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Remembering better: A bridge between paired-associate learning and higher-order cognition

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Abstract

Paired-associate learning is a classic paradigm addressing a most fundamental memory task: recalling examples of arbitrary associations between elements. One lesson is that semantics matters to this otherwise episodic task in that elaborative rehearsal connecting the words facilitates cued-recall. We ask whether two forms of semantic elaboration, inspired by higher-order cognition, can produce even better performance. Control groups performed ordinary elaborative study tasks (integrated imagery and compare/contrast) within a traditional paired-associate learning task. Experimental groups either: (1) completed a conceptual combination task requiring them to invent a novel concept aptly captured by the noun-noun pair; or (2) invoked relational cognition skills by predicating a propositional statement wherein the two concepts each fulfilled roles in a semantic relationship. Across three experiments relational predication showed a sizable advantage in cued-recall relative to controls; and additional evidence revealed a less robust benefit of conceptual combination. Implications for theory and application are discussed