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A Computational Model of Chinese Word Processing

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Abstract

Chinese has many distinct characteristics that differentiate it from alphabetic languages, making it necessary to develop specific theories and models for its study. Previous research on Chinese lacks systematic computational models for lexical and semantic processing. To address this gap, we built a computational model that simulates the processing of Chinese words presented in isolation. The model can process both single-character and multi-character words. Moreover, it can simulate orthographic, phonological, and semantic processing of words, as well as their interactions. These research findings will help clarify the cognitive mechanisms of Chinese reading and deepen our understanding of human language processing. The established model can guide experimental research and has significant theoretical significance.