Acquisition of Anticipatory Coarticulation in Italian-Speaking Children: An Acoustic Study

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Abstract : The aim of this study is to analyze the influence of prosody on the acquisition of temporal aspects of V-V anticipatory lingual coarticulation in productions by Italian-speaking children. Two twin 7-years old male children, native Italian speakers, interacted with the same adult, repeating nonsense disyllables containing VtV sequences where V1 = $\{i, a\}$ and V2 = $\{a, e, i, o, u\}$, with different stress patterns (e.g. pi'ta, pi'ta). The duration of the VC F2 transitions and the CV/VC F2 transitions durations ratios in different V2 contexts and stress conditions were measured by spectrographic analysis and compared between pronunciations by each child vs. the adult to test whether the child was able to imitate the duration of the transitions as produced by the adult in different stress conditions. Consequences highlighted a significant difference in durations of VC transitions between children and adult: longer VC transitions durations, indicating a greater amount of coarticulation, were found for one child in every context, and for the other, only in stressed [it] sequences. The data support the hypothesis of the presence of different temporal patterns of anticipatory coarticulation in adults and children, and of a greater amount of coarticulation in children, with different strategies of implementation across different prosodic conditions.

Keywords: speech acquisition, coarticulation, Italian language, prosody

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