Milan Andrejevic & Jakob Hohwy | 7/12/23 | 12:00pm-12:15pm | MR 4.02

Title: Trust in people's honesty is less malleable than distrust.

Wisdom has it that "it takes years to build trust, seconds to break it, and forever to repair it". Organizational psychology studies indeed demonstrate that trust repair requires time, effort, and does not guarantee full restoration to initial levels. Contrastingly, recent experimental psychology work suggests that people more readily integrate positive information about agent's morality, implying that it should be easier to recover trust than to break it. We formalize these two competing hypotheses using a hierarchical Bayesian inference framework, and test them in a novel task paradigm. Participants (N=351) observed the agent's outcomes in a game of chance cognisant that the agent could cheat. In each trial, participants made predictions about the agent's outcome, observed a loss (evidencing honesty) or a win (evidencing dishonesty), and reported their trust and confidence. Prediction performance was monetarily incentivized. We manipulated trustworthiness deterioration and improvement between subjects, by specifying a sequence of wins and losses for one condition and inverting for the other. Contrary to the common wisdom, we found larger prediction adjustments in the improvement condition, suggesting distrust is more malleable. Using computational modelling we demonstrate this effect is well captured by increases in belief volatility during trust recovery.

Milan Andrejevic, Jakob Hohwy & Linda Barclay | 7/12/23 | 2:15pm-2:30pm | MR 2.02

Title: Treating others with dignity entails accounting for their self-conscious emotions.

Dignity, alongside respect, is prominently endorsed in healthcare, organizations, and law. However, ethnographic and philosophical work cast doubt over whether the concept of "dignity" captures any unique ethical value distinguishable from "respect". Here, we tested a recent view that dignity uniquely relates to humiliation, by asking lay participants (N=71) to rate a set of vignettes describing a 'perpetrator' making offensive remarks or gestures to a 'victim', while manipulating the victim's emotions resulting from the offense across tree blocked conditions: base condition without any emotion descriptors, self-conscious emotions (e.g., humiliated, ashamed, embarrassed), and anger-related emotions (e.g. angry, irritated, frustrated). Specifically, participants rated how well the

offense corresponds to a violation of dignity as opposed to a violation of respect. We also manipulated other factors like the presence of ridicule in the offense, offense topic, mode of delivery, victim's gender and vulnerability to the offense (e.g., disability). All analyses and hypotheses were pre-registered. In line with our hypothesis, we found that self-conscious emotions increased dignity ratings as compared to the baseline and anger conditions. Additionally, vulnerability factors and physical appearance topic also increased dignity ratings. These findings suggest that dignified treatments account for the victim's subjectivity in unique ways.

Iva Apostolova | 8/12/23 | 11:30am-12:00pm | MR 4.02

Title: Touch, a Forgotten Sense, and its Importance for the Sense of Self

I will be exploring the significance of touch in relation to the sense of self. With the advancement of digital technology and AI, our world becomes increasingly visual and decreasingly tactile, a trend which I find worrisome. My claim is that the formation of human-type consciousness requires the faculty of touch, which in turn, is central for the development of feelings such as compassion and empathy, both of them at the heart of any relationship. The faculty of touch is at the foundation of the multisensory integration process involved in human perceptivity. In this sense, I will argue in favor of a bottom-up construction of the (human) self. I will rely on the relatively new phenomenon of peripersonal space to demonstrate the importance of touch. At the same time, I will base my claims about the evolution of consciousness on the works of two psychologists: Klein and Ogden, as well as the philosopher Damasio.

Kristy L. Armitage, Thomas Suddendorf, Adam Bulley, Amalia P. M. Bastos, Alex H. Taylor, & Jonathan Redshaw | 6/12/23 | 1:45pm-2:00pm | MR 4.02

Title: Creativity and flexibility in young children's use of external cognitive strategies

A cardinal feature of adult cognition is the capacity to draw upon our awareness of our cognitive struggles to offload internal demand into the environment. For example, we often prevent ourselves from forgetting by creating external reminders in calendars or smartphones. Here, we explored whether young children could devise, transfer, and adapt such external cognitive strategies. In

Experiment 1, 3- to 5-year-olds watched an experimenter hide a target in one of three identical containers, before the containers were shuffled out of view and children guessed where the target was hidden. In the subsequent test phase, children could perform perfectly by marking the rewarded container prior to shuffling. Children of all ages used this strategy above chance levels if it had been demonstrated, but only 4- and 5-year-olds independently devised the strategy themselves. In Experiment 2, we included a conceptually similar but structurally distinct transfer task. Among 3- to 8-year-olds, children aged 4 and older showed evidence of external strategy transfer, and many participants devised more than one previously unseen strategy. Both within and across age groups, there was considerable variation in the number, combination, and order of strategies devised, demonstrating children's remarkable flexibility in transferring external cognitive strategies across contexts.

Paul-George Arnaud | 7/12/23 | 3:45pm-4:15pm | MR 2.02

Title: How Arguments Influence our Beliefs and Guide our Decisions, Even When we Don't Understand Them

According to a widespread view, arguments play a direct and important role in shaping the beliefs and behaviours of individuals, by explicitly highlighting evidential relations of support between target premises and conclusions. On this view, it seems that the following three conditions must hold for an argument to persuade an individual in ordinary cases: i) the propositional content expressed by the argument must be accurately decoded by the evaluator; ii) the evaluator must have sufficient relevant background knowledge and expertise to recognise the epistemic force of this content; iii) the evaluator must be motivationally inclined towards truth-seeking in their employment of these competencies (i.e. not be biased). Many of the most culturally salient discussion topics in contemporary human populations concern politics, economics, and other policy related scientific issues. Not only do arguments related to these topics typically require substantial expertise to understand and competently evaluate, they're also particularly prone to biased evaluation. How can we explain the prevalence and apparent efficacy of argument in these domains? In this talk, I will suggest that arguments often change minds and influence behavior indirectly, through their contribution(s) to shared social-epistemic environments, which I will refer to as 'Contexts of Interpersonal Justification' (CIJ).

Andrew B. Barron & Colin Klein | 8/12/23 | 2:30pm-3:00pm | MR 2.02

Title: Crawling toward consciousness.

Which animals are conscious? Opinions differ. Some argue that consciousness is limited to humans and perhaps our immediate primate relatives. Others argue that consciousness is a property of all cellular life. These wildly divergent opinions persist because different authors propose strikingly different criteria by which to assess the presence of consciousness in entities. To arbitrate which criteria are useful we consider what features of information processing are needed for an entity to operate with agency and to be experiential. Rather than arguing that a specific type of brain or a specific brain region is essential for consciousness we explore in the abstract what would a system need for that system to operate as a cognitive agent, and what would a system need for it to be capable of experiencing the world. We argue that organisms possessing these features are likely to be capable of subjective experience or phenomenal consciousness. We use these features of information processing to arbitrate which animals are likely to be conscious and which are not.

Tim Bayne (Keynote) | 6/12/23 | 4:00pm-5:00pm | MR 2.02

Title: The Dawn of Awareness: When (and in what form) does Experience Emerge?

Kevin Berryman | 6/12/23 | 9:45am-10:15am | MR 4.02

Title: Do contemplative practices make us more moral?

Contemplative practices have become a staple of modern life and have historically been intertwined with morality. But do these practices actually improve our morality? The answer remains unclear because the science of contemplative practices has focused on unidimensional aspects of morality, which do not align with the type of interdependent moral functioning these practices aspire to cultivate. Here we appeal to a multifactor construct, organized as a Moral Functioning Framework which allows the assessment of outcomes from a contemplative intervention across multiple dimensions of moral cognition and behavior. Using this framework, we gain insight into mindfulness meditation's effect on morality, which we show indeed does have positive influences, but also some negative influences, distributed across our moral functioning.

Adam Bradley | 7/12/23 | 1:30pm-2:00pm | MR 2.02

Title: 'Allow Myself to Introduce... Myself': SelfAcquaintance and Disorders of Self-Awareness.

