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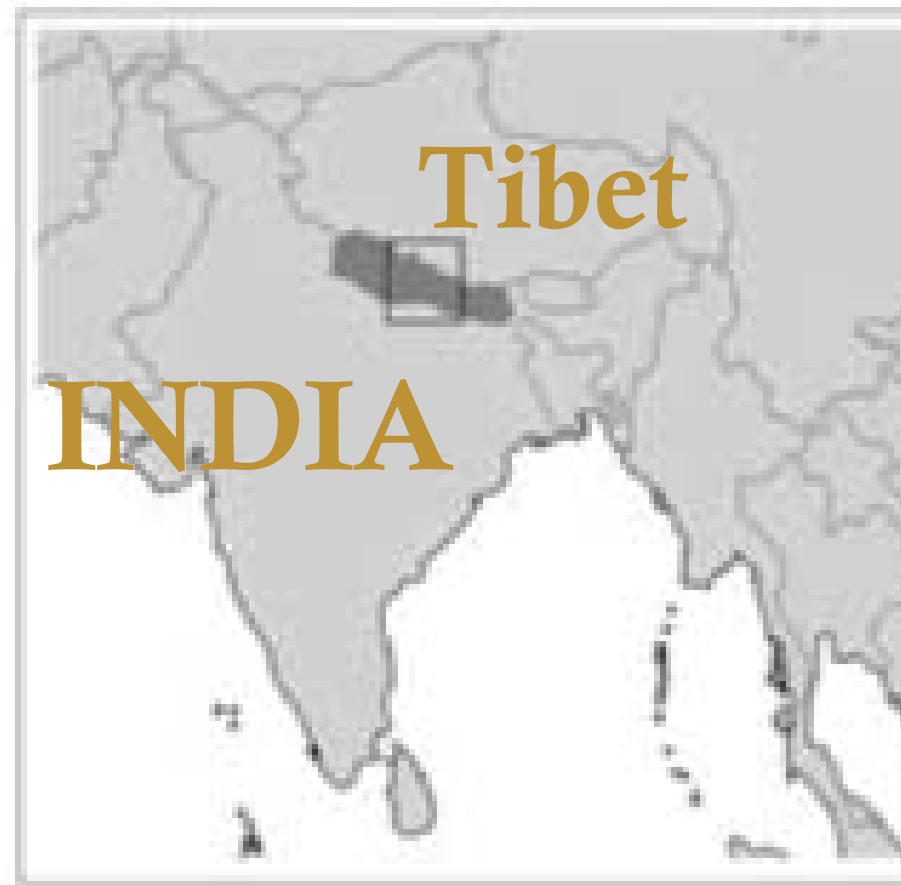
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# On the retention of an old feature in the Tamang dialect of Taglung (Tibeto-Burman, Nepal)



