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Recognition memory influenced by grammar

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Abstract

The validity of verbal working memory depends on language experience-independent capacities. We tested how grammatical knowledge impacts memory in the absence of overt language production and while controlling for semantic meaning of word pair stimuli. Native English speakers (n=129) completed: (1) ratings of unattested noun-noun compounds (e.g. ice-wallet) on meaningfulness; the (2) Author Recognition Test, measuring language experience; and (3) an old/new recognition task, where previously presented noun-noun compounds appeared in either old (ice-wallet) or new (wallet-ice) orders. Order of nouns in compounds either resembled order consistently found in English (i.e. typical noun modifier + typical head noun) or was reversed. If grammatical knowledge affects verbal working memory, consistency with natural language should predict old ratings, controlling for meaningfulness ratings and old status. As predicted, participants were more likely to rate consistent compounds as old compared to reversed. All analyses pre-registered on OSF prior to experimenter access to data.