



Metaphor or Reality: Episodic Memory as Mental Time Travel

A Review of

Mental Time Travel: Episodic Memory and Our Knowledge of the Personal Past

by Kourken Michaelian

Cambridge, MA: MIT Press, 2016. 291 pp. ISBN 9780262034098.

\$43.00

<http://dx.doi.org/10.1037/a0040475>

Reviewed by

Robert L. Greene 

When faced with a topic that is difficult to understand, it is common for people to seek a metaphor that can be applied to the topic. Given that human memory is both complex and challenging, it is not surprising that thinkers often approach it metaphorically. Spatial metaphors have been particularly attractive, as theorists have often conceived of memories as objects placed in some sort of storehouse and of the act of remembering as a search process for these objects (Roediger, 1980). However, alternatives to this spatial metaphor have long existed. In *Mental Time Travel: Episodic Memory and Our Knowledge of the Personal Past*, Michaelian discusses a different conception, one in which memory is viewed as a simulation process in which the rememberer imagines episodes from the past. Memory is to be viewed no longer as a search process unfolding in a spatial dimension but rather as a sort of mental time travel.

Michaelian is a philosopher, so much of the nature of the argumentation may strike experimental psychologists as a trifle exotic. Thought experiments are discussed in more detail than genuine experiments, and the focus is clearly on what a new conception of memory can offer to the field of philosophy. However, the book draws heavily from the psychological literature and is intended to be of value to psychologists seeking a new approach to the science of memory as well as to philosophers.

The Complexity of Memory

Michaelian first narrows the topic that is being addressed here by making clear that episodic memory will be the primary focus. He adopts the multiple-memory-systems hypothesis, asserting that “there are relatively few today who reject” (p. 19) this approach and claiming that the most general part of this hypothesis, the distinction between declarative and nondeclarative memory, “is acknowledged essentially universally” (p. 19). I have no idea whether these assertions about the attitudes of psychologists toward the multiple-memory-

systems hypothesis are true, although I suspect that there is a far greater diversity of opinion on these issues than is implied here. In the last few decades of the previous century, psychologists studying memory engaged in a strong debate about whether unitary or multiple approaches would be more useful. This debate eventually fizzled out to an inconclusive end, as many psychologists found ways to study the topics that interested them without trying to resolve what seemed to be a hopelessly inconclusive controversy. Still, even if I suspect that it is a mistake to assume that the existence of separate memory systems has become the overwhelming consensus, it is certainly a reasonable position, one with which many researchers would agree.

Michaelian argues for a nonstandard taxonomy of memory system, with the most central distinction being between cognitive memory and noncognitive memory. Priming, which is usually situated with more noncognitive forms, is instead described as “straightforwardly cognitive” (p. 30) for reasons that are never explained. Still, this is tangential to the main conclusion here, namely, that episodic memory is a separate system that can be considered largely on its own.

The Nature of Episodic Memory

Michaelian argues first that episodic memory largely has sensory, rather than propositional, content. At its core, it is not based on facts of what occurred when but rather on experiencing past events. He proposes a simulation view of episodic memory in which it can be viewed as a process of imagining past episodes. In this way, episodic memory has much in common with imagining future events, although there is a temporal orientation that ties episodic memory to the past.

The notion that memory involves construction of past events has a long history, with Bartlett (1932) offering the foundational statement of this approach. In this view, memory does not involve a search for a desired memory trace but rather the creation of an episode. Michaelian takes this further by arguing for an episodic construction system that can simulate episodes from the personal past by drawing on information originating in previous experiences. Following Tulving (2001), such a system is viewed as responsible for mental time travel into both the past and the future.

The notion of episodic remembering as mental time travel is a striking metaphor, and a renewed emphasis on constructive processes in remembering is welcome. However, Michaelian views this simulation argument as being a literal depiction of the nature of episodic remembering, rather than merely a striking metaphor. This may be stretching a valuable insight too far. It relies heavily on the phenomenology of remembering, assuming that true episodic memory requires subjective and perceptual dimensions. What is not clear to me is how much of episodic remembering truly involves the complex constructed episodes that Michaelian has in mind. For over a century, much of the psychological literature on memory has involved the presentation of lists to participants, who subsequently receive a test. It is not clear that these participants feel that they are engaging in mental time travel as they recall lists. Does this simulation theory say anything about this vast literature, or does it merely dismiss it as being not really episodic? I base my everyday life around memory for episodes, from knowing where I have to go when I wake up to remembering where I parked my car to go home. Personally, I have no phenomenologically rich episodes underlying most of this information. I remember where I

parked by accessing only the barest episodic details. A simulation theory seems to have little to say about the application of sparse episodic details that coordinates much of our life. Michaelian argues against restricting episodic memory to the basic details of past events but rather claims that the phenomenological experience of mental time travel is critical. It is not at all clear how often this experience takes place or what we are to do with episode-based behavior in which mental time travel does not appear to take place.

In psychology, many theorists work to develop formal models of memory processes (see Kahana, 2012, for a review of contemporary modeling approaches). The simulation approach, with its loose formulation and reliance on phenomenological experience, is unlikely to be seen as helpful in the development of such models.

The Challenges of a New Conception

Michaelian seeks to present a conception of memory that, although grounded in the past accomplishments of theorists such as Bartlett (1932) and Tulving (2001), nevertheless reinterprets our most fundamental conceptions of the topic. Having laid out the basic conception, he extends the work by showing how source-monitoring processes can help us distinguish between fantasy and memory and by speculating how animal memory may differ from human episodic simulation. There is much here that one can disagree with, as it is far from clear how far we can develop the metaphor of mental time travel into a true theory of memory. Still, this is consistently intelligent and thought-provoking. Certainly, this work has led me to consider questions that I had never thought about in my four decades of memory research. This is an essential book for anyone interested in memory. Although readers from psychology may see much to question here, they will also find a new and challenging perspective that will suggest a number of novel directions.

References

- Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology*. Cambridge, UK: Cambridge University Press. [PsycINFO →](#)
- Kahana, M. J. (2012). *Foundations of human memory*. Oxford, UK: Oxford University Press. [PsycINFO →](#)
- Roediger, H. L., III (1980). Memory metaphors in cognitive psychology. *Memory & Cognition*, 8, 231–246. <http://dx.doi.org/10.3758/BF03197611> [PsycINFO →](#)
- Tulving, E. (2001). Origins of auto-noesis in episodic memory. In H. L. Roediger III, J. S. Nairne, I. Neath, & A. M. Surprenant (Eds.), *The nature of remembering: Essays in honor of Robert G. Crowder* (pp. 17–34). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/10394-002> [PsycINFO →](#)