Semantic Anomalies in Second Language Processing: An Electrophysiological Study

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Oh, Sei-Rang. 2011. Semantic Anomalies in Second Language Processing: An Electrophysiological Study. *Linguistic Research* 28(3), 585-603. How humans' language processing occurs in the brain in real-time has been one of the major issues to clarify in the field. Especially, it is interesting to see related to the issue how bilinguals do in their second language (L2) processing as compared to monolinguals of the language. This study conducts an event-related potential (ERP) study to investigate the temporal neural dynamics of semantic processing in bilinguals. The experiment was done with Korean speakers of English as an L2, divided into two groups depending on their L2 proficiency level. The typical semantic anomaly paradigm was adopted for the material; semantically anomalous sentences end with a word which is not congruent in the sentence context. It was investigated if semantically anomalous stimuli elicit N400, known as meaning-related ERP component since Kutas & Hillyard (1980). Overall, similar pattern of the N400 effect was observed in the high proficiency group, while no significant effect was found in the low proficiency group. Though the results do not show a complete match in every detail, the study suggests that the bilinguals' semantic processing resembles monolinguals' semantic processing to a significant extent. This study also suggests that proficiency has a close correlation with brain responses in semantic processing in L2. (Gyeongsang National University)

**Key Words** event-related potentials, sentence processing, semantic anomaly, semantic congruency, N400, second language