

Generational Change in Seoul Korean Coda /l/: Evidence from Corpus and Experimental Data

Yeseul Lee¹, Yechan Lee¹, Donghyun Kim¹

¹*Kyungpook National University (Korea)*

leeelim13@gmail.com, yechan3081@gmail.com, donghyun@knu.ac.kr

Background: Although Korean /l/ is phonologically a single liquid, its coda realization shows wide phonetic variability shaped by segmental context and speaker-related factors. In the Gyeongsang dialect, younger speakers, particularly women, produce stronger cues of both velarization and retroflexion ([2]), indicating a change in how the lateral is implemented. For Seoul Korean, however, diachronic evidence remains limited, leaving open the question of how its coda /l/ has developed across generations. To evaluate potential shifts, this study examines acoustic indices that directly reflect the principal articulatory gestures.

Velarization lowers F2 through anterior cavity expansion, whereas retroflexion lowers F3 by lengthening the anterior cavity and shortening the posterior cavity. The relative measures F2-F1, a well-established indicator of dorsal retraction ([3]), and F3-F2, a perceptually grounded index of rhoticity ([1]), serve as reliable diagnostics of these gestures and correlate with perceptual judgments of darkness and rhoticity. These measures provide a useful basis for assessing whether the articulatory configuration of /l/ has shifted over time in Seoul Korean.

Methods: The first dataset was the Seoul Corpus of Spontaneous Speech ([4]), from which 40 Seoul speakers were selected across gender and age groups. The second dataset consisted of 30 young Seoul speakers (15 M, 15 F) who produced 60 disyllabic words containing coda /l/ before consonants varying in manner and place of articulation. The rhyme containing the coda /l/ was manually segmented, and its formant trajectories were examined using two relative acoustic measures: F2-F1 as an index of tongue-body retraction (velarization) and F3-F2 as an index of coronal constriction (retroflexion). Time-normalized trajectories were modeled using generalized additive mixed models (GAMMs; $k = 6$).

Results: The corpus data show that earlier Seoul speakers produced coda /l/ with low F2-F1 and comparatively high F3-F2 values, consistent with a velarized realization. Contemporary young speakers, by contrast, exhibited markedly higher F2-F1 values but substantially lower F3-F2 values than both older speakers and the younger speakers in the corpus. This pattern indicates a weakening of velarization but a marked shift toward retroflexive cues. Within the experimental dataset, male speakers displayed slightly lower F3-F2 values than female speakers. The result suggests that retroflexive gestures may be marginally more advanced among men, although the gender difference remains small. Direct comparison across datasets reveals that present-day young Seoul speakers no longer resemble their earlier counterparts, providing real-time evidence for a shift from a velarized to a retroflex-oriented realization of coda /l/.

Discussion: The findings indicate that Seoul Korean is undergoing a shift in the phonetic realization of coda /l/, with retroflex-like cues becoming more prominent among younger speakers. This shift represents a realignment of the acoustic-articulatory correlates associated with a phonologically single lateral and contrasts with the dual strengthening observed in Gyeongsang Korean. The results suggest regionally differentiated pathways of change shaped by generational dynamics and gender. By combining spontaneous-speech data with controlled production, the study provides converging evidence for an ongoing adjustment at the interface between phonetic implementation and phonological representation in Seoul Korean.

