

## Focus structure and articulatory strengthening in edge-prominence language: an articulatory study of Seoul Korean

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**Abstract:** Articulatory gestures under phrasal prominence undergo strengthening, becoming longer, larger, and faster (cf. Cho, 2006). Limited research, mainly from head-prominence languages, suggests that this articulatory strengthening does not simply correspond to a prominent vs. non-prominent distinction, but that it encodes focus structure instead, with the phonetic effects increasing not just from unfocused to focused units, but also—roughly—from broad focus to narrow focus, and then to contrastive focus (Breen et al., 2010; Hermes et al., 2008; Roessig & Mücke, 2019; Katsika et al., 2023). However, it is unclear whether focus structure is encoded in edge-prominence systems. Here, we turn to Seoul Korean, an edge-prominence language, in which the focused word is assumed to start an Accentual Phrase (AP) and exhibits prominence-induced strengthening.

Analyses of kinematic duration, displacement, and velocity from data of six native Seoul Korean speakers examine the degree of strengthening on focused AP-initial gestures. Results show that, in Korean, focus-induced strengthening reflects the focus structure, although kinematic dimensions differ in the number of focus types they distinguish. Yet, the order of encoded types remains consistent and similar to that found in head-prominence languages (Breen et al., 2010; Roessig et al., 2019; Katsika et al., 2023). The findings support the view that a hierarchy of prominence might emerge from the interface of prosodic structure with focus structure and suggest that this might be a property that holds across categories of prosodic typology.

### References

- Cho, T. (2006). Manifestation of prosodic structure in articulatory variation: Evidence from lip kinematics in English. *Laboratory Phonology*, 8, 519-548.
- Breen, M., Fedorenko, E., Wagner, M., & Gibson, E. (2010). Acoustic correlates of information structure. *Language and Cognitive Processes*, 25(7-9), 1044-1098.
- Hermes, A., Becker, J., Mücke, D., Baumann, S., & Grice, M. (2008). Articulatory gestures and focus marking in German. In *Proceedings of Speech Prosody 2008*, 457-460.
- Roessig, S., & Mücke, D. (2019). Modeling dimensions of prosodic prominence. *Frontiers in Communication*, 4, 44.
- Katsika, A., Jang, J., Krivokapić, J., Goldstein, L., & Saltzman, E. (2023). A hierarchy of prominence: The production and perception of focus in American English. In *Proceedings of the International Congress of Phonetic Sciences* (pp. 1696-1700).