Naturally Evolving Minds:

Controversies, Developments, Interventions

20-23 February 2018

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Conference Themes:

– **Biological and Scaffolded Minds**

– **The Day of RECkoning**

– **Rethinking Minds**

– **Narratives: Mind, Memory, and Self**

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Welcome!

From the Faculty of Law, Humanities and the Arts, University of Wollongong

Dear colleagues,

We are delighted to welcome you to the *Naturally Evolving Minds* conference. We trust you will enjoy the opportunity for intellectual exchange, debate and discussion whilst making the most of this beautiful location.

The University of Wollongong, through the Faculty of Law, Humanities and the Arts, has a strong commitment to Philosophy and this conference features an outstanding program of keynote speakers and delegates from Australia and overseas. It promises to be challenging, imaginative and inspiring. We hope you will enjoy your time at UOW.

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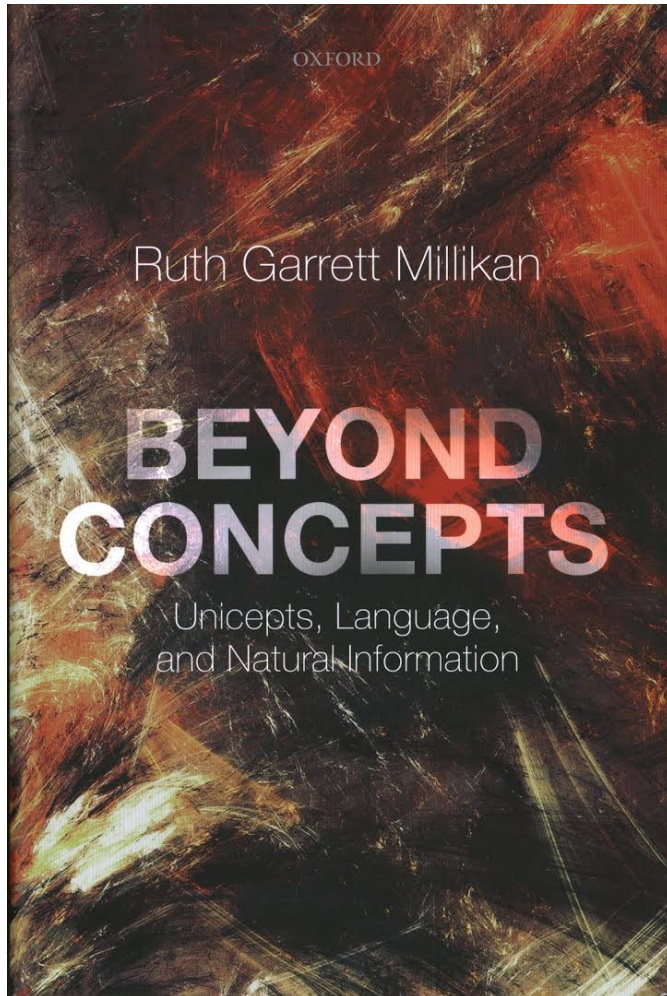16.30-17.30 **John Sutton** (Macquarie University)
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Book Launches

This will be an occasion to celebrate, launch and engage with topics and themes in three new books:

Millikan's *Beyond Concepts*

Ruth Garrett Millikan presents a highly original account of cognition - of how we get to grips with the world in thought. The question at the heart of her book is Kant's 'How is knowledge possible?', but answered from a contemporary naturalist standpoint. The starting assumption is that we are evolved creatures that use cognition as a guide in dealing with the natural world, and that the natural world is roughly as natural science has tried to describe it. Very unlike Kant, then, we must begin with ontology, with a rough understanding of what the world is like prior to cognition, only later developing theories about the nature of cognition within that world and how it manages to reflect the rest of nature. And in trying to get from ontology to cognition we must traverse another non-Kantian domain: questions about the transmission of information both through natural signs and through purposeful signs including, especially, language.

Millikan makes a number of innovations. Central to the book is her introduction of the ideas of unitrackers and unicepts, whose job is to recognize the same again as manifested through the jargon of experience. She offers a direct reference theory for common nouns and other extensional terms; a naturalist sketch of conceptual development; a theory of natural information and of language function that shows how properly functioning language carries natural information; a novel description of the semantics/pragmatics distinction; a discussion of perception as translation from natural informational signs; new descriptions of indexicals, demonstratives and intensional contexts; and a new analysis of the reference of incomplete descriptions.

# Gallagher's *Enactivist Interventions*
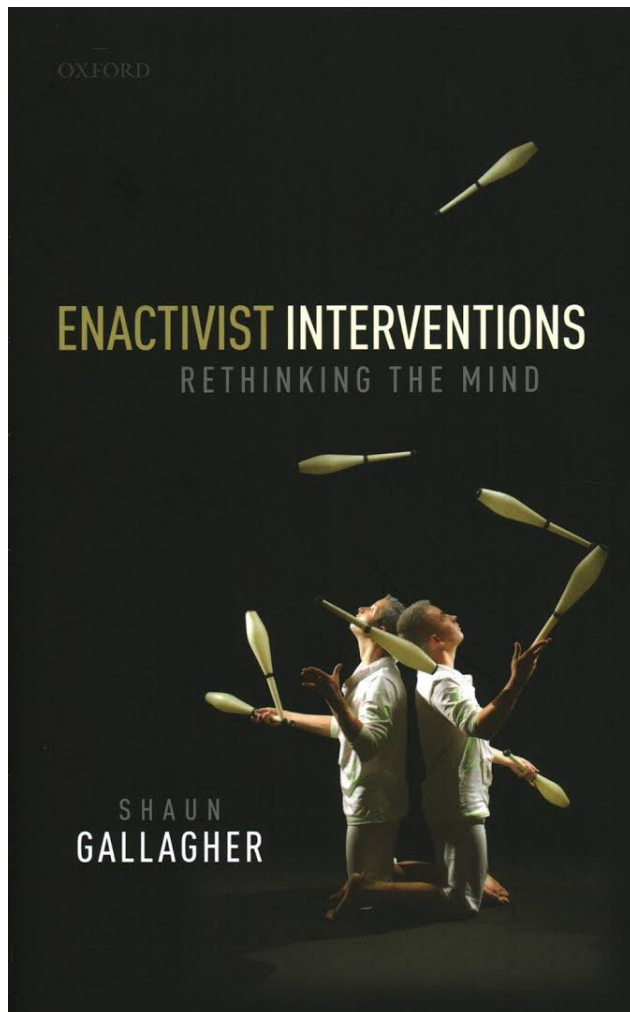
Enactivist Interventions is an interdisciplinary work that explores how theories of embodied cognition illuminate many aspects of the mind, including intentionality, representation, the affect, perception, action and free will, higher-order cognition, and intersubjectivity. Gallagher argues for a rethinking of the concept of mind, drawing on pragmatism, phenomenology and cognitive science. Enactivism is presented as a philosophy of nature that has significant methodological and theoretical implications for the scientific investigation of the mind. Gallagher argues that, like the basic phenomena of perception and action, sophisticated cognitive phenomena like reflection, imagining, and mathematical reasoning are best explained in terms of an affordance-based skilled coping. He offers an account of the continuity that runs between basic action, affectivity, and a rationality that in every case remains embodied.

Gallagher's analysis also addresses recent predictive models of brain function and outlines an alternative, enactivist interpretation that emphasizes the close coupling of brain, body and environment rather than a strong boundary that isolates the brain in its internal processes. The extensive relational dynamics that integrates the brain with the extra-neural body opens into an environment that is physical, social and cultural and that recycles back into the enactive process. Cognitive processes are in-the-world rather than in-the-head; they are situated in affordance spaces defined across evolutionary, developmental and individual histories, and are constrained by affective processes and normative dimensions of social and cultural practices.

