

# Intergenerational vowel change in several Russian-English speakers

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**Index Terms:** acoustic phonetics, sociophonetics

There has been little phonetic research undertaken into the various migrant varieties of Australian English, and only slightly more on second-generation speech. This apparent time study employed acoustic phonetic techniques in an attempt to characterise the accents of Russian-speaking migrants and their Australian-born children. Using formant and durational information, as well as dynamic measures, it has quantified the basic acoustic properties of the speech of these two generations of this underresearched subset of Australian English speakers.

Sixteen participants from two generations were recorded producing a total of 1,121 tokens of monophthongs of Australian English [1] in a /hVd/ context. The vowels were then analysed according to standard and established acoustic phonetic procedures [e.g. 2]. Recordings were segmented phonemically and annotated in Praat, after which a target was found and labelled manually. Formant information from the first two formants was subsequently extracted in Emu. Formant and durational data were handled using the R software to create plots of vowel spaces (e.g. Figures 1-2), as well as graphs of Euclidean distances and of durational comparisons.

Results show that the older generation of speakers clearly exhibit features of Russian phonology [3] in their speech (e.g. difficulty with length contrasts, difficulty with the /æ/ vowel, among others), indicating the presence of language transfer. Additionally, results demonstrate that the younger generation's speech is almost indistinguishable from Standard Australian English. At the same time, there are characteristics of the older generation's vowels that suggest an adaptation of their speech towards Australian English, and that their accents are not a simple consequence of transfer. There are also several instances of minor deviation from Standard Australian English in the speech of the younger generation, hinting at influences from the heritage language, Russian.

In terms of the younger generation, the small differences between their phonetic realisation and Standard Australian English support previous findings in plurilingual and heritage language speakers with relation to standard norms (e.g. [4]). The results of the study point suggest that second-generation speakers will carry elements of their

parents' language and speech, highlighting the importance in documenting variability in speakers of a language as supposedly homogeneous as Australian English. Conversely, the otherwise overwhelming resemblance of the younger generation's speech to Australian English accentuates key processes in linguistic change between generations of speakers. It also indicates that research should take place into features other than the areas focussed on in this study.

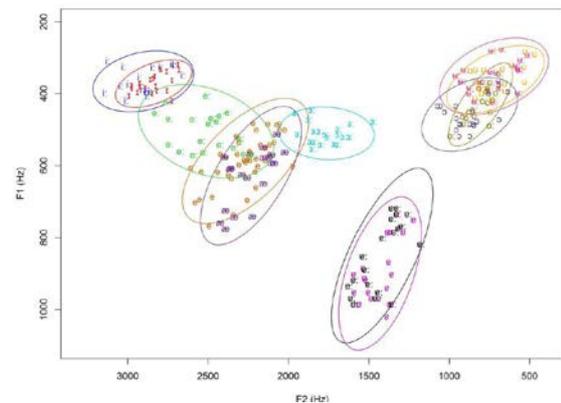


Figure 1. *F1 vs. F2 vowel space of older generation females (4 speakers) for /hVd/ words.*

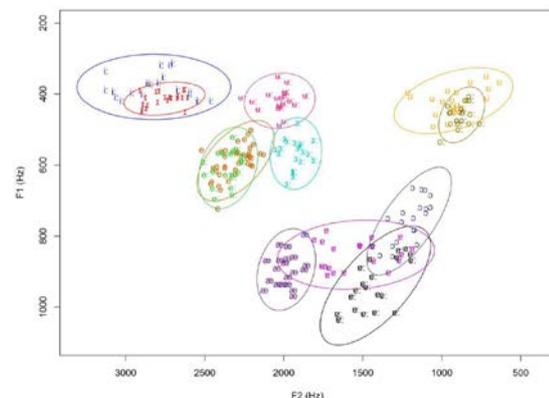


Figure 2. *F1 vs. F2 vowel space of younger generation females (4 speakers) for /hVd/ words.*

## References

- [1] Cox, F. (2006). "Australian English pronunciation into the 21st century". *Prospect*, 21(1), 3-21.
- [2] Harrington, J., Cox, F. & Evans, Z. (1997). "An acoustic phonetic study of broad, general, and cultivated Australian English vowels". *Australian Journal of Linguistics*, 17, 155-184.
- [2] Bondarko, L.V. (1977). *Звуковой строй современного русского языка (Zvukovoi stroi sovremennogo russkogo )* (The Sound Structure of Contemporary Russian). Moscow: Prosveshenie.
- [4] Evans, B.G., Mistry, A. & Moreiras, C. (2007). "An acoustic study of first- and second-generation Gu arati immigrants in Wembley: evidence for accent convergence?". In J. Trouvain & W.J. Barry (Eds.), *Proceedings of the 16th International Congress of Phonetic Sciences* (pp. 1741-1744). Saarbrücken: Universität de Sarlandes.