

Situated Cognition, Mental Representation, Mechanistic Explanation**GAP Satellite Workshop****Friday, September 21, 2018. University of Cologne****Scientific Organization: Beate Krickel, Albert Newen, Achim Stephan**Workshop Abstract

The workshop brings together young researchers from the DFG-funded Graduiertenkolleg on "Situated Cognition" and experts working on issues concerning 4-E cognition. We will tackle central meta-questions as well as discuss core applications of 4E-approaches. Meta-questions that will be addressed in the workshop concern the nature and role of mental representations in cognitive processing, the causation/constitution distinction in accounts of extended cognition, and the compatibility of extended cognition and mechanistic explanation. As application cases, we will focus on the relevance of situatedness for social and moral cognition.

Titles and Abstracts**Louise Antony (University of Massachusetts):*****Cartesian Materialism***

Descartes' *a priori* argument for dualism in the *Meditations* is well-known. Less well-known is his earlier, *a posteriori* argument for dualism in the *Discourse on Method*. There, he begins with the empirical assumption that thought enables human beings to respond *rationally* to an unlimited variety of circumstances. He then argues that no material device could embody such an unbounded capacity, and concludes that human thought must inhere in an immaterial substance. Fast forward to the 20th century, when Alan Turing demonstrates that a material mechanism could in fact embody such a capacity, by performing primitive operations on the primitive components of structured representations. I'll argue that Descartes' observations were accurate, and that he simply failed to envision (not even a genius like Descartes can anticipate everything!) the cognitive power inherent in compositionally structured representations. The compositionality of mental representation can therefore explain the productivity of thought.

There is nothing incompatible between the theory of mind that posits mental representation and a view according to which thought is situated -- Cartesian (individualistic) mental states simply constitute one of the factors that explain successful perception and action, environmental situation being another. But if the distinction between mental state and situated state is elided, as suggested by some defenders of situated cognition, then the resulting theory of mind will be unable to explain another important feature of thought -- its intensionality. Two thinkers, gazing up at the evening sky, may differ with respect to the way they represent the planet Venus, and that difference can have behavioral consequences. The Cartesian theorist can explain this situation easily: one thinker thinks of the planet as "Hesperus" and the other thinks of it as "Phosphorus". The advocate of situated cognition has no parameter to capture this difference.

Matej Kohár (Ruhr-Universität Bochum):

The role of covariance in mechanistic explanation of cognition

In this contribution I explore the mesh between covariance accounts of representational contents and the requirements of the new mechanistic model of explanation. In particular, I show that there is a tension between appeals to covariance between neural states and extraneural properties and the criteria of locality and mutual manipulability used to identify mechanism constituents. I show that depending on one's favoured account of probability, content-as-covariance is either non-local to cognitive phenomena, or not mutually manipulable with them. I consider various options out of the dilemma and show that they lead to more unwelcome consequences (e.g. widening the scope of the cognitive phenomena so that the covariance is local to the phenomenon trivially validates extended cognition, and possibly naive realism about perceptual states). I conclude that covariance between neural and extraneural states is more fruitfully viewed as an explanandum rather than as an explanans in cognitive science. I argue that simply noting the existence of a covariant relationship between neural and extraneural states does not explain cognitive achievements unless the mechanisms which bring about this covariance are uncovered.

Beate Krickel (Ruhr-Universität Bochum):

The Causation/Constitution Distinction: Can the New Mechanistic Approach help?

