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Key Speakers and Special Guests of the Symposia:

KENNETH AIZAWA (RUTGERS UNIVERSITY), **MARK H. BICKHARD** (LEHIGH UNIVERSITY), **GIOVANNA COLOMBETTI** (UNIVERSITY OF EXETER), **SHAUN GALLAGHER** (UNIVERSITY OF MEMPHIS), **MARCIN MIŁKOWSKI** (POLISH ACADEMY OF SCIENCES), **KATARZYNA PAPRZYCKA** (UNIVERSITY OF WARSAW), **FREDERIQUE DE VIGNEMONT** (INSTITUT JEAN-NICOD), **ANDREW WILSON & SABRINA GOLONKA** (LEEDS BECKETT UNIVERSITY), *and others*

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KEY SPEAKERS

Kenneth Aizawa (Rutgers University), **Mark H. Bickhard** (Lehigh University), **Robert Clowes** (New University of Lisbon), **Giovanna Colombetti** (University of Exeter), **Shaun Gallagher** (University of Memphis**), Marcin Miłkowski** (Polish Academy of Sciences**), Katarzyna Paprzycka** (University of Warsaw), **Frederique de Vignemont** (Institut Jean-Nicod), **Andrew Wilson** (Leeds Beckett University).

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ABSTRACTS

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Kenneth Aizawa (Rutgers University)

Perception, Action, and Embodiment

Here are two theories that intertwine perception, action, and embodiment that might be found in the work of Alva Noë and Kevin O'Regan. According to Strong Enactivism, perception is constituted, in part, by the exercise of sensorimotor knowledge in overt physical behavior. This theory makes a tight connection between perception, action, and the physical body outside of the brain. If perception is bodily action, then perceptual processing is, in part, bodily processing. If perception is bodily action, then perceptual process is something the body is engaged in. According to Weak Enactivism, however, perception is constituted, in part, by the exercise of sensorimotor knowledge. This theory forges a less tight connection between perception, action, and the body outside of the brain. This theory allows that a mere brain and its sensory apparatus would be capable of perceiving. A mere brain and its sensory apparatus may well

be sufficient for the exercise of sensorimotor knowledge. There might, for example, be purely brain-based use of what one knows about the effects of bodily or object movement on perception. Both of these theories, however, face difficulties that have largely been underappreciated. First, contrary to a common misconception, visual perception does not, strictly speaking require the exercise of sensorimotor knowledge in overt behavior. Vision does not require bodily action or even bodily. This undercuts one of the most familiar lines of supports for Strong Enactivism. Second, experiments with neuromuscular blockade show that an essentially completely paralyzed individual may nonetheless perceive the world quite normally. Third, there are an abundance of cases that support the view that, holding perceptual stimulus constant, but varying sensorimotor knowledge, yields not effect. There is what one might call an "impotence of sensorimotor knowledge."

Mark H. Bickhard (Lehigh University)
Representing as an agentive activity, not a structure

I will argue that representing is an agentive activity. It is not static, and it is not a structure. Representing is emergent in processes that have anticipatory properties. In being anticipatory, they can be true or false — they have truth values, and, thus, constitute the emergence of the basic normative properties of representing. Representation also exists, as various kinds of stand-ins for anticipatory activity, but it is necessarily derivative. This includes structures: structures can be useful, but structures require interpretation into more fundamental forms of representing. Thus, they are neither necessary in principle (though potentially useful for some purposes), nor foundational.

Robert Clowes (New University of Lisbon)
Epistemic Agency and the Extended Mind

Contemporary mobile internet technology as embodied in our smart phones and apps appears to easily meet the original criteria set out for an artefact to count as part of an agent´s Extended Mind (Chalmers, 2007; Clark & Chalmers, 1998). Indeed, it appears to make it too easy, the original "trust & glue" conditions now incorporating a raft of technology which threatens a reductio ad absurdum. Are our minds destined to seem ever more bloated? Sterelny´s (2010) ideas about entrenchment and personalisation might be one way of staving off cognitive bloat. However I will introduce a new thought experiment involving "Cloud Otto" that casts doubt on this. Finally I will review ideas that an agent´s epistemic character can also be extended by technology and artefacts (Pritchard, 2010) and look at whether this might give us new insights into the idea of the extended mind and its practical implications.

Giovanna Colombetti (University Of Exeter)
From sensorimotor to affective incorporation

I shall begin by introducing Merleau-Ponty's notion of "incorporation", distinguishing two senses in which he uses this term in Phenomenology of Perception—what I call "habit-incorporation", and "object-incorporation". The second can be seen as a special case of the first, and I will describe it in some detail, also with reference to later "post-phenomenological" works. I will then point out that existing discussions of incorporation so far have characterized it primarily, if not solely, as a sensorimotor phenomenon. My aim in the rest of the talk will be to show that it is possible to extend the notion of incorporation to the domain of affectivity, thereby also illustrating the importance of bodily practices and artefacts in scaffolding and regulating our affective states.

Shaun Gallagher (University Of Memphis)
Situating things: Material engagement and joint agency

Material Engagement Theory (MET), as outlined by Lambros Malafouris (2013) builds on the notion of the extended mind and shows the importance of artifacts, and more precisely, the materiality of artifacts, for cognition. He applies MET to questions about agency and intentionality. I'll extend this kind of analysis into an area that Malafouris does not address, specifically to notions of joint agency or shared intentions. This type of analysis promises to highlight some traditionally ignored features of joint action, and produces some innovative insights. For example, the material aspects of things (their shape and weight and substance) and environments (their physical and social and cultural affordances) as well as other people (their postures, movements and expressions) matter and enter into the constitution of joint action. Joint action is not simply action in close proximity accompanied by shared mental representations of goals and tasks. It's materially constrained and materially enabled interaction that redefines the affordance space and allows us to do things that we could not do on our own. For example, material artifacts afford the possibility for coordinating social forces in ways that might not otherwise be possible, and in this regard there are cases where specific kinds of material engagement can disclose new social affordances.

Marcin Miłkowski (Polish Academy of Sciences)
Situatedness and models of mechanisms

Explanations in cognitive science and cognitive neuroscience can be analyzed in terms of the neomechanistic explanatory framework (Miłkowski 2013; Bechtel 2008; Craver 2007). In this talk, I will review various ways models of mechanisms elucidate rich interactions of cognitive systems with their environment, and discuss how situatedness is related to multi-level explanations. I will also argue that some metaphysical worries about the purported contradiction between the supervenience claims and causation (Baumgartner 2009) are misguided, as due to situatedness, local supervenience claims for cognitive systems, usually considered in recent debates, are false. Finally, I will sketch a historical review of the importance of situatedness for cognition. I will show that at least large parts of the traditional cognitive science were never committed to methodological solipsism (Fodor 1980). On the contrary, important modelers such as Herbert A. Simon (1956) and Michael Arbib (1972), discussed the role of invariant generalizations about the brain in cognitive explanations. I will focus on Simon's account of cognition in terms of adaptation to the environment, whereas both the internal and external milieu are crucial parts of valid models of cognition.

Katarzyna Paprzycka (University Of Warsaw)
Intentional Omissions in Disguise: The Knobe Effect, the Epistemic Side Effect, and Related Problems

I use the normative theory of intentional omissions to argue that ordinary uses of the English adverb 'intentionally' are systematically ambiguous. There are occasions where they might be used to attribute intentional omissions rather than intentional actions. One can thus explain a number of puzzles that have been taken to be puzzles about the concept of intentional action: the Knobe effect, the connection between foresight and intentionality (in legal contexts), the Butler problem, the compatibility of moral luck with intentionality, the requirement of ability to do otherwise, the intentionality of akrasia. I show how the hypothesis can be extended to make sense of the epistemic side-effect effect. Toward the end of the talk I consider the curious case of the Polish language, which appears to lack a natural translation of 'intentionally' but includes a number of different endemic modifiers instead.

Frederique De Vignemont (Institut Jean-Nicod)
The extended body hypothesis

According to Mike Martin, "the apparent limits of the body are the apparent limits of possible sensation" (1992, p. 202). To what extent is this claim true? My approach will be two-fold. On the one hand, I will determine whether extended bodies result into extended bodily awareness. To do so, I will consider the extent of the embodiment of tool and show some fundamental limits. On the other hand, I will determine whether one can have extended bodily awareness without extended bodies. Can there be extrapersonal transitive sensations localized outside the bodily boundaries given by body representations? I will look specifically at cases in which one feels sensations as of being located in a specific empty region of space. It may then seem that bodily sensations can stretch beyond what is embodied. It is difficult indeed to see how an empty region of space can be embodied. However, we shall see that there are some regions of external space that are still encoded in a bodily frame of reference, namely, peripersonal space.

Andrew Wilson & Sabrina Golonka (Leeds Beckett University)
Ecological Information Makes Embodiment Possible

Embodied cognition can 'replace' more standard approaches, but it will only do so if it results in better science. So what does that science look like? The basic idea of embodiment is that the brain is not where all the good stuff of cognition occurs. Wilson & Golonka (2013) identified four steps necessary to tell a viable embodiment story. You begin with a task; you identify the resources that task makes available; you propose a system that connects those resources into something that produces the target behaviour; you do science to see if people work this way. Because the relevant resources can be distributed at some distance from the brain, this programme demands that you identify a path along which information about the resources can flow. Without this, a given embodiment explanation is a scientific dead end. Our best theory of information so far is Gibson (1966, 1979) and recent work has carefully expanded this theory to provide room for behaviours beyond perception and action (Golonka, 2015). Taking information seriously is the key to solving the troubles with embodied cognition theories.

Massimiliano Cappuccio (UAE University)
Transcendence and Incarnation: an Inquiry about Mind-Upload and Embodied Cognition Theory

The "Mind-Upload" hypothesis (MU), a corollary of radical machine functionalism, asserts that a whole mind can safely be transferred from a brain to a digital device. MU assumes that minds are reducible to non-material computational structures that can be entirely encoded, indefinitely stored, and reliably emulated, without losses or alterations. I will argue that this hypothesis clashes with any version of the Embodied Cognition theory (EC), i.e. any

account that sees embodiment as a necessary and constitutive condition for the existence of a mind. EC opposes MU for various reasons, but the most important one is that MU implicitly assumes that mental functions can be individuated even if they are purely immaterial. EC can't accept this assumption, which is why it denies the identity of a mind could ever be preserved through the upload process. I will show that EC and MU are mutually exclusive hypotheses, and that their truth depends on the requirements necessary to attribute numerical identity to abstract entities like functions and information.

Konrad Szocik (University of Information Technology and Management in Rzeszow)
Cognition, action and acquisition of religious beliefs in the light of Cognitive Science of Religion (CSR)

CSR assumes fundamental importance of cognitive mechanisms for the acquisition of religious beliefs. However, I suggest that development of religious beliefs requires first of all cultural inputs. The only natural cognitive mechanisms may generate theistic and atheistic beliefs dependently on cultural environment. I assume that rational beliefs may be more important than intuitive beliefs for the development of religious beliefs. Beliefs are "context-dependent and come in degrees" (Buchak 2012). This variability and context-dependence depends more on reasoning than intuition. Religious beliefs do not work under "perception action mechanism" but are the result of perception aimed at truth. Their aim is interpretation, understanding and explanation of the world. This is why they are connected with actions. It seems that „phenomenological experience is always the result of the interaction between expectation, cultural invitation, spiritual practice, and bodily responsiveness" (Cassaniti, Luhrmann 2014). Here I would like to underline that religious beliefs are the domain of rationality and culture. Their role can be explained by broader methodology which should include non-reductive naturalism, explanatory pluralism and the idea of multiple realisation (Visala 2014).

