

An Event-Related Potential Study of Individual Differences in Word Recognition: The Evidence from Morphological Knowledge of Sino-Korean Prefixes

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Abstract : A morphological priming has proved its importance by showing that segmentation occurs in morphemes when visual words are recognized within a noticeably short time. Regarding Sino-Korean prefixes, this study conducted an experiment on visual masked priming tasks with 57 ms stimulus-onset asynchrony (SOA) to see how individual differences in the amount of morphological knowledge affect morphological priming. The relationship between the prime and target words were classified as morphological (e.g., 미개척 [unexplored] - 미해결 [unresolved]), semantical (e.g., 친환경 [eco-friendly] - 무공해 [no-pollution]), and orthographical (e.g., 미용실 [beauty shop] - 미확보 [uncertainty]) conditions. We then compared the priming by configuring irrelevant paired stimuli for each condition's control group. As a result, in the behavioral data, we observed facilitatory priming from a group with high morphological knowledge only under the morphological condition. In contrast, a group with low morphological knowledge showed the priming only under the orthographic condition. In the event-related potential (ERP) data, the group with high morphological knowledge presented the N250 only under the morphological condition. The findings of this study imply that individual differences in morphological knowledge in Korean may have a significant influence on the segmental processing of Korean word recognition.

Keywords : ERP, individual differences, morphological priming, sino-Korean prefixes

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