Submetacognition: Towards a non-cognitivist account of the role of metacognition in human uniqueness

In the debate between proponents of associative and non-associative explanations of animal behaviour (i.e. Smith 2009, Beran 2019, Crystal 2009, Crystal 2019), Heyes' (2014) 'submentalising' account proposed that complex social behaviours could be explained without invoking the ability to represent the mental states of other agents. Heyes argued that a subordinate ape's ability to mislead a dominant ape into pursuing an inferior food source could be explained without invoking that subordinate ape's ability to know what the dominant was thinking. Rather than needing to represent things like, 'the dominant ape believes that I will lead him to the best food-source' or 'the dominant ape is not aware of the superior food source', the subordinate ape can simply track behavioural features of the environment - most significantly, the gaze of the dominant and his relation to the food-source - in order to form the sorts of predictions that allow him to guide his action flexibly enough to engage in complex behaviours like deceit. This submentalising interpretation, also dubbed 'behaviour-reading', shows how complex and apparently sociocognitive behaviours can get off the ground without complex representational abilities. This is significant because such abilities are taken to explain the differential flexibility of human and nonhuman animals' behaviour. The submentalising interpretation opens the door to the view that complex (i.e. flexible, adaptive) behaviours can be explained without invoking significant cognitive complexity, and in this spirit goes some way to closing the gap between accounts of human and animal behaviour.

The purpose of this paper is to extend this line of reasoning from mindreading to metacognition, developing a 'submetacognising' or behaviour-reading account of metacognition. The basic principle of this account is simple: when guiding one's own action flexibly, it is rarely, perhaps never, necessary to metarepresent one's mental states to oneself; rather, representing or otherwise accessing one's own behavioural states is sufficient. This account suggests that one's own mental state is inferred by the agent from his or her own behaviour - rather than 'looking within' and accessing some mental state that tells us what we're thinking, we construct our thoughts on-the-fly by inner observation of these behavioural states.

This paper explores a range of human and animal experiments to argue that submetacognising interpretations are powerful explanatory tools in both human and nonhuman animal cognition. The paper focuses on a range of experimental set-ups from comparative cognition (particularly, 2AFC, mirror recognition, perspective-taking and planning) to argue that submetacognitive interpretations can explain the flexibility of both human and nonhuman animal behaviours. I then explore the implications of this for the view that metacognition explains human uniqueness, sketching a non-cognitivist account of metacognition that distinguishes humans from nonhuman animals in terms of the changes we make to our ecological niche.

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