RUHR-UNIVERSITÄT BOCHUM

RUB

IGSN - SYMPOSIUM

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AI-based analyses of narratives and their role for cognitive function

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Reactivations in the human brain bind episodic events into narratives

Consider what you know of Albert Einstein. Your knowledge likely forms a narrative, linking pieces of information related to the events of his life and work. Now consider what you did yesterday. This knowledge would again translate into a narrative linking the events of the day. These examples demonstrate that narratives organize events into knowledge. In this talk, I will propose that our brains achieve this through a process termed "replay". Originally observed in rodents during navigation tasks, replay involves the rapid reactivation of cell firing patterns related to previous locations, as if binding these locations into an internal model of the environment. Using a novel fMRI method and a Distributional Semantic Model, I revealed that reactivations can similarly bind the neural representations of episodic events into an internal model of a narrative. I will discuss these findings in the context of whether and how AI systems understand narratives.

Host:

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