
Acoustic correlates of word stress in young Italian children's productions

Francesco Olivucci

francesco.olivucci@studio.unibo.it

Mario Vayra

University of Bologna

mario.vayra@unibo.it

Cinzia Avesani

CNR-ISTC

cinzia.avesani@pd.istc.cnr.it

Claudio Zmarich

CNR-ISTC

claudio.zmarich@cnr.it

We investigated five normally developing subjects, all from North-Eastern Italy (Trieste and Padova), from the age of 18 to 42 months. Each child was recorded while playing with a small set of objects which (s)he was asked to name and to talk about. Monosyllables and the last syllable of every utterance were excluded. For both stressed and unstressed vowels of each target word we calculated, by means of a Praat's script, duration, peak intensity, F1 and F2 at the vowel midpoint and spectral emphasis. As a control group we recorded and analyzed four adult subjects. Children have shown differences between stressed and unstressed vowels since their earlier age (18 months). The most statistically significant parameter was duration: for each child, since 18 months, stressed vowels had longer duration as compared to unstressed ones. We also found some less significant differences in the values of F1 (for [a]), F2 (for [i]), intensity and spectral emphasis. Each child has shown quantitative differences between stressed and unstressed vowel from his earlier age.

References: • Olivucci, F., Pasqualetto, F., Vayra, M., Zmarich, C. (2017) Lo sviluppo dell'accento lessicale nel bambino in età prescolare: una prospettiva fonetico-acustica. In: *Collana Studi AISV*, 2, Milano. • Zmarich C., Bonifacio S. (2005) Phonetic inventories in Italian children aged 18-27 months: a longitudinal study. In: *Proceedings of INTERSPEECH* (Lisboa, Portugal, September 4-8), 757-760