This rationality is required for the long-term planning which seems important part of religious beliefs (future life, predestination, etc.). Acquisition of religious beliefs may be a result of their psychological, ethical or social utility influenced by rational decision. In this sense I assume that humans treat religious beliefs rather as a domain of reasoning than blind gene-like automatic processes. Mind decides about participation in short or long term actions. Religious beliefs involve three kinds of relations: agent-proposition, agent-action, and proposition-evidence (Buchak 2012). Religious beliefs generate a disposition to act which is based on a faith that these beliefs manage in correct way a personal life. This faith linked to action is rational because person can stop behave according to religious beliefs. The phenomenon of theological (in)correctness is an example of this ability. Someone may have an act of faith when there are at least two possible ways of actions. Faith is a conviction that one way of action is better than an alternative one.

The main aim of this paper is to show that correlation between cognition and action in the context of religious beliefs seems more rational than intuitive.

Zsuzsanna Kondor (Hungarian Academy of Sciences)
Representation and Extension in Cognitive Theories

Mind, cognition, consciousness, and self have been regarded as closely related, both historically and functionally. However, their relationship is far from unambiguous. Some criticisms call attention to misinterpretations of certain scientific results (Aizawa 2010; Zahavi 2008). These criticisms underscore the differences between perspectives and presuppositions. In my presentation, I will consider whether (1) phenomenology and cognitive science, (2) the sensorimotor approach as O'Regan (2011) construed it and phenomenology, and (3) the sensorimotor approach and cognitive science are reconcilable. Despite the fact that phenomenology relies on and considers scientific evidence, and, significantly, gives space to representationalism, it considers consciousness and the self in a radically different way than cognitive science. Similarly, proponents of embodiment and enaction embrace scientific results, but because of their commitment to embodiment (which is to some extent common with phenomenology) and in some cases explicit preference for an anti-representationalist setting, their comprehension of some key concepts differs fundamentally with that of cognitive science. If we give credit to the evidence which Gallagher (2005) and Jacob & Jeannerod (2003) refer to when emphasizing the importance of the body, bodily skills, and activity, it may seem strange to query the role the body plays in our cognitive life. Also, considering the distinction between the minimal and the narrative self (Gallagher 2000) in light of Ramachandran's (2004) effort to give a neural, brain-based account of linguistic and conceptual skills, to regard the narrative self as mere abstraction (Dennett 1991) seems to be peculiar since the capabilities which Ramachandran establishes on neural settings are hardly imaginable without interaction with others, i.e. without the extension of neural activity to bodily skills, which are public. I will suggest that we can reconcile the represenationalism of cognitive science and approaches which endorse embodiment, thus the extension of the cognitive system, because representationalist accounts of neuronal and cognitive functions take into account interaction with the body. Hence, extension can be a question of how to define representation.

Marcin Trybulec (Maria Curie-Sklodowska University)
Rethinking the materiality of external representations

The aim of the presentation is to reflect upon the notion of external representation used by David Kirsh in "Thinking with External representations" (2010). Kirsh aptly stresses that the material dimension of representation plays crucial role in cognition, especially as it comes to sharing the same content, rearranging ideas, re-describing problems to be solved, and constructing abstract structures. One of the possible way to analyse the notion of external representation used by Kirsh is to focus on epistemological and ontological features of external representations. For example, we can reasonably ask the question whether the idea of external representation is consistent in itself, since it always has to be interpreted and as such, it will consist of some internal components (Wachowski 2014). The account presented in my paper is more parsimonious. I will ask the question, whether all external representations are necessarily spatial, visual and stable? Kirsh claims that " key difference between internal and external representations (...) is their difference in stability and persistence over time" (Kirsh, 2010, p. 447). This is the claim that seems to be problematic. The argument will be developed in three steps. First part justifies the claim that Kirsh analysis of external representations is based upon incomplete distinction between external and internal representations. The distinction is incomplete because it ignores the fact that not every external representation is spatially stable and persistent over time (e.g. speech acts, sign language). It will be argued that even though, Kirsh mention spoken words as an example of external representation, in fact his analysis is confined to graphical representations (e. g. maps, receipts, mathematical notation, video in choreography, models in architecture etc.). The second part is devoted to answer the question what are the treats of assuming that all external representations are persistent and stable. One can ascribe utterances to broader class of external representations, therefore ignoring the specific consequences of spoken language as transient, and ascribe to them concequences typical to graphical representations (Linell, 2004). This conclusion would be unjustified in the light of anthropology of communication (Finnegan, 1988) and psychology of reading (Homer, 2009; Olson, 2013) . Even though Kirsh pay special attention to material dimension of external representations, his analysis left no space for transient representations which are both material and external. Third part of the presentation justifies the claim that more fine grained classification of external representation is needed. In order to do so I will use classification based on classical typology of signs in semiotics (Heersmink, 2013).

Ashleigh Watson (University of Edinburgh)
Rethinking the Body Image/Body schema Distinction: A response to Gallagher and De Vignemont

A key working assumption in some spheres of the embodied cognition literature is that our complex and wide ranging (human) cognitive capacities are, in one way or another, grounded in brain-bound representation(s) of the body. Body movement, for example, has traditionally been explained in terms of a particular representation called the body schema which was initially characterised as an internal representation of the spatial organisation of the body (Head & Holmes, 1911-12). In turn, personal-level awareness of one's body is typically defined in terms of the body image which is built up out of cross-modal, conceptual and affective representations of the body (e.g., Gallagher, 2005). More recently, the body image and body schema distinction has been used to frame ongoing discussions about the kinds of body representation which underpin our sense of embodiment (Carruthers, 2008), body ownership (De Vignemont, 2007) and sense of self (e.g., Rochat, 2014). Despite its pivotal importance for classifying the body representations which underpin the movement and conscious experience of the body, the body schema/image distinction has not been particularly well integrated within cognitive science. This is due, in part, to the long-standing conflation between the two concepts where the body schema is defined in terms of a kind of body image (e.g., Schilder, 1935, Fisher, 1978). In more recent times, the issue of what the body schema consists of and whether it should be considered as a species of body representation is a matter of ongoing dispute in cognitive psychology and philosophy (e.g., Spence et al 2003, Gallagher, 2005 & De Vignemont, 2006 respectively) which points to a deep-seated disconnect amongst the psychologists who employ this concept and the philosophers who are attempting to provide a conceptual analysis of it. Against that backdrop I will use the philosophical debate between Shaun Gallagher (2005) and Frederique de Vignemont (2006) to highlight what's at stake in the debate over whether the body schema should be understood in terms of body representation. After laying out each position it will be established that perceived differences between their supposedly opposing accounts are merely terminological and that, in fact, their respective accounts about the functional structure of the body schema are broadly similar in terms of the fine details. I will then provide 2 problems for de Vignemont's exclusively representational interpretation of the body schema - a) at present her account has no explanatory leverage over Gallagher's non-representational account of the body schema and b) is not compatible with the aims and ambitions of embodied cognition. I will conclude by drawing upon the predictive processing framework as it applies to action (e.g., Friston, 2010) to piece together the insights from Gallagher and De Vignemont about the role of the body schema in enabling and constraining embodied interactions within the environment. The more global

ambition is to highlight the prospects of the predictive processing hypothesis for re-integrating the body image/schema distinction within current practices in cognitive science.

Katarzyna Chludzińska (University of Warsaw)
Cognition in Pregnancy: The Question of Patient's Competence to Consent to Treatment

One of the greatest challenges to both clinical and research ethics is the question of competence to make decisions about one's health and life. In medical context the patient's competence is crucial to their ability to give informed consent or refusal to treatment. Competence may be understood as a legal term or mental capacity. The issue of determining one's competence, understood as mental capacity, involves the assessment of their cognitive skills. It is not an easy task to establish what level of cognitive abilities is needed and whether it is the same one for every kind of decision, so the question remains: what does it mean to be competent in specific medical circumstances? Obviously some patients have mental deficits which may require physicians and guardians to protect those patients and to make decisions for them. It seems that the biggest group that should be considered as such are the psychiatric and mentally retarded patients or people mentally impaired for different reasons, for example due to accident or condition caused by old age. It is, however, worth noting that cognitive abilities may be also compromised by such factors as the hormonal environment. Due to the fact that a growing body of literature suggests that there are specific cognitive deficits associated with pregnancy, caused by hormonal fluctuations, in my presentation I would like to focus on the effect of pregnancy on the competence of women.

Przemysław Nowakowski (Centre for Philosophical Research)
On identification dependence of (sense of body) ownership

Many authors (for example: Botvinick, Cohen 1998; de Vignemont 2007, 2013; Tsakiris 2012), defend an existence of a specific kind of experience, or mental content, called the sense of own body ownership (SoO). In this experience (in normal circumstances) body which is our own is experienced as own. This kind of experience is characterized as minimal, pre-reflexive, while this content is described as non-conceptual (see de Vignemont 2007; Bermudez 2015; Gallagher 2000). For purpose of this paper I assume, according to mentioned literature that if such experience exist should be minimal (or primitive) mental state or experience with non-conceptual content. This experience is a part of own body consciousness not reducible to any other part of this consciousness. In this paper I present following thesis: if sense of body ownership exist, it should hinge on reliable identification mechanism , which is involved in identification of own body as own and on basis of its proper functioning we are making ascription of a mentioned ownership. Note that, this ascription could be a part of unconscious workings of identification mechanism. This thesis is a consequence of more general statement: any mental states, which content is ownership of some φ, need capacity for individuation and recognition, so identification of such φ as object of this content. This thesis has some nontrivial consequences. Firstly, this mechanism must be sufficiently sophisticated and there should be suitable conditions making identification possible and needed. If this is correct and sense of ownership need identification, than most of current conceptions of sense of body ownership is flawed. I would like to highlight that I'm not defending the thesis that body awareness is or must be based on a identification. I rather think that the mechanisms responsible for everyday body awareness are not related to a identification. On the other hand I will defend thesis that we should give up the concept of SoO, because it must rely on identification mechanism. Also this view is not identical with saying that there is nothing special in own body experience (see scheme at the end of this paper). Our consciousness of own body is special and crucial for judgement or beliefs about body ownership, but it doesn't contain content such as: this is mine body. So we identify own bodies, but this process is not a part of SoO, but judgements or beliefs about own body ownership.

