

附件

**Vowel and onset consonant lengthening as speech segmentation cues: Two studies
with Taiwanese Southern Min listeners**

Shu-chen Ou¹ and Zhe-chen Guo²

¹National Sun Yat-sen University, ²University of Texas at Austin

Despite the continuous nature of speech, listeners use a multiplicity of cues to identify where words begin or end. Prior research demonstrates that across languages, listeners tend to interpret longer vowels and longer syllable-onset consonants as signaling word-final and word-initial positions, respectively. The first study in this talk extended this line of work to Taiwanese Southern Min (TSM)—a tone language that remains underexplored in the segmentation literature and that shows language-specific sound patterns which might militate against the cross-linguistic tendencies. TSM listeners segmented the CVCVCV nonsense words (e.g., /banume/) from speech streams containing these words repeated continuously and recognized them in a subsequent test. The results showed that the TSM listeners perceived vowel lengthening as word-final and onset consonant lengthening as word-initial, replicating previous findings and suggesting that such use of lengthening cues may reflect universally accessible segmentation solutions. However, it is unclear whether the use of longer onsets to locate word beginnings generalizes to other onset types such as voiceless aspirated onsets, in which the aspiration has been found to be judged as part of the following vowel. It may be that word-final CV syllables with longer aspirated onsets are interpreted as containing longer vowels and hence exploited as word-finality cues. The second study investigated this possibility with TSM listeners, using a similar experiment but with the onsets of the nonsense words being all aspirated (e.g., /t^hat^hek^ho/). The findings provided no support for the possibility. Rather, the listeners seemed to perceive aspiration veridically as part of the onset and use longer aspirated onsets to identify word beginnings, as in the first study. Possible mechanisms underlying the listeners' use of longer onset consonant and vowel duration are discussed.