

# Epistemic & Personal Transformation: Dealing with the Unknowable & Unimaginable

## Schedule

### Day 1: Monday, 13 May

08:30 - 09:00 Arrival

09:00 - 09:30 Welcome and opening remarks

#### *Session 1: Formal modelling*

09:30 - 10:30 Evan Piermont “Partial, Dynamic Awareness” with Joseph Y. Halpern

10:30 - 10:45 Morning coffee

10:45 - 11:45 Ted Shear and John Quiggin “Justification logic with probabilistic confidence”

11:45 - 12:45 Katie Steele “Belief Revision for Growing Awareness”

01:00 - 02:00 Lunch

#### *Session 2: Climate change and Natural Sciences*

02:00 - 03:00 Matt Kopec “Climate Change, Manufactured Uncertainty and the Pragmatic Precautionary Principle”

03:00 - 04:00 Joel Katzav “Issues in the theoretical foundations of climate science” with Wendy S. Parker

04:00 - 04:30 Afternoon coffee

04:30 - 05:30 Bruno van Swinderen “Understanding consciousness in the smallest animal brains”

*7:00 Dinner for Speakers at Pane e Vino (124 Albert St, Brisbane City)*

### Day 2: Tuesday, 14 May

#### *Session 3: Transformative experience*

09:00 - 10:00 Brian Weatherson “Desire as Belief and Moral Newcomb Problems”

10:00 - 10:30 Morning coffee

10:30 - 11:30 David Braddon-Mitchell “Surviving (to some degree)”

11:30 - 12:30 Yuri Cath “Transformative Choices and the Structure of Experience”

12:30 - 01:30 Lunch

01:30 - 02:30 L.A. Paul (Yale) & John Quiggin “Education as a transformative experience”

02:30 - 03:00 Discussion

03:00 - 03:30 Afternoon coffee

## Abstracts

Evan Piermont (London): “Partial, Dynamic Awareness” (with Joseph Y. Halpern)

Abstract: We develop a modal logic to capture partial awareness. The logic has three building blocks: objects, properties, and concepts. Properties are unary predicates on objects; concepts are Boolean combinations of properties. We take an agent to be partially aware of a concept if she is aware of the concept without being aware of the properties that define it. The logic allows for quantification over objects and properties, so that the agent can reason about her own unawareness. We then consider what happens when a partially aware decision maker discovers novel statements. We argue that such discoveries will in general affect the decision maker's beliefs about statements she was previously aware of. This stands in contrast to existing models growing awareness where ex-post beliefs marginalize to ex-ante beliefs.

Ted Shear (UQ): “Justification Logic with Probabilistic Confidence” (with John Quiggin)

Abstract: In earlier work, we extended justification logic to accommodate graded levels of confidence. First developed by Sergei Artemov to investigate arithmetical probability, justification logic contains non-normal, hyperintensional modalities to represent justificatory relationships. These features make it an attractive option for modelling belief under unawareness. However, in its traditional form, justification logic does not capture the graded quality of justification since for any given justification,  $t$ , and any proposition  $X$ , the logic only admits of two possibilities:  $t$  justifies  $X$  or  $t$  does not justify  $X$ . Our logic improved this situation and permitted the representation of graded levels of justification. Our logic was extremely permissive in a few ways. First, it placed minimal restrictions on the measure used to represent confidence. Second, it permitted non-propositional justifications (e.g. the phenomenal character of an experience) to contribute to an agent's confidence in a proposition. In this paper, we discuss the model restrictions that can be introduced to recover a probabilistic representation of confidence for propositional justification. This confirms that our earlier work is a generalization of earlier modal probability logics. We discuss some of these technicalities as they relate to considerations salient to formal models of belief and choice under unawareness and severe uncertainty.

Katie Steele (ANU): “Belief Revision for Growing Awareness”

Abstract: The Bayesian maxim for rational learning could be described as conservative change from one probabilistic belief function to another in response to new information. This is precisely articulated for the case when we learn that some proposition that we had previously entertained is indeed true (the so-called rule of conditionalisation). But can this conservative-change maxim be extended to revising one's beliefs in response to entertaining propositions or concepts of which one was previously unaware? The economists Karni and Vierø, (2013, 2015) make a proposal in this spirit. Philosophers have adopted effectively the same rule: revision in response to growing awareness should not affect the relative probabilities of propositions in one's “old” epistemic state. The rule is compelling, but only under the assumptions that its advocates introduce. It is not a general requirement of rationality, or so we argue. We formulate and defend a more restricted principle that we take to be the proper extension of Bayesianism to situations of growing awareness. Moreover, our general model allows a deeper understanding, not only of the phenomenon of growing awareness, but also of the more standard aspects of the Bayesian model.

