Modelling the production effect in recognition memory

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Abstract

Memory is reliably enhanced for information read aloud compared with information read silently—this is known as the production effect. Theoretical accounts of this effect have been largely verbal in nature with very little exception, yet its robustness (and that of related phenomena) suggests that it is worth integrating into existing computational approaches to memory. A leading account of the production effect proposes that production leads to encoding of additional features at study and that these features are available at test to assist retrieval, conferring the observed memory benefit. We implement a version of this account into the Retrieving Effectively from Memory (REM) computational framework and examine its ability to capture key phenomena associated with the production effect. We compare and contrast the current implementation in REM with a pre-existing implementation of this effect in MINERVA2, in addition to discussing alternative conceptualizations and future work.