Abstract

In the present study, a primed lexical decision task was used to verify the psychological reality of radicals and components of traditional Chinese characters. It was hypothesized that sub-character units, i.e., component as clusters of strokes, would be decomposed independently in the early phase of orthographic recognition. Other factors, including character frequency, stroke number and position of component, that might affect the character recognition process were also investigated. Echoed with previous findings, Experiment 1 indicated that left radicals were readily decomposed and character frequency was the dominant factor of the recognition process. Hence, it provided strong convergent evidence in local logographic perception. However, from Experiments 1 and 2, no significant priming effect was observed when components were used as the primes, even when the position of the orthographic structure, experiential familiarity and stroke number were carefully manipulated. In addition, non-characters produced inhibition as described in the interactive-activation model, and gave the longest response latencies. Further investigations on the independent activation of components in traditional Chinese characters were suggested.