

AERODYNAMIC MEASUREMENTS ON ITALIAN INTERCONSONANTAL VOWELS

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The aim of this paper is to show that air flow measurements, controlled by air pressure measurements, may be adequate for a qualitative description of articulatory dynamics. In particular, the application of this technique to a speaker of Standard North Italian during production of short sentences has confirmed the results of a previous acoustic analysis (Vagges et al. 1975) about vowel length variations due to the following voiceless/voiced stops and has made it possible to correlate acoustic length variation to different movements of the articulatory structures. It was found that acoustic differences in durations reflect in part different speed of movements and are in part the result of different glottal adjustments. This study has also made it possible to correlate the presence of the "voice bar" in both single and geminate intervocalic voiced stops to an active expansion of the supraglottal cavity, which starts during the preceding vowel (30-40 ms before the closure). This movement seems to be quite independent of the closing gesture, which is taking place at the same time for both bilabial and dentoalveolar voiced stops, but seems to interfere with the closing gesture for velar voiced stops.

References

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