Electrophysiological evidence of the semantic and the number of characters encoding in Chinese production

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Abstract: This study investigated the psycholonguistic debates of serial and parallel models in language production by an nonalphabetic language, Mandarin Chinese. Two event-related potential (ERP) components were used to explore the time course of semantic and phonological encoding during implicit picture naming in Chinese. The lateralized readiness potential (LRP) and N200 were presumbly related to repsonse preparation and response inhibition.Participants were shown the pictures and made dual choice go/nogo decisions based on semantic features (whether the depicted items were animate or inanimate) and phonological features (whether the Chinese names of the depicted items were composed of one or two characters). The results showed that the pick latencies of the N200 were signicantly earlier in the hand = semantics condition than in the hand = character condition. Therefore, the results suggst a serial processing model of language production in Mandarin Chinese, and they provide more complete understanding of language processing.