

**Prosodic accommodation as a driver of sound change: accommodation
in Seoul Korean Accentual Phrase**

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Previous research has suggested that the spread of sound change may be explained in part by individual imitation of, or accommodation to their interlocutor's speech (Ito, 2001; Trudgill, 1986). Many studies have shown that speakers alter the phonetic details of their speech in response to an interlocutor, but only a few studies have examined prosodic accommodation and these report mixed results (D'Imperio et al., 2014; Ní Chiosáin, 2007; Cole & Shattuck-Hufnagel, 2011). The present study begins to examine individual differences in prosodic accommodation as a driver of sound change by examining accommodation in the f₀ contours associated with a prosodic boundary, the Accentual Phrase (AP) boundary in Seoul Korean (SK). The main hypothesis is that SK speakers exposed to the manipulated prosody of a model speaker (test group) will produce significantly different intonation patterns compared to SK speakers exposed to the original (unmanipulated) prosody of a model speaker (control group).

Twenty-five female native speakers of SK participated in a sentence completion task. In the first half of the experiment, participants silently read the incomplete sentences before producing the completed sentences, establishing baseline productions (Table 1). In the second half of the experiment, participants were divided into test and control groups. Each group listened over headphones to sentences recorded by a SK model speaker and then produced the completed sentences. The 11 control group speakers heard unmodified stimuli produced with the AP-final rising (LH) intonation pattern that is a characteristic feature of SK (Jun, 1993). The 14 test group speakers heard a manipulated version of the stimuli, in which the f₀ peak in the AP-final rise was lowered by 20%. Original stimuli were otherwise unchanged. After the experiment, all participants filled out an exit survey that asked for their language background and rating of the model speaker.

A series of statistical analyses were conducted for each group on their f₀ measurements (f₀ maximum, minimum, mean, and range) taken in the final syllable of all sentence-medial APs. The results of the Linear Mixed Model analyses showed significant differences between the two groups in that 10 out of 11 control group speakers did not differ as a function of condition (baseline vs. test) while the test group overall had significant effects of condition (Figure 1). Paired t-tests conducted for individual speakers in the test group revealed individual patterns of accommodation. Nine out of 14 speakers in the test group lowered their f₀ in the AP-final syllables, to varying degrees, after being exposed to the artificially manipulated prosody with lower f₀ in the AP-final syllables. The remaining five of the test group did not show post-exposure f₀ lowering (although two showed an effect of f₀ range). The responses to the exit survey indicated that three of the nine 'convergence' speakers, and three of the five 'neutral' speakers, noted that the model speaker sounded like a SK speaker.

Overall, the results indicate that a phonetically manipulated intonation pattern associated with a prosodic boundary induces speech accommodation in some speakers – accommodation that, in natural settings, would arguably have the potential to contribute to sound change. The results of this study may

also provide insight into the current diversity of prosodic systems among Korean dialects in which, for example, the Hamgyong and Kyungsang dialects differ in lexical pitch accents, and SK and Cholla dialects differ in the AP intonation patterns (Jun, 1993; Yeon, 2012).

Context sentence	“Ahn Mina is four years older than Ahn Yuri.”			
	anmina-nun	# anyuri-pota	# nesalina	# naiga-manta
	Ahn Mina-Subj	# Ahn Yuri-than	# four-year	# age-more
Target sentence	“Therefore Ahn Mina is (Ahn Yuri’s older sister).”			
	kuromuro	# anmina-nun	# (anyuri-poda	# unnita)
	Therefore	# Ahn Mina-Subj	# (Ahn Yuri-than	# oldersister)

Table 1. Example of a pair of sentences. The parenthetical portion was not provided to the participants in the experiment. The pound sign (#) denotes AP boundary.

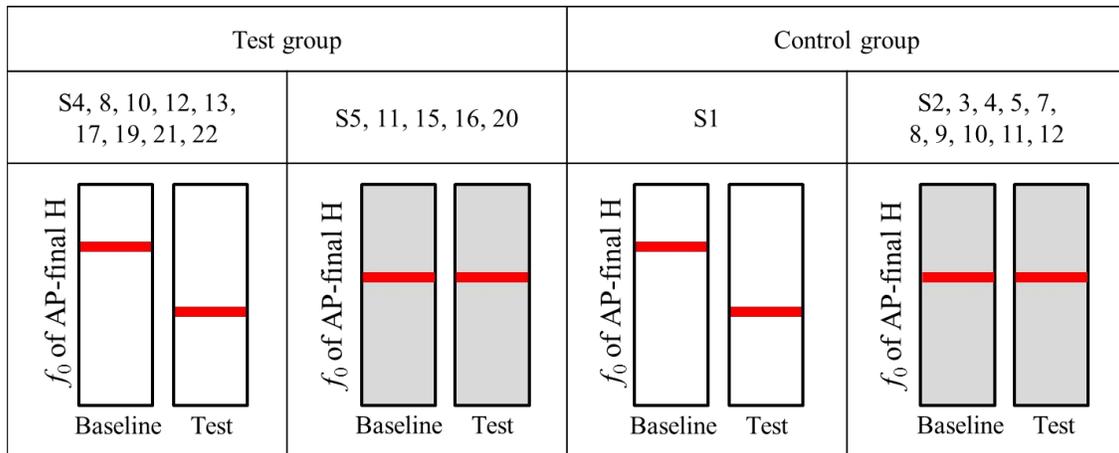


Figure 1. Schematic summary of the results. The difference between the red lines in the two boxes in a panel indicates the presence (white boxes) or absence (gray boxes) of significant effect of accommodation within each group.

References

- [1] Cole, J., & Shattuck-Hufnagel, S. 2011. "The phonology and phonetics of perceived prosody: What do listeners imitate?", *Proceedings of Interspeech 2011*, pp.969-972.
- [2] D'Imperio, M., Cavone, R., & Petrone, C. 2014. "Phonetic and phonological imitation of intonation in two varieties of Italian", *Front. Psychol.* 5:1226.
- [3] Ito, R. 2001. Belief, Attitudes, and Linguistic Accommodation: A Case of Urban Sound Change in Rural Michigan. University of Pennsylvania Working Papers in Linguistics: Vol. 7: Iss. 3, Article 11.
- [4] Jun, S-A. 1993. *The Phonetics and Phonology of Korean Prosody*, Ph.D. dissertation, OSU, Ohio.
- [5] Ní Chiosáin, M. 2007. "Effects of synchronous speech task on length and prosody in interdialectal nonprestige varieties", *Language Variation and Change*, pp.51-62.
- [6] Stevens, M., & Harrington, J. 2014. The individual and the actuation of sound change. *Loquens* 1(1).
- [7] Trudgill P. 1986. *Dialects in Contact*. New York, NY: Blackwell Publishing.
- [8] Jaehoon, Yeon. 2012. 'Korean dialects: a general survey.' In: Tranter, Nicholas, (ed.), *The Languages of Japan and Korea*. Abingdon and New York: Routledge, pp. 168-185.