

The sociophonetics of Chinese: Investigating social and geographical variation in Putonghua

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China has a rich dialectological tradition comparing the phonologies of Chinese language families and dialects, yet research on sociophonetic variation in Chinese has only emerged relatively recently (Zhang et al., 2024). Development of this research area would provide an opportunity not only to broaden the scope of sociophonetics to non-Western communities, but also to investigate the effects of social variables on variation in a complex linguistic environment. Our study aims to contribute towards addressing this gap by investigating variation in Putonghua, China's lingua franca and the standard form of Modern Chinese (i.e., Mandarin).

Modern Chinese is often defined in the literature as a unified language that encompasses both Putonghua and the 10 dialect groups found in China (e.g., Chen, 1999). Putonghua is based on the Beijing Mandarin phonological system and has been promoted and taught in schools throughout China since the 1950s: over 80% of the Chinese population claim to speak it (Zhang et al., 2024). Further, recent rapid urbanization and population movement have led to large-scale changes in both urban and rural speech communities. Whilst previous work has shown that local varieties have shifted towards Putonghua (see Zhang et al., 2024 for a review), we turn this round to ask whether, as a result of increased contact between different communities and dialects, Putonghua itself shows phonetic variation along different social and geographical dimensions.

Participants (N=20) were recruited opportunistically from the Chinese student population at universities in London and were drawn from all dialect areas. They had a mean age of 26 years and had been living in an English-speaking country for 3 years at the time of recording. They were recorded reading a word list and short story (The Boy who Cried Wolf; Deterding 2006) in Putonghua in laboratory conditions. The word list comprised three repetitions of 13 common vowel allophones in two tone contexts in a consistent phonological environment, produced in the carrier phrase 这个_的 'Zhègè_de' [tʂɤ̀vkɤ̀_ tɤ̀].

Initial analysis focussed on potential differences in vowel production. Data from the word list was force-aligned using WebMAUS (Kisler et al. 2017) before formant frequencies were extracted using FastTrack (Barreda 2021) and normalized using the Nearey (1978) method. Linear mixed-effects models were fitted to formant values from the acoustic mid-point to examine the effect of geographical region (north vs. south) and social class (indexed by parental occupation and parental education) on vowel production. Although there was some evidence of regional variation in production of [ʊ], there were no significant differences in production according to region or social class for any vowels.

One possibility is that there is variation in Putonghua but that this is not in the vowel system. We examine this possibility using an accent identification task in which Chinese participants hear the speakers from our dataset and are asked 1) to identify the region they think the speaker is from; 2) to comment on which factors influenced their decision. Data collection is ongoing. Together, our results will provide an initial picture of sociophonetic variation in Putonghua and contribute to our understanding of the sociophonetic landscape in China.

References

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