Are we ordinarily acquainted with the self in experience? It seemed certain to Descartes that we are. But philosophers in both the Western and Eastern traditions have rejected the notion of self-acquaintance. This debate persists into the present day. But the persistence of this dispute is puzzling. Why can we not simply settle this question by introspection? Here, many philosophers hold that the self is elusive. Hence, to address this question we need to use a more indirect method. To this end, philosophers have turned to disorders of self-awareness such as depersonalization and thought insertion in order to address the fundamental question of self-acquaintance. Some researchers argue that the best explanation of the symptoms of these disorders appeals to deficit in self-acquaintance (Billon 2017; Duncan 2019). In this paper I criticize these arguments on the grounds that the best explanations of disorders of self-awareness do not invoke self-acquaintance. This is for two reasons. First, the most promising accounts of these disorders explain disorders of self-awareness in terms of cognitive deficits in faculties such as interoception or affective experience. Second, the notion of acquaintance is both philosophically suspect and difficult to fit into a naturalistic account of the mind.

Deborah Brown & Brian Key | 8/12/23 | 9:45am-10:15am | MR 4.02

Title: The Sense-Making-Sense Hypothesis.

Three commonsensical assumptions about the perception-action pathway dominate both folk psychology and philosophy of mind. The first is that sensory states (sensations, feelings) cause behaviour. The second is that they do so in virtue of what they represent about the external world. They are, as the saying goes, 'maps by which we steer'. A third assumption is that if the first two assumptions were not true, it would impugn the rationality of humans. As Fred Dretske has argued, if the intentional content of perceptual states were no more part of the explanation of behaviour than that of the aria the soprano sings when she shatters the glass, then "one may as well not have a mind at all."

Recent neuroscientific findings cast a shadow, however, over the first two assumptions by suggesting that feelings are generated by cortical circuits not directly related to behaviour. In this paper, we argue that the function of

sensations and feelings is not to cause behaviour but is rather the brain's way of making sense of or explaining its behaviour to the agent, contributing indirectly to executive functions despite being illusory.

Thomas A. Corbin & Alexander J. Gillett | 6/12/23 | 9:15am-9:45am | MR 4.02

Title: Call Patterns and Skilled Perception: The Art and Science Behind Catching Cicadas.

Skilled expertise is central to scientific fieldwork. In this paper, we explore the role of auditory perceptual skills in a specialized scientific community dedicated to the study of Australian cicadas. Cicadas' distinct life cycles, emergence patterns, camouflage, and elusive behaviour force researchers to depend on auditory cues for locating specimens. However, this method is complicated by cicadas' behaviour in densely populated chorus centres, whose collective vocalizations create famous cacophonies, masking individual locations. To navigate this complex auditory environment, cicada researchers employ the concept 'call pattern'. This concept is richly informed by the researcher's understanding of the target species and serves to organise and facilitate their refined auditory skills. We outline four elements of these auditory skills and show how they are dependent on the concept of call pattern: [1] differentiation – sifting specific call patterns from a medley of sounds; [2] discernment – categorizing species through their distinctive call patterns; [3] enumeration – gauging the number of cicadas based on a particular call pattern; and [4] triangulation – zeroing in on and locating a single cicada within a chorus centre. Through this lens, we highlight the pivotal role concepts, like 'call pattern', play in the development of skilled auditory perception.

Sarah P. Coundouris, Sylvain Hohn, Anup Basub, Uwe Dulleck, Julie D. Henry, & Nicolas Cherbuin | 6/12/23 | 2:30pm-2:45pm | MR 4.02

Title: Cognition and Financial Decision-Making in Older Adult Spouses.

Age-related decline in executive functioning has been found to negatively impact one's capacity to make prudent financial decisions. The broader literature also speaks to the importance of considering interrelatedness in older spouses' functioning, as these individuals typically represent one's longest and closest relationship that involves an extended history of shared experiences. Accordingly,

this study aimed to provide the first examination of whether older adults' financial decision-making capacity is impacted not only by their own, but also by their partner's, level of cognitive functioning. Sixty-three heterosexual spousal older adult dyads aged 60-88 participated. The contribution of executive functioning and perceptions of partner's cognitive decline on financial decision-making behavior and financial competency was assessed through two actor-partner interdependence models. As predicted, for both genders, one's own executive functioning was predictive of one's own financial decision-making capacity. However, of particular interest was the finding that for females (but not males) perceiving greater cognitive decline in their spouse predicted their own (greater) financial competency. Examining whether partner interdependence extends to the realm of financial decision-making is not only a theoretically but also practically important question. These data provide initial insights that such a relationship does exist and highlight further important avenues for future research.

Marco Degano | 6/12/23 | 10:15am-10:30am| MR 4.02

Title: Assessing the tenability of habit-based accounts of skill.

This chapter challenges Radical Habitualism (Cappuccio forth.) by analysing its construal of the 'smart' notion of habit, together with the arguments and data marshaled in support of it. Radical Habitualism is compared to the Radical Enactive account of skilled action (Hutto & Robertson 2020; Robertson & Hutto 2023) to test both the former's conceptual and empirical tenability. It is argued that insofar as the reductionist tenet of Radical Habitualism is too strong, we have good reasons to doubt its efficacy to reduce skills to habits – and that more moderate multi-factor approaches nearby that are more attractive in this regard.

Ema Demšar | 7/12/23 | 2:00pm-2:15pm | MR 2.02

Title: On becoming aware that you're dreaming: A micro-phenomenological study of dream lucidity.

Lucid dreaming, where the dreamer is aware that they are currently dreaming, offers a unique platform for exploring meta-awareness in dreaming and consciousness more broadly. In light of ongoing research aiming to outline neural underpinnings of lucid dreaming and refine lucid dream induction techniques, it is

increasingly important to gain a better understanding of lucid dream phenomenology. This talk reports a neurophenomenological study in which participants signalled the onset of dream lucidity using predetermined eye movements. Participants' experience of lucid dream episodes was examined in a series of in-depth micro-phenomenological interviews. We outline the experiential dynamics and structures of these experiences, with focus on attentional dynamics, embodiment, and experiences related to self-consciousness and meta-awareness. We use the findings to inform a discussion of the concept of dream lucidity, and discuss implications for future research into lucid dreaming.

Lily Dicken, Thomas Suddendorf, Adam Bulley, Muireann Irish, & Jonathan Redshaw | 6/12/23 | 2:15pm-2:30pm | MR 4.02

Title: Children's emerging ability to balance internal and external resources.

In a world full of calendars, maps, and smartphones, humans must learn to effectively manage internal and external cognitive resources. Here, we show how children begin to perform this delicate balancing act between mind and world: weighing up when to offload cognition and when to rely on their unaided capacities. Australian children aged 6 to 9 years (N = 120, 71 females) attempted to remember the locations of 1, 3, 5, and 7 targets hidden under 25 cups. In Phases 1 and 2, respectively, children were compelled to find the targets using internal memory or external tokens that could mark the target locations. In Phase 3, however, children were given limited tokens to distribute freely across the upcoming trials. Following the final search period, children were invited to evaluate and adjust their initial allocation of external cognitive resources after seeing how their strategy functioned during the task. Although 8- to 9-year-olds prospectively allocated proportionately more tokens to more difficult trials, 6- to 7-year-olds did so only in retrospect. Utilisation of tokens within trials and search strategies are also explored. During middle childhood, humans appear to become increasingly adept at effectively balancing internal and external cognition.

Alexandre Duval | 8/12/23 | 3:00pm-3:30pm | MR 4.02

Title: Searching for modularity in higher cognition: A higher-cognitive module for searching.