Hutto and Myin's *Evolving Enactivism*

Daniel D. Hutto and Erik Myin

EVOLVING ENACTIVISM

Basic Minds Meet Content
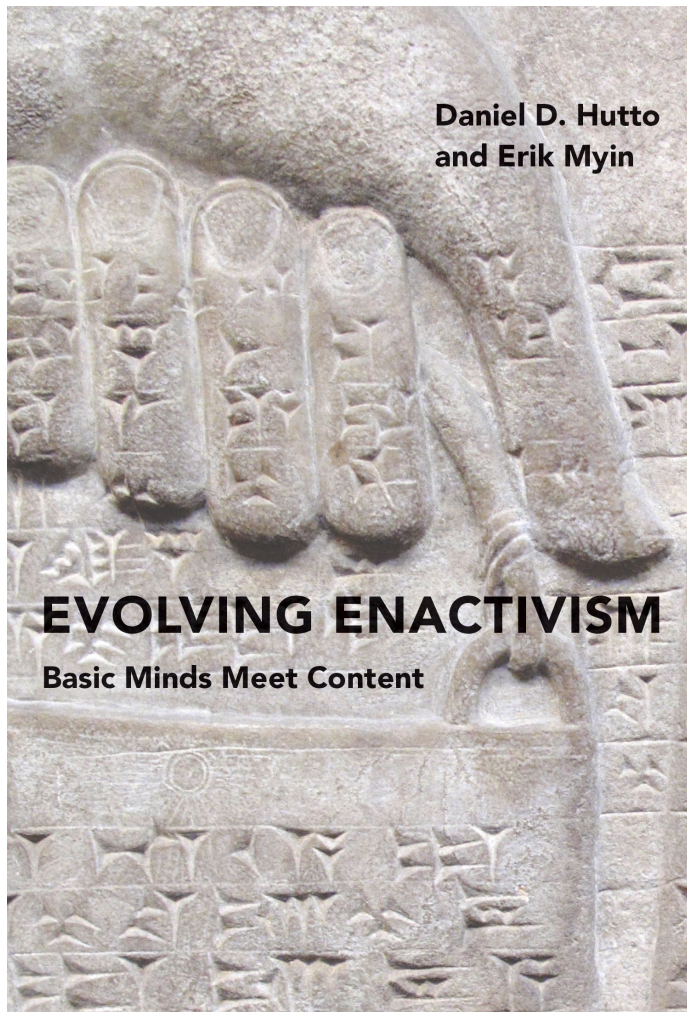
Evolving Enactivism argues that cognitive phenomena—perceiving, imagining, remembering—can be best explained in terms of an interface between contentless and content-involving forms of cognition. Building on their earlier book *Radicalizing Enactivism*, which proposes that there can be forms of cognition without content, Daniel Hutto and Erik Myin demonstrate the unique explanatory advantages of recognizing that only some forms of cognition have content while others—the most elementary ones—do not. They offer an account of the mind in duplex terms, proposing a complex vision of mentality in which these basic contentless forms of cognition interact with content-involving ones.

Hutto and Myin argue that the most basic forms of cognition do not, contrary to a currently popular account of cognition, involve picking up and processing information that is then used, reused, stored, and represented in the brain. Rather, basic cognition is contentless—fundamentally interactive, dynamic, and relational. In advancing the case for a radically enactive account of cognition, Hutto and Myin propose crucial adjustments to our concept of cognition and offer theoretical support for their revolutionary rethinking, emphasizing its capacity to explain basic minds in naturalistic terms. They demonstrate the explanatory power of the duplex vision of cognition, showing how it offers powerful means for understanding quintessential cognitive phenomena without introducing scientifically intractable mysteries into the mix.

Abstracts

Feb 20th: Biological and Scaffolded Minds

Representations Made Simple
Ruth Millikan, University of Connecticut

I am persuaded that the description of "intentional icons" and of "representations" first presented in my Language, Thought and Biological Categories (1984) captures a central and also a singularly simple explanatory principle involved in perception, cognition and also in language. Much of the literature that has followed this description entangles itself, I believe, in quite needless complexities. I will return to this description, stressing its outlines so as to highlight its simplicity and also, I believe, both its obviousness and its completely innocuous nature. I hope that the bulk of our time can then be spent on audience concerns.

What Distinctions Can Natural Selection Draw?
Paul Griffiths, University of Sydney

Hutto and Myin (2017) embrace the teleosemantic program as a source of functional norms for cognitive systems. But they deny that teleosemantics has the resources to assign representational content to states of those systems. There is a long tradition of such scepticism, stretching back at least to Fodor (1990). These sceptics claim that natural selection itself cannot distinguish between the properties that feature in competing assignments of representational content when those properties are co-instantiated in organisms and their environments. Hence teleosemantics cannot distinguish those alternative representational contents. But Sober (1984) famously argued that natural selection *can* make such distinctions: there is 'selection for' some properties of organisms but merely 'selection of' other, co-extensive properties. In this talk I draw on earlier work on the selection for/selection of distinction (Goode and Griffiths 1995, Wilkins and Griffiths 2013, Griffiths and Wilkins 2015) to give a principled account of the distinctions that natural selection can and cannot draw. The selection for/selection of distinction can only distinguish between properties that are *causal competitors*, meaning that they figure in alternative, testable hypotheses about the causes of differential survival and reproduction. Some objections to teleosemantics result from failing to respect this constraint on the selection for/selection of distinction. Others, when analysed in light of the constraint, turn out to be equivalent to an implausible scepticism about type-causation. However, my account of the selection for/selection of distinction does impose a limit on the distinctions between representational contents that can be drawn using teleosemantics, a limit which I suggest may be strict enough for Hutto and Myin to work with.

Mental Representation: Where Are We Now?
Peter Godfrey-Smith, University of Sydney

I will try to work out where we stand with respect to some foundational questions about the nature and role of internal representational states, revisiting the philosophical debates and considering the path taken by recent empirical work. Two of my main topics will be the role of isomorphism (and related concepts of structural similarity) and the role of producer-consumer coordination.

Dispensing with Concepts
Justine Kingsbury, University of Waikato, New Zealand

In *Beyond Concepts,* Ruth Millikan abandons talk of concepts in favour of talk of unicepts and unitrackers. In philosophy and psychology, concepts have been regarded as indispensable to a wide range of explanatory projects. These include explaining the compositionality of thought, how we recognise individuals (such as Spot) as belonging to categories (such as dog), how inference, memory, learning and communication are possible, and how it is possible to generalise across the mental states of different people, or the same person at different times, in order to predict behaviour. A unicept is "a neural node that helps in storing factual or procedural knowledge though its connections with other unicepts or with behaviour controllers. Each unicept is supplied with its own unitracker." A unitracker is "a neural network whose function is to recognise information arriving at the sensory surfaces that concerns one particular thing and present it for use or storage by its proprietary unicept." Neither unicepts nor unitrackers, nor unitrackers plus their proprietary unicepts, neatly correspond to concepts on any of the standard accounts of what concepts are. In this paper I explain how unicepts and unitrackers do most of the work that has traditionally been done by concepts, and argue that the residue doesn't need doing.