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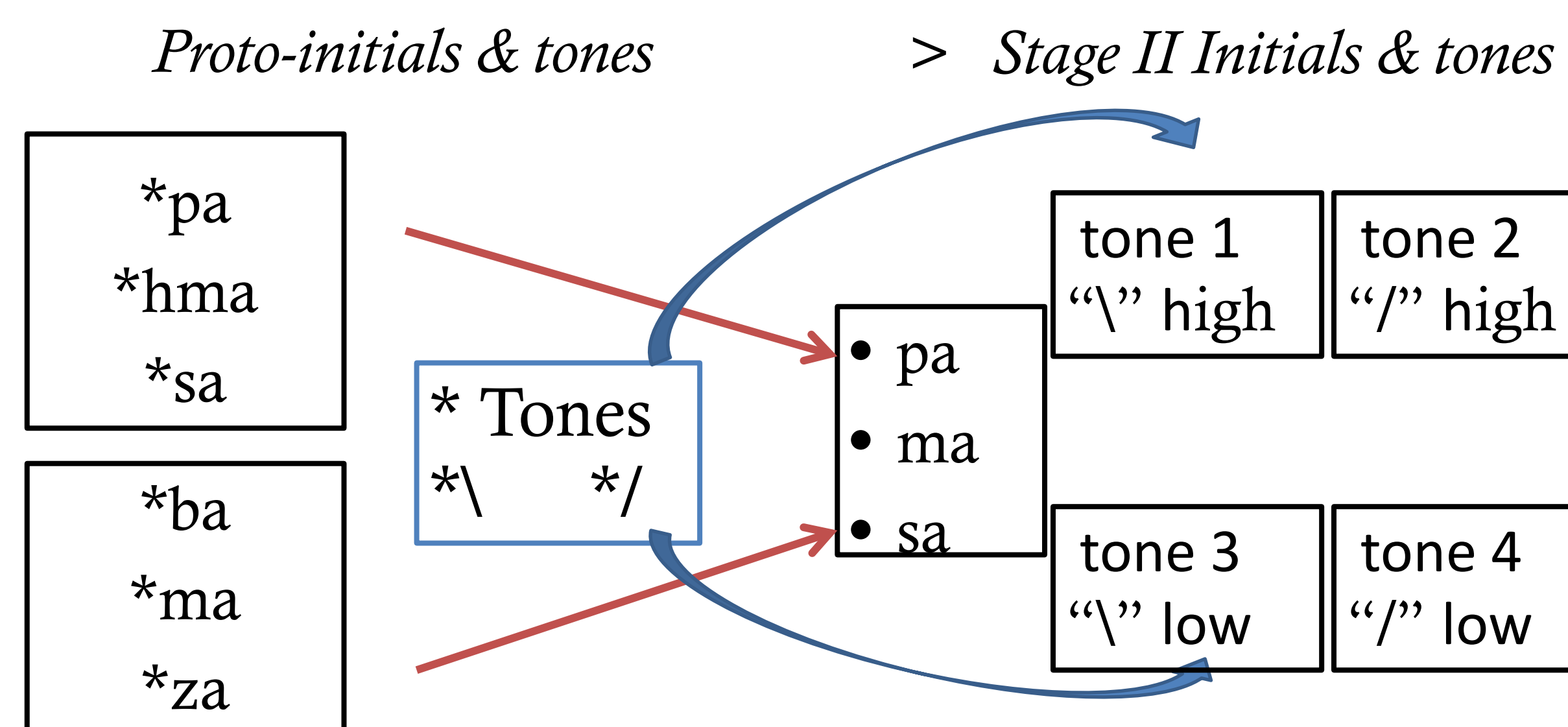


## Background

### Areal diffusion of the sound change

- Starting around 1000 AD in China, with progressive **devoicing of oral stops**
- Spreading to the South and West, across language families, often with simultaneous **voicing of previously voiceless sonorants**
- Resulting in a **tonal split** as the consonant series merge (Haudricourt, 1961, 1972)

### Schematic view of the Asian consonant merger and tonal split



### Intermediate stage of the sound change

- New low tones accompanied with **breathiness**
- Some **voicing** of the initial stops retained
- Retention of these old features viewed as a historical transition, e.g., in Wu Chinese, and the languages of the Tamang group...

### Various patterns of retention of old features in Tamangish languages

- In all Tamangish languages: Voicing never retained on /s/; voicelessness never retained on sonorants
- Whereas, **for stops (stop onset words)**:
  - **Gurung**: voicing retained only on simple C on tone 4 (low), breathiness retained as enhancement of the two low tones
  - **Risiangku Tamang**: voicing and breathiness retained as enhancement of the two low tones, no distributional regularities (Mazaudon & Michaud, 2008)
  - **Manang**: tone 3>[high], voicing or breathiness NOT retained
  - **Taglung Tamang**: tone 4>[high], what happens to voicing and breathiness?

## This study

In Taglung Tamang, when one tone of the low series (tone 4) becomes [high], voicing and breathiness cannot be considered as enhancing features of the tone anymore,  
 ➤ **What happens to these old features?** ➤ **Are there any distributional regularities?**

