ACOUSTICS2008/2441 Articulatory features influencing regressive place assimilation across word-boundaries in German

Marion Jaeger and Phil Hoole Institut für Phonetik und Sprachverarbeitung, Schellingstr. 3, 80799 München, Germany

Within current phonological theories the greater tendency of C1 nasals vs. C1 plosives to undergo regressive place assimilation is often treated as the consequence of acoustic-perceptual properties of nasality (e.g. Steriade, 2001). Little is known about the articulatory patterns underlying this asymmetry. Our current EMA study aims to test and compare the effects of manner of articulation of C1 (alveolar nasal vs. alveolar plosive), place of articulation of C2 (labial vs. dorsal plosive), vowel context (palatal /i/ vs. non-palatal vowel /a/), and word frequency upon the intra- and intergestural timing and movement magnitude of various articulators in C1C2 sequences across word-boundaries in German subjects. Our analyses of non-palatal vowel contexts in three speakers showed a greater likelihood of reduction of the tongue tip both in words with a nasal C1 and in high frequency words. For those word pairs in which tongue tip displacement was measurable, tongue tip - tongue back overlap was significantly greater in word pairs with a nasal C1 and in word pairs with high frequency words. On the other hand, tongue tip - lower lip overlap was only significantly greater in word pairs with high frequency words.