Another emergence of tonal contrast in Seoul Korean: the case of /i/  

**Introduction**

- Korean prosody
  - Jun 1993: the basic pattern of Korean prosody – LHLH or HHLH when the initial consonant of an Accentual Phrase (AP) is tense or aspirated
  - Therefore, an expected tonal pattern of vowel-initial APs: LHLH

- High-on [ı]: a new sound change
  - An AP starting with [ı] is sometimes found to be realized as HHLH (Jun & Cha 2011).
  - Jun & Cha’s findings on the phenomenon:
    - **Where**: in Seoul Korean (SK)
    - **Who**: younger than mid 40s, the more frequent (no gender difference).
    - **When**: most often when it means one (1) and less often when it means work
    - Two possible causes for this phenomenon:
      - To enhance the perceptual salience of No. 1 meaning in contrast to [ı] two (2)
      - Due to the influence of Kyungsang Korean (KK), a tonal dialect in Korean

- The questions examined here:
  - Has KK influenced the emergence of High-on [ı] in SK?
  - Do we find high [ı] in phonetic environments other than when it is before [ı]?

**Methods**

- Subjects: 7 Seoul Koreans (F: 4 / M: 3) & 5 Kyungsang Koreans (F: 3 / M: 2) in their 20s
- # of target words: 63 (presented in sentences)

<table>
<thead>
<tr>
<th>Four different meanings of [ı] / ı(C)/</th>
<th>ı / ı(C)/</th>
<th>ı(C)</th>
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<tbody>
<tr>
<td>12</td>
<td>8</td>
<td>7</td>
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**Summary of the results**

- **Result 1: The effect of the following segment**
  - Only AP-initial /ı/ followed by /ı/ is realized as H in Seoul Korean.
  - Kyungsang Korean doesn’t seem to have influenced the emergence of High-on [ı].
  - [ı] is the highest, and all four meanings of [ı] are significantly higher than [ı(C)].

- **Result 2: The effect of dialect**
  - Percentage of H tone (z-score > 3rd quartile)
  - Seoul and Kyungsang

- **Result 3: The effect of different meanings of [ı]**
  - Normalized mean F0 by different meanings
  - Percentage of H tone by different meanings

**Discussion**

- **My proposal for the emergence of a tonal contrast in [ı]**
  - SK: developing another tonal contrast in [ı] as in voiceless stops
  - The tonal contrast in voiceless stops: The (spread glottis) and (constricted glottis) features in voiceless stops are considered redundant and interpreted as a tonal contrast by learners (Silva 2006, Kingston 2011).

- **Evidences of the insertion of a glottal stop**
  - Kang & Guion (2008): Those born after 1970 used F0 more to distinguish stops, but those born before 1970 used VOT more.
  - Jun & Cha (2011): “High-on [ı] must have started in 1980s when those born in 1970 were a teenager.”
  - Both phenomena are led by the same generation! (born in 1970s)

- **Concurrent occurrence of tonal contrasts in both voiceless stops and [ı]**
  - The tonal contrast in voiceless stops: 
    - [ı] vs. [ı̂]
    - [ı̂] vs. /ı(C)/

- **Extension: A future study will investigate the phenomenon further by conducting a perception study and including teenage speakers.**

**References**