The Priority of Preferences in the Evolution of Minds
David Spurrett, University of KwaZulu-Natal, South Africa

More philosophical effort is spent articulating evolutionary rationales for the development of belief-like capacities than for precursors of desires or preferences. Nobody, though, seriously expects naturally evolved minds to be disinterested epistemologists. We agree that world-representing states are unlikely to pay their way without supporting capacities that prioritise from an organism's available repertoire of activities in light of stored (and occurrent) information. Some concede that desire-like states would be one way of solving this problem. Taking preferences as a starting point instead of beliefs, I defend two conclusions. First, psychologically real preference states, which approximately token expected utilities, have a quite general evolutionary rationale. They are a solution to the problem of efficiently allocating capacities with incompatible uses. This argument is a version of the Environmental Complexity Thesis. Second, preferences can plausibly function and naturally evolve *without* belief-like states, even though the converse claim is incredible. Preferences, that is, can mediate between discriminations of occurrent states ('internal' or 'external') and the processes selecting activity. By tokening expected utilities of actions conditional on discriminated state, they can increase the rate at which the 'right thing' is done at appropriate times, and they can do this without the support of belief-like, world-representing states. Preferences, even incomplete and noisy sets of them, are a fuel for success that will tend to be favoured when environments are complex in ways that matter to an organism, and when the organisms have complex behavioural repertoires with heterogeneous returns and costs.

Evolution and Quine's 'web of belief': Different Types of Belief in the Web have been Selected by Evolution for Different 'Purposes'
Graham Wood, University of Tasmania

Van Leeuwen observes that we label, for example, factual beliefs, political beliefs, theoretical beliefs, and metaphysical beliefs, all as 'beliefs' (2014, p. 706). He claims, correctly to my mind, that this approach, of identifying all these as the same type of belief, is leading to theoretical confusion. In an attempt to clear up some of this confusion, he advocates a process in which the

'functional properties' of the belief in question can be used to distinguish different types of belief. To apply this functional analysis to Quine's 'web of belief', Quine would characterize the function of scientific beliefs as 'predicting the future in the light of past experience' (1980, p.44). But this functional analysis can also be applied to other beliefs including moral and religious beliefs. This paper argues that applying a functional analysis to the broad category 'belief' results in (1) the insight that the broad category 'belief' is too coarse-grained a category, (2) finer-grained categories of belief, such as 'predictive belief' (scientific belief) and 'co-operative belief' (moral and religious beliefs) can be understood in the context of selective evolutionary pressures, and (3) all this gives us a way to understand the nature and evolution of a range of types of belief including scientific, moral, and religious belief. This paper further develops work first presented in Wood (2017).

The Transformative Cultural Niche of Human Spatial Cognition
Alexander Gillett, Macquarie University

This paper outlines how human spatial cognition is impacted on by the cultural niche. Humans have adapted to an incredibly diverse range of habitats not merely in terms of survival but also insofar as they are experienced as 'home'. Using a comparative analysis of different practices and technologies related to wayfinding and navigation, I shall show that an agent's relationship to space is transformed by the cultural niche in multiple ways over two diachronic timescales. Cognitive-historical factors and developmental trajectories related to techniques and tools transform both [1] the epistemic environment; and [2] an agent's neurocognitive profile behaviourally, phenomenologically, and neurologically. Importantly, I shall argue that we should not just think of this in terms of an enhancement or inhibition of our basic hominin/primate cognitive package - it is also potentially transformative insofar that it generates new cognitive capacities in relation to spatial reasoning tasks.

Teleosemantics and Moral Realism: A Clearer Picture Emerges
Andrés Luco, Nanyang Technological University, Singapore

This paper defends a teleosemantic theory of moral language—one which is congenial to naturalistic moral realism (cf. Harms 2000). According to *moral* teleosemantics, a moral utterance has *objective conditions for correct issuance*. These objective conditions are fixed by the evolutionary function which explains why the conceptual-linguistic system for expressing moral utterances was selected. Call this system *moral cognition*. In light of a growing consensus among empirical researchers who theorize the evolution of moral cognition (e.g. Boehm 2012), there are grounds to claim that the evolutionary function of moral cognition is to deter selfishness and facilitate social cooperation. Accordingly, if a moral utterance has the effect of deterring selfishness and promoting cooperation, then the utterance is correctly issued. In his critique of moral teleosemantics, Joyce (2001) suggests that moral cognition may have been selected because it generated false beliefs and illusions which happened to induce adaptive behavior. I argue in reply that the best empirical work on the evolution of moral cognition suggests that moral cognition was selected by virtue of generating beliefs and utterances which accurately represent objective conditions for effective social cooperation. In another objection, Joyce correctly points out that moral teleosemantics may not support the traditional moral realist assertion that moral utterances express truth-apt propositions. Even so, Ruth Millikan's (2017) notion of a *unitracker* helps us to see how moral teleosemantics can make good on what is arguably the core commitment of naturalistic moral realism: namely, that moral utterances represent objective and scientifically tractable properties in the world.

Unitrackers in Artificial and Natural Cognition

Stephen Mann, Australian National University

In this paper, I argue that there is a useful connection to be made between Millikan's naturalistic epistemology and synthetic psychology. Although unicepts are not intended as hypotheses about implementation (Millikan 2017 p.43 fn.1), I argue that artificial cognitive systems can teach us about real implementations of observed psychological capacities. I discuss how closely artificial neural networks instantiate some of the functions ascribed to unitrackers and unicepts. The connection here is not a trivial or obvious one however. There are significant differences between unicepts as described in Chapter 3 of Beyond Concepts and the class of artificial systems presently available. I focus on neural networks designed for recognising real-world objects and speech particles, as these are the best candidates for primitive artificial unicepts. In particular, I pay close attention to whether and how information transmission (in the sense of information theory) takes place in these systems, as well as how representation (in the sense of teleosemantics) is instantiated. This approach informs the recent debate surrounding the application of teleosemantics to cognitive structures. Cao (2012, 2014) expressed the difficulty of choosing an appropriate level of grain for analysing neural signalling. Artiga (2016) responded by highlighting concordance between teleosemantics and game theoretic models of communication. However, without significant elaboration, the traditional game-theoretic approach due to Skyrms (2010) is almost certainly not sufficient to capture the representational capacities of neural networks. I discuss what kind of elaboration is required.

Functions in the Biological Realm: The Function of Language as a Case Study

Eran Asoulin, Macquarie University

The aim of this paper is to argue that talk of functions in the biological realm is a theory-internal matter, and so nothing has its function essentially. In other words, functions are ascribed to suit the explanatory purposes of particular theories. This is not to say that there are no criteria by which to judge what a function is in the biological realm: rather, I want to suggest that the criteria of functional ascription are almost entirely explanatory considerations of a theory-internal nature. Debates about functional ascriptions often fail to recognise that the systems to which the functions have been ascribed do not have those functions essentially: a function is neither a natural kind nor an objective aspect of the world that we can pick out. The function of the heart as a pump, for example, is not an activity that we can characterise separate from our aims to explain the emergence and persistence of the heart in the species. A revealing example of the theory-internal nature of functional ascriptions is the debate in regard to the function of language. I argue that what one sees as the function of language is dependent on the explanatory purposes of one's theory, so that it is perfectly reasonable for, say, evolutionary biology and generative linguistics to have different conceptions of what the function of language is.

A Critique of Pure Functionalism

Anco Peeters, University of Wollongong

Recent developments in cognitive science have put pressure on the need to invoke representationalist, computationalist, and mechanistic approaches in understanding minds. Yet, functionalism, the textbook framework for understanding minds in analytic philosophy and cognitive science, is, in its traditional form, cast in terms of computational mechanisms which may or may not manipulate mental representations (Churchland, 2005; Brook, 2009). It has been argued that there is a pure form of functionalism that does not commit to representational, computational, or mechanical theories of cognition (Piccinini, 2010). This raises a first question:

would such a Pure Functionalism (PF) be compatible with Radically Enactivist theories of Cognition (REC) which do not make such commitments? Some have denied that functionalism is compatible with any and all such REC theories (Di Paolo, 2009; Thompson & Stapleton, 2009). Therefore, it is necessary to investigate whether that denial is based on a confusion of PF with a computational, representational, or mechanical account of cognition. It may be that some form of PF is entailed by and hence part of REC theories. Even if this proves so, it leaves open a second question: does PF make any explanatory contribution to REC theories? I develop tentative answers to both these questions, arguing (1) that compatibility between PF and REC is possible and (2) that PF does not make an explanatory contribution to REC theories.

