On the domain of intra-syllabic coarticulation in German children

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Finding the minimal domain of language organization in the speech of children has been one of the most vivid quests in the developmental field. In the past two decades, developmental research in the domain of coarticulation has outlaid conflicting results and hypotheses as to the temporal organization of consonant-vowel syllables (CV) in the first years of language acquisition. Up to date, the question is still debated (cf. Labphon 2015).

To carry on with this endeavor, the present study reports on a cross-sectional investigation of coarticulation patterns in German children from the preschool years to the beginning of second grade as compared to adults. Unlike previous studies, we investigated the articulatory mechanisms that may account for differences in intra-syllabic coarticulation. Using ultrasound imaging, we recorded movement from the tongue during repetitions of $C_1VC_2\vartheta$ nonwords varying in vowels as well as consonants' place and manner of articulation. To test whether the organization of coarticulatory patterns differed as a function of the articulatory demands for consecutive phonemes, we measured the degree of overlap versus resistance between C_1 and V.

While results highlighted greater coarticulation degree for /b, g/+V compared to /d, z/+V for both children and adults, children exhibited overall greater intra-syllabic coarticulation than adults regardless of the consonantal context. As the degree of speech motor maturity may initially be circumscribed by their experience with their native language, we tested for additional effect of vocabulary and phonological development on coarticulatory patterns. The interpretation of both datasets is in progress.

Reference
Satellite *Exploring Speech Planning and Production in Children,* org. K. Demuth, S. Shattuck-Hufnagel, I. Yuen, J. Thorson, Labphon 2015, Cornell University