Piotr Litwin (University of Warsaw)
Does motivation modulate Rubber Hand Illusion (RHI) experience? An experimental study

According to the cognitive penetrability of perception theory (CPP), higher – order factors, such as beliefs or desires, can directly affect and modify the content of conscious perception. This view is supported by a recent plethora of evidence suggesting the direct influence of extraperceptual states on perception (a comprehensive list of recent papers reporting such influences is available online:

 http://www.yale.edu/perception/Brian/refGuides/TopDown.html). Nevertheless, the verdict is still far from being unanimous, since the experiments are frequently prone to several methodological pitfalls, which, if taken into consideration, may strangle excessive optimism among CPP supporters. Surprisingly, there hasn't been much scientific reports concerning whether the intrinsic motivation to experience a particular phenomenon ("I want to experience such experience") can influence the character of that experience. To examine such possibility, an experimental study employing Rubber Hand Illusion (RHI) paradigm was conducted. 30 participants were divided into two groups (control and experimental) and watched two different video materials concerning the rubber hand illusion – informational one

and one putting a gloss on RHI as one of the most interesting experiences in life, respectively. Subsequently, the illusion was induced and two questionnaires – one concerning the subjected feelings connected with the experience of the illusion and one short post-hoc survey concerning the purpose of the experiment and levels of motivation and interest in illusion – were filled by participants. The skin conductance response (SCR) in a situation threatening the rubber hand was also obtained as an objective measure of the experience. The results of the experiment are ambiguous. No significant differences between groups were observed, possibly due to inefficiency of manipulation. However, the additional analyses revealed that the self-reported motivation to experience RHI displays similar pattern and explains comparable proportion of variance of SCR to subjectively declared strength of the illusion. Nevertheless, the small correlation between self-reported motivation and self-reported strength of the illusion did not reach statistical significance. The interpretation of the results may be twofold: 1) the motivated participants actually experienced the illusion stronger, but simultaneously their expectations concerning the illusion escalated so their subjective reports of the strength of the illusion did not reflect results obtained by SCR. Inferring about nonexistence of influence of motivation would be a "reversed el Greco fallacy" (see Firestone and Scholl, 2014). 2) The results were distorted by participants that could not experience RHI (up to 20% of population according to literature; Botvinick and Cohen, 1998). Arguments for and against both standpoints will be discussed with regard to general methodological issues which are currently open to widespread scientific debate among researchers involved in cognitive influences on perception.

Pii Telakivi (University of Helsinki)
Extended experience – active perception or experiential cognition?

The Extended Mind thesis (EM) (e.g. Clark & Chalmers 1998) claims that the vehicles of cognition can be extended across brain, body, and world. The Extended Conscious Mind thesis (ECM) (e.g. Noë 2004; Ward 2012) adds that in addition to cognition, also the vehicles of conscious experience can be spread in the same way. It states that brains are necessary but not sufficient for conscious experience. The question of this paper is: what is extended experience and how does it differ from extended cognition? I will differentiate between two kinds of arguments for ECM that share the same background assumptions but vary in the way they answer the question above. One possible way of motivating ECM is based on sensorimotor dynamics and enactivism (e.g. O'Regan & Noë 2001; Noë 2004): experience is extended to the environment through active perception. This view asserts that perception is directly linked with a subject's actions in its environment – perception and action are mutually dependent processes. Without the non-bodily parts that maintain dynamic sensorimotor relations, some of our perceptual experiences could not have been experienced. This view seems to imply, however, that extended organisms consist of parts (brain, body, environment) that can be coupled in interaction (and decoupled). Another way to argue for ECM is the Radical embodied cognition thesis (e.g. Chemero 2009, Hutto & Myin 2013, Silberstein & Chemero 2011; 2015). It states that "experience is cognition and cognition is experiential". Experience extends jointly and inseparably with cognition; extended experience is already explained by extended cognition. The radicalists stress that extended organisms form one unified, nondecomposable system. Therefore, we cannot in fact talk about extension anymore, since there isn't any primary substrate where the mind would extend from – the mind is extensive by its very nature. Cognition is a "necessarily embodied phenomenon" (Chemero 2009). Contradictorily enough, the radicalists admit that the mind need not be extended/extensive all the time, after all. "There is no a priori reason why some phenomenon might be given wholly brain internal explanations" (Chemero & Silberstein 2008). It seems that ECM needs a more clearly expressed account on whether experience extends only sometimes or whether it is extensive by its very nature.

Paweł Gładziejewski (Polish Academy of Sciences)
When do mechanistic explanations count as representational explanations?

It has recently been argued by a number of authors that (some or all) notions of representation used in cognitive science turn out to be, when investigated under close scrutiny, explanatorily useless. In my talk, I will sketch out a view of representational explanation that is immune to this sort of worry. According to my proposal, representational explanations are mechanistic explanations. In particular, representational explanations are ones which postulate cognitive mechanisms equipped with component parts that function as action-guiding, detachable, structural models that afford error detection.

Piotr Litwin (University of Warsaw)
Non-veridicality of perception in service of minimizing global prediction error – embedding desires into predictive processing framework

According to the cognitive penetrability of perception theory (CPP), higher – order factors, such as beliefs or desires, can directly affect and modify the content of conscious perception. It seems that the cognitive penetrability of

perception may be embraced within a broader framework – a predictive processing (PP) theory of cognition. According to the PP, the brains attempt to predict external causes of the sensory inputs on the basis of hierarchical and generative models. Although PP is considered to be rather representational and computational theory, it has recently been argued that it "has the resources to cash the enactivist cheques" (Clark, 2015, p. 3). Firstly, the model has to be understood in the most inclusive sense, taking into account not only neural machinery but also personal history of interactions with the world, morphology or evolutionary selection processes. Moreover, it has recently been suggested that PP framework may apply not only to extero-, but even more naturally to interoception. The causes of the interoceptive sensory signals are believed to be continuously predicted in a similar manner to external sensory signals and those inferences may even account for the constitution of emotional states. Taking above insights and the following main assumptions of PP: (1) organisms aim at minimizing global prediction error; (2) if allowing information from expectations, beliefs etc. to influence perception reduces global prediction error, then this information should be used; (3) the prediction error generated in one unimodal system can be explained away by inferences in other system via high-order neural areas into account, I will argue that minor lower-level exteroceptive prediction errors may be explained away if they prevent interoceptive and, as a result, global prediction error increase. This means that if exteroceptive prediction error is not persistent (e.g. brief presentation of a stimulus) or has low precision (e.g. in case of conditions hindering observation) it may be explained away on low-order neural areas in order to avoid unexpected physiological reaction associated with perception of an undesirable object, scene or event etc. I will argue that this is coherent with recent empirical studies, e.g. concerning motivational influences on distance perception and stimulus domination in binocular rivalry paradigm. To sum up, I will try to show that PP does not identify congruency of the model with its ability to mirror the structure of the world and, therefore, provides for non-veridical percept of the external world to be the optimal one.

Patrycja Maciaszek (Jagiellonian University)
Cognitive factors causing memory distortion vulnerability in the light of interdisciplinary studies

Cognitive psychology has assembled a massive amount of data leading to clear conclusion that people show tendency to create false memories (Loftus, 1975). Despite many years of research, crucial question about factors indicating individual's vulnerability to a memory distortion still remains unanswered. The issue of presented project was to examine cognitive factors causing individuals vulnerability to a wide range of memory distortions. The way people receive and proceed information and - as a consequence - memorize them (accurately or not), is known to be strongly related to basic cognitive abilities. To shed some light on this issue, three experiments using the DRM paradigm (Deese 1959, Roediger & McDermott, 1995) and modified version of "remember-know judgment" procedure (Tulving, 1985) were conducted and compared to the results participants achieved in a various kinds of WM tasks, measuring its storage and proceeding capacities (Oberauer et. al., 2003 ; Oberauer, 2006).

Paweł Motyka (University of Warsaw)
Embodied visual awareness. Disambiguating perception by body posture: a predictive pro-cessing perspective

The goal of the present study was to investigate the putative influence of body posture on visual awareness during binocular rivalry (BR). BR is a spectacular example of multistable perception which occurs when different stimuli are presented separately to each eye (Alais and Blake, 2014). In result the conscious percept continuously alternates from one image to another. Recent studies based on this procedure report the influence of other modalities like audition, olfaction and touch on visual awareness (crossmodal congruency effect – CCE) (Lunghi, Morrone, 2013).

To verify the hypothesis, procedure proposed by Tiedens and Fragale (2003) has been used. Participants were placed in a dominant (expanded) or submissive (constricted) posture and were naïve about the manipulation. Afterwards, they were observing ambiguous images presenting people in dominant and submissive postures and words connected with the concept of dominance and submission. Participants had to report their visual experience by pressing mouse buttons (left/right).

Final results showed that stimuli were perceived for a longer period of time when body posture seen on the picture was congruent with participant's body posture (CCE). There were also tendency, although not statistically significant, for words. This work elucidates the role of body posture – which can be interpreted as a special modus of proprioception schema – in clarifying ambiguous visual experience.

The phenomenon of binocular rivalry and crossmodal congruency effects seem to be well explained in terms of predictive processing (PP) (Clark, 2013, 2015) (Hohwy, Roepstorff, Friston, 2008) (Hacker, Jack, 2014). On the basis of PP theories, the hypothetical mechanism of aforementioned influence of body posture on visual awareness will be described.

Tereza Nekovarova (National Institute of Mental Health; Charles University in Prague)
Theory of Mind: Self Projection vs. Cognitive Schemas

The ability to represent and attribute mental states (knowledge, incentive, emotions) both to oneself and others belongs to intrinsic human cognitive abilities. In presented study we examined neuronal correlates of theory of mind (an ability to attribute mental states to others) and self-projection (imagining oneself in a specific situation) using audio stories tasks. As various studies suggest, mental processing attributed to Theory of Mind (ToM), and Self-projection (Self) evoke large overlapping brain areas but there can also be found some specific regions connected uniquely to particular tasks (Vogeley et al. 2004; Przyrembel et al., 2012). The aim of our study was to consider not only similarities and differences among these various processes on neuronal level, but also take into consideration the subjective appraisal of presented stories and the approach employed in understanding of the behavior of the characters in these stories. 34 (18 males, 16 females) healthy adult subjects participated on the study and were examined them using BOLD fMRI on Siemens Trio 3T scanner. The fMRI stimulation scheme consisted of 30 audile stories, each followed by a question and time for answering mentally. We used three types of stories for eliciting supposedly different brain activations: 1) Theory of mind (ToM) stories - concerning on analysis and predicting behavior and motivation of others; 2) Self-projection (Self) stories - concerning on one's own behavior and 3) Instrumental stories, which were not based on analysis on human's behavior but that can be answered by analysis of physical/instrumental patterns. After fMRI testing the participants were interviewed about presented stories and filled two self-assessment questionnaires (Interpersonal Reactivity Index and Self-concept). We found out that there were marked inter-individual differences in categorization of the presented stories, what can suggest, together with the neurobiological data that there are also different strategies in solving Theory-of-mind tasks. We propose two main strategies: so called "self-projection" (corresponding predominantly with simulation theory) and "cognitive schemas" (corresponding with theory-theory). To see whether such differences may be connected with inter-individual differences in personal characteristics we analyze data from self-assessment questionnaires. Furthermore, we discuss whether personalized categorization (1st person subjective appraisal) of stimuli yields more precise models of observed data then predefined categories of stimuli. This project was supported by GACR grants 13-23940S and 15-08577S, by Project Prvouk P34, by the project „National Institute of Mental Health (NIMH-CZ)" - grant number ED2.1.00/03.0078 of the ERDF, and by the projects GA UK number 94215 and 1508414.

