WE *ARE* OUR BRAINS
ROUNDTABLE SUMMARY

VISION AND OBJECTIVES

The panoply of mental phenomena that define who we are – memories and feelings, desires and thoughts, the decisions that we make and the beliefs that we hold dear – are all mediated by events in the brain. Holding a worldview which situates the brain as the key organ that provides meaning to our lives is a perspective often termed NEUROESSENTIALISM: the notion that we *are* our brains, and that when we think of who we are as beings interacting in the world, the *we* that we think of primarily resides in our brains[1,2]. We are also our bodies, our genes, our books, and more, but neuroessentialists suggest that these are less central to the concept of *we* than the *we* that we think of when we think of our brains. In recent years, the neuroessentialist perspective has moved from its traditional ambit among neuroscientists and philosophers to the larger domain of the public at large, with implications for such diverse fields as art, economics, sociology, and law, to name but a few. Indeed, it can be argued that this worldview, with its impact upon the lives that we lead, is rapidly becoming a *zeitgeist* of relevance to everyone.

The issue that arises is not so much that this neuroessentialist *turn* is ascendant, but rather the impact that it may have upon society. In many instances, neuroessentialist thinking can be anticipated to be prosocial: displacement of uninformed stigma by the considered understanding that people with addictions and mental illnesses suffer from a change in brain chemistry rather than a defect in character; a move away from the stale perspective of ourselves as *homo economicus* towards a more realistic understanding that decisions made by brains are beset by cognitive biases, with the resultant introduction of policies that nudge people into making better decisions; a renewed appreciation for the reasons that people (read: brains) commit crimes and with it a move towards *bona fide* rehabilitation as a replacement for retributive punishment.

These prosocial sentiments are laudatory, but there are also concerns that merit consideration. Foremost on the list is the existential angst[3,4] that regularly accompanies the suggestion that touchstones such as free will may be an illusion, with its disquieting corollary that if our brains are mere machines, our decisions may not be as free as we imagine them to be. Similar sentiments may be aroused by the recognition that trust, altruism, and even romantic love may be mediated (or at a minimum, affected) by neurochemical signals. The relevant question is not whether these musings represent the facts of the matter but rather how might the notion that this might be the way that our brains work affect the general public's perspectives on

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[1] Roskies, Adina. Neuroethics for the New Millennium. *Neuron* 35:21–23 (2002).
[2] Reiner, Peter B. The Rise of Neuroessentialism. in *Oxford Handbook of Neuroethics* (J. Illes and B. Sahakian, eds.) pp. 161-175 (2011).
[3] Vohs, Kathleen D, and Jonathan W Schooler. The Value of Believing in Free Will: Encouraging a Belief in Determinism Increases Cheating. *Psychological Science* 19: 49–54 (2008).
[4] Farah, Martha J, and Andrea S Heberlein. "Personhood and Neuroscience: Naturalizing or Nihilating?" *American Journal of Bioethics*: 7:37–48 (2007).

interpersonal relationships? How does neuroessentialist thinking intersect with evolving perspectives over the biological bases of sexual preferences? Layered upon this set of enthusiasms and concerns is another important consideration: how might neuroessentialist thinking be perceived in different cultural contexts.

The roundtable is intended not to merely review these issues but to address an important normative matter: how should we move forward with the neuroessentialist agenda? One theme, drawn from the free will debate[5], centres around what has been termed ILLUSIONISM: and that society is healthier if we are mute about some of the more disturbing ideas emerging from modern neuroscience. An alternative view suggests that illusionism is paternalistic, and argues that on balance, popular understanding of the role of brains in behaviour will result in a better informed society which will be better positioned to deal with modernity.

A key objective of the roundtable is to impress upon the participants that ideas gestated in the academy may have real-world impact, and that it is our responsibility as engaged scholars to evaluate their effects with due consideration. The neuroessentialist agenda forces us to grapple with fundamental questions about what defines *us* in the world. The subject matter naturally lends itself to including the perspectives of thinkers from outside academe, and the roundtable will provide an opportunity for academics, authors & artists (and, via the mechanism of a public forum, members of the general public) to share their perspectives on a topic of relevance to us all.

The anticipated deliverables from the roundtable are two-fold. Academics will be invited to contribute to an edited volume on the topic of neuroessentialism to be published by the journal *Neuroethics*, and all participants, authors, artists and scholars alike, will be encouraged to impart their deepened appreciation of the field to the public by publishing an article in the popular press. Overall, the roundtable offers participants an extraordinary opportunity to shape the trajectory of public discourse on this important topic.