The idea that higher cognitive processes are partly or mainly realized by modular systems has been widely criticized in cognitive science. Many people resist it in large part due to the fact that there isn't even a single non-controversial example of a higher-cognitive module. In this paper, I try to remedy this situation by bolstering one of the most promising empirical cases in favor of positing a higher-cognitive module. It comes from the geometric-module hypothesis (Cheng 1986; Gallistel 1990), which holds that many species possess a module for spatial navigation that operates only on representations of the global geometry of three-dimensional surfaces to guide search behavior. I start by considering an objection against the hypothesis that hasn't been discussed at any length in the navigation literature, even though it seems to cut right to its heart. It is that the geometric-module hypothesis can't make sense of well-known findings from neurobiology that navigation-related neurons are sensitive to non-geometric information. To answer this objection, I provide a new cognitive architecture for spatial navigation in mammals. I then argue that any plausible model of spatial navigation will need to be committed to this architecture to account for relevant neurobiological findings.

Robert Farquharson | 8/12/23 | 2:30pm-3:00pm | MR 4.02

Title: Cognitive Maps & Computation.

Cognitive Maps are central to understanding successful navigation in animals. However, there are many types of maps, or map-like structures. So, what kind of map is a cognitive map, and how could we tell? I use systematic navigation errors in ants to argue that cognitive maps are not "Euclidean" maps. Instead, the data suggest that cognitive maps are a form of "labelled graph", a weaker mathematical structure.

The difference has consequences for the philosophy of cognitive science. Connectionism and classicism are competing views on the computational architecture of the brain & mind. Classicists argue that Euclidean cognitive maps are essential to explaining animal navigation, and only classical architectures can sustain them. If animals navigate via graphs, then this is evidence against brains

as classical computers. I conclude by gesturing how a connectionist view of the brain/mind fits felicitously with the cognitive graph approach.

Bronwyn Finnigan | 7/12/23 | 10:45am-11:15am | MR 4.02

Title: Does fear require a self? An interdisciplinary dialogue between Buddhism and emotion research.

With the global prominence of the Buddhist-inspired mindfulness movement comes increased scrutiny. One focus of scrutiny concerns whether its presuppositions about emotions align with the Buddhist traditions from which mindfulness practice is derived; since emotion-regulation is a central outcome of secular mindfulness practice, it pays to consider whether contemplative science and Buddhism have similar conceptions of emotions and their regulation. This paper focuses on fear and anxiety and critically examines whether and to what extent analyses of these states align with the Buddha's teaching of no-self (anātman). Popular social media consistently promotes pop-psychological studies claiming that science has discovered or even proven the truth of Buddhist view of no-self. But the concept of 'self' features prominently in many scientific analyses of fear and anxiety, which raises important questions for interdisciplinary study. This talk critically examines three distinct roles the notion of self that have been given in analyses of fear and anxiety, and assesses whether and to what extent they are consistent with no-self, on some interpretation. The paper aims to both draw out the diversity of views about self and non-self, in both the emotion sciences and Buddhism, and identify points of tension as a vehicle for theoretical innovation.

Beth Fisher | 6/12/23 | 1:50pm-2:10pm | MR 2.02

Title: An active inference model of psilocybin induced optimism in rats.

The optimism bias is a cognitive bias where the outcomes agents expect are better than reality, such that agents overestimate the likelihood of positive events and underestimate the likelihood of negative events. Associated with improved quality of life, from better physical health to higher salaries, studies of the optimism bias persistently suggest we are better off with such a biased representation of the world. Given the multitude of positive outcomes associated with the optimism bias, it is a promising avenue of research as an intervention for

mental health conditions in cases where individuals appear to lack optimism. Arguing for a domain general model of the optimism bias, I use the active inference framework to provide a computational model of optimism. Here, we demonstrate how our model can account for increased optimistic behaviour for a reversal learning task in rats treated with psilocybin. Using computational modeling frameworks, such as active inference, provide us with a greater understanding of the mechanisms underlying psilocybin and the optimism bias. However, I will also address important considerations needed when interpreting and fitting computational models and what consequences these have for the philosophy of computational neuroscience.

Philip Gerrans & Jesus Ramirez Bermudez | 8/12/23 | 11:00am-11:30am | MR 4.02

Title: Pain, suffering and the self: Pain Asymbolia as a problem of self modeling.

Historically Pain Asymbolia has been explained in modular/representational terms as a case of intact sensory/nociceptive processing and impaired affective/emotional processing. The patient senses bodily damage but is (emotionally) indifferent to it. The modular conception has been applied to explain variety of disorders characterised by pain and suffering, Pain Asymbolia, Chronic Insensitity to Pain, Chronic Pain, "Social" Pain (of humiliation or exclusion) phantom limb pain and nocibo and placebo effects.

However the neuroscience of pain processing has moved steadily from a modular to a network or matrix conception of pain processing in which pain experience emerges from co-ordinated processing across a "pain matrix". This is also consistent with an understanding of pain as primarily a regulatory not a representational phenomenon. We present a case of pain asymbolia and develop an account that integrates representational and regulatory accounts. The core idea is that processing across the matrix is anchored by a multidimensional self-model that co-ordinates "active inference". Pain should be seen as the co-ordination of organismic resources to optimise functioning according to a predictive self-model. On this view activity in the insula is best interpreted, not as a substrate for affective experience, but as an integrative hub of self modelling.

Omid Ghasemi, Adam J. L. Harris, & Ben Newell | 7/12/23 | 4:15pm-4:30pm | MR 2.02

Title: Exploring the Rationality of the Framing Effect: Uncovering the Role of Information Leakage.

The framing effect is a widely acknowledged phenomenon, wherein logically equivalent options trigger different preferences (e.g., 90% fat-free vs 10% fat). This effect has been interpreted as evidence of deviation from normative decision-making. However, the information leakage account suggests that frames convey choice-related information to decision-makers, making them informationally non-equivalent and causing the choice of frame to "leak" information to listeners. For example, decision-makers might interpret a positive frame (90% fat free) as an implicit recommendation. Therefore, in contrast to traditional paradigms, the information leakage account views framing effects as normatively defensible. In a series of experiments, we eliminated the informativeness of frames by minimizing the freedom of a speaker to choose a frame and varying the communication context between a speaker and a listener from collaborative to competitive. The information leakage account would predict a less pronounced framing effect in these situations, where the leaked information conveys no useful cue to decision-makers. The results indicate that manipulations to block information leakage have labile impacts on the extent of framing. The findings contribute to our broad understanding of people's susceptibility to framing, and the rationality of such effects.

Alexander J. Gillett, McArthur Mingon, John Sutton | 8/12/23 | 2:00pm-2:30pm | MR 4.02

Title: Towards a Cognitive Ecology of Collaborative Wayfinding.

Moving around in the world together is a crucial part of our everyday lives. However, the study of collaborative wayfinding has been notably underrepresented in both psychological and philosophical domains (Dalton et al., 2019). Velasco (2022) approaches group navigation comparatively by reference to empirical studies of non-human animals. Critically engaging with this rare philosophical contribution, we argue that human collaborative wayfinding differs significantly from that found in other animals in two ways, relating respectively to spatial cognition and to collaboration. Firstly, a range of evidence indicates that some forms of human spatial cognition are unique (Newcombe, 2019): extensive usage of wayfinding technologies and pervasive epistemic engineering

dramatically transform the ways we navigate our environments. Secondly, collaborative human cognition involves complicated group dynamics that arguably involve divisions of labour and communicative microprocesses unlike most non-human animals. We conclude by recommending a cognitive ecological approach to handle the challenges of studying these multilayered processes in context.

Micah Goldwater & Scott Friedman | 8/12/23 | 11:30am-12:00pm | MR 2.02

Title: The Assembled Coherence Theory of Explanatory Cognition.

