

Poster ME-1

Processing lexical semantic information in second language shaped native language by Event-related fMRI

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목적: The purpose of the present functional magnetic resonance imaging (fMRI) investigation was to examine the modulation of neural activity with respect to language translation. It is a complex task that entails an interaction between a second language (L2) and the native language(L1).

대상 및 방법: To study the underlying mechanisms, we used fMRI to show bilingual's brain activity in phonological processing of reading English words (L2) shaped Korean words (L1). In our fMRI study, nine Korean-English bilingual subjects performed the experiment while they covertly read four type words such as Korean words, Korean words of foreign origin, English words shaped Korean words, English words.

결과: fMRI results reveal that the right occipital-temporal and the left inferior frontal areas have a greater response to the presentation of English words shaped Korean words than for other type words.

결론: These results may indicate a change in brain circuitry underlying relational processes of language translation, with transition from a similarity-based process system in the occipital-temporal lobes to a language-related processing system in the left prefrontal cortex.

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