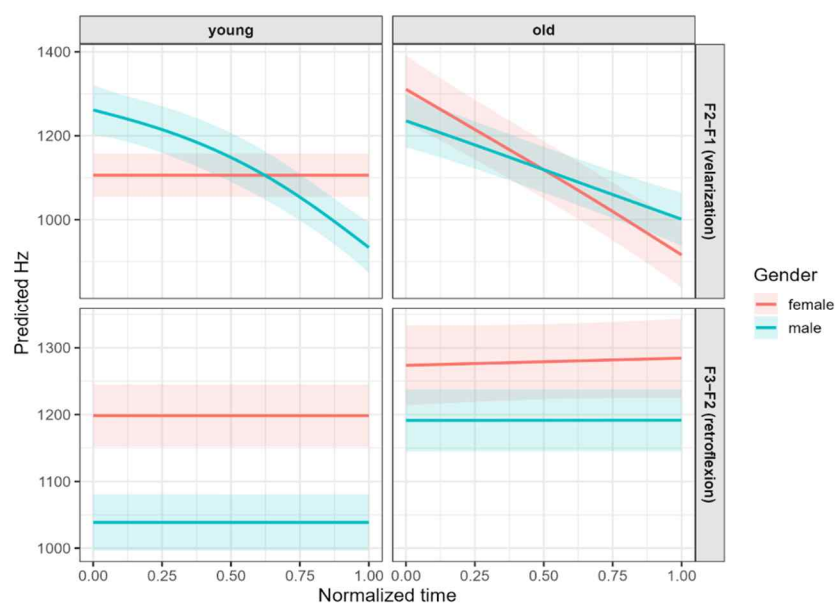


Fig. 1. Time-normalized F2-F1 and F3-F2 trajectories of coda /l/ across age groups and genders in the Seoul Corpus.

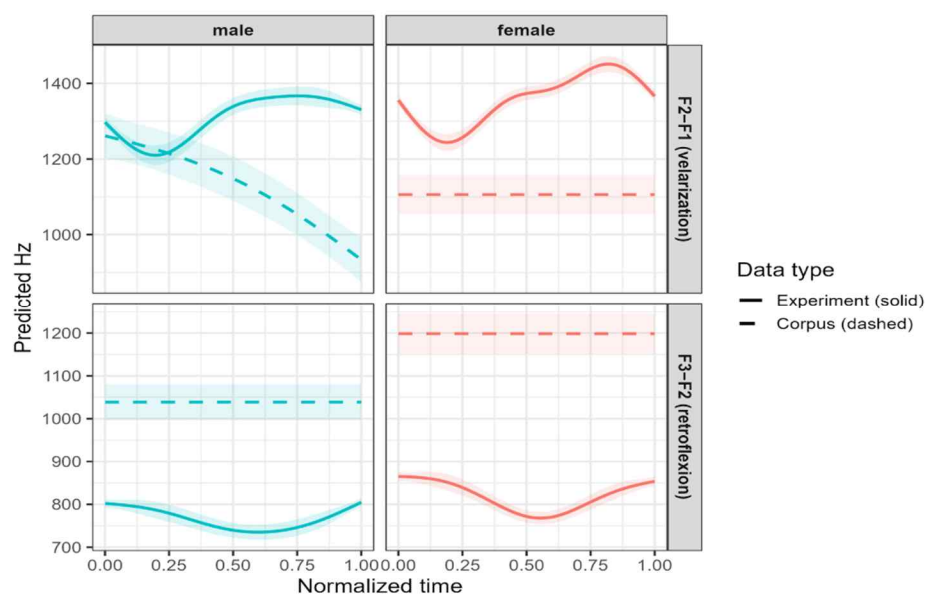


Fig. 2. Time-normalized F2-F1 and F3-F2 trajectories of coda /l/ comparing experimental speakers with the young group of the Seoul Corpus.

References

- [1] Heselwood, B. & L. Plug. (2011). The role of F2 and F3 in the Perception of Rhoticity: Evidence from listening experiments. In Proceedings of the 17th International Congress of Phonetic Sciences (ICPhS). City University of Hong Kong, 867-870.
- [2] Lee, Y., & Sohn, I. (2025). Generational and Gender Variation in the Acoustic Realization of Korean Coda /l/. Korea Journal of English Language and Linguistics, 25, 1281–1298.
- [3] Turton, D. (2017). Some /l/s are Darker than Others: Accounting for Variation in English /l/ with Ultrasound Tongue Imaging. University of Pennsylvania Working Papers in Linguistics, 20(2), 189-198.
- [4] Yun, W., Yoon, K., Park, S., Lee, J., Cho, S., Kang, D., Byun, K., Hahn, H., & Kim, J. (2015). The Korean Corpus of Spontaneous Speech. Journal of the Korean Society of Speech Sciences, 7(2), 103–109.