**BACKGROUND**

**Ambiguity**
Laryngeal status of "nonfortis" Korean /s/ is ambiguous (Chang 2013): shares properties of both lenis and aspirated series.

**Dialectal variation**
/s/ has high f0 in Seoul, but Kang (2014) found that speakers in Dandong, China produced /s/ with low f0, suggesting different trajectories of change.

**Perception/Production**
Seoul speakers have little/no f0 difference in production of /s/ vs. /ss/ (Kang et al. 2009), but f0 influences perception (Chang 2013).

**KOREAN FRICATIVES**

<table>
<thead>
<tr>
<th></th>
<th>STOP/AFRICATES</th>
<th>VOT</th>
<th>f0</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Seoul</td>
<td></td>
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<tr>
<td>VOT</td>
<td>Dandong</td>
<td></td>
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<tr>
<td>/fortis/ ss/</td>
<td>unaspirated</td>
<td>high</td>
<td></td>
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<tr>
<td>/nonfortis/ ss/</td>
<td>aspirated</td>
<td>low</td>
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**QUESTIONS**
1. Is there ongoing change in the use of f0 and VOT to signal the fricative contrast in Seoul and Dandong Korean?
2. Are production differences reflected in perceptual cue-weighting strategies?
3. How does this fit in with changing status of f0 and VOT in the three-way (stop/affricate) laryngeal contrast occurring in both dialects (Kang et al., 2017)?

**METHODS**

**PARTICIPANTS** (n=128)
- **Dandong**: 30 M, 34 F, 20-84 years
- **Seoul**: 30 M, 34 F, 20-83 years

**PRODUCTION TASK**
Friable-initial words (6 in Seoul, 9 in Dandong), spoken in isolation. Following vowel /a/ or /i/.
- 1856 total tokens analyzed (2 reps).
- Measured f0 at vowel midpoint and VOT (/a/ context only).

**ANALYSIS**
- 4 Linear mixed-effects models.
- 2 dimensions (VOT or f0) * 2 modalities (perception and production).
- Focus on effects/interactions involving laryngeal category.

**PERCEPTION TASK**
- Forced-choice task (/s/ vs. /ss/)
- Stimuli manipulated from productions by 1 male and 1 female talker.
- 288 total trials, blocked by talker

**MANIPULATED PARAMETERS**
- **Talker Gender**: (Older) male, (Younger) female
- **Aspiration**: 3 steps: 0-90 ms
- **f0**: 3 steps (varied by gender)
- **Base Vowel**: from nonfortis or forts fricative
- **Base Consonant**: from nonfortis or forts fricative

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