Joanna Szczotka (Jagiellonian University)
Schizophrenia as a disorder of embodied self

Schizophrenia is a complex and heterogeneous disease that manifests itself in thought insertion, hallucinations, disorganized, catatonic behaviour and many deficits in higher cognitive functions. It is also known that schizophrenia involves deformations of self and leads to identity delusions. However, over the last decade it became more probable that schizophrenic's self is disordered on even more fundamental level – level of the body. This poster presents theoretical research on embodied cognition in the context of modern psychopathology. It includes review of phenomenology of schizophrenics's experience based on almost 500 verbal reports of patients (Parnas, 2003; Saas, 2003; Scharfetter, 2003; Fuchs, 2005) and discussion of the results of experiments pertaining bodily self in schizophrenia that have been conducted so far: facial self-recognition (Kircher & David, 2003), rubber-hand illusion (Thakkar, Nichols, McIntosh & Park, 2011), loss of implicit body knowledge (Ferri, F., Frassinetti, Mastrangelo, Salone, Ferro & Gallese, 2012). It is argued that most symptoms of schizophrenia, such as paranoid delusions, deficits in agency, anhedonia, loss of self-affection, some psychotic episodes could be derivative from a distorion of body schema and embodied self (Metzinger, 2004; Fuchs, 2005; Metzinger, 2009). It also indicates the promising perspective of application of current paradigms of embodied cognition in psychiatry and clinical psychology. Future studies are suggested.

Georg Theiner (Villanova University)
Group-Sized Distributed Cognitive Systems

The aim of this talk is to introduce the analysis of human groups as distributed cognitive systems, and to examine the related question of whether socially distributed cognition (SDC) amounts to group level cognition. In my discussion, I first break down the complex notion of SDC into a 'joint', a 'distributive', and a 'shared' aspect. Then, I highlight organization-dependence, novelty, and autonomy as central features associated with the 'emergent' qualities of SDC. Finally, I survey six theoretical 'stances' that have been invoked to identify the presence of cognitive organization at the group level, and thus bridge the suggested inferential gap between SDC and group cognition: (i) the 'social parity' stance, (ii) the intentional stance, (iii) the information processing stance, (iv) the computational stance, (v) the ecological stance, and (vi) the dynamical stance.

Barbara Trybulec

Maria Curie-Sklodowska University

According to the mainstream of the contemporary analytic epistemology only individuals can cognize and posses knowledge. The idea that groups could be cognitive subjects is not very popular. Most epistemologists argue in favor of the epistemic agent individualism assuming that epistemology is about things that go on inside the head. This position is motivated by the idea that cognitive subject must be rational, and only individuals are able to meet conditions of rationality. In my presentation I introduce an argument for the thesis that certain groups are rational, cognitive subjects. To be rational however, a group agent has to satisfy one condition which is not required for an individual agent. In addition to standard conditions of rationality, a group agent must be a reasoner. To justify this thesis, I present a combined account of group agency composed of Deborath Tollefsen interpretationism and analyzes on group agency conducted by Philip Pettit and Christian List. What it means that a group reasons, and why it must perform this sophisticated form of cognitive activity to earn the name of a cognitive agent? To answer these questions I divide my presentation into four parts. I start with presenting the distinction made by Pettit on rational and reasoning agents. Simple agents are able to satisfy Pettit's conditions of rationality, yet they are unable to form metapropositions which describe and evaluate their desires and beliefs. Only sophisticated agents conduct intentional activity of reasoning designed to raise the chance of satisfying norms of rationality. Pettit argues that groups cannot be simple agents. To satisfy conditions of rationality they must be true reasoners, which means that they must be able to deliberate on their commitments. In the second part of my presentation I explain, in reference to Tollefsen's interpretationism, what it means that groups could be subjects of mental states. Third part concentrates on the theory of judgments aggregation. Its recent results show that it is impossible to have a procedure for determining group judgments that both secures their consistency and is responsive to the individual members' judgments. It is called the impossibility result, for it undermines the possibility of group's rational performance. In the last part of my presentation I introduce the procedure of judgment aggregation which overcomes the impossibility result. This procedure can be conducted only by the groups with a rational point of view, for only from this perspective group rational performance can be controlled. Hence, a group agent must be able to organize itself in such a way that some, if not all, of its members can maintain such a control.

Gregory Sandstrom (European Humanities University)

Understanding Human Extension: Because it's not just our minds that extend

This paper addresses a gap in the current literature involving 'extension.' Rather than focussing on the 'extended mind' thesis (EMT) or the hypothesis of 'extended cognition' (HEC), it instead highlights several general and specific uses of the term 'extension' in the social sciences and humanities (SSH), not only in philosophy, but also in distance learning, technology, economics and agriculture. Instead of starting with Chalmers and Clark (1989), I trace the idea to Marshall McLuhan's 'extensions of man', about which he calls 'the final phase', "the technological simulation of consciousness" (1964: 19). Three examples are provided to show that 'human extension' is not only in/by our minds. First, the University Extension movement (Draper 1923) at Oxford and Cambridge universities in the 1870's, second, ideational extension as demonstrated in Catholic Extension (1905) or 'Catholic Church Extension Service' in the USA and Canada, and, third in the Cooperative Extension Services via the US Department of Agriculture (1914). The conclusion suggests we are now involved in a new era of 'human extension' in the electronic-information era, which some have linked with the 'global mind' or 'noosphere'. The paper contends that the EMT and HEC are built on an underdetermined conceptualisation of human persons for SSH that reduces them (us) into mere 'unreflexive' cognisers. Similarly, the new project of 'Extended Knowledge' (EK) at the University of Edinburgh appears to underestimate the directive factors of agency and choice in socio-cultural settings. These dehumanising 'analytic' moves are thought to be largely based on a 'naturalised epistemological' approach that aims to turn philosophy into impersonal natural science, rather than acquiring personal or community knowledge or even (applicable) wisdom 'humanistically'. Instead, a non-naturalistic approach to Human Extension (Sandstrom 2014) enables a more synthetic in-depth look at how people perceive and experience extension in their lives. The basis for this overall approach can be found in the methodological principles of the Kraków School centred on philosophy in science, rather than philosophy of science. The paper finishes by briefly acknowledging the importance of the notion of Human Tension. Missing from the EMT, HEC and EK is the balancing term 'in-tension', which is the linguistic counterpart of 'ex-tension.' Asking what it is that extends and intensifies and how it can be measured may enable a largely esoteric niche conversation in analytic philosophy and cognitive science to elevate from individual 'minds' to 'humanity', to something more inclusive for SSH.

Coelho Mollo (King's College London; Humboldt-Universitaet zu Berlin)
Mechanism, Computational Structure and Representation in Cognitive Science

Computation plays a crucial role in the sciences of the mind since the consolidation of cognitive science as a research field in the 1950s. This theoretical commitment, and the representationalism that it is taken to entail, has been attacked by proponents of radical embodied cognition (van Gelder 1995). Indeed, a prominent view of computation in cognitive science is the semantic account, which takes computation essentially to involve representation (Shagrir 2006). But it need not be so –- an alternative theory has no recourse to representation in accounting for computation: the mechanistic view (Piccinini 2008, Milkowski 2013, Fresco 2014). My aim in this talk is to explore the fruitfulness of using the mechanistic view of computation as a way to clarify representation. This brings to deflationism about representational content and leads to a middle-ground position between classical and embodied approaches to cognition. In particular, I argue that at least for one important kind of theory of representation in cognitive science, structural representation (Cummins 1996), the mechanistic view of computation may help solve traditional metaphysical problems. Structural representation is based on the idea that representations represent what they do by virtue of instantiating the same relational structure of what they represent. A natural way to cash out the relational structure of representational vehicles is in terms of their computational structure. Uniting the mechanistic view of computation with a structural account of representation, I propose, allows 'deflating' representational content in a way that preserves its explanatory power in the sciences of the mind. Briefly, I argue that structural representation leads to the view that the computational structure of cognitive states carries much of the explanatory burden in an account of cognition. The computational structure of cognitive states lies at the basis of ascriptions of representational content (Cummins 1989). Content, in the resulting picture, is an explanatory handle that captures the (un)successful use of a cognitive state in the context of a certain task-domain; (un)success that is strongly dependent on mechanistically-individuated computational structure. This deflationary approach places softer requirements on a theory of representation. In this way, both anti-representationalism and strong representationalism, and their shortcomings, are avoided by making space for a deflated, but still explanatorily useful, notion of representation. Once a mechanistic view of concrete computation is coupled with structural representation and a deflationary understanding of representational content, worries concerning the naturalisation of computation and representation in cognitive science lose much of their bite. Moreover, a middle ground can be found between strong representationalist and embodied approaches to cognition.

Jarek Gryz (York University)
Anytime Algorithms

Over the last 50 years classical AI (understood here as an academic discipline within computer science) has come up with an enormous number of algorithms to model (or perhaps just mimic) various aspects of human cognition. Surprisingly, very few of them take into account time it takes for the algorithm to complete the task at hand. Even worse, these algorithms must run the full course (however long it takes) before they can return a solution – they are not interruptable. No concept of partial or approximate solution exists for them. Such algorithms are completely impractical when actions are performed within an unstable environment: partial results of decisions or plans must be available here at arbitrary points in time. There is, however, a relatively recent trend in AI where algorithms are expected to be stopped at any time to provide a solution and the quality of the solution must increase with computation time. Such algorithms are called "anytime algorithms". In this talk we will present that trend, discuss some of the successes in this area, but primarily discuss the challenges. The most interesting one – and the most appropriate for this forum - is the very concept of the quality of a solution. Can we say that of the two incorrect reasoning one is better than another? When is one partial face recognition better than another? If anytime algorithms are to be useful for AI, answers to these questions should be based on some model of human cognition.

Zuzanna Rucinska (University of Hertfordshire; Leiden University)
Situating pretence in wide mechanism

Mental representations are considered indispensable to explain how one can 'act as if' one thing was another, or act as if one thing is there when it is absent. Hence, make-belief or pretence is typically considered to require cognitivist tools in its explanatory account, such as mental representations; cognitivist explanations of pretending also rely on mechanistic explanations (Leslie 1987, Nichols and Stich 2003). To date, there is no enactive account of pretence. This talk shows that some forms of pretence could be explained in enactivist terms without the use of mental representations. The enactive account of pretence I propose uses a particular conception of affordances as dispositions (Turvey 1992) to show how else might it be possible to explain pretending that one thing is another. These dispositions can be considered as extrinsic to the pretending agent (McKitrick 2003). The talk shows that with the conception of affordances, we can consider pretence affordances to be present possibilities for play (instead of absent entities that need to be represented), thereby taking over some of the roles mental representations were supposed to play. I argue that even enactivist

explanation of pretence is compatible with a type of mechanistic explanation, where mechanism is understood as wide and situated (Bechtel 2009, Zednik 2011). Finally, the talk proposes one response to Aizawa's (2014) challenge that enactivists not only use different tools, but study different issues than cognitvists: a kind of behaviour, instead of cognitive processes, which lead to a behaviour. The response is a suggestion for enactivists to apply certain strategies like explaining in mechanistic terms (albeit referring to wide and situated mechanism) as well as making use of the role-realizer distinction of functionalism, to provide a genuine rival explanations of cognitive phenomena like pretence, but without positing mental representations. The proposed account is a first step towards reconsidering the conceptual bases of make-belief interactions, and has potential to contribute to the search for new models of cognition.

Robin Löhr (Humboldt-Universität zu Berlin)

Do Neo-empiricists leave anything out?

