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Multiple Systems for Modal Cognition

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Abstract: The capacity for representing and reasoning over sets of possibilities, or modal cognition, has long been understood as central to many high level judgments. To date, however, little empirical research has sought to directly investigate the connection between these high-level judgments and the underlying cognition that allows humans to represent and reason over sets of possibilities. The present studies build on previous developmental research which suggests that the early emerging system for modal cognition treats norm-violations (e.g., immoral actions) as impossible. Across two studies, we provide evidence that a similar system for representing possibilities persists in human adults, despite the development of an additional capacity for reasoning about possibilities in a way that is independent of considerations of normality. Study 1 distinguishes between these two ways of representing possibilities. Study 2 demonstrates that the early-emerging system is often recruited when adults make high-level cognitive judgments.