Humans are motivated to explain the natural and social world. The Assembled Coherence Theory of explanation (Friedman, Forbus, & Sherin, 2018) assumes that humans make sense of the world by assembling semantic hierarchical fragments of spatial, temporal, social, and causal knowledge. It assumes that our long-term semantic memory is fragmented and globally inconsistent, but coherence is assembled in the process of explanation, facilitating learning and conceptual change. Assembled Coherence Theory makes predictions about the ways in which science education will and will not change people's conceptual knowledge and explanations. The talk will present the results of computational simulations and behavioral experiments on the cognitive phenomena of how multiple (arguably incompatible) explanations of the same phenomenon coexist in people's minds, such as viral and witchcraft-based explanations of the spread of HIV, and aerosol and surface-based explanations for the spread of COVID-19. These results show how people can rearrange their globally-inconsistent, pre-existing conceptions to accommodate new explanatory models, but also how providing deeper explanations that show how multiple explanations are fundamentally incompatible can support their cognitive divorce.

Jack Hawke | 8/12/23 | 3:00pm-3:30pm | MR 2.02

Title: How Should We Study Animal Consciousness?

In comparative psychology, animal consciousness has long been seen as a taboo. By Morgan's Canon, animal behaviour is most often explained in terms of associative learning rather than conscious sensing and thinking. Recently, philosophers have argued for both (1) the existence of animal consciousness and (2) the benefits of talking about animal consciousness in comparative psychology.

I identify three different approaches for making this argument, which I call the evolutionary approach (Godfrey-Smith, 2020; Ginsburg & Gablonka, 2019), the cluster approach (Birch, 2022; Shea, 2012), and the epistemic approach (Tye, 2016; Andrews, 2020). I will evaluate the strengths and weakness of these approaches, against the opposing view that denies that any animals are conscious, which I call the human-centred approach (Carruthers, 2019). I will give my own view on the matter. In doing so, I will also address the sceptics who doubt we can ever gain any knowledge on this question (Schwitzgebel, 2020; Dennett, 1996).

Julie Henry (Presidential Address) | 7/12/23 | 12:00pm-12:30pm | MR 2.02

Title: The Cognitive Tenacity of Self-Directed Ageism.

Wendy Higgins | 7/12/23 | 3:45pm-4:15pm | MR 4.02

Title: Psychological tests are not valid.

In psychological research, a tension exists between the conceptualisations of validity as a property of a test and validity as the extent to which a test score can be interpreted as a measurement of a particular psychological construct for a particular use. In practice, validity is often treated as a property of a test. Drawing on my review of the validity evidence reported in 1,461 studies that administered the Reading the Mind in the Eyes Test (one of the most widely used measures of social cognitive ability), I will argue that treating validity as a property of tests encourages poor measurement practices including infrequent reporting of validity evidence, dismissal of weak validity evidence, and the use of psychological tests in inappropriate contexts. This, I further argue, raises serious concerns about the credibility of research across many psychological literatures.

Jakob Hohwy | 8/12/23 | 12:00pm-12:30pm | MR 2.02

Title: From predictive processing to selfevidencing.

Through the last decade or so, predictive processing has emerged as a prominent paradigm for cognitive science, with large footprints in psychology and philosophy. This talk discusses how the notion of self-evidencing underlies predictive processing, in particular with its recent focus on active inference and

grounding in the free energy principle. Self-evidencing opens several new avenues for understanding mind and action in self-supervised agents.

Ryan Jesson & Jason Tangen | 7/12/23 | 4:15pm-4:30pm | MR 2.02

Title: Looking beyond the looking glass: Investigating the roles of intuition and insight in classic cognitive reflection problems.

The Cognitive Reflection Test (CRT) is one of the most popular measurement tools in Cognitive Science, famous for its ability to supposedly measure one's mental habits regarding analytic thinking. Across a series of lab-based studies, we experimentally tested the conventional theory of performance. Using a cognitive load paradigm, we tested a total of 300 participants across 3 studies where cognitive load was varied between groups. We consistently found that inducing cognitive load did not impair performance on the CRT. This result potentially implies a more significant role for intuitive reasoning than previously thought. To explore this possibility more deeply, we also conducted a think-aloud protocol with 100 participants who completed 19 cognitive reflection problems. In a novel approach, our investigation focused on a special kind of intuitive process: insight or "Aha!" moments. Insight moments describe the experience where a solution pops into one's mind suddenly and unexpectedly, a qualitatively distinct process from the kind of linear reasoning produced by analytic thought. We found that people solve, and fail, cognitive reflection items in a variety of theoretically consequential ways, including through the experience of insight. These findings pave the way for a new conception of the CRT.

Alicia Jones, Shalini Gautam, & Jonathan Redshaw | 7/12/23 | 1:30pm-1:45pm | MR 4.02

Title: Controllability and Foreseeability in Children's Counterfactual Thinking.

When we consider counterfactuals to our own past actions, we often experience regret, which can help us learn to choose better actions in the future. In study 1 (N = 192), we investigated if 4- to 9-year-olds experienced stronger emotions towards a box selection made by themselves (controllable) compared to a box selection made by a randomised wheel (uncontrollable), where both selections equally caused a positive or negative outcome. Following a negative outcome, older children were more likely than younger children to feel stronger regret

about the box selected by themselves. In study 2 (N = 144), we investigated if 4-to 9-year-olds experienced stronger regret towards a choice where they could have foreseen the eventual outcome. Children selected one box each from two pairs of boxes, with both selections leading to sub-optimal outcomes. Critically, one pair of boxes had windows on the bottom, such that children could have foreseen the outcome of their choice if only they had first looked underneath the boxes. Not until 8 years of age did many children feel worse about the box selection with the foreseeable outcome. Overall, both studies suggest that children only gradually begin to consider counterfactuals that aid future decision making.

Samuel Jones | 6/12/23 | 12:00pm-12:15pm | MR 4.02

Title: Extending the Ear; Soft Collaboration in Popular Music Production.

In popular music production, songwriters, producers and performers often rely on close friends and acquaintances for feedback and advise. These relationships often have radical effects on the production process. In this paper, I argue that these connections are not superficial, but constitutive of the creative system. Herein referring to these connections as soft-collaborations, I build an ecological model of music production that takes into account the interactions and dynamics that arise outside the scope of traditional collaboration. In doing so I identify three key concepts; the extension of domain knowledge, co-performing and embodied listening, unpredictable problem solving and orientation. Each concept is supported by ethnographic work with artists and producers across Australia.

The recording studio is not a closed system, but consistently incorporates these soft collaborations giving rise to novel ways of writing, recording and producing music.

Alan Jurgens | 6/12/23 | 9:15am-9:45am | MR 2.02

Title: Body social models of disability: Examining enactive and ecological approaches.

Autistic philosopher and neurodiversity proponent Robert Chapman (2021) argues that disability may be best understood by utilizing an ecological functional model where the focus is on the intersection and overlaps between relational contributions to collectives and group functioning with individual functionality.

This presents an alternative to both social-relational models of disability advocated by other neurodiversity proponents and the orthodox medical model of disability. While enactivists such as Michelle Maiese (2021) and Juan Toro, Julian Kiverstein and Erik Rietveld (2020) have also offered relational models of disability that challenge the orthodox medical model, I argue that unlike the ecological functional model, these enactivist models remain problematically committed to an individualist methodology. Drawing on what Miriam Kyselo (2014) has labeled the body social problem, I show that the enactivist models not only face theoretical issues, but also practical issues in terms of their recommended intervention strategies for disability. I argue that for these reasons, if enactivists want a relational model of disability, then they should adopt both a neurodiversity paradigm approach and Chapman's ecological functional model.

David M. Kaplan | 8/12/23 | 11:00am-11:30am | MR 2.02

Title: The role of behaviour in understanding neural representation and computation.

Behaviour is essential for understanding what the brain is doing and how it is doing it. In this paper, I argue that well-designed, hypothesis-driven behavioural experiments often provide comparably deep insights and equally strong constraints on the latent representations and computations underlying behavioural performance as do neural recording or perturbation experiments. In developing this argument, I also clarify some misconceptions in the scientific literature and show how this view flows naturally from a mechanistic perspective.

Jeanette Kennett & Mark Nolan (Public Forum) | 7/12/23 | 5:30pm-7:00pm | RSSS Auditorium

Title: Neuroscience, Responsibility, and the Law.

