

**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 (provisional title)***

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**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.

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**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.

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**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.

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**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.

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**Lasse T. Bergmann (Universität Osnabrück):**

***Situated Moral Cognition***

Moral cognition is an emerging area of research, which aims to explore cognition in morally challenging situations. This interdisciplinary research is experimentally driven relying on methods from neuroscience and psychology, thus inheriting their classic cognitivist commitments: Many experiments are inspired by thought-experiments, putting subjects in highly artificial situations. These situations are designed to isolate intuitions supporting moral theories, not to provide generally applicable insights into cognitive processes. Non-situated approaches mainly focus on cognition distinct from the world, forgetting or marginalizing cognition in participation with the world and people. Situated approaches offer a more inclusive way of looking at moral cognition: positing cognition to emerge from the interaction of body and world. How agents make sense of morally challenging situation depends on how they relate to the world. Their experience of interactions appropriately guides their moral assessments if applied to the right kinds of moral problems.

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**Richard Menary (Macquarie University Sydney):**

***Cognitive Norms are Social Norms: A Naturalistic Account***

Living systems trade in normative interactions with their environment. For example, errors in honey bee waggle dances produce interesting behavioural results. Okada (2014) and colleagues report that small errors in the waggle dance are ultimately beneficial to the bee colony. This is because it forces the colony to flexibly respond to those inaccuracies in the dance. Consequently, foraging bees actively exploit the errors in the bee dance signal to improve foraging outcomes. Two features of this kind of phenotypic flexibility are apparent, firstly this is an entirely natural process and secondly it is a social process - the colony responds as a collective. I shall build on examples such as these to argue that social processes in nature are norm sensitive. They are ultimately responsible for cognitive norms, norms that do not need to be explicitly represented or linguistically formulated.