Norms: Cooperation, Scale and Complexity
Kim Sterelny, Australian National University

Just about everyone who works on the evolution of social or moral norms connects the evolution of norms and our cognitive capacities to recognise and respond to norms to the distinctive character of human cooperation. More specifically, important recent work has connected the evolution of norms to the scale of human cooperative life: this idea is developed in somewhat different ways in Michael Tomasello's *Natural History of Human Morality*; Robert Boyd's *A Difference Kind of Animal*; Philip Kitcher's *The Ethical Project* and Joseph Henrich's *The Secret of Our Success*. I accept the broadest outlines of this picture: I agree that the emergence of norms is linked to both cooperation and complexity. But I shall argue that the key driver is economic complexity; the changing nature of the returns on cooperation, rather than social scale. Scale is indeed challenging; but in my view, that challenge in its most intense form came later, around the Pleistocene/Holocene transition. So I think norms and normative cognition emerged later (roughly 100,000 thousand years ago) and for different reasons than Tomasello, Boyd, Henrich or Kitcher.

Feb 21st: The Day of RECkoning

Beyond Content: Explications, Motivations and Implications
Daniel D. Hutto, University of Wollongong

Radically Enactive Cognition, or REC, proposes that cognition is best modelled on the activities of living systems. It construes cognition as fundamentally interactive, dynamic and relational. Controversially, REC also holds that in its most basic form cognition is not content-involving: it is neither representational at root, nor does it involve picking up and processing informational contents that are used, stored and reused to get cognitive work done. This presentation situates our evolving account of REC within the wider theoretical landscape. It will: (1) clarify how REC understands the thesis that basic cognition lacks content; (2) review reasons that motivate adopting that thesis, so construed; and (3) outline the theoretical consequences of such adoption, including some of the questions and new lines of research it inspires.

Naturally Evolving Minds: Transformation and Continuity
Glenda Satne, University of Wollongong & Universidad Alberto Hurtado

According to Enactivism, cognition is enactive, embodied and embedded: an interactional engagement with-in the world on the part of situated agents. Enactivism rejects the idea that basic forms of cognition involve representing worldly objects and facts. Radical Enactivism (REC) in its turn, denies that cognition must always and everywhere involve content, but concedes that sometimes cognition is content-involving. Thus, REC is committed to providing a

story about the progression from basic forms of cognition to content-involving ones and an account of the relationship between them. In this talk, I examine two important challenges that REC faces. First, the "continuity problem" (Menary 2015, Clowes and Mendonça 2015), i.e. whether REC is committed to a "saltationist view" in describing the progression from non-human forms of cognition to human specific ones, a view that is incompatible with evolutionary continuity. Second, the "transformation challenge" (Kern & Moll 2017), i.e. the charge that content-involving forms of cognition are transformative and thus transform the nature of basic forms of cognition penetrating them with content, leaving no room for basic non-contentful forms of cognition for transformed minds. In discussing such challenges, evolutionary, psychological and philosophical aspects of transformation and continuity are considered. The motivations that each of these theoretical domains provide for thinking that human specific forms of cognition are alike/different from non-human ones are discussed. The outcome of such considerations is that continuity and transformation are not all-or-nothing phenomena, especially when not considered under the light of philosophical necessity arguments. This leaves room for transformation, evolution, and interaction between basic and non-basic forms of cognition but it also comes at a cost, i.e. denying the credo that cognition is by necessity a uniform phenomenon.

Situated Imagination
Ludger van Dijk, University of Antwerp
Erik Rietveld, University of Amsterdam

If there is one ability that until recently resisted non-representational treatment it is imagination. Looking at the concrete details of imagining in context, in this talk we aim to contribute to changing that. We develop the Skilled Intentionality Framework (SIF) on the basis of observing architects in the process of making an architectural installation, showing how to consider imagination as part and parcel of concurrently attuning to multiple "affordances," i.e. the unfolding possibilities for action. We show how engagement with affordances can be thought of as continuing a history of practices that unfolds into a current situational activity. We then show how people coordinate multiple affordances, which unfold across different timescales, in such a way that these affordances are jointly enacted. It is within this process that imagination finds its place. Within the SIF, imagination is an aspect of simultaneously coordinating across multiple timescales. This allows the resulting coordinative process to widen and open up, letting new possibilities for action enter into it. We discuss several examples of this process of imagination by drawing on real-life examples from architectural practice.

Enactivism and Predictive Processing: A Non-Representational View
Michal Kirchhoff, University of Wollongong

This paper aims to end the 'representation wars' in cognitive science. It starts by considering an argument for thinking that predictive processing is always and necessarily representational. This argument suggests that the Kullback-Leibler (KL) divergence provides an accessible measure of misrepresentation, and therefore of how representational content is accounted for in hierarchical Bayesian inference. The paper then argues that while the KL-divergence is a measure of information, it is not a plausible measure of representational content. This is argued to follow from the fact that the KL-divergence is a measure of relative entropy, which can be shown to be the same as covariance (through a set of additional steps). It is well-known that facts about covariance do not entail facts about representational content. So there is no reason to think that the KL-divergence is a measure of (mis-)representational content. This paper thus provides an enactive, non-representational account of hierarchical (Bayesian) predictive processing.

Radical Enactivism and (Post)Causal Theories of Memory
Kourken Michaelian, University of Otago

Hutto and Peeters (2018) propose a radically enactive account of episodic memory that denies the assumption -- common to a number of philosophical theories of memory -- that episodic remembering involves the retrieval of stored information or content deriving from experience of past events. This talk reconstructs and assesses their argument for the enactive account, considering its implications for a number of causal and postcausal theories of memory, including Martin and Deutscher's (1966) classical version of the causal theory, Michaelian's (2016) simulation theory, and Perrin's (2018) procedural causal theory. The enactivist account is straightforwardly incompatible with the classical causal theory but compatible with the procedural causal theory and with certain versions of the simulation theory. The talk concludes by attempting to determine where, exactly, the enactive account, the procedural causal theory, and the simulation theory disagree.

Perception: From Basic to Non-basic, and Back Again
Erik Myin, University of Antwerp

If, as REC contends, basic sensation and perception should be thought of in terms of contentless embodied anticipatory reactions, forged by phylogenetic and ontogenetic history of interactions, what happens to perceiving when perceivers acquire the capacity to speak and think in contentful ways? The short answer is that, once contentful capacities are on the scene, some, but not all perceptual interactions change. Therefore, the explanation of different ways of perceiving without and with contentful capacities consists of showing how differences in interaction give rise to differences in perception. After having presented the REC view on basic sensation and perception, and on content-involving cognition, I'll spell out how it allows to explain a number of specific instances where what we can say and what we know changes how we perceive, in interactive, essentially environment-involving ways.

Feb 22nd: Rethinking Minds

Causality and Constitution
Shaun Gallagher, University of Wollongong/Memphis

In order to develop a dynamical conception of constitution consistent with an enactivist approach to cognition, I look at the new mechanist claims that constitution must be understood to be non-causal, and the controversies that have emerged around the notion of mutual manipulability (MM) when understood in the framework of interventionist conceptions of causality. If MM is understood in interventionist terms, it's not clear how one can maintain the strict causality-constitution distinction that motivates the critical objection against enactivism and extended mind concerning the causal coupling-constitution fallacy. My analysis draws on Francisco Varela's neurophenomenology and on the idea that cognition involves several different timescales.

