Segmental constraints on F0 target alignment in interlanguage intonation: Early alignment of boundary rises in L1-English learners of L2 Japanese

In English intonation, a boundary rise can begin several syllables away from its associated prosodic boundary (e.g. at a nuclear-stressed syllable with an L* pitch accent). In contrast, Japanese phrases obligatorily end with a phrasal L%, which anchors the boundary rise to begin in the final syllable, regardless of the accentuation of the phrase. Because of this cross-linguistic mismatch, L1-English learners of L2-Japanese often transfer their L1 alignment patterns and begin boundary rises from an accented syllable, a phenomenon referred to here as 'early alignment'. The present study investigates the linguistic conditioning of this phenomenon, in particular seeking to determine whether certain types of segmental material (namely, a monosyllabic particle) constrain learners’ rates of early alignment.

Towards this end, approximately three hours of recordings of spontaneous oral production during semi-structured interviews were collected from eight L1-learners over a 2-year period. All boundary rise tokens were extracted from the recordings and coded in terms of alignment of the boundary rise as well as whether the corresponding segmental material ended with a monosyllabic particle.

As hypothesized, early alignment appeared more frequently in utterances that did not end in a monosyllabic particle, and this pattern held true for all time-points and for the majority of learners. It is argued this result stems from two factors: (1) the monosyllabic particle serves as a cue to targetlike alignment due to the frequent co-occurrence of monosyllabic particles and boundary rises in instructional input; and (2) learners store the boundary rise as an inherent part of the lexical specification for the question marker -ka. More broadly, the results of the present study suggest that acquisition of the alignment of F0 targets in an L2 is not acquired in a context-free manner but rather is constrained by the segmental material that carries them.