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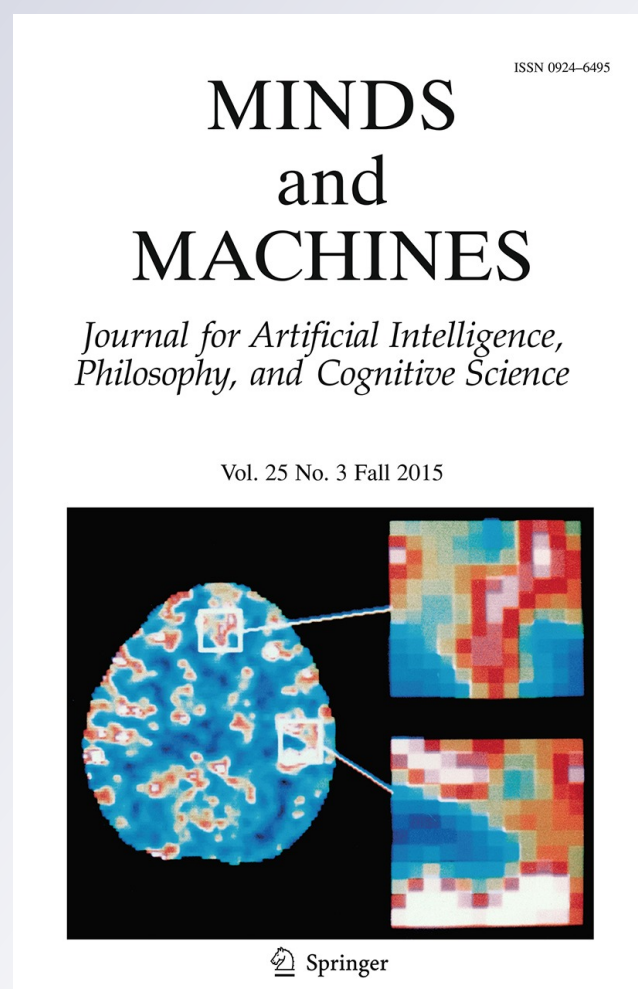
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Joëlle Proust: The Philosophy of Metacognition: Mental Agency and Self-Awareness

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This interesting book constitutes a remarkable contribution to our understanding of a rather neglected subject in philosophy of mind. It provides a comprehensive theory of the metacognitive capacity in relation to topics in the philosophy of mind, such as mental action, normativity, self-awareness and self-knowledge. It is more than a collection of Joëlle Proust's previous papers on metacognition; it explores recent objections, provides new analyses and arguments, and presents new data from psychology and neuroscience to support her view.

Metacognition is a word that has caused fascination in psychology and philosophy. However, its traditional definition as cognition about cognition or thinking about thinking has not yielded an adequate understanding of the phenomenon. After reviewing the history of this concept, Proust shows that it hides a history of confusion and misunderstandings. Proust has spent more than 10 years working to disentangle two opposing ways of understanding the concept. The first is the attributivist view, defended by Peter Carruthers (2011). According to this perspective, metacognition is the production of self-attributions or self-ascriptions of mental states by the mindreading capacity. The second is the evaluativist view, defended by Proust. According to this view, metacognition is the procedural capacity to non-conceptually evaluate and control one's own mental processes and actions by means of noetic feelings (chapters 1–3). Yet, in defending the evaluativist view, Proust is not committed to the denial of the fact that subjects sometimes form self-ascriptions and that these can play a metacognitive role. Her point is rather that

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self-evaluation is phylogenetically and ontogenetically prior, and therefore does not depend on the mindreading capacity.

In chapter 4, Proust presents her main arguments against the attributivist view and in favor of the evaluative view. Chief among these is that unlike mindreading, metacognition is always action-dependent (i.e., the subject is actively engaged in the process and evaluates its adequacy). Two other features of metacognition (features that the mindreading capacity does not possess) are norm governance and direct action guidance. Norm governance refers to the fact that procedural metacognition always selects and acts based on a given epistemic norm to regulate a cognitive process, and direct action guidance refers to the fact that engaged cognition guides action directly. I found this characterization of metacognition to be a useful way of distinguishing this capacity from mindreading. An important argument that Proust brings against the attributist view draws on data from comparative and developmental psychology: there is evidence that agents like children of about 3 years old and some non-human animals are able to monitor and control their cognitive processes despite lacking the appropriate mental concepts to construct self-ascriptions or metarepresentations (i.e., a mindreading capacity); therefore, mindreading is not a necessary condition for metacognition. In line with this argument, in chapter 5, the author reviews comparative evidence for procedural metacognition in primates and defends the metacognitive interpretation of this evidence over four non-metacognitive interpretations provided by Peter Carruthers and other skeptics. She also presents evidence for a double accumulator model that explains procedural metacognition in terms of adaptive accumulators. Adaptive accumulators are the mental mechanisms that allow the subject to prospectively or retrospectively evaluate her mental actions.

