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THE ACOUSTIC EFFECT OF SPEAKING RATE, FOCUS AND PROSODIC POSITION ON SYLLABLES IN CHINESE

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ABSTRACT
In this experiment the effects of speaking rate, focus and prosodic position on duration, F0, intensity and vowel quality are analyzed. The test syllables are /pʻi, pʻa, pʻu/, which are designed to be in disyllabic words. It is found that there is an effect of rate on the formants of the vowels of the key syllable, with vowels more fully realized in slow speaking rate, and there is a tendency for pitch range to be expanded in slow rate. Intensity may be affected by focus, and vowels under focused condition may be maximally realized to highlight the phonemic contrasts. There is no effect of prosodic position on voice onset time, while its effect on fundamental frequency (F0) is obvious. The influence of prosodic position on intensity is similar to that on F0. Its effect on vowel quality is weak, and the effect is in line with enhancement of the place feature rather than with sonority expansion.

KEYWORDS
Speaking rate **F**ocus **D**uration **F**undamental frequency **I**ntensity **V**owel

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语速、焦点及韵律位置对汉语音节的声学影响

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摘要

本文考察了语速、焦点及韵律位置对时长、基频、音强及元音音质的影响。研究的目标音节为/p‘i, p‘a, p‘u/，分别嵌入在双音节词语中。结果发现：语速对元音共振峰有影响，语速较慢的时候，元音发音更到位，且语速较慢时，调域会有所增大。焦点对音强有影响，处在焦点位置的元音发音更到位，以凸显不同音位的对立关系。韵律位置对发声起始时间(Voice onset time)无影响，但是对基频的影响明显。韵律位置对音强的影响与对基频的影响相似，对元音音质的影响很小，该影响不在于增大元音的响度，而是凸显元音的部位特征。

关键词

语速　**焦**点　**时**长　**基**频　**音**强　**元**音