

**An acoustic and aerodynamic analysis of partially nasal consonants
in Chinese dialects (draft)^λ (摘要)**

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Abstract

This paper is an acoustic and aerodynamic analysis of the partially nasal consonants in Chinese dialects. Shanxi dialects, Cantonese dialects around the Zhongshan area, southern Min dialects (Xiamen and Chao-Shan area), and the Qingxin Hakka are investigated. Totally 64 speakers were recorded acoustically and/or aerodynamically, and 19 speakers were analyzed in the present study.

Results show that partially nasal stops are widely detected in these dialects. Shanxi dialects have the richest inventory of partially nasal consonants, the partially nasal stops in five places of articulation – labial, alveolar, retroflex, alveolopalatal, palatal, and velar – and an alveolar partially nasal fricative. All the other dialects have three partially nasal stops, labial, alveolar and velar, except that Chao-Shan Min has an additional alveolar partially nasal fricative. Interestingly, the retroflex and alveolopalatal partially nasal stops alternate with the corresponding partially nasal affricates, and the partially nasal fricative alternates with its affricate counterpart, too.

Both qualitative and quantitative analyses indicate that the partially nasal consonants in southern Min differ from those in the other dialect groups in that the former has a weaker nasal murmur than the latter. The results reveal that southern Min is at a late stage of the long-term historical phonetic or phonological sound change of denasalization (*plain nasal consonants in Middle Chinese > partially nasal consonants in these Chinese dialects), whereas the other dialects at an early stage.

^λ *In Pre-conference Proceedings of IACL-14 & IsCCL-10*, pp. 56-89, Academia Sinica, Taipei, 2006.