(Note: Separately ticketed event)

Aluma Kepten | 6/12/23 | 11:30am-12:00pm | MR 4.02

Title: Entrepreneurial Mindset in the Military: Assessing the cognitive characteristics of military entrepreneurship in Special Operations Forces.

Can Special Operations Forces (SOF) operators be identified as entrepreneurs in the context of the military? And if so, to what extent do they share the cognitive characteristics displayed by entrepreneurs in business and other areas of civil society? This paper tackles these questions, by presenting research into entrepreneurial cognition in the military context. This collaborative project focuses on the idea that there is a neurological difference in military entrepreneurs that enables them to spot ideas, innovate, act, and cope with uncertain environments. Specifically, we want to determine whether there is a distinct common cognitive profile in SOF. We will do so by assessing whether SOF operators and support staff share the cognitive characteristics displayed by entrepreneurs in business and other areas of civilian society, by employing entrepreneurship-associated cognition skills. SOF work is fundamentally rooted in innovation, and SOF operators are commonly recognised in military studies as the entrepreneurs of the military. However, there is a significant gap in the empirical assessment of this characterisation. Furthermore, research into neuro-cognition in the military sphere remains underdeveloped. The project attempts to initiate investigation and provide preliminary commentary on entrepreneurial profiling in the military context.

Christoph Klebl & Samantha Stanley | 8/12/23 | 9:45am-10:00am | MR 2.02

Title: Do perceptions of wealth and historic emissions predict support for policies that help the victims of climate change?

Discussions about international climate finance to compensate losses, and climate migration policies to resettle people displaced by climate change, sometimes call for contributions commensurate with nations' historic contributions to causing climate change and/or their capacity to help. Given the contention surrounding climate solutions more generally, we wondered how these two appeals might resonate with the public. In an initial correlational study in the UK, we identified that perceptions of the UK's historical emissions, and not its perceived economic capacity, relates to greater support for climate aid policies. We are now developing an experimental paradigm that immerses participants in a fictional world of Hima. Using a 2 (wealth: high vs low) x 2 (historical emissions:

high vs low) experimental design, participants will rate the extent they, as a citizen of Hima, support Hima implementing climate aid policies, to determine the extent that climate aid policy support depends on capacity to help and historic emissions in this context and where we can systematically vary both wealth and emissions profiles. Together, this work will give insights into possible responses to more widespread debate about how the international community ought to compensate and assist the victims of climate change.

Antoine Lutz | 6/12/23 | 12:00pm-12:15pm | MR 2.02

Title: Using generative modelling to develop a computational model of lived experience: implications for neurophenomenological research.

I will present some recent efforts in computational neuroscience to naturalize phenomenology (Ramstead et al. 2022, Sandved-Smith et al. 2021 and in prep). This approach is using generative modelling techniques while borrowing concepts and descriptions of lived experience from the phenomenological tradition of philosophy (e.g., the work of Edmund Husserl, Maurice Merleau-Ponty…). I will discuss the role of deep generative models with second-order attentional states to simulate core phenomenological features such as the epoché (bracketing) in Phenomenology, or dereification in mindfulness meditation. I will argue that this class of computational models provides a fruitful mathematical formalism for the neurophenomenological investigations of the lived experience, as proposed by Varela (1996).

Cate MacColl, David Sewell, & Jonathan Redshaw | 6/12/23 | 2:00pm-2:15pm | MR 4.02

Title: Development of Metacognition in Multi-Choice Decision Making.

Prevailing theories based on two-alternative decision making tasks suggest that metacognitive confidence is based on the overall probability that a selected option is optimal (Kepecs & Mainen, 2012; Mamassian, 2016). However, recent findings from three-alternative tasks instead suggest that adults' confidence reflects the difference between the probabilities of the best and next-best options only (Li & Ma, 2020). Using a uniquely sensitive confidence measure and a probability task (in which participants had to guess the colour of a ball selected from arrays of varying distributions), we investigated metacognition in multi-

option decision making in children (N = 100, aged 6-9-years) and adults (N = 56). Findings indicate that children's explicit confidence vary as a function of probability manipulations, accuracy, and response latency. Interestingly, with increasing age children's implicit and explicit confidence is more likely to extraneously vary based on evidence for the next best option, despite it not influencing the initial decision is correct. However, a parsimonious interpretation of the developmental trajectory may imply that metacognition in decision making with multiple alternatives relies on all available options.

Adam Manoogian | 6/12/23 | 2:10pm-2:30pm | MR 2.02

Title: Context within Active Inference: A case study with schizophrenia.

Despite the wide history of context misinterpretation in schizophrenia, the influence of contextual inference in decision making remains underexplored. We highlight the utility of active inference models in understanding essential cognitive impairments. We discuss the potential applications in commonly studied behavioral tasks, as well as in the wider symptomology.

Andy McKilliam | 6/12/23 | 11:00am-11:30am | MR 2.02

Title: A Difference-Making Alternative to Minimal Sufficiency as the Guiding Principle for NCC Research.

For the past 30 years, the search for the neural basis of consciousness has been conceived as the search for neural correlates of consciousness (NCCs) — the neural mechanisms that are minimally sufficient for states of occurrent subjective experience (Chalmers, 2000; Koch et al., 2016). I argue that this way of conceptualizing the project neither i) accurately describes the objectives of current research, nor ii) guides researchers in a constructive manner. I draw on three concepts from the mechanistic philosophy of science — specificity, systematicity, and stability — to provide a difference-making alternative to minimal sufficiency, and I sketch the implications this has for current debates concerning the role of the primary visual cortex and prefrontal cortex within the neural mechanisms of consciousness.

Andy McKilliam | 7/12/23 | 2:30pm-2:45pm | MR 2.02

Title: Detecting Introspective Errors.

Most researchers in consciousness science agree that we can sometimes be wrong about what it is like to be us — introspective error is possible. Many also believe that the subjective nature of consciousness makes detecting and controlling for introspective errors particularly hard, if not impossible. This is a problem since many disputes in consciousness science turn on when, and to what extent, we should trust subjects' introspective judgments. If we cannot detect introspective errors, then there is reason to worry about the prospects of resolving these disputes and converging on a unified science of consciousness. Some authors have supposed that making progress on this issue will require radical new methods — methods that break from those deployed elsewhere in science. I argue, that on closer inspection, the old methods — those that allowed the physical sciences to detect and control for perceptual errors — work just fine. I leverage recent findings from research exploring the physiological markers of conscious mental imagery to show that it is possible to detect and control for introspective errors in a way that can resolve disputes in consciousness science — even those concerning the relationship between consciousness and cognition.

Angus McLachlan | 8/12/23 | 12:00pm-12:30pm | MR 4.02

Title: Some odd similarities between laughter and swearing.

In an effort to account for the considerable range and diversity of "meanings" of laughter, a comparison of imprecations and laughter will be offered. As response cries, imprecations, are typically considered to represent outbursts of negative emotion prompted by, for example, pain or dismay. Laughter is often viewed as a flooding out of a positive emotion, such as joy, yet it often follows a variety of acts or events, most of which would not be expected to prompt a positive reaction. Both imprecations and laughter are also found to occur within utterances, imprecations, as expletive attributives, serving as emotional intensifiers, while laughter, as a marker of non-seriousness, serving to moderate the emotion. However, both imprecations and laughter also occur within "matter of fact" utterances that lack any obvious emotional force. It will be argued that imprecations may be better grasped as indicating the relative centrality of the substantive content of the ongoing interaction to the speaker, he "means it"; while laughter signifies a degree of pleasant detachment, a not "meaning it". Such an

account foregrounds the participants' active construction of a position within particular episodes by deploying imprecations and laughter to reflect their relative investment in the talk.

Talia Morag | 7/12/23 | 11:15am-11:45am | MR 4.02

Title: A sympathetic response to skepticism about empathy.