In order to account for procedural metacognition, which does not depend on the possession of mental concepts and metarepresentations, Proust introduces, in chapter 6, a feature-based format of mental representation inspired by Strawson's notion of feature-placing thought. Proust calls these representational structures "cognitive affordances," and explains them by analogy to the well-known "motor affordances," which non-conceptually and non-propositionally guide behavior. This new representational format allows her to account for metacognition without mental concepts in young children and non-human animals.

Chapters 7 and 8 explore the nature of mental action and its constitutive relation to normativity. Proust's claim here is that mental action is a natural kind distinct from bodily action. The distinctive feature of mental action is that it has an epistemic or informational goal and thus it is subject to epistemic norms (as "constitutive requirements"), such as fluency, exhaustiveness, coherence, consensus, plausibility, relevance, or truth. Turning to epistemology, in chapter 9, the author explores whether her account of procedural metacognition in terms of noetic feelings commits her view to the tradition of epistemic internalism. Being a hard-core naturalist, Proust's strategy is to reveal that noetic feelings are ultimately determined by the external dynamics of the subject and external norms; what seemed internal at first sight turns out, after a careful analysis, to be external. This chapter, however, is probably the most speculative part of the book, since Proust

resorts to a thought experiment to support her claim, and not to experimental data as she does in the rest of the book.

How do we come to know our mental actions and mental processes? Chapters 10 and 11 develop a philosophical framework to answer this question. In chapter 10, Proust presents and discusses Peacocke's (2007, 2009) view on self-knowledge and self-awareness. She builds on Peacocke's work to defend the view that noetic feelings are the primary source of agents' non-conceptual self-awareness that one is mentally acting instead of acted upon. Chapter 11 offers a theory of the capacity of self-re-identification (i.e., thinking of oneself as the same individual over time) based on Proust's account of mental agency and self-awareness. It is by mentally acting, and by monitoring and controlling mental actions, that the subject is able to re-identify herself. Complementing these considerations, chapter 12 explores disturbances of the sense of mental agency in schizophrenia and claims that a semi-hierarchical control system is well suited to explain them.

Chapter 13 departs from the rest of the book, moving from the domain of mental agency and self-awareness to the domain of embodied communication. Proust claims that there are certain bodily gestures that are properly metacognitive; i.e., they perform the function of conveying information about conversational adequacy in a conversation. For example, a "puzzled look" may express that the hearer is having a hard time understanding the message.

Chapter 14 recapitulates the main arguments of the book and relates them to the dual system theory of cognition. Proust argues that the distinction between system 1 and system 2 is better framed in terms of inflexibility versus flexibility, rather than personal versus subpersonal. Thus, the inflexible character of noetic feelings is explained by their representational non-conceptual format. Employing the same logic, she argues that the flexibility of system 2 is ensured by the conceptual format of its representations.

There are three main contributions that this book makes that are worth highlighting. The most important of these is the clear distinction that is drawn between ordinary (i.e., bodily or physical) action and mental action. Philosophers, psychologists and neuroscientists often ignore this distinction and conflate these different types of actions in their theories. Proust provides a number of important arguments to distinguish both types of action: each of them has a different goal, a different type of control, a distinct phylogeny, and even a different phenomenology. A second contribution of the book is the claim that normativity is constitutive of cognitive agency and metacognition. Metacognition deserves attention not because it is something special that only humans can do (as it has been assumed by the philosophical tradition), but because it allows the subject to have normative control over her cognitive processes. Finally, the book provides an innovative account of mental agency and self-awareness based on noetic feelings and cognitive affordances. Noetic and metacognitive feelings allow the agent to predict and evaluate the cognitive adequacy of her mental actions. They are crucial for self-control and constitute an immediate form of self-awareness. This form of agency and self-awareness deserves more attention in the philosophical literature.

There are a couple of shortcomings that I would like to point out. The discussion about the relationship between consciousness and metacognition is rather

superficial. The issue deserved more attention and detail given the current interest among philosophers and psychologists in the topic. Although the distinction between procedural and analytic metacognition is enlightening, the relationship between these two forms of metacognition does not receive the comprehensive explanation that the topic warrants. Through the book, this relationship is always assumed but never explained.

All in all, the book takes into account and synthesizes the recent literature on metacognition, elaborates on it, and advances insightful ideas. Philosophers will find it thought provoking, while psychologists may find some conceptual constructions that will be of use in helping them to better understand and explain their own observations. It is unfortunate that the specialized terminology that is used throughout will prevent the general public from benefitting from this book.

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