What do event-related potentials reveal about processing grammatical aspects in Bosnian/Croatian/Serbian? A comparison with the English aspect

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Abstract

The grammatical aspect expresses information about the temporal contours of an event. Important differences exist between English and Bosnian/Croatian/Serbian (BCS) aspectual systems. English shows considerable flexibility in the distribution of aspectual forms – different forms can convey one aspectual meaning, which is not the case with the BCS aspect. This study investigated whether grammatical aspect violations are processed similarly in BCS and English (Flecken et al., 2015). In an event-related potential (ERP) experiment, we studied BCS's electrophysiological responses to aspectual violations. Participants read sentences with and without aspectual violations in a word-by-word presentation in the center of the screen. In the ERP experiment, aspectual violations in BCS resulted in a positivity (P600) in the 600-800 ms and 800-1000 ms time windows and in central and posterior regions absent in sentences without aspectual violations. The different ERP components show differences in processing aspectual violations in BCS and English: P600 for aspectual violations in BCS (present study) and short early negativity (250-350 ms; Flecken et al., 2015) for those in English. The robust P600 suggests that the parser immediately detects the incongruity between the aspectual feature on the verb and the time frame of the sentence in BCS. The parser might not detect aspectual violations in English if such forms have secondary aspectual meanings compatible with the sentence's time frame.

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