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Clarifying Metacognition System 1 & 2 with the Common Model

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Abstract

Dennett's (1981) call to use computational frameworks in philosophical analysis can assist in clarifying the distinction between System-1 and System-2 metacognition. Metacognition has been described as "cognition about cognitive phenomena" (Flavell, 1979) and is renowned for its particularly difficult issues. Understanding its "mysterious mechanisms" (Brown, 1987) has been obscured by the subject's abstractness and disputed terminology. Computation is uniquely suited to overcome these barriers as it forces definitional clarity. New research is supportive of the Common Model of Cognition as the best candidate for computationally modeling the functional organization of the human brain (Stocco et al., 2021). The Common Model represents a powerful tool for investigating unresolved cognitive issues as it is informed by a convergence of research and is well-defined. We propose that applying the Common Model as a philosophical tool can assist in clarifying the problematic distinction between System-1 and System-2 metacognition.