Extending the Enactivist Grasp: Exploring the Cognitive/Normative Dimension
Jesus Ilundain, Linfield College

Shaun Gallagher's (2017) *Enactivist Interventions* ambitiously and extensively expands the emerging enactivist canon across an impressive number of issues that range from a theoretical homage to enactivism's pragmatist roots to probing reexaminations of intentionality, action, perception, and free will, among others. With the proviso that there are obvious limitations to what may expected to be taken up in a book of reasonable length, my intent is to flesh out and help "rethink the mind" by furthering the holistic underpinnings of enactivism, to which Gallagher occasionally alludes. Along these lines, and more specifically, I look at the intersection between cognition and normativity, a dimension that Gallagher also engages, if more subtly, to argue that skill and virtue, cognitive and value theory are, in the best cases, integrative and integrated. Within the framework of a *thick* holism (Ilundáin-Agurruza 2016), what are usually taken to be ontologically separate, different-in-kind phenomena become continuities that co-arise in degrees in performance and action. In other words, such integration is a matter of achievement. Experts embody – literally not just theoretically – fully integrated skillful and virtuous means (thereby distinguishable only conceptually) whereas novices, less capable agents, or those with various pathologies, show various degrees of (dis)integration. A cross-sectional and East-West comparative analysis of related but distinct practices – sports, martial and performing arts – shows how cultural permeation affects this in ways that correlate with higher or lesser cognitive and normative integration. Further, this framework sheds light on how processes of enculturation are premised foundationally and fundamentally on an enactive model of cognition (Hutto & Myin 2017).

Enactivism and Purposiveness
Talia Morag, Deakin University

Enactivism places human action between reason and reflex. Action is understood as pre-reflective responsiveness to affordances of the social and natural environment. The mind's operations, including perception, emotion, and much else, are claimed to be "intelligent" engagements with the environment. Intelligent how? A closer look at the enactivist literature reveals that its paradigm is skillful behaviour, such as grasping, catching a ball, driving, etc. The basic assumption appears to be influenced by evolutionary biology, namely that mindful actions are "as if" purposive, even if not rationally motivated. In this paper, I turn to S. Gallagher's new book as a case study of enactivism, in order to challenge the ubiquity of this assumption in a theory of mind and the image of the (social) world it has the resources to explain. I claim that a wide range of mental phenomena that are neither rationally motivated nor sub-personally caused fall outside of the enactivist assumption of purposiveness, including all affective behaviours, such as emotionally and sexually motivated behaviours. According to the view I favor, these distinctively non-rational and non-purposive behaviours are governed by imaginative capacities of symbolization and fantasy, and make the understanding of oneself and of others much more challenging than the enactivist picture of the mind admits. I conclude that enactivism should forgo its ambitions to offer a complete theory of mind, and confine itself to accounting for the important, yet limited, range of skillful behaviours.

Defending the Enactive Intersubjective Turn: Confronting the C-C Fallacy
Alan Jurgens, University of Wollongong

This presentation defends the enactive intersubjective turn (E-IT), which formulates strong externalist and constitutive claims regarding the role of interaction in the study and explanation

of social understanding (De Jaegher & Di Paolo 2007; Froese & Gallagher 2012; Hutto 2004), from the Coupling-Constitution Fallacy (C-C fallacy). While Adams and Aizawa (2001; 2008) originally formulated the C-C fallacy to target the idea of cognitive extension, it has become the cornerstone for internalist theory theorists' rejection of E-IT claims (Herschbach 2012, 2015; Carruthers 2015; Schönherr 2016; Schönherr & Westra 2017). As such, the goal of this presentation is to secure the E-IT claims regarding interaction and constitution against the C-C fallacy by demonstrating that a dynamic and diachronic conception of constitution can support externalist E-IT claims against the C-C fallacy.   The dynamic and diachronic conception of constitution used here will be drawn from Kirchhoff's (2015) and Gallagher's (2017) responses to the C-C fallacy where they show that the fallacy's argument relies on a synchronic view of constitution. By utilizing a diachronic view of constitution, where causality and constitution are not independent, and where constitutive features of the body and environment shape the neurological processes that facilitate social cognition, E-IT constitutional claims avoid the C-C fallacy. This is because the E-IT notions of constitution and interaction focus on the dynamic processes, both neural and non-neural, of an embodied and embedded mind where both the physical and social environment play a constitutive role in shaping the processes themselves (Gallagher 2017). With the E-IT secured against the C-C fallacy, theory theorists will need to take seriously the challenge that E-IT presents to their explanations of social understanding.

Putting REC into scientific practices. Suggestions for a naturalistic approach to basic minds without content
Massimiliano L. Cappuccio, United Arab Emirates University

In defense of the Radically Enactive approach to Cognition (REC), philosophers have deployed sophisticated arguments to conceptually distinguish a basic form of cognition from a content-involving one, delineating an a priori dichotomy between representational and non-representational varieties of intentionality. Nonetheless, the proponents of REC seem reluctant to provide general criteria or operative indications to directly apply this distinction in naturalistic and quantitative research. This is because, beside the objective complexity of the task, the proponents of REC think that disentangling these varieties of mental acts within concrete empirical scenarios is beyond the scope of their philosophical work. This way, REC offers the flank to an insidious objection: that of ultimately building on a conceptual distinction that does not correspond to any real difference. To prove this objection wrong, I will present some recent empirical results on the pre-reflective nature of skill and expertise in the athletic domain, as they concretely show how philosophical talks about non-representational intentionality are not just corroborated, but conceptually defined by and methodologically rooted into, performance measurement, experiential description, and cognitive modelling. This suggests that normative notions like basic minds and representational contents can only be construed within a rich operational background and concrete epistemic practices, if they want to be naturalistically meaningful, other than metaphysically plausible. REC primarily aims to make a foundational point about the nature of the mind, but this endeavor cannot even commence without describing in detail the causal and informational systems that make the mind work.

Beware of Dichotomous Distinctions
Anna Strasser, Humboldt-Universität zu Berlin

It seems to be an open question what belongs to the realm of cognition. Characterizing specialities of human minds standard cognitivist approaches focus on demanding representational information processes. Mentalistic explanations are contrasted with behavioural

explanations to draw a line between abilities of humans and non-human animals. In this line, Dennett framed the slogan of 'competence without comprehension' to characterize 'less' cognitive abilities of non-human animals. Considerations about what makes the cognitive ability of comprehension possible are often based on an explicit-implicit dualism. But we cannot refer to a canonical definition of this distinction, all we have is a bundle of assumed dichotomous properties characterizing processes as either implicit or explicit. For example, implicit processes are described as automatic, lacking voluntary control and being not accessible to consciousness whereas explicit ones are characterized as non-automatic, controlled and being accessible to consciousness. I claim that such a dichotomous understanding is responsible for the fact that we fail to capture the diversity of cognitive processes. By showing that properties of this bundle do not necessarily co-occur and by questioning a dichotomous understanding, I will argue for a disjunctive conceptualization. For example, we can observe that automatic processes can be controllable. Therefore, we should not infer from one property of this bundle, e.g. automaticity, to all the other properties such as being unconscious, unintentional, efficient and uncontrollable. Instead of relying on an explicit-implicit dualism we should establish a fine-grained framework including a matrix of possible combinations of gradual properties.

