PBDB 19, 2026. Abstracts

Marta Halina (Keynote), *Causal Understanding in a Dappled World*

Psychologists have long characterised young children as little scientists. This view holds that children use abstract, general theories to navigate the world, much like scientists discovering universal laws. This idea stands in contrast with contemporary philosophy of science, which often depicts scientists as understanding the world in a piecemeal, pluralistic way. In this talk, I explore this tension and develop a 'case-worker' account of how children and other animals navigate their physical environments. Instead of relying on overarching theories, agents sift through a collection of generative models to determine which one applies to their immediate situation. We do not need to discard the idea of the child as a scientist, but we do need to update our understanding of what that means.

Leee Overmann, *Identifying Numbers in the Prehistoric Record*

Numbers are one of the longest-lived cultural systems the world has ever known, but we still do not know how old numbers might be, or where and why they might have first emerged, or in what form. Contemporary cultural number systems have implications for examining and interpreting the archaeological record for signs of prehistoric numeracy. To define what we should be looking for in the archaeological record and how we might recognize numbers in markings on prehistoric artifacts, current assumptions, evidence, methods, and issues are reviewed, and recommendations are offered for incorporating interdisciplinary data and insights into archaeological investigations and interpretations.

Marilynn Johnson, *The Costs of Fashion Signaling as Public Information*

(work in collaboration with Christina Katt-Pawlowitch)

This talk brings together economics and philosophy to consider the costs of our adorning practices. For these purposes, I will use the sender-receiver model as presented by Peter Godfrey-Smith (2011), to understand the signals that are sent with fashion. The wearing of fashion can be considered to be a public event that creates some level of common knowledge amongst all who are present (Lewis 1969; Aumann 1976; Pinker 2025). Recent work in philosophy of fashion (Simmenauer 2025; Simmenauer and Ramponi Forthcoming) considers the costs of the choices we make when adorning the body. Depending on whose gaze we are under there may be different costs and benefits to the messages sent with our clothing, and we as rational bodies moving in the world make choices such as wearing ambiguous clothing (Simmenauer and Ramponi Forthcoming), removing clothing, completely changing, and sometimes literally veiling to optimize these payoffs. Additionally, fashion subcultures, which are communities of knowledge, complicate the picture of common knowledge in fashion: depending on the viewer's level of expertise and

the context, different degrees of information will be perceived by the receiver. I will also connect this discussion to animal bodily signaling, Darwin's theory of sexual selection, and the Handicap Principle in displays such as the peacock's tail and human beards.

Camilla Di Biase-Dyson, ***Metaphors in Ancient Egyptian healing texts: The genesis of scientific language?***

Figurative language, including metaphor, metonymy and personification, is employed in medical literature even today to explain otherwise invisible, intangible or elusive functions of the human body, such as weakness, fever or inflammation. In this paper, case studies from the healing texts of pharaonic Egypt (ca. 1800–1100 BCE) will be presented to see how figurative language was being used and to consider whether figurative language contributed to what might have been a register of 'scientific' or 'technical language' in ancient Egyptian textual expression.

Saira Khan, ***Experiments and the Origins of a Trait***

Human culture is thought to be unique in its scope. To explain this, it has been proposed that early humans, in contrast to other animals, possessed either unique forms of social or technical cognition that enabled a particularly effective transmission of cultural practices as well as innovation and cumulative improvement. Such cognitive abilities have often been identified by way of experimental studies. I argue that using experiments to discern the origins of uniquely human culture presents a methodological difficulty, as such studies use a reference class whose cognition already depends on cumulative culture. I present an alternative methodological approach.

Jackson Freeman, ***What Can Sparse Evidence Tell Us About Animal Dreams?***

Human dreams can present rich, sustained, internally generated worlds where even the most bizarre events pass as though they are perfectly ordinary. Might other animals have similar experiences? How could we investigate something as elusive as animal dreaming? I develop a multidimensional framework for comparing human experiences and possible sleep experiences in other animals. Using cases involving rats, finches, and octopuses, I examine what fragmentary neural and behavioural evidence can support, what assumptions are needed, and whether experiences resembling human dreams or those we are inclined to imagine for other animals remain possible.

Derek Skillings, ***Major Transitions Without Cooperation***

What constitutes a major transition in evolution, such as the emergence of eukaryotes or multi-cellular organisms? A consensus view about major transitions is that they require high degrees of cooperation to occur. I argue that this view is mistaken and that high degrees of cooperation are neither necessary nor sufficient for a major transition. To make the case I review recent work on selfish genetic elements and macrobe-microbe symbioses. I argue the hallmark contingently irreversible changes of major transitions can come about due to coercive capture instead of cooperation. I conclude with a conjecture about major transitions.