Neo-Empiricism is the view that our conceptual representations are stored and reactivated in sensorimotor areas (Barsalou 1999). A frequent objection to this view is that sensation-dependent representations cannot explain concepts that are too abstract to be derived from experience (TRUTH, KNOWLEDGE, DEMOCRACY). Despite the prima facie plausibility of this objection it is rarely stated why exactly concepts that seem detached from experience cannot in principle be explained in terms of it. Barsalou (1999) and Prinz (2002) for example have proposed such explanations. They explain the concept of truth for example in terms of a mental process of matching a belief with what one perceives. Many philosophers and psychologists remain unconvinced that this is an explanation of TRUTH at all (see commentary in Barsalou's BBS article). A frequent argument against this proposal is that TRUTH is not the same as MATCHING. Propositions can be true even if we do not think that they are (e.g., Dove 2011). Hence neo-empiricists have not explained TRUTH. I argue that this argument is a red herring. It confuses the question of the structure of the constituents of concepts with the question of whether these constituents can be sensorimotor representations. Moreover, it seems to presuppose a theory of the structure of concepts that is rarely explicitly held in contemporary psychology, namely definitionism, the view that concepts in psychology should be individuated in terms of necessary and sufficient conditions (for a review see Laurence & Margolis 1999). Objecting that the explanation of TRUTH (for instance) in terms of MATCHING lacks an important condition (is not sufficient) or that MATCHING has nothing or little to do with TRUTH (is not necessary) implies that a successful explanation of TRUTH ought to be sufficient and necessary to what we commonly mean when using this term. I conclude that neo-empiricism can account for abstract concepts if, for example, we understand the structure of concepts not in terms of necessity and sufficiency but typicality.

Andrzej Kapusta (Maria Curie-Sklodowska University)

Decision making in the light of depressive experience

The aim of the presentation is to answer the question to what extent the depressive experience results in difficulties in patients' decision making and generally to explore the specific properties of depressive experience. We intend to systematize on the basis of available literature (both selected philosophical and phenomenological concepts, theoretical models and the interpretation of empirical research in the field of psychopathology) the features of patients' depressive experience (eg. self-disorders, disembodiment, deformation of common sense, irrational beliefs, the problems of reasoning, lack of insight) and their effectiveness in social functioning, abilities to cope with everyday life and to follow the social rules. Particular focus of our interest is in the depresive patients' ways of decision-making in comparison to other forms of mental disorders. We especially investigate disorders of agency/subjectivity and the problems of free will in depresive patients, their insight, reflexivity, depressive deformations of time and disembodiment. Examined experiences will be localized on the axis: reflexive/habitual action; decision making/ implementation; cognitive/emotional components of decision-making; planning/realization; agency/authorship; real/imaginary. The proposed methodological and theoretical approach refers to the phenomenological method of analysis, and is a part of the narrative/qualitative research tradition (Merleau-Ponty, H. Dreyfus, S. Gallagher, Varela, C. Fuchs, G. Stanghellini, A. Kępiński).

Adrianna Smurzyńska (Jagiellonian University)

Disordered emotions in disordered beliefs

Delusions are defined as disordered beliefs. Scientists and philosophers concerning beliefs very often focus on cognitive anomalies in such beliefs – in reasoning and perception. Based on that, there were established cognitive theories of delusions, which will be briefly described in my paper. There is convinced that apart from cognitive aspects of delusions, emotional and affective elements are also very important. It can be seen in the researches in which scientists use neuroimaging and when they ask patients for describing subjective feelings. Such researches suggest that emotions and affect should be taken into consideration during exploring delusions. Apart from better understanding of mental disorders, results of such researches may have also philosophical implications. It is possible when treating mental

disorders as some kind of natural experiments. It is probably not possible to separate emotions and reasoning in experimental design. However, exploring mental disorders can lead to observation of that kind of situations. here could be taken some conclusions about nature of beliefs and nature of cognition. In the former, there can be explored how affect is situated in belief formation and what kind of disorders in emotions can lead to delusions. In the latter, seeing how cognition is connected with emotions can lead to exploration of their relations. It can also show that appropriate reasoning is not possible to follow during emotional disorders. In my paper, I will present the role of mood and emotions in delusions' formation. I will focus on two well described types of delusions – Cotard syndrome and Capgras syndrome. I will present the researches using neuroimaging and parts of speeches of such persons. At the end, I will try to infer some philosophical conclusions – on the nature of beliefs and on the nature of cognition.

Paulina Gołaska (Adam Mickiewicz University in Poznań
Reflectiveness of mothers of children with Autism Spectrum Disorders

Reflectiveness is a capacity do identify and regulate emotional processes in self and others to understand and predict their behavior. There are two components which foster this ability: (1) cognitive mechanism (responsible for transcribing representations of emotions into three different codes: visual, verbal and abstract one and placing them in a hierarchical systems (Maruszewski, Ścigała, 1998; Obuchowski, 2004) and (2) regulatory mechanism (responsible for monitoring and modifying emotional reactions through thinking (Thompson 1990). Parental reflectiveness is thus an aptitude of the parent to reflect both on his child's, as well as on his own mind in order to distinguish mental states that underlie behavior (Slade, 1999). This cognitive competence is thought to be the crucial in supporting child development. In this presentation the author assumes that the key psychopathological mechanism of Autism Spectrum Disorders is the inhibition of the development of thinking and self-regulation. It is a result of an interaction of two factors: (1) child's congenital vulnerability and (2) biological or psychological traumatizing stimuli which affect the child in his earliest stage of life (Reid, 2008). Thus, in such case as in autism, parental capability to reflect on child's emotional experiences seems to be crucial. From the autistic child's perspective, to be supportive enough his parents should be hiper-mentalizing (Slade, 2009). Only then they are able to understand such subtle, unclear and often bizarre emotional reactions as in autism. Unfortunately, those parents are in a such difficult emotional situation themselves that reflecting on their child's mind may not be possible. Due to their own congenital high levels of anxiety (Włodarczyk, Otto, 2012) and enormous stress that they experience every day confronting with autism (Hastings, 2005), the reflective thinking may not be available for them. This presentation will be a brief illustration of those assumptions. The introductory part will be focused on describing concepts which refer to parental reflectiveness and autism such as Theory of Mind (Baron-Cohen, 1995), Maternal Mind-Mindedness (Meins et al., 2003) and the Broad Autism Phenotype (Baron-Cohen, Hammer, 1997). Then the model of reflectiveness will be introduced. The author will describe it in the context of parent-child relationship as well as in autism. In the third and last part, the author will show some clinical implications of parental reflectiveness, especially in the field of child psychotherapy.

Piotr Kozak
Pain and Concepts or the Myth of the Given Revisited

The aim of the talk is to investigate the issue of bodily representations of pain. I will argue that (C1) experience of pain is conceptual by nature, strictly speaking, experience of pain is an aspect of possessing a concept. I justify my conclusion in three steps. First of all, I argue that (P1) although we are tempt to view experiences such as pain as non-conceptual by nature, we are also able to formulate judgments and inferences that include the reference to the experience of pain such as "I have pain in my breast" or "I have a pain therefore someone has a pain". However, judgments and inferences are conceptual by nature. Therefore, if we would like to save the possibility to formulate judgments with pain-predicate or inferences with pain-premise and –conclusion, then we have to view pain experience as in a way conceptual. Second of all, I claim that (P2) an intuitive way of thinking about pain could be in a way philosophically misleading. Although we have a strong inclination to think that we possess nonreductive first-person certainty that we are in pain, the use of the concept "certainty" is logically senseless, since the possibility of a doubt is logically excluded. Strictly speaking, if doubt is logically excluded from the first-person experience of pain and certainty is equivalent with not having doubts, then certainty is logically excluded. Third of all, I will try to present a different explanation of the certainty of pain experience trying to save the initial intuition about one's certainty of inner feelings such as pain. Strictly speaking, I will argue, that (P3) the certainty of pain experience consists not in the non-doubtful knowledge of inner states, since that is logically senseless, but consists in the certainty of possessing concepts, where the latter is based on being a necessary condition of cognition or reasoning. In other words, analogically, we are certain that one's left hand is on the left not basing on description but basing on being a necessary condition of orientation in space. In the last part of the talk I will try to briefly sketch the possible understanding of conceptual

character of pain experience where I will argue that (C2) one could understand pain as concepts viewed from subjective side.

Robin Zebrowski (Beloit College)
Troubles with embodied cognition theories

While there are still holdouts clinging to the strictly computational representational theories of mind, most researchers now agree that embodiment matters, in important ways, for understanding the nature of minds and our conscious experiences. Unfortunately, there has been a lack of critical examination of the very notion of "body" that we all rely so heavily upon now. When we do phenomenology, we generalize from our body to other bodies, and we assume that we aren't doing phenomenology in a vacuum, applicable only to the person doing that work. We take phenomenology to be useful in part because it can say something generalizable. So how do we make sense of our allegedly shared phenomenology when there isn't a single kind of body? Furthermore, how do we make sense of any of our theories of embodiment, from conceptual metaphor to embodied cognitive psychology, given the same premise? Plenty of these theories explicitly refer to a universal embodiment (see, for example, Lakoff and Johnson's 1999 book, Philosophy in the Flesh, where this universal body plays a large and important role in the theory, or even Gallagher and Zahavi's 2012 revision of The Phenomenological Mind.) To make progress on this question, we can look to evidence from multiple sources that show us any claims to a shared human embodiment are highly problematic. The neuroscience of tool use has shown us that our body schema changes to incorporate tools as though they are temporary body parts, and there have long been arguments that some tools used often enough become akin to new sensory organs. (Merleau-Ponty, for example, makes a claim like this when speaking of feathered hats and the blind man's cane.) Evolutionary biology constantly reminds us that the very notion of evolution is built on constant change over time. There is no single ideal human body (or genome), nor ought there to be. Variation is vital to the continuation of our species. Further, we can look to all sorts of social philosophy about gender, and race, and numerous social intersections of those facets of our bodies. Disabilities studies literature offers decades of further argument and evidence against the notion of a shared kind of human embodiment or experience. So there is no universal body that we can talk about in our theories of embodied cognition. And yet, the embodied cognition literature is undeniably powerful as an alternative to computational/representational theories. I will argue that theories of embodiment are overwhelmingly the appropriate research program for us to pursue in trying to solve the details of the mind-body problem. But I will also argue that it requires something like "similar enough" embodiment, and, at least right now, we have no idea what that means or how to even approach the problem.

Camille Buttingsrud (University of Copenhagen)
Defying the mind-body hierarchy - Proposing a reflective order of embodied self-consciousness

Philosophers investigating the experiences of the dancing subject (Sheets-Johnstone 1980, 2011; Parviainen 1998; Legrand 2007; Legrand & Ravn 2009; Montero 2013) unearth vast variations of embodied consciousness and cognition in performing body experts. The phenomenological literature provides us with definitions of reflective self-consciousness as well as of pre-reflective bodily absorption, but when it comes to the states of self-consciousness dance philosophers refer to as thinking in movement and a form of reflective consciousness at a bodily level – as well as to dancers' reported experiences of being in a trance and yet hyper-aware – we are challenged in terms of terminology and precise descriptions. After empirical research on dancers' experiences and studies of the above-mentioned philosophies of dance, aligning this material with Husserl, Zahavi and other phenomenologists' descriptions of reflection and embodied self-consciousness, I find it plausible to acknowledge the existence of a third state of self-consciousness; a reflective state experienced through and with the embodied and/or emotional self. The interviewed dancers describe their bodily self-consciousness on stage with terminology phenomenology traditionally uses on the order of reflection: they are (bodily) attentive, explicitly aware of the other and the world, disclosing their experiences through transformation (by means of the body), and (emotionally and/or bodily) articulating what they experience pre-reflectively. This could indicate a reflective state of self-consciousness, yet, there is a simultaneous lack of thinking and rational control, reports of artistic black-outs, someone else leading their arms and legs, of being in a trance. There seems to be an experientially lived as well as theoretically seen experience of the self in which the subject's bodily aspect of self "thinks"/reflects/accesses herself as object through/in/by means of her embodied activity, in which she is completely immersed. Embodied reflection is neither mystical nor exclusively experienced by artists or experts. It is the universal human experience of being profoundly focused through the non-conceptual aspect of the self.