Chinese Room Revisited: Enactive Account of Language
Jonggab Kim, Konkuk University, South Korea

John Searle's Chinese Room Argument is considered to be "an exemplar of philosophical clarity and purity," but I argue it is not. This experiment wrongly supposes the distinction between information and understanding: computer may succeed in delivering information, but without understanding its message. It follows that computer does the right things unknowingly like Kantian unenlightened man. Another false supposition is grounded on the existence of disembodied language. Such a disembodied language is basically characterized by Shannon's mathematical language, the enclosed system of signs. Searle defines the laws of signs' orderly combination as syntax, which he considers is purely logical and computational. Why are they false premises? I will explain this question in terms of embodied nature of language. Language should not be confused with nor can be reduced to information or representation, It is because language is contextual, both embodied and disembodied, with its constitutive division into the figurative and the literal, the split between syntax and semantics. As such, syntax cannot be divorced from semantics, nor communication from understanding. The distinction between them is methodological, not real. The question how to bring in the real in the language, which is excluded in the disembodying gesture of the representational/computational theory, will be the last half of this paper.

See as he does: Wittgenstein's challenge to Enactivism
Victor Loughlin, University of Antwerp, Belgium

Many have sought to develop the link between later Wittgenstein and enactivism. What is less recognized is that Wittgenstein may challenge enactivist proposals. A key theme within Wittgenstein's On Certainty (OC) is that at the basis of knowledge is certainty. This is true of perception. Suppose you were to doubt whether I saw John yesterday and I replied: "I know I saw him". This language-game hinges on the certainty that I perceive a world around me. According to some proponents of sensorimotor theory (SMT), perception is embodied know-how. However, if perception is a form of knowledge, and knowledge and doubt are grammatically linked, then it must be possible to doubt the fact that I perceive. But the fact that I perceive, as the above example demonstrates, is a certainty for me. Doubting this fact is to engage in skeptical doubt and skeptical doubt is senseless. Consequently, it is senseless to claim

that perception is a form of knowledge. This is the challenge Wittgenstein poses to enactivism. However, if perception were to be identified with doing, then this challenge could be met. Proponents of an identity view of SMT can distinguish between visual sensations and visual perceptions and recognise that some visual sensations e.g. 'This is red', are certainties we enact whenever we interact with our environment. When sensations play this role, then they provide the logical basis for the embodied know-how of visual perception. This excludes as senseless skeptical doubts while still allowing that visual perception is an achievement and so can go wrong.

An Acid for What ails you: a Further Critique of Hutto and Myin
Nikolai Alksnis, LaTrobe University, Melbourne

Often the most vocal critics of the representational theory of mind are philosophers introducing their own account of representations. From Fodor's insistence on their symbolic nature; to Cummin's development of S-bend representations; or to Hutto and Myin's hard problem of content being alleviated by scaffolded linguistic practices. Each account shows some flaw in the previous accounts of representations and offers a new way forward. Furthermore, each of these authors would no doubt agree with Hutto and Myin's (2018) claim that their criticisms against representations are not some uncontrollable acid that "once out of its bottle, cannot be contained." Rather, they would claim to show a problem with the other approaches and then present a way to alleviate the concern. However, this reasonable statement reveals that Hutto and Myin misunderstand a key criticism against their work (see Alksnis 2015): the concern is not that one cannot both criticise an idea and then develop it. Instead, the problem is that if one uses a criticism, or acid (to continue the metaphor), to dissolve a rival position, then one should be sure that one's own proposed solution is acid resistant. In this talk I will be arguing that the solution Hutto and Myin provide is unfortunately open to the very same criticism they used to reject other accounts of representation. Namely, their appeal to the neo-pragmatic idea that social practice can ground intentionality is corroded by the problems of naturalising intentionality.

The Self and Dance Movement Therapy – A Narrative Repair Theory
Christian Kronsted, The University of Memphis, USA

Why does Dance Movement Therapy (DMT) positively impact participants with schizophrenia? The clinical literature on DMT has shown that DMT is effective in reducing both negative and positive symptoms in schizophrenic patients. However, there is no consensus on why DMT seems to work. In the phenomenological embodied literature on schizophrenia, the pathology is often defined as a loss of the sense of self. Patients lose the sense that they are "here now" and lose the ability to synchronize in speech and motion. Further, schizophrenia patients often lose their sense of agency. These symptoms in turn leads to disrupted or competing self-narratives. I combine field interviews with professional dancers, dance therapists, and their students with clinical research on Dance Movement Therapy (DMT). I use the frameworks of enactivism, phenomenology, and narrative identity to argue for DMT as narrative repair. I argue that, while there is no master explanation for why DMT is effective for patients with schizophrenia, a multitude of smaller cognitive and bodily benefits effects opens the possibility for patients to re-evaluate their self-narrative. DMT functions as a form of narrative repair that allows patients to recast their self-understanding in a new narrative. In making this argument, I reject the idea sometimes presented in the literature on DMT that movements are inherently narrative. Rather, movements are easily incorporated into narratives.

Putting Neo-Pragmatist Flesh to the Bones of Enactivism. How Enactivists Can Answer the Scaling Up Problem

Mark-Oliver Casper, Ruhr-Universität Bochum, Germany

Enactivists are frequently confronted with the so-called "scaling up problem". It is the problem of explaining, in a non-representational way, what "high-level" cognition is and how it comes about. In their latest book, Hutto and Myin (2017) advocate the idea that such a non-representational explanation is – in principle – possible. The aim of this talk is to specify how a non-representational explanation of high-level cognition can look like. I like to present how neo-pragmatist resources (introduced by social pragmatic inferentialism; Brandom 1998) can be used to develop a non-representational, enactivist approach to high-level cognition. This approach is supposed to answer questions like "What are beliefs?" and "How come that some cognitive organisms can feature high-level cognitive states like beliefs and some do not?". For these answers to be solid ones it is necessary to support a well understood liberal naturalism, to employ a normative meta-language, and to refer to insights of social epistemology.

Remarks on Enactivism as a Philosophy of Nature: On the (Relative) Autonomy of Philosophy and the Recovery of Non-Scientific Nature.

David Macarthur, University of Sydney

In the Introduction to his book *Enactivist Interventions* (2017), Shaun Gallagher endorses the suggestion that enactivism is best seen not as a scientific research program but, rather, *a philosophy of nature*. He notes, following Godfrey-Smith, that although enactivism may take the sciences as its critical object it is really a distinct activity since, to some extent, it employs a different vocabulary. As philosophy of nature, enactivism adopts a meta-scientific stance whose aim is to integrate and reframe the results of the various sciences according to its own criteria and concepts – in the process building a certain conception of nature. As Gallagher notes, philosophy of nature remains distinct from science even if the former can clarify the latter or inform relevant scientific inquiries by making concrete hypotheses and raising novel scientific questions. In this paper, I want to critically examine Gallagher's new philosophy of nature. For one thing if enactivism as philosophy of nature is distinct from science then enactivism allows for the autonomy of philosophy as a non-scientific discipline prosecuted from a distinctively philosophical stance even if it studies the sciences and feeds back into them. This is an important point as a great deal of cognitive science seems to make the Quinean mistake of holding that philosophy is continuous with science which implies that there is no distinctive philosophical stance independent of the scientific stance. But Gallagher seems reluctant to draw the anti-Quinean implications of his naturalism on the questionable ground that a new conception of nature will require a new conception of (cognitive) science which *will* be continuous with philosophy. Secondly, enactivism presents itself as non-reductive, in so far as it does not attempt to reduce subjects and their cognitive capacities to the physical objects recognized by the natural sciences. But in pursuing a scientific theory of mind enactivism limits its conception of nature to the collective scientific image (including various natural and social sciences). This may count as an enriched nature when compared to physicalism but it is still a *restrictive* conception for all that. The blindspot is to overlook the realm of *non-scientific nature*, all of those things that are too subjective to count as suitable objects of scientific inquiry e.g. persons, art, artifacts, actions (in Anscombe's sense).

