

## **Linguistic variation in the production of Canadian English Vowels: The Case of Heritage Speakers in Vancouver**

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Bilinguals make up a large part of the Metro Vancouver population. In fact, 69.7% of the total population in Metro Vancouver are first- and second-generation immigrants (Statistics Canada, 2016). Most of these people are bilingual with a different degree of proficiency in English and their respective heritage languages. Among second-generation immigrants (born and raised locally with at least one parent born abroad) there is an attested rapid shift to English (i.e., the majority language of Vancouver), while the degree of proficiency in their heritage languages in such speakers vary. Previous studies show that in some cases, heritage phonological/phonetic systems may deviate significantly from monolingual systems (e.g., Rao, 2015; Sharma, 2017). At the same time, early onset of second language acquisition has been shown to result in more native-like proficiency (Flege et al., 1999; Munro & Munn, 2005; Abrahamsson & Hyltenstam, 2009). Overall, heritage phonology remains relatively under-researched in comparison to native and non-native ones. In particular, there is a paucity of Canadian research studies that focus on whether heritage speakers with non-Anglo ethnic backgrounds participate in sound changes in the same manner as the rest of the community (with the exception of Hoffman & Walker, 2010; Hoffman, 2016; Umbal, 2019; Presnyakova 2020). Current study focuses on investigating raising of /æ/ in pre-nasal contexts that has been attested in Canadian English overall (Boberg 2010:207), as well as in Vancouver English where both monolingual and heritage groups were shown to produce raised /æN/ in a controlled speech style (word list reading) (Presnyakova 2020). For this study, acoustic analyses were performed for words in /æN/ contexts (preceding /n/ or /m/) produced in read and spontaneous speech by 12 female heritage speakers (4 Chinese, 4 South-Asian, 4 Korean). These results were then compared to data collected from 4 female monolingual speakers of Vancouver English with British/mixed European heritage. The results show that while all speakers do participate in pre-nasal raising, the degree varies depending on the heritage and speech style. In particular, monolingual speakers seem to produce more raised /æN/ in spontaneous speech compared to controlled speech, while the pattern is reversed for the heritage speakers. These findings suggest that both environmental factors (e.g., heritage language) and speech style (or formality) may be at play when it comes to speakers and their language production. The results further shed light on the motivation for the course of sound change that is observed, given that the degree of shifting (or vowel quality) seems to change as a function of speech style for some speakers.

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