

COORDINATION OF FUNDAMENTAL FREQUENCY AND ARTICULATION IN SWEDISH  
ACCENT II WORDS

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Fundamental frequency correlates of the Swedish word accent were investigated with special attention to the coordination of  $F_0$  and articulation. A previous study found only minor variations between  $F_0$  contours from grave accented syllables belonging to words differing in syllable number. A vowel in such a syllable has a  $F_0$  maximum in the beginning preceded by a slight rise and followed by a relatively steep fall. To certify the importance of the final fall to the perceived accent type, vowel duration was varied by a systematic manipulation of phonological vowel length, voicing of the following consonant and number of syllables. It was shown that a decrease in vowel duration did not bring about a reorganization of the  $F_0$  pattern, but resulted in a final truncation. An attempt was then made to vary the temporal conditions in the beginning of a given  $F_0$  contour, by changing the number of intervocalic consonants in compound words with stress and accent pattern 32. The  $F_0$  contour in syllables with stress level 2 is often described as rising because of the  $F_0$  rise in the vowel. As the number of consonants between the two vowel onsets increased, the temporal distance increased accordingly. It was found that temporal perturbations of this kind did not bring about a reorganization of the contours. There was no truncation of the initial rise, instead the entire contour was displaced forward in time as the second vowel onset was delayed. These findings suggest that truncation is only possible at the final part of the contour and that  $F_0$  is coupled to the vowel onset.

Litterature:

Alstermark M. and Erikson Y. 1971. Swedish word accent as a function of word length. STL-QPSR1, 1-13

Erikson Y. and Alstermark M. 1972. Fundamental frequency correlates of the grave word accent in Swedish: The effect of vowel duration. STL-QPSR 2-3, 53-60

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