

Uncovering syllable-final nasal merging in Taiwan Mandarin

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Syllable-final nasals /n/ and /ŋ/ in Taiwan Mandarin is known to be undergoing merging. Earlier perceptual studies have reported that the merging is context-sensitive and the merging directions are vowel-dependent. More aggressive merging has been found between /in/ and /iŋ/ and between /ən/ and /eŋ/ than between /an/ and /aŋ/. These findings have been attributed to dialectal and social factors, such as influences from Taiwan Southern Min. In this talk, I will summarize two production experiments to uncover the tongue postures of these syllable-final nasals in different contexts. The results of the first experiment confirmed that the degree of merging and merging directions of syllable-final nasals are vowel-dependent. Crucially, for some speakers, although nasals were merged in tongue postures, the degrees of nasalization of the preceding vowel were contrastive, suggesting that the merging process is incomplete. The second experiment examines if the gestural and acoustic contrast of the underlying /n/ and /ŋ/ would be enhanced in prosodically prominent positions (i.e., in prosodic focus condition). The results show that in the /i/N context, the prosodic contrast between different prosodic conditions is manifested more in the acoustics of the pre-nasal vowels (i.e., the degree of nasalization) than in the gestural contrast. That is, the degree of nasalization is enhanced in the prosodic focus condition but this enhancement is absent in tongue postures. Taken together, these experiments results suggest that the syllable-final nasal merger resides in articulation and merging may be vowel-dependent.