Feb 23rd: Narratives: Mind, Memory, and Self

The Way We Were: Episodic Memory and Personal Identity

Marya Schechtman, University of Illinois

The idea that our memories make us who we are has been expressed frequently both in philosophical discourse on personal identity and in popular culture. There is something that seems right in this idea, yet the details are frustratingly elusive. It seems clear that the *kind* of memory taken to play this role is episodic memory, but just *how* episodic memory is involved in constituting identity is less evident. This is especially so in light of the recently-discovered condition, Severely-Deficient Autobiographical Memory Syndrome (SDAM), which suggests that episodic memory is not necessary for many of the identity-related features we might have thought that it was. While this is an important revelation, it is also difficult to deny that we value episodic memory highly, and view it as closely connected to who we are. The loss of such memory through accident or illness is often conceived as an assault on the self; scrapbooking, journaling, and virtual equivalents are a huge industry, and reminiscing a cherished pastime. A question thus arises about what function episodic memory does fulfil for us. This is a complex and multifaceted question which might be legitimately considered through a variety of methods. This paper will explore it from one particular angle, speculating on three highly-interconnected, identity-related functions that episodic memory might serve. These speculations lead to a different way of framing the original question, which suggests that it is not episodic memory *per se*, but instead a more general form of "mental time travel", that is central to identity.

Enculturating the Self: Narrative Niches and Pragmatic Selves

Richard Menary, Macquarie University

Much of the discussion about narrative and self concerns personal identity (or continuity), the narrative constitution of the self and whether there can be anything more to the self than a minimal experiencing subject. I will take a rather different route by looking at the evolutionary basis for the sense of self. The account I provide runs parallel to recent work on the enculturation of social cognition. The sense of self arises (at least in part) out of social interaction, but also from the role of narratives and narrative perspective taking in development. When married to a conception of the self from the pragmatist tradition, which focusses on exploration, openness to experience and plasticity, we reach a more naturalistic conception of the self.

Pluralism, Self and Narratives

Anika Fiebich, University of Milan

Unlike traditional theories, pluralist theory does not account for a single social cognitive process that is based on mental state attribution (e.g., theory or simulation) as the primary way to achieve social understanding. Rather, pluralist theory accounts for a variety of social cognitive and domain-general processes that may come into play in everyday social understanding, dependent on the socio-situational context, the personal or social relationships between the agents, their shared history, the present mood of the understander, etc. In this talk I will illustrate two advantages of pluralist theory. First, I will show that pluralist theory is able to capture the multifacetedness of social cognitive (dys)functions in autism spectrum disorder. Second, I will illustrate that pluralist theory provides a useful tool to elucidate the interrelation between various ways to understand oneself and others. I will end with pointing to some implications for narratives and narrative therapy.

Epistemic Power and Other Minds: A Social Rehearsal Account of Cognitive Evolution

Samuel Veissière, Maxwell Ramstead & Laurence Kirmayer, McGill University, Montreal

In classical dual-process accounts, human cognition is characterized by both rapid 'automatic' decision-making and by more deliberative and self-reflective processes. Both of these modes of engagement with the world exhibit specific biases that are typically described as specialized evolutionary adaptations. Such modularist views are not well supported by recent evolutionary theory. In this paper, we provide an integrative account of the heuristics that mediate human cognition, and the cues that activate them. Drawing on recent variational (free energy) [1, 2], cultural learning [3], and extended evolutionary synthesis [4] frameworks, we argue that the majority of these biases (i) are *social* in nature, (ii) implicate *attentional* cognitive systems, and (iii) were optimized to allow humans to engage the many social contexts in which they evolved. We describe the shared 'beliefs' that guide social behaviour as *cultural affordances*, i.e., as possibilities for action activated by contextual cues, and which depend on shared expectations about other agents [5, 6]. We leverage the concept of *epistemic power* to catalogue the *salient cues* that direct automatic attentional processing, and present a taxonomy of the probabilistic mechanisms involved in the automatic outsourcing of group-specific relevant cultural information and behavioural models. After describing sub-varieties of evolved *prestige, status,* and *expertise* biases, we discuss their 'maladaptive' functioning in *context (base-rate) neglect*, and *misattributions of agency* [7]. We expand on recent accounts of reasoning [8] to propose a *social rehearsal* and *monitoring* theory of human cognition. In this model, intuitive and analytical reasoning about the world are both understood as varieties of inference that evolved to exploit statistical regularities in the domain of human cognition at least as much (if not more than) in the world itself. We argue, in other words, that 'natural' affordances in Homo Sapiens' niche(s) are processed through constant interaction with other minds, which crucially includes expectations about other agents' expectations about what the symbolically-marked world affords.

Story as Niche Construction: The Cultural Evolution of Fictional Narratives

Graham Thomas, Macquarie University

Evolutionary Psychologists – such as Tooby & Cosmides (2001) – argue that engagement with fictional narratives is adaptive, that humans have evolved genetically to be driven to, and capable of, engaging with stories because they provide a reproductive benefit. I will argue that evidence that purports to show that the human brain is hard-wired for engagement with fictional narratives is weak. In contrast I outline a more plausible account: that the practice of fictional engagement is better explained as an exaptation. Through a process of scaffolded learning, individual capacities that have likely been selected for other reasons are co-opted and extended to allow an individual to engage with their culture's stories. From here I situate fictional narratives within an 'aesthetic niche', a suite of practices and storytelling norms of form and content that are passed down from generation to generation, and which each new member is inducted in to. I conclude by briefly discussing some of the functional roles such a niche might serve: such as providing a shared cultural reference point that facilitates interactions between individuals within a community, and normalising behaviour across the population in ways that foster group identity and social cohesion.

Hey Functionalists, Let's Get Sufficiently Physical
Paul Hubble, University of Waikato, New Zealand

Abstract: A long-standing debate in the philosophy of science and mind has failed to appreciate the context-dependence of functionally-defined things. Functionalists have largely taken multiple realizability to entail the irreducibility of mental states as functionally defined, thus securing psychology as a science. Reductionists have argued that heterogeneity of realizers of functional kinds casts doubt both on their status as objects of science and on the explanatory power of realization as invoked by functionalism. Both positions have been shortsighted about sufficiency: a role-occupying individual is locally necessary but not sufficient to instantiate a function; the physical basis of roles is part of the sufficiency base for functioning. The sufficiency principle I offer maps a middle position, urging that reduction, in some form, is not blocked by multiple realizability, and yet the special sciences are methodologically ineliminable in the division of explanatory labour.

Affordances and Niche Construction: Towards a New Engagement of Psychology and Evolution
Manuel Heras Escribano, Universidad Alberto Hurtado, Chile

In this talk I argue that affordances can be understood as exerting selective pressure when included within the scope of a niche construction process and that, if this is true, it may offer a promising way of understanding the relation between psychology and evolution from a 4E perspective. First, I introduce the idea of affordance and I analyse a tension between sociocultural and transcultural affordances, mainly because there is no consensus about how to conceive the role of affordances in their niches: some authors adopt a transcultural approach to affordances, focusing on how aspects that are common to all humans combine with elements of the environment independently of cultural factors; on the other side, a sociocultural approach would take into account that social norms and habits exert some pressure in our dealings with affordances, and also that social norms expand the variety of affordances in each niche. This results on a competing view of ecological niches. My proposal is that sociocultural and transcultural aspects of affordances could be systematically accommodated if we apply niche construction theory as a methodological framework for explaining the emergence of ecological niches. In conclusion, this application will lead us to an integrative explanation of landscapes as the product of the interaction between nonhuman and human (both biological and cultural) elements. If this idea is on the right track, it offers a new way for understanding the relation between psychology and evolution: a relation based on the reciprocal causation of organism and environment both at the evolutionary and at the cognitive level.