[5] Smilansky, S. Free Will: From Nature to Illusion. *Proceedings of the Aristotelian Society* 101:71–95 (2001).

ROUNDTABLE PROCEEDINGS

DAY ONE : PARTICIPANT PRESENTATIONS

MORNING SESSION

"We *Are* Our Brains"
Peter B. Reiner
Professor, Department of Psychiatry
Co-Founder, National Core for Neuroethics
University of British Columbia

Dr. Reiner's presentation provided evidence that the public views brains as being at the centre of our lives. This notion, that "we *are* our brains" raises has substantive societal implications.

Dr. Reiner showed a billboard sign that says, "depression is a flaw in chemistry, not character", and noted how this perspective changes how we think about people who are mentally ill, reducing **stigma**. A similar perspective holds for addiction, and some have argued that if we view addiction this way, we should change social policies that deal with people with addictions.

These are feel good stories, but there are aspects of this worldview that are more challenging. Among the most challenging is our view of **responsibility**, in particular in the criminal justice system. For if all our thoughts are based on our brains, then all of our decisions are based on our brains. Qhen we think about responsibility using this brain-centered view, we can move away from tough retributive stance (i.e. an eye for an eye), and towards the more compassionate view that holds that people who make bad decisions have brains that made bad decisions.

Thinking about the brain as this mechanical machine evokes a new neuroexistential crisis. Dr. Reiner argues that we cannot ignore this, it is one of the **predicaments of modernity**. But if we work through it, we can have more compassionate view – if we think about our foibles as a function of our brains, we can become **more humane humans**.

"Expanding the Neuro"
Louise Whiteley
Associate Professor
Medical Museion, University of Copenhagen

Dr. Whiteley's presentatation explored how neuroscience is at the nexus of labortaory, clinic, academy, culture and self-understanding. One way in which she approached the subject was by taking apart the title, We Are Our Brains:

- **Brains:** The turn towards dynamic networks, plasticity and embodied cognition ensures neuroessentialism is vital and here to stay, and it also presses the humanities to get over the spectre of biological reductionism.
- **Are:** What our understanding of ourselves is.
- **Our:** Who is included and what rights and responsibilities do we have.
- **We:** A diverse disciplinary crowd.

She ended her presentation with the quote from Adam Phillips: "Instead of talking about the natural and unnatural or even nature and culture – we can talk about the parts of nature that we prefer and why we prefer them'. This thinking makes us avoid both reductionism and simplistic constructivism, and invites us all to explore why we are drawn to particular objects and forms of inquiry.

"Brains, Minds and Institutions"
Max Cameron
Professor, Department of Political Science
Director, Centre for the Study of Democratic Institutions
University of British Columbia

Using Popper's three worlds method, Dr. Cameron explained that a book is a physical object but a product of the human mind – and the content remains invaried. World 3 depends on World 2, which depends on World 1.

Dr. Cameron suggested that the reductionist approach to thinking about institutions can be cast in terms of Popper's concept of 3 worlds – the physical world (World 1), the world of the mind (World 2), and the products that minds create (World 3). In the reductionist view, institutions can be explained on the basis of underlying minds, which of course are based upon the underlying activity of brains. The alternative view is one of emergence, where institutions, like societies are essentially emergent properties of minds, produced by the interaction of many brains.

Political states reflect and replicate individual processes, or as Durkheim put it, the state is a thinking organ. The process by which states emerge is complex, requiring changes in social organization, communication and cognition. In the modern era, we

are transforming the physical World 1 with our mastery of Worlds 2 and 3 in ways that threatens our very survival. For humanity to flourish we need to have brains capable of building institutions that can direct our collective efforts to restore balance of the natural world.

Afternoon Session

"I Am My Conscious Experience"
Jonathan Schooler
Professor, Department of Psychological and Brain Sciences
University of California – Santa Barbara

Dr. Schooler pressed the group to consider things that are generally thought to lie outside of what might be termed the conventional wisdom. He began by presenting what he termed as two essential truths: (1) I have subjective experience; and (2) experience is the flow of time. The problem is that the prevailing paradigm has no explanation for how experience exists, either subjective experience or even that the flow of time exists. Because science provides no way of conceptualizing either the two things for which Dr. Schooler is most certain, he suggests that we need to be cautious in embracing the power of science.

