The prosody of corrective focus and its domain in Korean

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INTRODUCTION

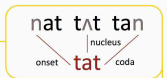
How do speakers modulate their speech to highlight new or important information?

- Focus effects have primarily been studied for domains larger than a segment, such as accented syllables or words.
- This study elicits focus on segment-sized units using a corrective focus task to answer the following questions:

Q Is the domain of corrective focus smaller than a syllable?

Q Is the focus modulation shown on ALL and ONLY the gestures co-active during the domain of focus?

METHOD



Segmental corrective focus

A: Is the ball between the tree and the CV.CV.$C_xV_xC_x$?

Instructed Correction:

B: No, the ball is between the tree and the CV.CV.$C_yV_xC_x$. (**Onset**)
B: No, the ball is between the tree and the CV.CV.$C_xV_yC_x$. (**Nucleus**)
B: No, the ball is between the tree and the CV.CV.$C_xV_xC_y$. (**Coda**)

C: No, the **moon** is between the tree and the CV.CV.$C_xV_xC_x$. (Post-focus)

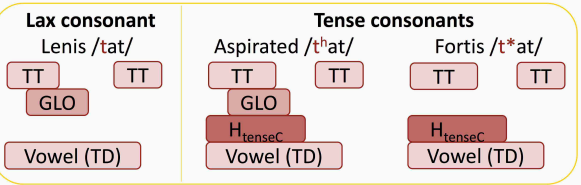
- Subject: 16 native Korean speakers (8 female, 8 male)
- Target: Final syllable in tri-syllabic nonce words: CV.CV.**CVC**
- 6 target syllables × 7 reps; measured acoustic durations & f0max
- Ind. Var: Stops (lenis, asp, fortis); Correction position (ons, nuc, coda)
  Control (focus vs. post-focus)

1. Instructed correction × Sub-syllabic position (onset, nuc, coda)

Segment-sized scope **vs.** **Syllable-sized scope**

onset …or… *coda focus*

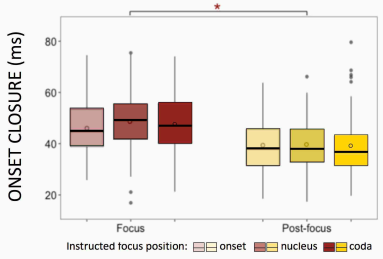
2. Instructed correction × Segmental compositions (tense vs. lax)



Predicted under focus:

- GLO — VOT lengthening in lenis & aspirated stops
- H_{tenseC} — Pitch raising for tense Cs (& the lack thereof in lax Cs)
- TT/TD — Lengthening of closure duration (TT) and vowel duration in all Cs

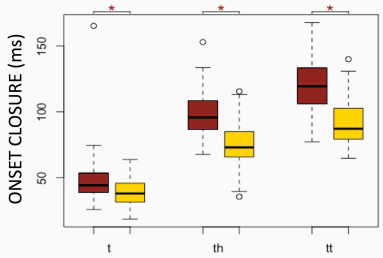
RESULT 1 – SYLLABLE POSITION EFFECT



- **Onset closure duration** lengthens under focus
- No difference found with respect to instructed sub-syllabic correction position (onset, nucleus, vs. coda)
- Same results hold for **VOT** and **vowel duration**

RESULT 2A – SEGMENT COMPOSITION EFFECT

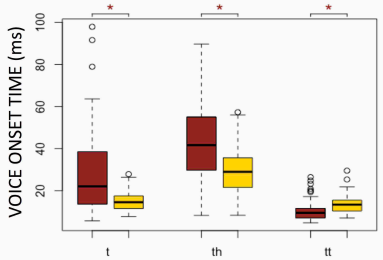
(reports onset-correction data subset only)



→ Focus lengthens onset **closure duration**

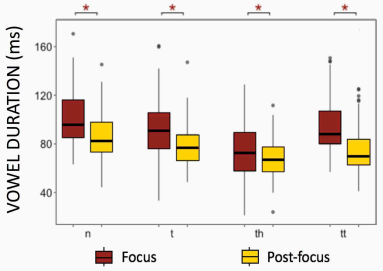
→ Greater focus effect in tense stop onsets

- Consistent with slowing of Tongue Tip constriction



→ Significant **VOT** increase in lenis (/t/) and aspirated (/tʰ/) onsets

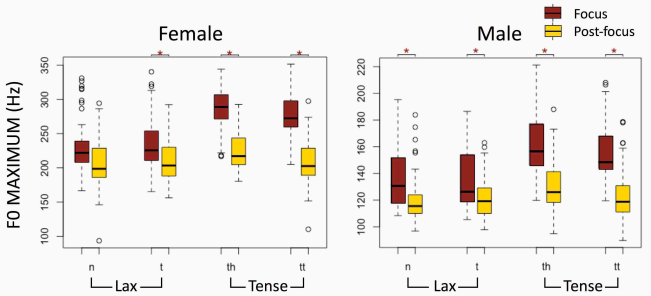
- Consistent with slowing of GLO in lenis & aspirated



→ **Vowel duration** lengthens in all Cs under focus

- Consistent with slowing of Tongue Dorsum interval

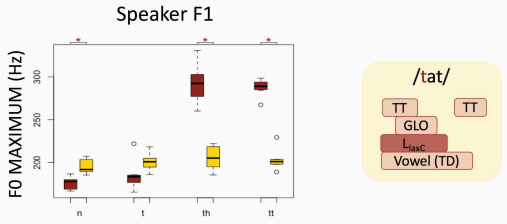
RESULT 2B – TONAL EFFECT



→ With **lax onsets**, only **50%** of the Speaker × Consonant combinations show significant increase in f0max, whereas for **tense onsets** 94% of the Speaker × Consonant combinations show significant f0max increase.

- Focus modulates Accentual Phrase (AP) tone gesture (LL**H**/LH**H** for tri-syllabic words), resulting in pitch increase in general.
- Simultaneously, focus modulates segmental tonal gesture on tense onsets (H_{tenseC}), thus greater pitch increase with tense onsets (than lax).
- Although it is known that the tense-lax contrast neutralizes within AP, we observe that focal prominence de-neutralizes the phrase-internal tense-lax f0 contrast.

Speaker idiosyncrasy re lenis stops



For speaker F1, f0 maximum *decreases* in syllables with lax onsets under focus, while tense onsets occur with a f0 maximum increase.

CONCLUSION

- Focus effects were not sensitive to the instructed sub-syllabic correction position, suggesting that the domain of focus is larger than a segment-sized interval, potentially having the scope of a syllable.
- Focus modulates all and only the gestures co-active within the hypothesized syllabic domain of focus.

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