Sara Manasterska (University of Warsaw)
Embodiment in the Languages of the Ancient Near East

This paper focuses on the common methodological issues that occur when we try to exploit embodiment theory to glean new insights about corpus languages, such as the languages of Ancient Near East. First, I shall provide an overview of linguistic domains which exploit the embodied human experience to create new means of expression. Although this experience must have been the same in antiquity as it is now, the shapes that the ultimate linguistic expressions assume can vary more or less subtly across time and space. Secondly, an account of problems and advantages of applying the embodiment theory to the analysis of ancient languages will be presented in more detail. On the one hand, exploring the embodied nature of linguistic expressions can bring important insights about the functioning of ancient cultures. On the other, however, many idioms and formulas, including those found in legal and religious texts, cannot be fully understood without extra-linguistic sources, such visual representations. I shall attempt to propose possible ways of coping with that state of affairs. Lastly, several examples from different text genres will serve to elucidate how embodiment theory can help us to further our understanding of ancient cultures.

Biju Antony (IIT Bombay)
Embodied Cognition and Samkhya System

Embodied cognition forms part of an increasingly popular trend in the philosophy of mind and cognitive science which emphasizes the role played by extra neural and extracorporeal factors in human cognitive processing. It is also viewed as a family of approaches to the study of cognition that advocates departures from classical cognitive science. It takes cognition to be a matter of processing mental representations in abstraction from the kind of body the system inhabits, the environment in which it is situated, and the relation between the two. The remedy associated with many versions of embodied cognition is a radical shift in the study of cognition to an approach that focuses on human beings considered as practical agents who interact with the world. At a minimum, embodied cognition proposes that the states and actions of the body play a causal role in processes that are traditionally considered cognitive. The Samkhya theory of mind is one of the oldest systematic treatise in classical Indian philosophy. It would be exciting to see how the Samkhya theory of mind will be viable and defensible in the light of embodied mind view. It is an attempt to situate Samkhya theory of mind with contemporary discussions of embodied mind and cognition. The phenomenological approach to mind and cognition in classical Samkhya will help us to see it as an embodied view of mind.

Russell McBride (University of Utah)
The Homeostatic Mind

In physics there has been an explicit pursuit for more than a half century to provide an all-encompassing theory that unites its divided domains under a single explanatory framework. Lesser known is the existence of a parallel pursuit underway in cognitive science toward a unified account of mind and behavior. According to the homeostatic mind theory, all physiological systems are homeostatic systems, the mind is a collection of physiological systems, so the mind is a collection of homeostatic systems too. It displays homeostasis, among other ways, at the neuro-molecular level, unconsciously in the perceptual invariants, in engrained neuromuscular patterns, as well as in general behavior and consciousness, and so provides a unified explanatory framework across different levels of granularity and diverse domains. First, I look at the currently dominant unified theory, called the Prediction Machine Model (Clark, Friston, Howhy) and conclude that it's got the most important piece of the puzzle, but only a piece of what is in reality a larger, more cohesive framework better described by the homeostatic mind theory. I then carefully explore three cases of organism behavior to illustrate clearly the mechanics of homeostasis and lay the ground work for a more generalized account of human behavior and consciousness in the future based on the homeostatic mind theory.

Klara Łucznik (Plymouth University)
Between Minds And Bodies – A study into group flow experience in dance improvisation

Dancers, as well as other performance artists, commonly associate high quality performance with a 'being in the flow' state. Previous studies suggested that flow is associated with being absorbed and experiencing feelings of energized focus, deep involvement, and success in the process of doing things, especially creative tasks (Csikszentmihalyi 1996). Further, a social psychologist Sawyers (2007) described group flow as a collective state of mind that is experienced by an improvising group. He defined a group flow as a peak experience when a group is performing at its peak level of abilities. This study assessed dynamics of flow experience and its individual/shared character in dance improvisation. Dance improvisation gives a unique opportunity to explore how people collaborate together while creating. It gives an opportunity to observe how new ideas appear not simply from the internal processes of a creator but rather from the interaction between the minds bodies and the environment acting on and between the group of improvising dancers. Therefore improvisational scores serve in this study as a laboratory for group flow research (c.f. Sawyer, 2000). Five

groups of four dancers performed together four different improvisation scores, based on sense awareness and multimodal imagery. Flow experiences were assessed using a video stimulated recall method (Rowe, 2009), that asks dancers to reflect upon their own process just after completing the score by: (a) Commenting on their awareness, actions, thoughts and images and their relation to others while watching a video recording. (b) Identifying those moments in their dance when they experienced 'flow' by annotations on video recording. Comparing to previous studies that only used general evaluation of group experience or individual reports, this method allows researchers to explore whether the flow experience is simultaneously shared between group members. Differences in dancers' awareness and improvisational strategies between high and low group flow tasks where explored. The results offer deeper understanding of flow state in dance improvisation and its shared character.

Luke Kersten (Carleton University)
Music, Affect and Extended Cognition

The view that cognition extends beyond the body is well entrenched within cognitive science and philosophy of mind. Both the major positions and standard dialectic moves are by now well established. Recent years, however, have seen a return to an earlier phase of the debate between individualist and externalist views of mind. Several authors have begun to offer extended treatments of more specific topics, such as moral cognition or personal identity (e.g., Sneddon, 2011; Wilson & Lenart, 2014). One topic, in particular, that has received increased attention from externalists is music cognition. Some have argued that music not only shapes emotional and cognitive processes but also sometimes literally extends those processes beyond the bodily envelope. These proposals stand to substantively reshape orthodox music cognition. Music, on these views, no longer constitutes an external resource that impinges on internal processes. Rather, it forms part of what it is have an emotional or cognitive process.

The aim of this paper is to evaluate the case for extended music cognition. This is achieved by examining two of the most comprehensive accounts that have been offered to date: Joel Krueger's (2014) "musically extended emotional mind" and Tom Cochrane's (2008) "expression and extended cognition". To determine the strength of these accounts, each view is evaluated against three anti-externalist arguments: the Coupling-Constitution Fallacy, the Motley Crew Problem, and the Argument from Scientific Conservatism. It is argued that although both accounts offer important steps toward extended music cognition, each remains underdeveloped. This is because both accounts remain open to one or more of the internalist challenges. This leads to the proposal of an alternative "extended computational approach to music cognition" (ECMC). The claim is that music cognition forms part of an extended cognitive system because it involves computational processes that range across environmental and in-the-head elements (Kersten, 2014). It is further argued that Krueger and Cochrane's account are well advised to incorporate elements of the ECMC, as it successfully overcomes each of the internalist challenges.

Bruno Pušić (University of Zagreb)
A Survey of biologists on the species problem

My PhD dissertation is on the species problem in the philosophy of biology. In order to determine the attitudes of active biologists on the key assumptions, concepts and positions of the species problem. I conducted a broad survey on members of over 150 departments of biology at universities and institutes across the world. More specifically, the survey was designed to check the validity of the following claims that are often made in the literature on the species problem: 1. The species concept is a fundamental concept in biology. 2. The species is the fundamental unit of evolution. 3. The species problem is of great importance in biology. 4. Biologists think that species are real entities. 5. Species as individuals is a dominant position on the ontological status of the species. 6. Species as individuals position implies that species really exist. 7. Species essentialism is not a plausible position in modern biology. 8. Species monism implies that species really exist. 9. Species pluralism implies that species do not really exist. 10. Most biologists use biological species concept in their research. This type of survey has not been performed before, and the results are quite surprising. On this conference I would present the methodology and the results of my survey on the species problem, followed by some comments.

Krystyna Bielecka (University of Warsaw)
Cognition and representations in ethology

There is a hot debate on the mark of cognitive in cognitive science and philosophy (Adams and Aizawa 2008; Adams and Garrison 2012; Adams and Aizawa 2010; Rowlands 2009). Some philosophers point out that defining cognition in purely behavioral terms is problematic. One problem is that a theory of cognition must not only specify what cognition enables agents to do, but also how it enables them to do (Adams and Aizawa 2008; Buckner 2011). In my talk, I will discuss this general claim of what cognition is in the field of ethology. Firstly, I will briefly present Adam's and Aizawa's criticism of purely behavioral criteria of cognition and his proposal for the mark of the cognitive, which is

intrinsic intentionality (in the sense of Searle's). But this is too vague. He doesn't further explain the role of intentionality in cognition, so he doesn't show how intentionality is indispensable for cognition. Adam's and Aizawa's proposal remains controversial (Rowlands, 2009) and is at odds with comparative psychology and ethology. Then I will characterize an alternative approach as defended by Buckner (2013) who proposes a homeostatic cluster theory of cognition. Buckner reviewed various reasons ethologists and comparative psychologists use to justify the claim that certain processes are cognitive rather than merely associative. He compiled a list of criteria of the cognitive: context-sensitivity, speed, class formation, higher-order abstract learning, multi-modality, inhibition, monotonic integration, expectation generation and monitoring. I will explain what each criterion means as well as point out how it is related to a broad variety of neural processes in animals. Buckner's account fits the practice in ethology but he doesn't emphasize enough the role that representations play in the cognitive processes. I will claim that some of the abilities he listed as cognitive actually need mental representations. But these are best understood in terms of teleosemantics (Millikan 1984; Millikan 2004) rather than in traditional ways associated with intrinsic intentionality.

Magdalena Brodziak (Adam Mickiewicz University in Poznań)

The cubicles of historical vivisection. A cognitival tools of realizing, explaining, and acquiring the historiography commonly understood as abstract construction

The paper focuses on the matter of the confrontation between two cognitival perceptions on the historiography – the one perfectly harmonized with sociology and an attitude based on physical reaction of the mind of an author (individual). Dividing an apparent homogeneity visible in processes of creating and receiving the problem of history may be treated as artificial, but paradoxically, it may be easily justified by analyzing the pregeneses of methods of describing the history through the enactivism. It not only confirms the possibility of proposed schism of sociological and non-sociological act of thinking but also leads to the presentation of appliance of each matters in literature. Dissonant ideas of connecting historicism to the act of creating literature would be exemplified by different historical objects included in Andrzej Leder's Prześniona rewolucja. Ćwiczenie z logiki historycznej (mainly the discussion on Leder's outline of symbolism), Stanislaw Lem's The Cyberiad and Prowokacja, Emil Zola's Germinal, Yuval Harari's Sapiens: A Brief History of Humankind and Mark Twain's The Adventures of Huckleberry Finn and William Faulkner's books.

The danger of finding an ambivalent elements in sociology, as this human science may also be classified as a tool of creating the historiography, in this paper would be heavily minimised as the fundamental role would be given to mechanism of human mind that are able to semi-physically modulate the history. What is more, the paper would introduce the concept of converting the sociological, not clearly defined methods of reasoning into certain literary and philosophical tools of depicting the history. But the main goal would be to analyze so called the quasi-biological, practical tools and mechanisms of projecting the history in human mind. Leder's symbolic area as well as semi-biological, cognitival effects of philosophical intervention on human mind processing the historic concepts, would be a priority.

