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Application of EEG/ERPs in Linguistic Experiments

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Abstract

Event-related potentials (ERPs) represent the electrical brain activity time-locked to a stimulus, which can be, for example, a word in a sentence. One of the main strengths of ERPs is the presence of components (i.e., regularities in the signal) that can help us characterize cognitive processes. Two of the most well-known components in language research are the N400 and P600. This workshop focuses on methodological choices in designing language research with ERPs, particularly sentence processing paradigms for eliciting the N400 and P600. We will begin by reviewing what ERPs are and how they are measured. After that, we will demonstrate how certain methodological choices can affect results (e.g., by enhancing or diminishing a component), but also what is considered 'good practice' in the field. The focus will be on the number of stimuli, their distribution, the role of fillers, and the role of the behavioural task and instructions.

Keywords: Event-related potentials (ERPs), N400, P600, Methodology

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