

What is a Chinese Word? A Large-scale Behavioral Experiment

Due to the characteristics of written Chinese, it is sometimes ambiguous how to segment a sequence of Chinese characters into words (e.g., “一眼” may be considered as two single-character words “一” and “眼”, or a two-character word). The proposed study will investigate how Chinese characters and words are represented in the mental lexicon, by using a large-scale behavioral experiment and computational modeling. Thousands of native Chinese readers across a wide age range (from 16 to above 50 years old) and various education levels (from middle school to graduate school) will complete a lexical decision task online via the WeChat platform. The full set of stimuli includes more than 34,000 Chinese two-character words and a comparable number of nonwords (i.e., arbitrary combinations of two characters). Participants' response accuracy and reaction time will be submitted to computational modeling, in order to comprehensively explore both item-level and individual-level factors influencing the weightings of combinatorial and holistic processing routes in Chinese visual word recognition. The results of this study will advance our understanding of the nature of Chinese words, from a psycholinguistic perspective. In terms of practical contribution, a large database of Chinese lexical decision will be generated, which will provide recognition difficulty of most Chinese two-character words and can be used by teachers and test developers of Chinese literacy.