Dr. Schooler suggests that consciousness may be a fundamental feature of nature, an essential property of the physical universe, rather than a by-product of neural systems. Viewed in this way, I am not necessarily my brain.

"Are We Our Brains?: A Short Journey Through Emotions"
Giovanni Frazzetto, Author

Dr. Frazetto addressed the question of "What counts most in us?" by taking a close look at emotions. He described how his work in a neuroscience research laboratory was like deciphering a tale written in code about the mind with the actors being brain tissues, neurons, DNA, and lab animals. But when he got home the only protagonist in the story was himself, and the script was still about to be undermined. In search for an answer, he turned to writing about life experience and what he knew about the brain to inform his search.

Understanding the way that the brain processes emotions helped him help a friend who had anxiety financial woes, but was insufficient to explain the lived experience of anxiety. He learned that love is madness, blind and that the suspension of judgment about the beloved we experience is better than knowing which exactitude, transmitters, and regions in the brain light up or not when we see the image of our beloved.

So are we our brains? Dr. Frazetto agreed with this statement, insofar as we are bodies that experience life and respond constantly to our environment. Emotions are things that happen in our bodies, but knowledge about the brain has limitations. He reminded us that there are several different roads that can lead us to of knowing oursevles.

"We *Are* Our Brain-Body Systems"
Edward Slingerland
Professor, Department of Asian Studies
University of British Columbia

Dr. Slingerland explained that we are mind-body dualists. This is why people get so excited about fMRI scans: you exhibit a certain behavior (mind) and it shows up on the scan (brain)! He argued that the biggest issue is the *cogito illusion* – the notion that the only think we know in the world is that we are conscious. He argued that the two main pillars of this idea are fragile: that we know that we are conscious, and that we are unitary beings. Dr. Slingerland argued that brain damage that knocks out selective functions – to use verbs or recognize faces – fatally damages the *cogito* illusion.

He also suggested that physicalist accounts such as neuroessentialism easily accept such notions as extended mind, arguing that it does not imply that mind is spirit, but merely that it can exist in distributed fashion. There may be innate barriers to comprehending the ways that we are body-brain systems, but so it is with much of science. Such insights may be counterintuitive, but we eventually learn to embrace them.

Dance performance
Sarah Chase
Dancer, Choreographer and Storyteller

Sarah presented a remarkable example of how a brain can manage multiple tasks at once. She created a gestural analogue to the song *Both Sides Now*, and while moving through the complex repetitive movements that this produced, told us a story that included terms suggested by the audience. Her ability to simultaneously hold these disparate cognitive constructs in her mind was a powerful example of the extreme flexibility built into the structure and function of the brain.

DAY TWO: PARTICIPANT PRESENTATIONS

MORNING SESSION

"Lack of Consciousness, Lack of Responsibility?"
Neil Levy,
Head, Neuroethics Unit
Florey Institute of Neuroscience and Mental Health
University of Melbourne

Dr. Levy presented an argument that modern cognitive science seems to be suggesting that we should not hold be responsible for certain actions, particularly those that we perform without consciousness. He argued that the automaticity revolution in psychology strongly demonstrate that unconscious processes drive behavior in complex ways.

Perhaps the most remarkable case is that of Ken Parks who drove 23 kilometres in a state of somnambulism without hitting anyone, stabbed both of his parents-in-law, and was acquitted by the courts because *he*, or at least the conscious *he*, did not commit the crime. He argued that when people are not 'conscious', they are unable to integrate all of the information to which their brain has access. Under these circumstances are we morally responsible for our actions? Dr. Levy argued that much in the way of stereotypical behavior is driven by action scripts, and therefore is not responsive to the cues to which a normal person would respond. While one may claim indirect responsibility for these outcomes, it is more difficult to claim direct responsibility.

"Neurophenomenology"
Evan Thompson
Professor, Department of Philosophy
University of British Columbia

Dr. Thompson reviewed the famous study from 2004 showing that experienced meditators can self-induce a state of high amplitude gamma oscillations. Along the way, they asked the meditators to rate increases and decreases in what the meditators termed 'clarity' and that this phenomenon correlated with in/decreases in amplitude of gamma activity. The empiricists would say that this shows that meditators tracked something really going in the brain. Dr. Thompson argues the other side of the coin – it shows that self-report is an insight into phenomenology, and that without the self report, the gamma activity would just be noise.