Matt Kopec (ANU): “Climate Change, Manufactured Uncertainty and the Pragmatic Precautionary Principle”

Abstract: Many have proposed so-called 'precautionary principles' to guide policy makers through decisions made under conditions of serious uncertainty, a common feature in decisions over climate change mitigation and adaptation strategies. Typically, these principles hold that when we have good reasons to believe that a choice carries some possibility of serious, irreversible harm, we can abandon our usual cost-benefit analysis and instead rule out that choice as a matter of precaution. Although such precautionary principles have intuitive appeal, they have also faced serious criticism and are employed, in practice, only intermittently at present. In this talk, I present a novel justification for taking precautionary measures in cases of uncertainty that bypasses much of the criticism. In particular, often times certain corporate entities, fossil fuel companies being a clear example, are responsible for the uncertainty facing policy makers, and these very same entities are the ones that stand to gain when precautionary measures are not taken. I argue that in such cases of 'manufactured uncertainty', what I call the Pragmatic Precautionary Principle ought to be triggered. I finish by sketching how we can justify applying the Pragmatic Precautionary Principle in a wider range of cases than is typical, since we can rightly apply the principle even in cases where (1) we lack a strong scientific basis for the possibility, seriousness or irreversibility of harm and (2) we have no feasible way to measure the costs the relevant corporate entities would incur by our taking precautionary measures.

Joel Katzav (UQ): “Issues in the theoretical foundations of climate science” (with Wendy S. Parker)

Abstract: The theoretical foundations of climate science have received little attention from philosophers thus far, despite the relevance of work on these foundations to representing our uncertainty about climate and despite a number of outstanding issues. We provide a brief, non-technical overview of several of these issues – related to theorizing about climates, climate change, internal variability and more – and attempt to make preliminary progress in addressing some of them. In doing so, we hope to open a new thread of discussion in the emerging area of philosophy of climate science, focused on theoretical foundations.

Bruno van Swinderen (UQ): “Understanding consciousness in the smallest animal brains”

Abstract: Consciousness has traditionally been viewed as a characteristic of higher-order animals, such as humans and other apes, with a few select other species considered potentially conscious depending on various behavioural

measures that appear to satisfy key anthropocentric criteria. An alternative view has been recently considered, that elements of consciousness are universal in all animals endowed with a brain. This view is based in part on recent findings that even certain insects display a capacity for emotion, metacognition, abstract learning, and tool use. However, to best study how consciousness may have evolved in even the smallest brains requires an understanding of more fundamental brain functions, such as selective attention and sleep. Here, I will make the case for studying these phenomena in fruit flies, with a view to understanding how subjective awareness may have evolved from a basic need to optimize predictive systems in self-moving animals.

Brian Weatherson (Michigan): “Desire as Belief and Moral Newcomb Problem”

Abstract: In a pair of papers, David Lewis argued against what he called the Desire-as-Belief thesis. It's not entirely clear who Lewis took to be the holders of this thesis, but there are a couple of reasons to think that it is related to Transformative Experience. One is that it explains why lack of knowledge about how good things are is relevant to rational choice. Another is that a number of theories of authenticity imply that satisfying desire-as-belief is necessary (though not sufficient) for being authentic. Lewis's argument is more powerful than is often thought, but I'll argue that thinking about decision making under moral uncertainty shows us where to find a hole in the argument.

David Braddon-Mitchell (Sydney): “Surviving (to some degree)” (with Kristie Miller)

Abstract: In this paper we argue that reflection on the patterns of practical concern that agents like us exhibit strongly suggests that the same person relation (SP-relation) comes in continuous degrees than being an all or nothing matter. We call this the SP-degree thesis. Though we argue that the SP-degree thesis is consistent with a range of views about personal-identity, we suggest that combining desire-first approaches to personal-identity with the SP-degree thesis better explains our patterns of practical concern. We then argue that the combination of the SP-degree thesis and the desire-first approach are best modelled by a stage-theoretic view of persistence according to which temporal counterpart relations are non-symmetric relations that come in continuous degrees.

Yuri Cath (La Trobe): “Transformative Choices and the Structure of Experience”

Abstract: Paul (2014, 2015) argues that one cannot rationally decide whether to have a new and very different experience “like becoming a parent for the first time” on the basis of one's prior judgments about what it would be like to have that experience, and the subjective value of having that experience with those 'what it is like' properties. In Cath (2018) I argued that 'what it is like'-knowledge comes in degrees and, appealing to this idea, I also suggested that some instances of Paul's argument schema might commit a fallacy of equivocation. The purpose of this paper is to explore a range of different replies that might be given to this equivocation objection, including replies that appeal to first-personal perspectives, the difficulties in comparing experiences across different sensory modalities, and holistic views of experience on which phenomenal properties cannot be broken down into different “building blocks”.

Laurie Paul (Yale) & John Quiggin (UQ): “Education as a transformative experience”

Abstract: It is widely believed that higher education should aspire to be a transformative experience, from which students, entering as adolescents, emerge as fully formed adults. The distinctive idea of university or college as a transformative experience is the emergence or discovery of individual character, different for each student. Against this idea may be counterposed the view that post-school education, including ‘higher education’ should focus on the more modest, but still challenging goal of transmitting a body of disciplinary knowledge and reasoning skills. In this paper, we consider the epistemic and personal transformations associated with education. We argue that these cannot be disentangled, and that personal transformation is an inevitable part of a successful education. At a minimum, educators must be aware of this process and take responsibility for their part in it.