Empathy was originally introduced to philosophy as a solution to the problem of other minds skepticism, the doubt whether other minds exist at all, which arises from the Cartesian dualist picture of the mind as metaphysically hidden (Lipps, 1907). Already in Lipps's work , and from then on into contemporary philosophical discussion, empathy in its various forms has been seen as our way to know what specific minds believe and feel and desire in specific scenarios. It is presupposed in these discussions, that we do know other minds and successfully interpret them, even if we can make mistakes (e.g. Spaulding, 2017). In this paper, I draw on ordinary experience and on literary examples to show that actually, there is plenty of empirical support for the opposite idea, namely that we can hardly claim to know the motivations and feelings of others (Cavell, 1979; Macarthur 2022). Relying on the work of the psychologist Hoffman (2000) and the clinical psychologist Symington (2018), I propose a new associative-imaginative account of affective empathy, which still sees it as a moment of knowing another mind, but in a qualified sense, and only on rare albeit important occasions.

Alex Morgan | 7/12/23 | 11:15am-11:45am | MR 2.02

Title: On the Emergence of Deceit in Transformative AI.

One important subfield of AI safety research concerns 'the deception problem': how to mitigate situations in which AI systems intentionally or unintentionally provide false or misleading information to humans. An example often used to illustrate the problem is the tendency for large language models (LLMs) such as ChatGPT to generate seemingly authoritative content that includes references to non-existent sources. While this phenomena is certainly problematic, it does not qualify as deception in any ordinary sense of that word, and is not the kind of scenario that AI safety researchers are most concerned about when they discuss problems associated with autonomous AI systems that can strategically outmaneuver humans. There's no sense in which ChatGPT, or any other existing AI

system, is deliberately intending to deceive its human users. There's an important *categorical* difference between intentional and unintentional generation of misleading content when it comes to theorizing about AI safety. However, there are many examples of emergent capabilities in the kinds of deep learning systems underlying contemporary LLMs when those systems are trained on sufficiently large datasets. Could true deception inadvertently emerge from deep learning systems given enough data and computing power? In this paper I tentatively argue "yes", albeit only under very specific conditions.

Michael Newall | 8/12/23 | 2:00pm-2:30pm | MR 2.02

Title: What is it like to be a tetrachromat?

Most people are trichromats, but some people have an extra kind of cone cell in their retinas: these are tetrachromats. Recent science shows that some tetrachromats can make distinctions between reflectances that ordinary viewers are unable to detect. Here I ask what kind of color experience these tetrachromats have. I reject the claim that they see finer gradations of those colors familiar to trichromats, and argue instead that they see novel colors: elementary colors that trichromatic viewers are unable to see or imagine. I argue this by examining the structure of tetrachromats' phenomenal colour space. There is good evidence that this has a higher dimensionality than trichromatic phenomenal colour space. I argue that this implies that novel colours must be part of tetrachromat colour experience, since there is no way that the kinds of colours that trichromats are familiar with can fill tetrachromat colour space and preserve its structural complexity.

Merin Nielsen | 8/12/23 | 10:30am-10:45am | MR 4.02

Title: An illusion of consciousness.

The mind-body problem is ever echoed by the difficulty of fully explaining related ideas such as cognition, perception, consciousness, sentience, experience, awareness, observation, and so on, without circularity. This conceptual nest has always carried a sense of divorce from physical reality; a situation often viewed as suggesting that it is illusory. Sure, the neural circumstances of conscious perception are physically real, and even reasonably describable. Illusoriness, however, may yet reside in the accompanying what-it's-likeness. Given the recent

development of perspectives such as Predictive Processing and Biosemantics, the case for illusoriness may perhaps be made more confidently. Predictive Processing points to active inference as the heart of reality model generation. It posits perception — as perceptual inference — to be far more abundant, although functionally secondary. I contend that perceptual inference, in fact, legitimately counts as a type of active inference. Saluting allostasis, issues of 'how to' supersede 'what is'. In this light, even apparently immediate conscious perceptions are mediated by memory. That is, actions to resolve currently prioritised disequilibria are compared as predictive simulations, and selection hence obtains conscious reinforcement (within memory). As Biosemantics would anticipate, though, the allostasis driven what-it's-likeness instead substitutes this simulation into non-conscious realisation of the respective action.

Abigail O'Hara, Martin Schweinberger, & Ryan K. L. Ko | 8/12/23 | 9:15am-9:45am | MR 2.02

Title: A real-time corpus-based analysis of conspiracy discourse on Reddit.

This presentation applies a corpus-based analysis to comments in Reddit's conspiracy forum.

Since the start of the COVID-19 pandemic, there has been an increase in academic literature focusing on the weaponising of COVID-19 and non-COVID-19 conspiracy theories and a potential threat of conspiracy-fuelled extremism. The harms of conspiracy theory endorsement have also been adequately documented in social psychology literature.

However, a recent body of literature has identified positive functions of conspiracy theories in terms of their entertainment value, ability to increase compliance with COVID-19 government regulations and increase existential meaning. In addition, the notion that conspiracy theories have increased over time has been refuted in a time-series study.

This presentation leverages big data (comments published in Reddit's conspiracy forum between 1st June 2019 and 30th November 2020) to:

• detect keywords associated with conspiracy discourse

• identify families of conspiracy theories

• extract entities that are part of the different conspiracy families

• determine sentiments of the conspiracy discourse families

This research explores various aspects of the conspiracy discourse. Specifically, it will focus on lexical features, broader themes, and the association of conspiracy discourse with core emotions.

We hope that this presentation would provide a more nuanced and detailed understanding of conspiracy discourse and provide researchers with a more accurate picture of conspiracists and how they communicate so they can better engage with them.

The research findings could also demonstrate how corpus-based analysis of everyday naturalistic language can aid testing and modifying of psychology theory and experiments.

Bryan Paton & Juanita Todd | 6/12/23 | 2:50pm-3:10pm | MR 2.02

Title: Context dependent processes of inference and learning.

Enmeshed in a hierarchically deep environment, with how we learn, follow and adapt to the signals and processes in our lives, especially in the presence of uncertainty, is still an open question. Given streams of sensory information how do we determine which are relevant, which to ignore and which signal an important process change that we should act upon? A hundred and one participants completed a web based learning experiment on Prolific, based on a recent task by Nassar et al. The participant's task was to maximise the coins collected from bags dropped by a helicopter obscured by clouds. Each counter-balanced sequence (200 trials, split amongst four blocks), one sequence contained mean-shift trials, where outliers signalled a qualitative change in helicopter dynamics. In the other sequences reversals immediately followed outliers. Responses, modelled via the Hierarchical Gaussian Filter (HGF) framework and Semi-hierarchical Bayesian model comparison revealed the best model in the outlier condition was a Kalman Filter, in the mean-shift condition the HGF. Recent generative models of learning of predictive coding and active inference, posit the brain as an inference engine, refining its model of the environment to predict and act upon the same. Results are discussed in this context.

Shawn Prest | 6/12/23 | 2:30pm-2:50pm | MR 2.02

Title: Understanding and Modeling the Mechanisms Underlying the Phenomenology of Meditative Deconstruction under Hierarchical Active Inference.

Deep meditative experience has long been associated with conceptual attenuation and a pacification of the tendency to cling to phenomena. However, the mechanisms underlying this apparent meditative deconstruction into the present moment are not well understood. We illustrate how the phenomenology of meditative deconstruction can be understood in terms of hierarchical active inference. We propose a contemporary Buddhist phenomenological approach to meditative deconstruction and provide an account of its phenomenology under the active inference framework. We then discuss a computational model of meditative deconstruction which captures the core phenomenology.

Michael J. Platow, Chris Wang, Eryn J. Newman, Katherine J. Reynolds, & Russell Spears | 8/12/23 | 10:15am-10:30am | MR 2.02

Title: Considering Alternative Epistemologies as the Basis of Partisan Truth.