Anita Galuschek (Heidelberg University)

Me, Myself, and the Other. Melanesian and Western Ideas on Selfhood and Recognition

In this abstract for a symposium paper, I argue for an interdisciplinary philosophical-anthropological approach to enable social and relational investigations in empathy, agency and autonomy by opening up a window on the motivation of recognition. I show, by a hermeneutic-phenomenological account, how biographies as narratives can help to understand the other within her life-world, even if the life-world is the very part of our personality as a dividually conceived relational self like cultures in Melanesia perceive themselves. Therewith, personhood can be conceived in relationality that is understood as a category of the human being endowed with a stronger focus on culturally and historically framework instead of relying exclusively on individuality and subjectivity. To show this relational movement in the life-world, I introduce 'the Melanesian' worldview on personhood. This worldview assumes that we are 'dividuals' and thus holistically relational. At the same time, it lets the perception of an objective world shift into a world of animated entities which become parts of the human. In consequence, we are recognized and we recognize others both on a personal as well as on a social level. The leading question, still unsolved and at the same time insolvably linked with the relationship of individual and society, is: why are we relying on recognition? In other words: how do I recognize me, my self, and the other? Building on this set of philosophical and anthropological arguments, my purpose is to draw up a self-based model of mutual recognition which includes all stages of mutual recognition: recognition of one's own identity (autonomy), recognition of one's own acting (agency), and recognition of others (empathy).

Robert Zaborowski (Polish Academy of Sciences)
Affectivity in its relation to memory

It looks obvious that various feelings are memorized, forgotten and recollected in several degree. Some of them are forgotten. Some of those forgotten can be recollected while others are lost forever. For example sensible feelings and psychic feelings are memorized and remembered in a different manner. I argue that the complexity of memory–feeling relation is just another evidence of how much intricate is the realm of affectivity. As such, the argument is understood to be a supporting element with a view to heterogeneity of affectivity. The method is deductive with a consideration of a few of empirical materials. The paper will focus on some categorial distinctions in order to shed light on memory–of–affectivity dilemma. I start with a remark on a difference between thinking and feeling (e.g. thinking sadly about (a different) joy or joyfully about (a different) sadness vs experiencing (i.e. feeling again) joy that is remembered sadly or sadness joyfully, Augustine's example). Then I go on, first, with three categories of feelings ((1) unforgettable = always presentable, (2) forgettable and rememberable = retrievable, (3) forgettable and unrememberable = definitively lost) and, in order to make the picture more adequate, with a consideration of these three categories in relation with the temporal nature of feelings (i.e. momentaneous, short lasting, and long–term feelings). I end with example for each particular case distinguished and a final remark on complexity of the world of feelings, the feature evidenced by memory as a function of feelings.

Martin Krampell (Linköping University)
Providing a Dual Process Account for the Relationship Between Affect, Emotion and Cognition

The fields of cognition and emotion have long been divorced and seen as competing and fundamentally different aspects of the human mind, with the issue still being debated to this day (see Huntsinger, Isbell, Clore, 2014; Storbeck & Clore, 2007; Izard, 2009). The Platonic categories of emotions (e.g. the "basic" emotions: anger, sadness, happiness etc.) have since their inception been upheld as an integral part of the human mind (Barrett & Wager, 2006). Early research on emotions was based on a dichotomous distinction, that emotions had a clearly separated function from that of cognition. For example, during the 1980's, the field of emotion spawned the controversy dubbed the primacy of emotion, and the long following debate on the subject (cf. Lazarus, 1984; Zajonc, 1980, 1984). However, separating emotion and cognition to independent entities, and further into any constituent components, is not necessary for several reasons. Firstly, the underlying mechanisms of emotion and cognition are constructed from much of the same parts, and are neurologically interconnected (Storbeck & Clore, 2007; Lindquist et al., 2012; Barrett, 2012; Barrett, Wilson-Mendenhall, Barsalou, 2015; Russel, 2003). Secondly, dissecting these concepts would reduce the richness of their complexity (Storbeck & Clore, 2007), and thirdly, because the one often requires the other (Huntsinger et al., 2014; Solomon, 2008). Theories of cognition and decision making often lack descriptions of emotions (e.g. Kahneman, 2003; 2011; Evans & Stanovich, 2013), while theories of emotions often characterize cognition too broadly (e.g. Zajonc 1980; 1984; Lazarus, 1984; Izard, 2009). The purpose of this article, therefore, is to provide one possible account of how the fields of emotion and cognition can be integrated to form a coherent whole. To this end, a dual information processing theory (Kahneman, 2003; 2011) has been adapted to visualise the relationship between affect, emotion and cognition. This distinction is by no means original or unique, but stands to act as an important first step towards the creation of an encompassing and competent theoretical framework. As such, it must be regarded as purely functional, and not seen as having any teleological application.

Michał Barcz & Leon Ciechanowski (University of Warsaw)
Where do the reasons come from

Gilbert Harman was one of the few philosophers who were not surprised with so called Knobe's effect. Indeed in his Practical Reasoning, an article of 1971, he claimed that if an agent has reasons against ϕ-ing, then if one does it as a foreseen consequence (a side effect) of something else that one intends to do then he is ϕ-ing intentionally. We call this thesis the Harman's Statement. It is widely accepted that Harman's Statement explains Knobe's effect (at least the harm vignette), however it has never been directly checked. E.g. in the classical Knobe's surveys of the first decade of 21 c. the respondents were asked whether CEO intentionally harmed the environment, but they were not asked whether CEO had any reason not to. Our suggestion is that the fact that CEO had a reason not to harm environment is implicitly assumed by theoreticians explaining Knobe's effect because of an evident axiological background of the story. In our presentation we propose a certain operationalization of Harman's Statement and show the results of our studies conducted in order to test it. In our experiments we used classical Knobe's vignettes as well as our original stories.

Jan Winkowski (University of Warsaw)

The role of modifiers in the Knobe Effect

A number of studies (see Knobe 2010 for a review) suggest that the moral status of an action can affect the ascription of non-moral attitudes. In particular, people tend to attribute intentionality when the side-effect of an action is bad, but not when it is good. This is known as the Knobe effect or as the side-effect effect (SEE, for short). The effect was first described by J. Knobe (Knobe 2003) with respect to the notion of intentional action. It was later demonstrated that it affects many different notions (e.g. causality and knowledge). This suggests that the reason behind SEE is not connected to a particular concept but rather that it has a universal cause. An easy way to search for such a cause would be to show that there is a general process which makes us shift our judgment in light of something morally relevant. The first step in showing that this is indeed governed by such a general process, would be to show that SEE manifests itself no matter what modifier is used to modify the ascription of the bringing about of the side effect. In order to test such a hypothesis I conducted an experimental study. The main idea behind the experiment was to test the role of modifiers in the blame ascription process. I hypothesized that there is a mechanism in our perception of a given situation, which makes blame ascription automatic. If this was really the mechanism behind all the different SEEs, then it should be strong enough to make people assign responsibility even using modifiers they don't understand. The study was conducted in Polish. First, I had a control group, which was almost an exact replication of Knobe's original experiment except that the participants were asked simply whether the chairman harmed/helped the environment. No modifier was used. I wanted to see whether the SEE needs any modifier to

appear. Then, in the second part of the study, I tested whether the use of artificial or ungrammatical (i.e. endemically, fodderily, catribily) modifiers will trigger the effect. The results were quite surprising. The effect of modifiers was easily noticed, i.e. the use of every modifier made fewer subjects answer "Yes" in both (harm and help) conditions, than in the control group. Depending on the modifier, this decrease was more significant in the help condition than in the harm condition. Also, there was a significant difference between the amount of "Yes" and "No" answers in some of the conditions. However, no disproportion of a size similar to Knobe's was observed. In the control group, there was a significant difference in the amount of "Yes" and "No" answers between harm and help condition, but the observed proportion, of positive and negative answers makes unambiguous qualification of the result as SEE debatable. The results suggest, that the SEE is a much more general phenomenon then was previously believed, and that it might not be connected to any particular modifier. Also, some methodological issues arise, among which the most important is: what exactly do we call SEE?

Sławomir Mijas & Ignacy Szczeniowski (University of Warsaw)

On the Mysterious S-M Effect—Does Knowledge Imply Belief?

In our talk, we would like to present and discuss some peculiar phenomenon discovered in experimental philosophy, which can tell us something interesting about the folk concept of 'knowledge' as well as its connection to the intentional action. The famous Knobe effect (Knobe 2003) instructs us that people are more likely to attribute intentionality to an action which side effect was morally bad (or wrong), than to an action that had morally good (or right) side effect. When the chairman of a corporation decides to introduce a program that will harm the environment, and he knows about this consequence, and does not care about it, people claim that he harmed the environment intentionally. However, when he introduces a program that will help the environment (and all the other factors are equal), people respond that his action was not intentional. As shown by Beebe and Buckwalter (2010), there is an analogous effect with respect to the attribution of knowledge to the agent. It is to say, people are more likely to agree that an agent knew about the side effect of her action, if the side effect was morally negative. When the side effect was morally positive, people tend to think that the agent did not know that her action was going to bring it about. The asymmetry with respect to the ascription of knowledge is known as 'the epistemic side-effect effect.' We know for a fact (Beebe 2013), that there is also an analogous asymmetry in the ascription of beliefs. All three of these results were obtained by surveying native English speakers. However, most recently Marta Zaręba (Zaręba, unpublished) has discovered that native Polish speakers do not generate the epistemic side-effect effect. As she has shown, in both harm and help cases people claim that the chairman did knew about the side effect of his action. Therefore, one would expect that since in Polish language there is no asymmetry in ascription of knowledge,neither is there one in ascription of beliefs. As we have discovered, nevertheless, native Polish speakers do attribute beliefs in asymmetric way, similarly to the Knobe's asymmetry. If, according to the surveyed people, thechairman in the help case knows about the side effect (as shown by Zaręba), and yet does not have corresponding belief (as shown by our study), it means that according to the folk concept of 'knowledge,' it does not even require any belief (see also: Myers-Schulz and Schwitzgebel 2013). In our paper, we present and moot the most recent results of Zaręba's study and our research, to look for an explanation of the phenomenon.

Aleksandra Koltun (Maria Curie-Sklodowska University)

Practices of producing knowledge for a social change. A case study of a Polish non-governmental organisation

The purpose of my presentation is to deliver a better understanding of practices of producing knowledge which is supposed to effectively act towards a social change. My conclusions are based on a qualitative case-study research conducted in a Polish non-governmental organisation dedicated to reinforcing public participation and modernizing the state. In my presentation I am going to focus on one of the issues that has emerged as crucial to knowledge practices in the researched field: how to produce 'knowledge packages' which will become effective in local contexts whilst staying capable of travelling between them. Specifically, I will show various examples of translating several types and forms of knowledge, especially of propositional, practical, presentational, and experiential kind (cf. Heron, Reason 1997) together with the accompanying axiological background, aiming at various audiences under distinct circumstances. This will also allow me to look into the strategies of recognising and mobilising not only the human actors, but also non-human resources, settings, and devices. As a result, I argue that the 'knowledge package' has to be created and transformed together with the setting in which it is intended to operate. Knowledge processes are therefore of twofold character: the knowledge package is made effective not only by means of adopting it to some 'external' conditions, but also the conditions themselves are accommodated to knowledge. Altogether, I conclude that the boundary between the process and the product is diffusing, undermining our understanding of knowledge as a well-defined, static entity. Rather, we should be looking for knowledge practices that are intrinsically embedded, engaged within and, at the same time, transforming the world. Thus, the research results presented will allow me to briefly refer myself to some major disputes over the possibility of abolishing representationalism and essentialism while recognising the collective, material, and temporal dimensions of the processes of knowledge production.

