Introduction

This study reports an initial exploratory analysis of the separability of the acoustic cues to the Accentual Phrase (AP) boundaries of Seoul Korean in spontaneous speech.

- Seoul Korean AP boundaries are tonally marked [1, 2].
- AP also conditions lenis stop realization—lenis stops are strengthened AP initially (Domain-initial strengthening) [3, a.o.].
- Listeners sensitive to both tonal [6, 7, 8] and segmental cues [9].
- Less is known about how the two kinds of cues interact to create the percept of AP juncture.
- In Spontaneous Speech, the Segmental cue but not the Tonal cue emerges as categories in the Speech Sciences.

Measurements

- Tonal cue: change in F0 from the previous syllable, normalized as fraction of range.
- Segmental cue: three measurements taken from the lenis stop interval—proportion of voiced interval [10], speech-rate normalized duration [9], and change of rate in intensity [11]; and
- Combined into one variable using the Principal Component Analysis [12].

This study: separability of tonal and segmental cues in two data sets

- Transcribed Data: small (403 items), K-ToBI transcribed (PWd, AP, and IP) [13], various speech styles such as story-reading, but not spontaneous speech.
- Spontaneous Data: larger (6497 items) and spontaneous speech but only PWd boundaries [14].

Prosodically-conditioned realizations of a syllable with a lenis onset

- Same PWd: /kinjaŋ/ realized in 3 prosodic positions (3 different BI levels)

Acknowledgements

I would like to thank Professor Yun for sharing the Spontaneous speech corpus, Professor Jun for sharing the labeled data. Kristine Yu, John Kingston and UMass Sound Workshop.

References