Dr. Thompson went on to claim that this shows that the mind-brain influence is bidirectional: changing brain can change mind and vice versa. But rather than viewing this as a dualist perspective, he suggested we would do well to consider what is called

the interventionist approach to causation: that interventions at a lower level can bring about higher level effects (TMS, drugs, etc.), and interventions at a higher level can bring about lower level effects (selective attention, mental imagery, mindfulness, etc.). This shows that changing the mind affects brain – WITHOUT DUALISM!

Neurophenomenology: It is the phenomenology of consciousness, neuroscience of consciousness, meditative training, neuroscience of meditative training.

In studies of these phenomena, it is important to look at first person reports of meditators on a trial by trial basis (not average across trials which wipes out interesting variance). Normal subjects don't have mental insight required to report on such changes. In conjunction with second person methods for explaining tacit experience.

"Are We Our Brains?: Three Suggested Consequences From a Legal Perspective"

Jennifer Chandler
Associate Professor
University of Ottawa Faculty of Law

Prof. Chandler suggested that we are seeing a shift in epistemic authority, from the first person perspective in which the individual is the only one who can 'know their mind' to the third person perspective in which others can understand one's brain. There are three consequences that accompany this shift.

The first is self-trust: our ability to know what we know. The example she offered was the phenomenon of recovered false memories in which people become skeptical of their own knowledge. The conclusion is that people are moving to a position where they 'trust the brain but doubt the mind'. The second is self-concept, and this is particularly evident in studies of successful rehabilitation of criminals, because a key characteristic is that they forge a new 'replacement self'. But accounts of the 'brain as self' makes it difficult to achieve without a strong account of plasticity. The third issue is the question of agency itself. Judges commonly refer to individuals with neurobiological deficits as requiring an 'external brain' – another human who will supervise the criminal with the defective brain, effectively transfer agency from offender to keeper. One unfortunate outcome that Prof. Chandler argued ensues is that viewing people as brains instead of minds may increase our paternalistic tendencies towards vulnerable people.

"On Self-Shaping: Challenging Neuro-centrism From Within the Sciences"
Saskia Nagel
Principal Investigator, Institute of Cognitive Science
University of Osnabrück

Dr. Nagel discussed the idea that the rise of neuroplasticity in popular culture and media gives rise to a 'self shaping' imperative – because we *can* change our brains, we *should* change our brains. From their earliest years, children are seen as products to be shaped, whether it is with behavioural or pharmacological means. She reviewed how in the course of contributing to a paper on recommendations on prescribing enhancers to children (the recommendation was not to), the doctors with whom she wrote the paper were surprised when she emphasized that we should look beyond pharmacology in dealing with these children.

Self shaping continues into aging - age successfully, and if you don't it's your fault. We need to challenge the 'train your brain' discourse for ethical reasons. We *are* not our brains, we *have* our brains. The alternative view is of a brain that sees, feels, and acts in the world, with feedback forming a virtuous loop of interaction.

Dr. Nagel's third point was one about what we can glean from the public. She emphasized that the public really care about brain science, and made a plea for more studies of public attitudes towards issues relevant to the brain. In a study of public attitudes in Germany, people think that almost everything influences the brain, and they frame their diet in terms of brain enhancement. A majority of people also think they can influence their brain to be happier. Moreover, people felt that now that they know they have the power to change their brains, they also have the responsibility to change their brains.

Afternoon Session

"How Do Brains Come to Matter?"
Candis Callison
Assistant Professor, Graduate School of Journalism
University of British Columbia

Prof. Callison began by pointing out that the traditional model of public understanding of science begins with an authoritative stance for science. Such a view has been critiqued for not recognizing the heterogeneity of science and of diverse publics. Moreover, how and when science is publically accepted is culturally determined. At the same time, the media is in upheaval. Declines are seen everywhere but online, and fragmentation via a vast range of sources, is the norm. Media ecosystem – consumers put many sources together to form opinions.

In this context, the role of journalists is changing – in many respects, they are no more than forum providers. Reporting on science, especially a politically charged issue such as climate change, is like parking your car under a tree filled with starlings – the droppings never cease. And yet 60% of people go online for information about science. The instinct is to valorize peer review over the swirling vortex of public discourse. But if we are to take seriously the notion that the social and scientific are embedded in one another, then the chaotic world of modern media may be welcome.

