

DESCRIPTION FOR THE GENERAL PUBLIC (IN ENGLISH)

Previous research into semantic processing in bilingualism has shown that the activation of semantic information is delayed in the non-native tongue (L2) relative to the native language (L1). The study described in the current project is aimed at extending our knowledge about semantic processing in bilingualism by means of using semantically complex meanings (i.e., novel metaphors), which – when contrasted with semantically simple meanings (i.e., literal utterances) - can provide insights into how the degree of semantic complexity modulates the activation of semantic information in the native and non-native language. With a view to providing an in-depth examination of the extent to which mechanisms engaged in semantically complex meaning comprehension are language (in)dependent, the experiment described in the project will be based on examining novel metaphors presented in Polish and English, in two linguistic forms: as nominal metaphors (A is B; e.g., *Amnesia is a rubber*) and as similes (A is like B; e.g., *Amnesia is like a rubber*). Due to the fact that previous research on monolingual novel metaphor comprehension has suggested that the processing of novel metaphors requires comparison mechanisms, it should be facilitated when novel metaphors are presented as similes compared to nominal statements. Therefore, using different forms of novel metaphors, whose comprehension involves a different degree of cognitive effort even in the native tongue, will allow for providing thorough insights into the processes engaged in the comprehension of semantically complex meanings in the native (L1) and non-native language (L2).

In order to examine specific differences in how semantically complex meanings are processed in L1 and L2, the experiment described in the present project will employ the EEG method with the analyses of event-related potentials (ERPs), whose aim is to examine the electrical brain activity evoked in response to a linguistic stimulus (e.g., to a presented sentence). It will thus be possible to analyze different stages of native and non-native language processing with a temporal resolution up to 1 ms. Since previous ERP experiments have not been devoted to examining mechanisms engaged in the comprehension of semantically complex meanings in L1 and L2, this research project aims at showing how the bilingual brain computes previously unknown meanings. Furthermore, by using novel similes and novel nominal metaphors, the study will elucidate the role of comparison mechanisms in the processing of novel metaphors in both languages.

Employing the EEG method to examine the role of semantic complexity in bilingual figurative language processing is a novelty. The research project is unique, as it investigates a linguistic phenomenon while employing an electrophysiological method, which is likely to yield new, surprising results. The obtained findings will therefore provide new information on specific cognitive operations involved in the process of new meaning creation and integration in the native and non-native language, will verify the role of comparison mechanisms in bilingual novel metaphor comprehension, and will show how the level of semantic complexity modulates native and non-native language processing.