We offer a conceptualization of the emergence of "partisan truth" that is not based on directional motivated reasoning, cognitive laziness or bias. Instead, we propose that partisan truths can emerge from unbiased, logical information processing pursued via the accuracy motive. This is because salient social identities guide choice of (formal and informal/intuitive) epistemologies. Group members can think systematically and rationally within a particular epistemology leading them to divergent truth conclusions from others adopting different epistemologies associated with their own salient social identities. Recognizing this allows us to make the novel predictions that: (1) partisan truths emerge from equally logical and systematic cognitive processing, and (2) people can and will make truth determinations counter to their directional motivations, even when made via identity-based (and systematic) partisan truth processes. This is because they are motivated by accuracy, but they have pursued this motive through an identity-based epistemology. In our model, identity guides epistemology, while accuracy motives within that epistemology guide non-directional and systematic reasoning processes that can yield group-based differences in truth determinations (i.e., partisan truths). We present this model and some initial data examining it.

Brentyn J. Ramm, Anna-Lena Lumma, Terje Sparby Rudolf, & Ulrich Weger | 6/12/23 | 10:30am-10:45am| MR 4.02

Title: Experiencing the Void off of the Meditation Cushion.

Experiences of the void and pure awareness are commonly reported in contemplative traditions. Anecdotally, subjects who carry out the Headless Way exercises frequently report an experience of emptiness or void. The goal of this study was to: (1) provide a preliminary assessment of the reliability of these methods in eliciting void experiences and pure awareness experiences in naïve subjects, (2) investigate the prevalence of these experiences in these tasks, and (3) to differentiate these experiences from closely related and potential precursor experiences. Twenty adults participated in one-on-one phenomenological interviews in which they were guided through the Headless Way exercises. A thematic analysis was conducted on the interview transcripts. Twelve of the participants reported an experience of emptiness and 5 reported a pure awareness experience. These experiences were respectively categorised as subsets of more the general reports of perceptual absences and the sense of not being person-like. Another novel finding was the real-time reports of the void/pure awareness. We provide initial support that the Headless Way exercises can reliably elicit pure awareness/void experiences in naïve participants. The findings suggest that such experiences can be elicited outside of a traditional meditation context, including in non-meditators.

Jonathan E. Robinson | 6/12/23 | 11:30am-12:00pm | MR 2.02

Title: Active inference and conscious content.

Under Active Inference, actions (including eye gaze, attention, motor action etc.) are hypothesised to be necessary for the appearance of content in consciousness. Here we empirically test this theory using a carefully controlled adaptation of the classic motion induced blindness paradigm. In an 'active' condition participants were asked to look towards a target stimulus following its disappearance from consciousness, and to report its reappearance in awareness. Replay trials emulating active trials are then used to create a 'passive' condition in which the eyes remain fixated at the centre of the screen. We find differences in both pupillometry and reports of reappearance. We discuss these findings in the context of Active Inference as an account of conscious content, and consider directions for future research.

Peter Robinson | 6/12/23 | 11:00am-11:30am| MR 4.02

Title: Vocational educational assessment a matter of observation of performance or measurement of latent traits?

Within education generally but more acutely in vocational education there are two competing assessment approaches. Bodies certifying professionals tend to employ a traditional objective testing methodology supported by psychometric analysis. Registered training organisations employ a performance-based assessment framework mandated by the National VET Regulator Act 2011.

Adherents to both approaches claim to be able to assess competency but view competency in contrasting ways. Objective assessment views knowledge and ability of candidates as a latent variable. Registered training organisations are provided with a definition of specific competences, specifying skills and knowledge and a set fo criteria to observe candidate behaviour in a workplace or simulated workplace.

The main difference in approach is that a performance assessment involves a judgement of observable behaviour whereas the objective assessment model requires measurement of a latent ability.

This paper employs a philosophical plumbing analysis described by Midgely (1992) to argue that despite human ability is largely latent but that common objective testing measurement models are problematic and performance observation can support a valid assessment judgement provided a suitable measurement model is employed.

Geoffrey Roche | 7/12/23 | 4:30pm-4:45pm | MR 4.02

Title: Ethical Issues with Psychedelic Therapy and Informed Consent: Cognitive Distortion, Chemically Altered Beliefs, and Discontinuity of Personal Identity.

Michael Pollan has raised the 'comforting delusion' problem of psychedelic therapy: that is, is it not unethical to alleviate anxiety towards death and dying in patients through neurochemical manipulation of belief? In response several philosophers have argued for the epistemic benefits of the psychedelic experience; rather than being delusional, they argue, the psychedelic experience enhances insight into absolute reality. Chris Letheby in particular has argued that the psychedelic experience is compatible with a naturalistic worldview.

In response I argue that none of the claims of such cognitive enhancement are well supported. In particular, I argue that there is no sound evidence of psychedelic drugs leading to deeper, independently verifiable insight into external reality, or moral enhancement. I suggest that the issue is one of epidemiology and data analysis, rather than philosophical speculation.

In addition, raising further ethical issues, psychedelics have a well-established history of inducing bizarre and unscientific beliefs amongst key theorists of psychedelics and psychedelic psychotherapy, such as the belief that one has encountered aliens, or deities, raising questions of what might constitute a psychological harm. Psychedelics may also induce radical personality changes, to such a degree that the patient may no longer identify with their previous selves.

Jesse Ruse, Paul Rhodes, & Ernst Schrabue | 6/12/23 | 12:15-12:30pm | MR 4.02

Title: Left to their own devices: The significance of mental health apps on the construction of therapy and care.

Digital mental health (MH) apps provide convenient, low/no-cost automated psychological support to anyone with a smartphone. These apps have the potential to reconfigure previously held notions of psychological care. Looking through the post-phenomenological lens (Idhe, 1991), we explored how the materiality of the app itself mediates the construction of the concept and experience of psychological care. This qualitative interview study aimed to understand the apps as agentic actants, with their own views on users' problems and suffering, and an ability to influence on users' views of themselves. Results that many apps constructed suffering in a way that was abstracted from the concrete particulars of the users' real lives. The apps did not understand the complex, context-dependent nature of users' problems. Instead, they amplified the message that suffering could be understood through broad MH categories, idealising a mechanistic and individualistic idea of psychological wellbeing. Meanwhile, the apps concealed the importance of interpersonal dialogue as a meaningful part of care. Some found this to be an impersonal and inappropriate way to deal with emotional problems, while others lamented their own inability to conform to the app's ideals.

Daniel Skorich | 8/12/23 | 10:15am-10:30am | MR 4.02

Title: Why (and How) are We Conscious? Cooperation Between Neural Signals and the Emergence of Consciousness as a Symbolic Phenotype.

A resolution to the hard problem of consciousness – that is, the problem of why and how it is that there is something it is like to be conscious – remains elusive. In this talk, I will propose a novel framework for understanding the "why" aspect of the hard problem, from which I will derive a tentative answer to the "how" aspect. I will first draw an analogy between information transmission in neural systems and in biological replicators, and argue that there is an equivalent "why" question for biological replicators: why do biological replicators create complex phenotypes? I will then discuss the answer to this question in Szathmary and Maynard-Smith's (1995) work on major evolutionary transitions and argue that this answer can be extended by analogy to the hard problem of consciousness. Specifically, I will suggest that the subjective, holistic, irreducible nature of qualitative experience emerges from a tendency for neural signals to produce higher-order informational structure – a "symbolic phenotype" – through a form of "cooperation". I will then attempt to show that one of the major evolutionary transitions in particular – the emergence of the genetic code – might provide a promising avenue for understanding the "how" aspect of the hard problem.

Peter Slezak | 8/12/23 | 9:15am-9:45am | MR 4.02

Title: Spectator in the Cartesian Theatre.