Going Radical? Go Ecological!
Miguel Segundo-Ortin, University of Wollongong

My aim in this talk is to defend that Ecological Psychology already provides the resources, both theoretical and empirical, to be the theory of perception of a radical enactive, embodied cognitive science without further "RECtification". First of all, I will analyze the main tenets of REC's approach to perception. Then, I will defend three theses. First, that explaining perception in ecological terms entails taking organism and environment as the main unit of analysis. Hence, Ecological Psychology is the right theory of perception for an extensive account of cognition—the account that REC promotes. Second, that Ecological Psychology provides the theory of information that REC lacks. Contrary to what Hutto and Myin assert (2017, p. 86), ecological perception is not based on the gathering of external representational content but on the

detection of physical variables that are present in the ambient array and that correspond to properties of the environment. In addition, these physical variables can be fully described and empirically tested. Thus, ecological information is non-problematic regarding REC's naturalistic credentials. And third, that the empirical corpus of Ecological Psychology can be used to encourage the REC's thesis of Ur-Intentionality—that is, the thesis that organisms learn to be sensitive and responsive to non-contentful physical information, and that such sensitivity suffices for basic cognition. The conclusion of this talk is hence that a truly radical enactive account of cognition should take Ecological Psychology in account.

Collaborative Skills in Autobiographical Remembering
John Sutton, Macquarie University

Human children learn gradually to remember past events and experiences in rich and culturally-inflected narrative forms, deploying a diverse array of cognitive resources. The development of skills in autobiographical remembering is culturally and socially scaffolded. In this paper, I focus on active and collaborative aspects of remembering, seeking to integrate archaeological, developmental, and cognitive evidence in a new account of the distributed ecologies of human memory.

Conference Venue
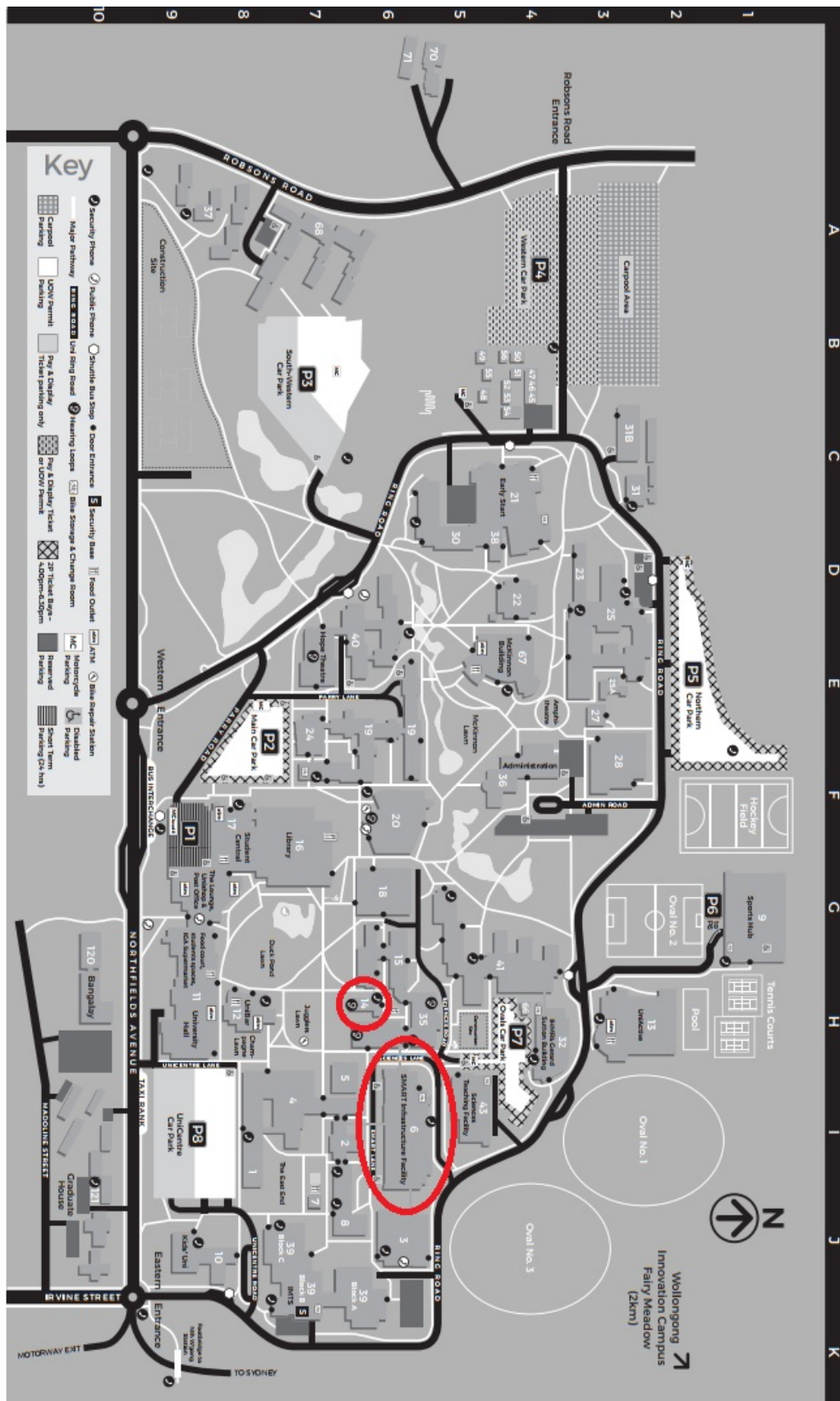
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All rooms for presentations will have available a computer with PowerPoint, data projector, and screen. Guest log-in information will be provided. Please have your presentation on a USB data stick ready for loading.

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1. Turn on WiFi on your device.
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3. Enter the password as follows: **radical2018** Please note the zero in the password. It is case sensitive.
4. Allow time for authentication.
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Acknowledgements

The conference organisers and delegates acknowledge the Dharawal people, the traditional custodians of the land on which this conference is being held. We pay respect to the elders past and present of the Dharawal nation and extend that respect to other Aboriginal people present. As some of the first people to encounter settler Europeans, the Dharawal survive with a legacy of violence and displacement written into their recent history. We encourage delegates for this conference to respectfully acknowledge the Dharawal people and their living culture.

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Naturally Evolving Minds:
Controversies, Developments, Interventions
20-23 February 2018

UNIVERSITY OF WOLLONGONG AUSTRALIA

Image by: Luc Blain   Artist: Alma Nungarrayi Granites

Tuesday 20 February
Biological and Scaffolded Minds

Ruth Millikan (University of Connecticut)

Peter Godfrey-Smith (University of Sydney)

Paul Griffiths (University of Sydney)

Kim Sterelny (Australian National University)

Wednesday 21 February
The Day of RECkoning

Daniel D. Hutto (University of Wollongong)

Erik Myin (University of Antwerp)

Erik Rietveld (University of Amsterdam) and
Ludger van Dijk (University of Antwerp)

Michael Kirchhoff (University of Wollongong)

Glenda Satne (University of Wollongong)

Kourken Michaelian (University of Otago)

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Thursday 22 February
Rethinking Minds

Shaun Gallagher (University of Wollongong/ Memphis)

Jesús Ilundáin-Agurruza (Linfield College)

David Macarthur (University of Sydney)

Talia Morag (Deakin University)

Friday 23 February
Narratives: Mind, Memory, and Self

Marya Schechtman (University of Illinois)

Richard Menary (Macquarie University)

Anika Fiebich (University of Milan)

John Sutton (Macquarie University)

This will be an occasion to celebrate, launch and engage with topics and themes in three new books:

- **Millikan's** *Beyond Concepts*
- **Gallagher's** *Enactivist Interventions*
- **Hutto and Myin's** *Evolving Enactivism*

<u>Notes:</u>