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False memories from nowhere: humans falsely recognize words that are not attested in their vocabulary

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Semantic knowledge plays an active role in many well-known false memory phenomena, including those emerging from the Deese–Roediger–McDermott (DRM) task. In this experimental paradigm, indeed, humans tend to falsely recognize newly presented words via activation of other previously shown stimuli. In the present study we aimed to test what happens in cases in which no apparent prior semantic knowledge is available, like in the case of entirely novel lexical stimuli. To do so, we evaluated semantic similarity effects in a DRM task with lists entirely composed by pseudowords (or "novel words,"i.e., letter strings resembling real words but lacking assigned meanings). Semantic similarity between pseudowords were established through a distributional semantic model able to represent in a vector space, not only attested words but also unmapped strings as bags of character n-grams. Participants were instructed to memorize those lists and then to perform a recognition task. Results showed that participants false and veridical recognition increased with increasing semantic similarity between each stimulus and the stimuli comprising its list, as estimated by the distributional model. These findings extend previous evidence indicating that humans are sensitive to the semantic (distributional) patterns elicited by novel words by showing that this sensitivity can even induce humans to falsely recognize stimuli that they have never encountered in their entire lives.

If you're submitting a symposium talk, what's the symposium title?

Old and new perspectives on the study of human memory

If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

Yes

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