How do brains come to matter? How do you make room for different narratives about neuroessentialism? Who can speak for and against the brain, if we are our brains?

"In Genes We Trust: How Our Essentialist Biases Distort How We Think About Genes"

Steve Heine
Professor, Department of Psychology
University of British Columbia

People are essentialist – they have a need to identify something that makes us who we are. Dr. Heine argued that despite being a psychological universal, essences are hard to observe directly. As a result, we use placeholder, and genes make a very good placeholder.

We tend to think that genetic causes are immutable, that they have specific etiology, that groups that share genes are more homogenous and different from other groups, that genetic outcomes are natural. As a result, when people encounter genetic arguments, their essentialist biases are primed. Sometimes, these biases are correct and a single gene can have a large effect, but more commonly human characteristics are weakly related to genes, and are much more the product of gene-environment interactions.

A fascinating lens into this issue is the observation that the more people endorse biological theories of race, the higher they score on measures of racism. The notion that people are 'made of different stuff' apparently increases in-group bias. But there are many ways in which these essentialist biases play out, and understanding these helps us unravel the ways that we humans make sense of who we are.

"An Evolutionary Approach to Social Psychology and Some of Its Implications"

Mark Schaller
Professor, Department of Psychology
University of British Columbia

Dr. Schaller introduced the idea of the behavioural immune system. It is well known that we have an immune system to protect us against parasites and other pathogens, but it is reactive. We also have a 'behavioural immune system' that is proactive,

helping to protect us against a range of societal challenges. As a result, when disease threat is more salient, people become more xenophobic. In fact, if one looks globally, in places where pathogens have been more prevalent, people are less extroverted and more xenophobic, less individualist and more conformist. Dr. Schaller framed his perspective on the question of whether we *are* our brains by adopting an evolutionary approach to the study of human nature, and concluded that 'we have evolved within a highly dynamic social ecology, and as a result are sophisticated, flexible, and unpredictable.

DAY THREE: WORKSHOP, CONCLUSIONS, AND PUBLIC EVENT

The day began with a roundtable workshop on public dissemination of scientific information. The enterprise takes two forms – interacting with journalists and reaching out directly to the general public.

In dealing with journalist, the challenge is translating complex information into sound bites. There was consensus that it is difficult to convey the context dependence and nuance of science, and that it is maddening to be misquoted. But everyone agreed that it is important to interact with journalists, and to understand their agenda when doing so.

New media offers myriad opportunities for academics to reach out directly to the general public, whether it is via blogs, or social media, writing articles for magazines, or publishing your talks on YouTube (as all talks from this meeting will be). A challenge for younger colleagues is to include outreach to the public on their CV, as in some disciplines, having a public personae is detrimental to career advancement. We need avenues of recognition for public outreach to break down these barriers.

PUBLIC EVENT

The roundtable concluded with an evening of dialogue about the impact of the growth in neurocentric thinking – the worldview that situates the brain as the key organ that provides meaning to our lives.

The evening began with a dance performance by internationally acclaimed dance/literary artist, Sarah Chase, and was followed by presentations by Dr. Peter B. Reiner, Prof. Jennifer Chandler and Dr. Giovanni Frazzetto. An interactive conversation between the audience and roundtable participants followed.

ROUNDTABLE PARTICIPANTS

Peter B. Reiner
The organizer of the PWIAS International Roundtable, Dr. Reiner is Professor of Psychiatry and co-founder of the National Core for Neuroethics at the University of British Columbia. His research is focused upon the ways in which neurotechnologies impact the quality of our lives. His work in the field neuroessentialism explores notions of legal responsibility, autonomy, decision-making, and stigma.

Candis Callison
Assistant Professor at the UBC School of Journalism where she teaches science journalism and media ethics. A member of the Tahltan Nation in northwestern BC, Dr. Callison has worked as a journalist in both Canada and the US, and holds a Ph.D. from the Program in Science, Technology, and Society at the Massachusetts Institute of Technology, and an MSc from MIT's Comparative Media Studies Program.

Maxwell Cameron
Professor of Political Science at the University of British Columbia and Director of the Centre for the Study of Democratic Institutions. Dr. Cameron is at work on a book tentatively titled Between Rules and Practice: Why We Need Practical Wisdom in Politics. His work asks what moral skills will we need as citizens, professionals, parents, and friends to know how to act in particular circumstances.

