
How do different pitch accent types affect the processing of stress?

Evidence from Ukrainian speakers of L2 German

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Previous research (e.g., Archibald, 1992) has demonstrated that realization of word stress in L2 may be affected by the prosodic system in L1. Studies on Ukrainian reject the role of f_0 as a correlate of stress (e.g., Łukaszewicz & Mołczanow, 2018), in contrast to German (e.g., Kleber & Klippahhn, 2006). In our study, we address the effects of this mismatch on production and perception of German word stress in proficient Ukrainian speakers of L2 German.

For the production experiment, we selected 20 trisyllabic Ukrainian and 20 German word pairs, one member with a SWW (strong-weak-weak), one with a WSW metrical pattern. Each word appeared as an object in a carrier in two conditions: focused (narrow focus on the target word) and unfocused (narrow, contrastive focus on the verb). Eleven native speakers of Ukrainian (3 male) read 20 utterances per condition in both L1 Ukrainian and L2 German. Statistical analyses showed that f_0 marks focus in both languages and signals stress in L2 German only. The analysis also revealed speaker-specific differences.

The visual-world eye-tracking experiment investigated whether Ukrainian learners of German temporarily interpret an unstressed syllable with an f_0 peak as stressed, similarly to German participants (cf. Zahner et al. 2019). Two written trisyllabic cohort competitors, one member with a WSW (target), one with a SWW (competitor) metrical pattern, were shown on a screen, accompanied by two unrelated distractors, in two intonation conditions: early-peak accent (f_0 peak preceding stressed syllable of the WSW word) and medial-peak accent (f_0 peak aligns with stressed syllable). Our results show that Ukrainian learners of German show no differences between the intonation conditions, suggesting insensitivity to f_0 as perceptual cue to stress in German.

Overall, it is likely that Ukrainian learners of German tend to rely on L1 more in perception than in production.

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