The "Cartesian Theatre" is Dennett's metaphor for the notorious error of positing a homunculus or "little man" who watches the screen on which our conscious thoughts appear. However, I suggest Dennett's critique involves two mistakes. First, contrary to much academic teaching and scholarship, Descartes was not guilty of the fallacy, as he explains in his physiological writings neglected by philosophers. Second, the pseudo-explanation arises, not from what is included in our theory to do the "clever work", but rather from what is missing. We fail to notice that the theory is incomplete because we are intuitively doing part of the explanatory work. That is, we are the spectators in the Cartesian Theatre. As Fodor notes, the question is not what is obvious to the theorist but what follows from the theory. Once the error is properly understood, we see that the error is more widespread. Leading theories of the mind share the seductive mistake, as Chomsky warns, by depending on "an intelligent and comprehending reader."

Searle's Chinese Room Argument, the Gettier Problem, Kripke's theory of proper names, Davidson's semantics of natural language, Kosslyn's theory of visual imagery and Newcomb's Problem, inter alia rely on what is intuitively meaningful to us.

Mitchell Stirzaker | 6/12/23 | 10:00am-10:15am | MR 2.02

Title: Under the radar: Hermeneutical injustices against the camouflaged neurodivergent.

Camouflaged neurodiverse people can and do internalize neurotypical ignorance. The paper builds up a picture of hermeneutical injustices against the camouflaged neurodiverse, drawing from literature on epistemic injustice; ignorance studies; psychological and philosophical literature on neurodiversity; and lived experience of neurodiversity.

Discussion of neurodiversity, and of disability (which are in complex relationship), have gone under the radar in the foundational literature on epistemic injustice. This is part of a larger epistemic marginalization phenomenon.

Neurodiversity also goes under the radar in other senses - a portion of neurodivergent people camouflage their neurodiversity. They hide their neurodivergence from others, under strain and at cost, to avoid some of the negative social consequences for marginalized neurodiverse people in a cultural, social and institutional environment primarily built by, and for, neurotypicals. In addition, many camouflaged neurodiverse people do not realize they are neurodiverse (let alone diagnosed as such). Even when they do realize they are neurodiverse, deficits in available hermeneutical resources, and pervasive restrictive neuro-normativity, mean that many aspects of their experience and difficulties can remain obscured from the understanding of themselves and others. This leads to neurodiverse people with internalized neurotypical ignorance. Once this is seen, it can begin to be remedied.

Jess Taubert (Keynote) | 8/12/23 | 4:00pm-5:00pm | MR 2.02

Title: Linking brain activity to our phenomenal experience of the visual world.

Jacob Taylor | 7/12/23 | 11:45am-12:00pm | MR 4.02

Title: Iris Murdoch's mysticism and animal ethics.

The precautionary principle is widely seen as a way to mitigate our lack of knowledge of other minds. In this paper I draw on familiar arguments from Thomas Nagel and Sextus Empiricus to conclude that we are in principle incapable of knowing about other minds, and that this ought to lead not to precaution but to humility. A good way of understanding this humility is with Murdoch's use of mysticism and the Good. If the argument is convincing, it leaves us with an impractical approach to animals ethics, but one which I think is right.

John Noel Viana | 8/12/23 | 10:00am-10:15am | MR 2.02

Title: Bridging epistemic injustice and antiracism discourses: Implications for brain and mental health promotion for racial/ethnic minorities in Australia.

The underrepresentation of multiple racial /ethnic groups in brain and mental health research can lead to epistemic injustice, wherein their bodies, minds, and interests are not given enough credibility and value in scientific knowledge production. This can then lead to medical interventions, health policies, and health programs that may not fully address their needs; or worse, disproportionately perpetuate harm and stigma towards them. Contemporary bioethics discourse, particularly work by Brandon del Pozo and Josiah Rich (2021), has applied Miranda Fricker's (2007) concept of epistemic injustice to characterise instances of racism in medicine, such as physicians dismissing pain experienced by Black patients as drug-seeking behaviour. This presentation aims to build upon emerging discussions of epistemic injustice in brain and metal healthcare and research and to bring them into conversation with Australian anti-racist discourses (Gabriell Berman and Yin Paradies, 2010; Emma Kowal, Hayley Franklin, and Yin Paradies, 2013), which underscore the health impacts of interpersonal and structural racism. I will forward some preliminary reflections on how bringing both epistemic injustice and anti-racism can better illuminate the brain and mental health challenges experienced by people from CALD (culturally and linguistically diverse) backgrounds in Australia and can help generate ideas to better address them.

Christopher Whyte | 6/12/23 | 1:30-1:50pm | MR 2.02

Title: Conscious access and the discrete continuous interface in mixed generative models.

Previous theoretical work has argued that the availability of sensory information to the first person point of view – conscious access – occurs at the transition in information processing modes from purely passive inference, where organisms are aiming to change their beliefs to match incoming sensory data, to active inference where organisms are selecting policies aimed at reducing the disparity between their beliefs about how the world ought to be and the way they currently perceive it. Here I leverage numerical simulations of a visual masking task to argue that this transition from unconscious to conscious sensory processing, and

the known neural correlates of this transition, is naturally captured by a form of hybrid generative model that combines continuous sensory inference with a discrete decision process.

Iwan Williams | 7/12/23 | 10:45am-11:15am | MR 2.02

Title: Can structural correspondences ground representational content in Large Language Models?

Large Language Models (LLMs) such as GPT-4 produce compelling responses to a wide range of prompts. But their representational capacities are uncertain. Current LLMs have no direct contact (via perception or action) with extra-linguistic reality: their inputs, outputs and training (aside from human feedback signals) consist solely of text, raising the questions (1) can LLMs represent anything and (2) if so, what? In this presentation I'll present work assessing the merits of a structural-correspondence based account of representation in LLMs.

in the philosophical literature on mental representation in biological organisms, one popular family of approaches appeals to structural correspondences. On this view, representations are grounded partly in a morphism, resemblance, or mirroring between (on the one hand) a set of internal states or vehicles and (on the other) a set of entities in some worldly domain.

These accounts look well-placed to ground representation and content in LLMs because: (1) unlike causal-informational accounts, structural correspondences don't obviously require perceptual or behavioural contact with the represented entities, and (2) words with similar meanings cause similar patterns of activity in

certain layers of LLMs' architectures, suggesting a structural correspondence. However, I'll argue that differences between LLMs and biological organisms complicate the story.

Shauna Winram | 6/12/23 | 9:45am-10:00am | MR 2.02

Title: Is psychosis a distinct global state of consciousness?

This paper is a philosophical attempt to understand psychosis within the framework of the science of consciousness. Psychosis refers to experiences whose core features include hallucinations, delusions, and disordered thoughts. These experiences are a symptom of illnesses such as schizophrenia and bipolar disorder. As there are no known biological markers for these disorders, we require novel approaches to better understand them and help people manage and understand their experience. Consciousness is defined here as our subjective first-person experience and can be understood to occur in specific global states, such as the normal waking state, REM dreaming, altered states such as those that result from the use of psychedelics, delirium, and states of light anaesthesia. In this paper, I ask if psychosis is a distinct global state of consciousness. I then explore preliminary findings from eight interviews I have conducted with people who have previously experienced psychosis. These findings suggest that psychosis may not be one distinct global state. While some participants reported that they experienced heightened perception and sensation during psychosis, others highlight such things as manic thinking, heightened mood, and heightened motivation. These findings suggest a range of experiences that could guide future taxonomies of these disorders.

Toby Woods | 7/12/23 | 2:45pm-3:00pm | MR 2.02

Title: Non-doing, rest, and spontaneous experience.

In daily life we tend to be constantly doing things – listening, talking, concentrating, analyzing, problem solving, and so on – and most experiments in cognitive science focus on participants doing things. In this presentation, I will report the findings from a randomized controlled trial examining what happens in mind and body when we simply do nothing. In this lab-based study, over 320 participants completed a 15 minute "quiet time" session comprising do nothing meditation practice, focused attention practice, or an audiobook control. The

findings cast light on the relationship between non-doing, rest, and spontaneous experience including mindwandering and forms of minimal phenomenal experience where thoughts are entirely absent.