Jennifer Chandler
Associate Professor of Law at the University of Ottawa, where she teaches mental health law and neuroethics, medical legal issues, tort law, and legal philosophy. Her research focuses on the law and ethics of neuroscience and other advances in biology and medicine.

Sarah Chase
A British Columbia-based, internationally recognized choreographer, dancer and storyteller. Sarah generates choreographic equations through a type of exercise known as cross patterning, sets of movements that challenge both hemispheres of the brain simultaneously. Among her many her works is Number Theory, which she will adapt for this roundtable and present at the public performance.

Giovanni Frazzetto
Giovanni Frazzetto was one of the founders of the European Neuroscience & Society Network and the creator of the transdisciplinary Neuroschools. Giovanni has also written short stories and plays and curated science-inspired art exhibitions. He now works at the Institute for Advanced Study. His first book "How We Feel- What Neuroscience Can - and Can't - tell us about our emotions" was published in August 2013.

Steve Heine
Professor in the Department of Psychology at the University of British Columbia. A member of the Centre for Human Evolution, Cognition, and Culture, Dr. Heine's research on genetic essentialism considers how people understand essences and genetic foundations for human behavior.

Judy Illes
Professor of Neurology and Canada Research Chair in Neuroethics and Director of the National Core for Neuroethics at the University of British Columbia. A world leader in the field of neuroethics, Dr. Illes has written extensively on the myriad ways in which neuroscience information is communicated and mis-communicated in the popular press. Her most recent edited volume is the Oxford Handbook of Neuroethics.

Neil Levy
Deputy Director (Research) of the Oxford Centre for Neuroethics, and Head of Neuroethics at the Florey Neuroscience Institutes, University of Melbourne. A philosopher with wide ranging interests in neuroethics, Dr. Levy is the Editor-in-Chief of the journal Neuroethics and author of the highly regarded text Neuroethics: Challenges for the 21st Century (2007).

Saskia Nagel
Principal Investigator of the research group Changing Brains at the Institute of Cognitive Science at the University of Osnabrück, and Associate of both the Heidelberg Protestant Institute for Interdisciplinary Research, and the Stiftung Neue Verantwortung. As a cognitive scientist, Dr. Nagel's interest in the neurosciences focuses on the brain's plasticity and encompasses a range of empirical questions concerning multimodal perception, sleep, sensory substitution, and enhancement. In philosophy, Dr. Nagel is mostly concerned with ethical, anthropological, and social investigations with respect to the life sciences, in particular, neuroscience. She is author of "Ethics and the Neurosciences" (2010).

Mark Schaller
Professor in the Department of Psychology at the University of British Columbia. His work in social psychology includes pioneering the dominant evolutionary psychological theory of stigma – that it serves as immunity against social contagion. He is co-author of Evolution, Culture, and the Human Mind (2010).

Jonathan Schooler
Professor of Psychological and Brain Sciences at the University of California Santa Barbara. Dr. Schooler's research on human cognition explores topics that intersect philosophy and psychology, such as how fluctuations in people's awareness of their experience mediate mind-wandering and how exposing individuals to philosophical positions alters their behavior.

Edward Slingerland
Canada Research Chair in Chinese Thought and Embodied Cognition and Professor in the Department of Asian Studies at UBC, Director of the Cultural Evolution of Religion Research Consortium, and co-Director of the Centre for the Study of Human Evolution, Cognition and Culture. An expert on embodied cognition as understood through the lens of Chinese religious thought, he is also editor of Creating Consilience: Integrating the Sciences and the Humanities (2010).

Evan Thompson
Professor of Philosophy at the University of British Columbia. Dr. Thompson's research interests are philosophy of mind and cognitive science, especially embodied cognition and the neuroscience of consciousness; Phenomenology, Continental philosophy of science, and contemporary European philosophy; and cross-cultural philosophy, especially Indian philosophical traditions and contemporary Buddhist philosophy in dialogue with Western philosophy of mind and cognitive science.

Louise Whiteley
Associate Professor at Medical Museion, University of Copenhagen. Dr. Whiteley studies how neuroscientific research is entangled with popular culture; from newspaper headlines that over-extrapolate laboratory research, to the use of brain scan images in advertising or the uptake of scientific vocabularies into everyday speech and ways of thinking about the self. She also produces public engagement events.