stream of consciousness is not static nor substantive, but it informs us of our world view. If the Buddhist project is to “know the world as it really is,” then valid means of knowledge are important to lead one towards enlightenment. Buddhist enlightenment occurs when a person stops evaluating the sensory data in his or her stream of consciousness. In some schools of Buddhism, enlightenment involves operating from this original or intrinsic mind. Operating from this “state” of mind helps one to correct the errors of cognition and perception.</p>
<p><b>2.30pm</b></p>	<p><b>Michael Kirchhoff</b> (University of Wollongong) <i>Active Inference and Predictive Processing: A Modular View of Mind?</i> (co-authored with <a href="#">Inês Hipólito</a>)</p> <p>Modularity is a core thesis in many theories, models and experimental approaches to the study of brain and cognitive function. It is, broadly speaking, the thesis that brain and cognitive function can be understood as comprised of mechanisms with specific functions, some of which, if not all, with dedicated neurological structures. This paper considers the following question: do currently influential Bayesian models of brain and cognitive function, specifically predictive processing and active inference, support the modularity thesis? It starts by showing that modularity and predictive processing, especially, have been argued to work well together. It then goes on to identify what is arguably the three most well-articulated arguments in favour of modularity premised either on predictive processing, active</p>

	<p>inference, or some combination of both. This paper argues that all three kinds of arguments for modularity come up short, albeit for different reasons. The analysis in this paper, although formulated in the context of predictive processing and active inference, ultimately speaks to broader issues to do with how to understand the relationship between action and perception, functional segregation and integration, and finally the directed and reciprocal architecture of the inferential brain.</p>
<p><b>3.30pm</b></p>	<p><b>Afternoon tea break</b></p>
<p><b>4.00pm</b></p>	<p><b>Jakob Hohwy</b> (Monash University)</p> <p><i>Thought in the Predictive Mind</i></p> <p>The predictive processing framework appears to soften, or perhaps even abolish, the perception-cognition distinction. This can make it difficult to account for specifically cognitive processes, such as conceptual thought. Here, I consider the predictive processing resources available to account for thought. I consider standard characteristics of thought and cognition and argue that they are accommodated within the framework. This approach begins from predictive processing's internalist perspective on perceptual and cognitive processing, enabling the kind of stimulus-detachment required for thought.</p>

Event funded by the **Australasian Association of Philosophy** and the **School of Liberal Arts, Faculty of Law, Humanities and the Arts, University of Wollongong**.

## Speaker Biographies



**Fiona Macpherson** is Professor of Philosophy at the University of Glasgow, where she is also Director of the Centre for the Study of Perceptual Experience. She has been a Kennedy Scholar at Harvard University and a Rosamund Chambers Research Fellow at Girton College, Cambridge. Macpherson has held visiting positions at the Australian National University, Umeå University and the Institute of Philosophy, University of London. She is a member of the governing council of the Arts and Humanities Research Council. She is a trustee of the Kennedy Memorial Trust. Macpherson was president of the Scots Philosophical Association from December 2015 to December 2016. She is currently president of the British Philosophical Association.



**Inês Hipólito** is graduated in Philosophy (BA, 2010; MA., 2012 *summa cum laude*), and Cognitive Science (PG, 2015). Currently, she is a PhD candidate on Philosophy of Mind and Cognition, at the University of wollongong (Australia). Her research focuses on the relation between perception and cognition. Specifically on whether, and if so how to draw boundaries between perception and cognition in optimisation schemes of predictive processing and active inference in a way that is not challenged by the epistemological problems of content. Inês has been a visiting student at the Berlin School of Mind and Brain and she has received a number of prizes and grants that included British Association for Cognitive Neuroscience, the University of Oxford, the University of Amsterdam, the Federation of European Neuroscience Societies, the Portuguese Foundation for Science and Technology, Ministry of Science, Technology and Higher Education of the Portuguese Government. She is presently an elected member of the Status of Women in the Philosophy Profession Committee and the Diversity Committee of the Australasian Association of Philosophy.



**Venerable Dr. Juewei** is the Director of Nan Tien Institute's Humanistic Buddhism Centre and Lecturer at the Institute's Applied Buddhist Studies program. Her research interests include Humanistic Buddhism, Buddhist acculturation and Buddhist issues in modern society, including Buddhist Economics and Buddhist Ethics. Besides research, she also

teaches classes such as Buddhism and Modern Society, Buddhist Ethics and subjects related to Chinese Buddhism. Juewei holds a PhD in Religious Studies, a Master of Arts in Buddhist Studies, a Master of Business Administration, and a Master of Science in Computer Science and Engineering. In her spare time, Juewei heads up a worldwide tour, 'Buddha's Birthday Education Project' that connects past and present, east and west. BBEP ([thebbep.org](http://thebbep.org)) has now been staged in ten places around the world, bringing research to life through art, music and technology.



**Michael Kirchhoff** studied at the University of Aarhus, Denmark, obtaining his PhD on the metaphysics of the extended mind hypothesis from Macquarie University in 2014. Michael is a chief investigator on an ARC DP on "Minds in Skilful Performance" and has previously received grants from the John Templeton Foundation. Some outcomes of these grants are: the special issue in *Synthese* on 'Predictive Brains and Embodied, Enactive Cognition', a finished book manuscript under review with Routledge entitled 'Extended Consciousness and Predictive Processing: A Third-Wave View' and numerous single and jointly authored papers in top-rated journals such as the *Australasian Journal of Philosophy*, *Philosophical Studies*, *Philosophy and Phenomenological Research*, *Synthese*, *Entropy*, the *Journal for the Royal Society Interface*, and many more. Michael is currently working on completing a large grant application to the John Templeton Foundation and will be submitting his DECRA application to the ARC early next year.



**Jakob Hohwy** is a professor at Monash University. He is also the head of Cognition & Philosophy Lab, where he conducts interdisciplinary research of philosophy, psychology, and neuroscience. Particularly experiments on the nature of perception and cognition, focusing on theories about brain function, which say the brain is primarily a sophisticated hypothesis tester. Hohwy is Deputy Editor of the open access journal *Neuroscience of Consciousness* (Oxford University Press), and he just been awarded the Australian Research Council Discovery Grant on his project: *The integration of perception and thought*.