Kinga Jęczmińska (University of Warsaw; Jagiellonian University Medical College)

The sensorimotor theory and the sense of taste

Gray and Tanesini (2010) argue that Noë's sensorimotor version of enactivism is applicable mostly to sight, hearing and touch, but cannot account for taste and smell. They acknowledge that there is some instrumental dependence between taste perception and sensorimotor skills, which confirms Noë's belief in the interplay between perception and action governed by the sensorimotor contingencies. Still, Gray and Tanesini claim that there is no justification for a stronger claim that experience itself is constituted by sensorimotor knowledge. In Noë's enactivism, the specific sense of spatiality comes from the construction of one's perception of factual properties out of one's relation to experienced properties in egocentric space through their co-variation with movement (Noë 2004). Gray and Tanesini claim that the sensorimotor knowledge is insufficient to provide experience with such a dual content (i.e. a distinction between actual and appearance properties) in the case of taste, although the distinction is applicable to sight, hearing and touch. However, it has been acknowledged that the gustatory system receives sensations not only from the ordinarily understood sense of taste, but is in fact a multimodular sense (Araujo, Simon 2009). Although the multimodularity of taste is accepted by Gray and Tanesini, they do not develop the idea to examine its possible implications for their argument. My paper focuses on the multimodularity of taste to provide a counterargument to Gray and Tanesini's analysis. In particular, it is useful to employ the analysis by Smith (2013), who claims that the objects of perception in tasting are not tastes but flavours. He illustrates how data received through the sense of taste are intertwined with data coming from other senses and channels: retronasal olfaction, somatosensory sensations, mechanoreceptors, trigeminal irritation. Even if many subjects may experience a taste as unified on the conscious level, the experience of a flavour should be viewed as a complex interaction effect. It provides the opportunity to attribute to the gustatory experience the required duality: the difference between the regular flavour of a given substance and its momentary experience may constitute the difference between actual and appearance properties. The difference can be observed in experiments that examine cross-sensory interactions, for instance the influence of substance colours on flavour identity or flavour intensity (cf. Spence et al. 2010.).

Adrian Thomas Downey (University of Sussex)

Radical Sensorimotor Enactivism

In this talk I outline my own theory of experience, which I label 'radical sensorimotor enactivism'. I begin the talk by focusing on sensorimotor enactivism [SE]. SE is committed to three key claims: relationalism (we directly perceive objects in the environment), knowledge of sensorimotor contingencies (knowledge of the law-like relation between sensation and movement), and attention = consciousness (attention is both necessary and sufficient for consciousness). I outline the two ain versions of SE (Alva Noë's 'actionism' and Kevin O'Regan's 'sensorimotor enactivism'), and explain where, and why, I differ from these theorists. In short, I endorse the general thrust of O'Regan's account, but I improve on his view by focusing on clarifying what attention is and how it works, and explicating (what I take to be) the relation between sub-personal sensorimotor knowledge and personal level experience. Next, I outline radical

enactive cognition [REC]. REC commits to a thorough-going antirepresentationalism about all non-linguistic mental activities. It is typically thought that SE and REC are separate versions of enactivism. However, the view I endorse is a combination of the two. Thus, my position is more accurately labelled 'radical sensorimotor enactivism' [RSE]. The reason I can combine these theories is because I endorse (an anti-representational version of) Chris Mole's adverbial theory of attention. On such an account, attention is constituted by an interaction with a perceived object when the interaction is carried out in a specific manner. The interaction counts as attentive only when it occurs with 'understanding'. Thus, on the RSE view, in order to perceive, one must be capable of 'attentively perceiving'. Finally, I provide a precise definition of my theory, and list the benefits of endorsing it. On RSE, we are able to perceive because our brains possess sub-personal (non-propositional) knowledge of sensorimotor contingencies, which allows us to come into direct perceptual contact with objects in the environment. However, we only come to perceive those objects when we attend to the fact that our brains are currently exercising this sensorimotor knowledge. Thus, the brain is thought to possess sensorimotor knowledge, and personal level experience is explained by our attending to this knowledge being put to use. The theory is radically enactive because it commits to a thorough-going anti-representationalist view of perception. RSE has a number of practical benefits: it provides an anti-representational SE theory; it provides a (much-needed) definition of what attention is, on the SE view; and, it provides a novel take on the relation between brain and mind, such that contemporary cognitive science only requires mild metaphysical tweaking, as opposed to wholesale revolution.

Jasper van den Herik (Erasmus University Rotterdam)
Content in a Radical Enactivist Account of Linguistic Cognition

Radical Enactive (or Embodied) Cognition (REC for short) proposes a root and branch denial of representationalism and intellectualism in the cognitive sciences (Hutto & Myin 2013). According to REC, basic cognitive processes emerge from recurrent dynamic interactions between an organism and its environment. This entails that the notion of content – understood as correctness conditions – is no longer needed to explain cognition. At the same time, REC assumes that these non-representational explanations break down in the face of typically human cognition such as linguistic cognition, which does rely on the rule-governed manipulation of truth-evaluable representations and therefore admits of propositional attitude explanations. In this paper I argue that this distinction between the explanation of contentless and contentful cognitive activities is problematic. The aim of this paper is to therefore to reconceptualise linguistic abilities in order to bring an explanation of linguistic cognition within the reach of REC. I argue that our linguistic abilities can be characterised in terms of know-how that is regular without being regulated by explicit or implicit rules or norms. Instead of propositional content, we should adopt an account of what I call minimal content, in which not reified utterances, but the (linguistic) behaviour of humans is the vehicle of content. The capacity to conceive of linguistic symbols themselves as the vehicles of content is a socioculturally and ontogenetically late-developing capacity that is naturally at home in theorising practices, such as philosophy. It is in these practices that the notion of a proposition finds its natural home. I flesh out this account of minimal content in terms of social triangulation in which a teacher and a pupil both interact with an object. I show how through this social triangulation the teacher can educate the attention (Ingold 2001) of the pupil, thereby bringing its behaviour in line with conventions, understood as reproducible patterns of world-directed interaction. In these activities, words get to play a very distinct role: the allow for the sedimentation of the education of attention by acting as what Bottineau (2010) calls mind-guiding pieces of voicing. From this, the child acquires linguistic knowledge that is know-how, and not knowledge by rules (Ryle 1945). This means that there is no synchronous cognitive gap between contentless and contentful cognition (Loughlin 2014). Contentful cognition is therefore not a novel kind of cognition and accordingly does not admit of a different kind of explanations when compared to contentless cognition.

Michał Klincewicz (Berlin School of Mind and Brain; Jagiellonian University)
Action and temporal mental qualities

In this talk I offer a model of interaction between action and time perception mechanisms. What motor representations and time perceptions share, I argue, are temporal qualities, such as duration and timings, which enable organisms to make temporal discriminations. Temporal qualities are ideally suited to facilitate rapid exchange of temporal information between action and perceptual mechanisms during action execution. Some of the evidence for this view comes from research on Parkinson's Disease, which negatively impacts time perception and action execution at the same time and at the same rate. Anatomical evidence suggests that what underlies this particular profile of deficits and recovery is involvement of the same neural network, which prominently involves the cerebellum—already known to be crucial in both action and time perception in the subsecond range.

Krzysztof Dołęga (Ruhr Universität Bochum)

Action-oriented Predictive Coding as Virtual Enactivism

In this paper I will pose the question, whether Action-oriented Predictive Coding can be treated as a form of enactivism? Because of the relative novelty of the framework in question, its relationship to the embodied approaches to cognition has been a subject of a heated debate. Although some authors (Clark 2013, Seth 2015) argue that predictive coding offers an enactive view of perceptual experience, others (Hohwy, 2014) have outright denied any similarity between the two. Here I defend the position that Predictive Coding is a form of enactivism, albeit one that is not embodied. I coin the term 'virtual enactivism' to stress that Action-oriented Predictive Coding theories do employ the sensorimotor account of perceptual experience, but do not consider it to be constituted by the non-neural body or the environment. In the first part of this paper I will use a well established phenomenon of sensory substitution to illustrate how Action-oriented Predictive Coding can explain cases of non-standard perception. I will argue that, on Predictive Coding, sensory substitution is a result of tracking particular set of environmental regularities responsible for similar structuring of the input patterns in both the substitute and the original modality. Having done that, I will juxtapose the proposed explanation with the rich body of enactive literature tackling this subject (Hurley & Noë 2003, Auvray & Myin 2009). By focusing on the role active-inference and prior knowledge play in the predictive account of perception, I will try to show that the framework in question offers an attractive operationalisation of the problematic notions of sensorimotor-contingencies and sensorimotor knowledge (Shapiro 2011). In the second part of this paper, the above conclusion is contrasted with the arguments against the embodied nature of the explanations offered by the Predictive Coding framework (Hohwy 2014, Burr & Jones forth.). Building on the claim that the framework offers a unified account of the processing responsible for perception, hallucination and dreaming (Clark, 2013), I will put forward the proposal that Predictive Coding endorses a kind of 'virtual-enactivism' in which only prior sensorimotor knowledge is necessary for perceptual experience.

Mark-Oliver Casper (Ruhr University Bochum)

Unbelievable Problems. How to deal with inference making and beliefs in situated cognition theories?

Situated cognition theories often elaborate on "adaptive behavior" to understand the intelligence of biological organisms (and machines). But this research doesn´t account for a question which always has been – in one form or another – a philosophical core issue: how should we understand inference making and having beliefs? A functionalist version of the extended mind thesis only slightly answers this question. E.g.: Clark states that language in general is nothing but a computation enhancing artifact. Moreover, he talks of representation-hungry tasks which get solved by the belief constituting, body extending cognitive machinery of humans when they linguistically deal with the absent and the abstract (Clark 1998, 162; Clark/Toribio 1994). Other philosophers like Menary (2007) claim that cognition is primarily a social phenomenon that is guided by cognitive norms. But he also doesn´t elaborate on inference making or beliefs in particular. Gallagher (2011, 2013), as proponent of a liberal version of the extended mind thesis, maintains that the accomplishment of certain cognitive processes ¬– like making this inference and holding that belief – depends on institutional procedures resp. "mental institutions". However, the claim that mental institutions are crucial for cognitive processes (like judgments in legal systems) does not lead to a detailed analysis of inference making and having beliefs. I claim that such analysis can be integrated into the idea of mental institutions by using and slightly altering claims of social-pragmatic inferentialists like Brandom (1994). A basic claim of Brandom is that there is content-based reasoning and that this reasoning comes along with material inferences. Material inferences are inferences which are formally invalid – e.g. because a premise is missing – but which are nevertheless frequently endorsed by others in discursive practice what makes them function as practically legitimate inferences. In this setting, beliefs are seen as parts of inferences since they are playing the role of premises and/or conclusions. But there are different institutions within which only certain inferences are endorsed. The endorsement of inferences depends on institutional procedures humans engage with. So, the idea of mental institutions can situate social-pragmatic inferentialism in the world and thereby answer the initially raised question.