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Exploring the Contributions of Semantics and Emotion to Word Memorability: a Behavioural and Computational Modeling Study

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Abstract

Memorability is an intrinsic property of stimuli, reflecting their average likelihood of being remembered across individuals. While recent research has examined the relationship between semantic relatedness and English word memorability, it is unclear whether these findings apply to other languages, and moreover, whether emotional content contributes to word memorability. We conducted three behavioural cued-recall experiments using Chinese words and implemented computational modeling to examine semantic relatedness and emotional consistency as predictors of memorability. We found that both factors explained word memorability: words that were more semantically dissimilar were associated with higher memorability; broad emotional consistency (non-neutral cue-target pairs) and positive emotional consistency (positive-positive pairs) both had memory advantages. Our results provide new insights into Chinese word memorability, and the potential contributions of semantics and emotion.