In the debate on extended cognition, one central but still ill-defined distinction is that between causation and constitution. In a recent paper, David Kaplan (2012) suggested using the new mechanists' mutual manipulability account of constitutive relevance due to Carl Craver (2007) to determine when and whether extracranial processes are constituents of cognitive processes. If successful, Kaplan's approach has a further advantage: it is independent from any specific understanding of what cognition is, which is of the key disagreements between defenders and opponents of extended cognition. The aim of this paper is twofold: First, I will show that although Kaplan's considerations provide a good starting point, his application of the mutual manipulability account is problematic. Second, I will show how Kaplan's suggestion can be improved in a way that avoids the original problems. Still, I will argue that one challenge remains: in order to avoid the trivialization of extended cognition, one has to be able to distinguish between what I call *cognitive constituents* and *behavioral constituents*. This challenge leaves us with two options: either one rejects the whole project Kaplan started as we first have to understand what cognition is in order to, then, identify its constituents. Or one holds that the challenge cannot be as there simply is no difference between cognitive and behavioral constituents-which is what defenders of extended cognition might have wanted to convince us of all along.

Leon de Bruin (Radboud University Nijmegen/VU University Amsterdam):

Extended Cognition and the Limits of Mechanistic Explanation

In this talk I will explore whether the mechanistic explanatory strategy can be applied to cases of extended cognition and discuss two challenges to such an approach. First, it is unclear how we can determine the boundaries of mechanisms whose components are across brain, body, and the environment. Second, extended cognitive processes are often taken to be characterized by reciprocal causation, which (allegedly) precludes mechanistic explanation because it imposes limits on the explanatory heuristics of structural and functional decomposition.

Jumana Morciglio (Universität Osnabrück):***Putting the Mind Back Together: Reconceiving the Status of Emotions in Self-Control***

Can emotional processes function as bona-fide members of the self-control system, or are emotions always compulsive? The Divided Mind view, presented by Chandra Sripada (2014), splits the mind into two motivational processes, deliberate and emotional, and argues that willpower (i.e. self-control) belongs exclusively to the deliberative processes.

I will argue that emotions can function as members of the self-control system. According to Sripada, the function of deliberative willpower is inhibiting emotional-action desires, but some forms of self-control – for example, the strategies required to overcome diminished motivation, a state of behavioral apathy – rely on inciting emotional-action desires. This “go willpower” is not only utilized for overcoming diminished motivation, but can also overcome temptations. Furthermore, if the mind is to be divided, then “go willpower” belongs to the emotional motivational system. If this “go willpower” belongs to the emotional motivational system, then (at least some) emotions can genuinely participate in successful self-control.

Sabrina Coninx (Ruhr-Universität Bochum):***Pain: Why representationalists cannot account for it***

In the philosophical debate, it is widely accepted that pain possesses a phenomenal content of ‘what it is like’ for the subject to undergo this particular kind of experience. Strong intentional theories assume in addition an intentional content which makes these experiences be ‘about’ something. This intentional content is considered as necessary and sufficient for the unique phenomenal character shared by all pains. Moreover, the intentional content is supposed to account for the varying sensory properties of pain, including its felt location, intensity and quality. Most prominently, this very intentional content is defined in indicative terms. Accordingly, pain experiences represent an objective physiological condition, mostly labeled tissue damage (e.g. Armstrong, 1962; Bain, 2007; Cutter & Tye, 2011; Pitcher, 1970; Tye, 1997). More precisely, pain is considered as the representation of a tissue damage in a certain part of the body that is of a certain severity and of a certain type. This indicative content distinguishes pain experiences from other mental phenomena and determines their sensory properties. Four arguments apparently support the definition of pain as such a kind of representation. The aim of my paper is to challenge these arguments by means of insights recently gained in empirical sciences.

Richard Menary (Macquarie University Sydney):***Enculturating Cognition: From Simple Minds to Talking Heads and Back***

How do we get from the simplest kinds of minds to complex minds capable of language and culture? Dennett provides a sweeping account in his recent book, in which he provides a sustained argument for how cultural evolution is key to gradually evolving fully enculturated minds. My own work has been primarily focussed on the mechanisms of enculturation including: Learning driven plasticity, re-use (degeneracy) and cultural canalisation. I'll propose a way of filling in the details of how enculturation works, taking into account a gradualist explanation of the slow transition from simple minds to fully enculturated talking heads. In closing, I'll consider some possible objections.