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The Effect of Semantic Diversity on Serial Recall for Words

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Abstract

We investigated whether semantic diversity (SemD) influences immediate serial recall for words. SemD was calculated using LSA to quantify semantic similarity across contexts in large corpus. We examined the effects of SemD and imageability, a classic semantic variable. Participants saw and recalled the 6-word list by typing out the words in correct serial order. Experiment 1 was conducted in the laboratory (N=40). There was no main effect of SemD or imageability but exploratory analyses showed that SemD was modulated by list position and imageability. Among high-imageability words, low-SemD words were better recalled in latter positions (4 & 5) of the list. Experiment 2 conducted online (N=44) replicated the results, showing better recall of low-SemD words in the high-imageability condition at Position 5. These findings suggest that the availability of more semantic connections induces more competition between items, which impacts on performance later on in serial recall.