

Remembering the Past and Imagining the Future:
The Constructive Episodic Simulation Hypothesis

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Abstract

Although studies of episodic memory have focused on remembering the past, an important function of episodic memory is to allow individuals to simulate or imagine future scenarios. We present fMRI evidence concerning the neural regions that mediate the construction and elaboration of past and future events. Participants were cued to construct a past or future event; once participants had the event in mind, they elaborated on it. Though there were some neural differences related to the construction of past and future events, elaboration of these events was characterized by striking overlap in regions comprising the autobiographical memory retrieval network. We link these and related data to observations indicating that episodic memory is a constructive process that is prone to distortion. According to our *constructive episodic simulation* hypothesis, simulation of future episodes requires a system that can draw on the past in a manner that flexibly extracts and re-combines elements of previous experiences, sometimes producing memory distortions that reflect the operation of adaptive processes.