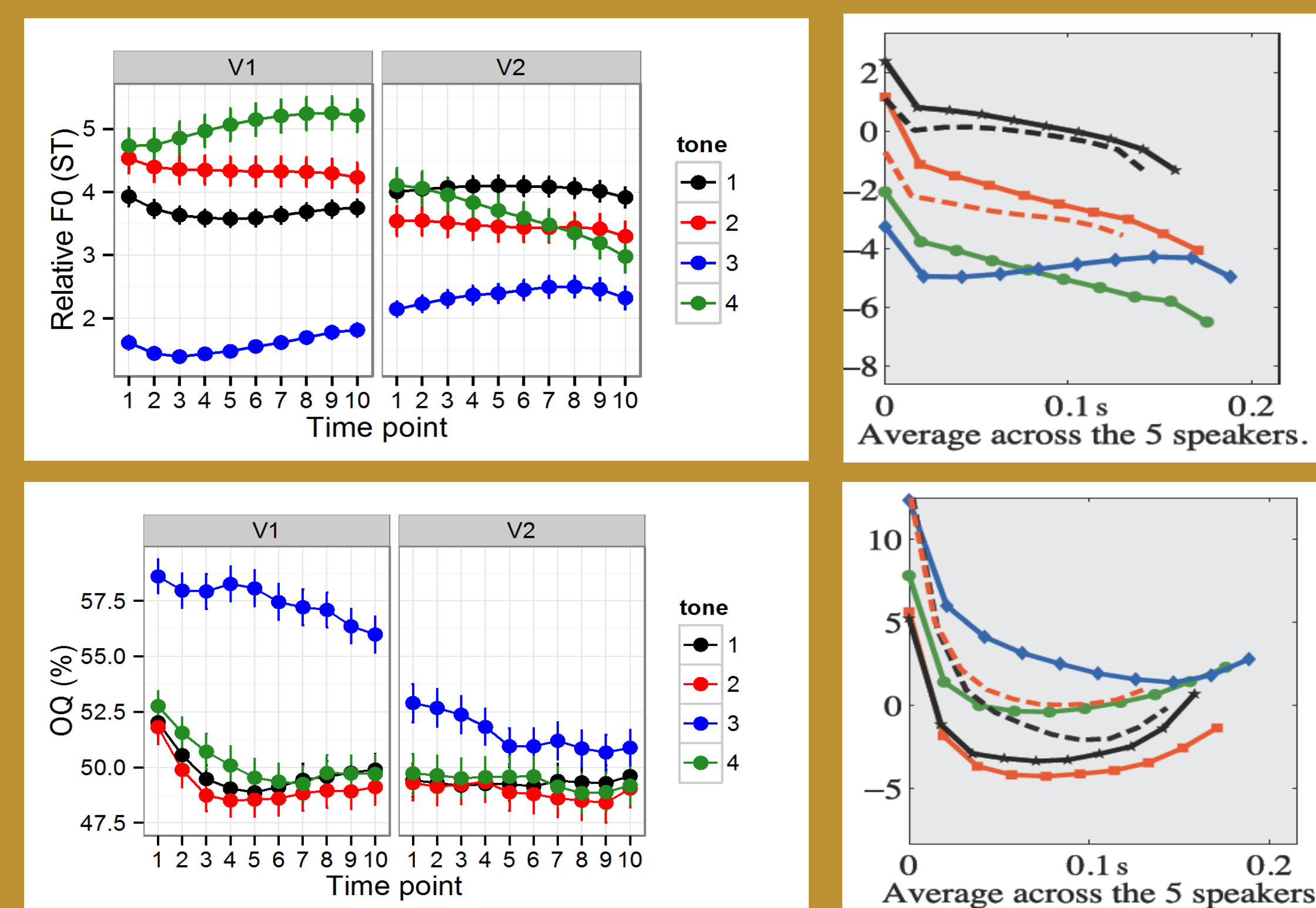
### Method

- When: November 2015; March-April 2017; Where: Taglung village, Nepal
- Who: bilingual speakers (Tag & Nepali), M1 (mid-30), M2 (50+), F1 (40+), F2 (70+)
- How: simultaneous **audio** and **electroglottographic** (EGG) data, for detection of the voicing, measurement of F0, and OQ (open quotient, higher values indicating breathier voice)
- What: **C<sub>i</sub>(L)V(C<sub>f</sub>)** (stem) + nominal/verbal suffix, in isolation and carrier sentences  
 Ci (subset) = /p, t, ts, t̥, k/; V = /i, i:, e, e:, u, u:, o, o:/; L = /l, r, j, w/; Cf = /p, t, s, k, m, n, ŋ, l, r, j/.

### Results: F0 and breathiness

(only stop Ci open syllables, averaged for 3 speakers)

#### Breathiness retained on T3, lost on T4 in Tag.



**Taglung (word) vs. Risiangku (σ1)**  
 F0 (above) and OQ (below) contours of the 4 tones

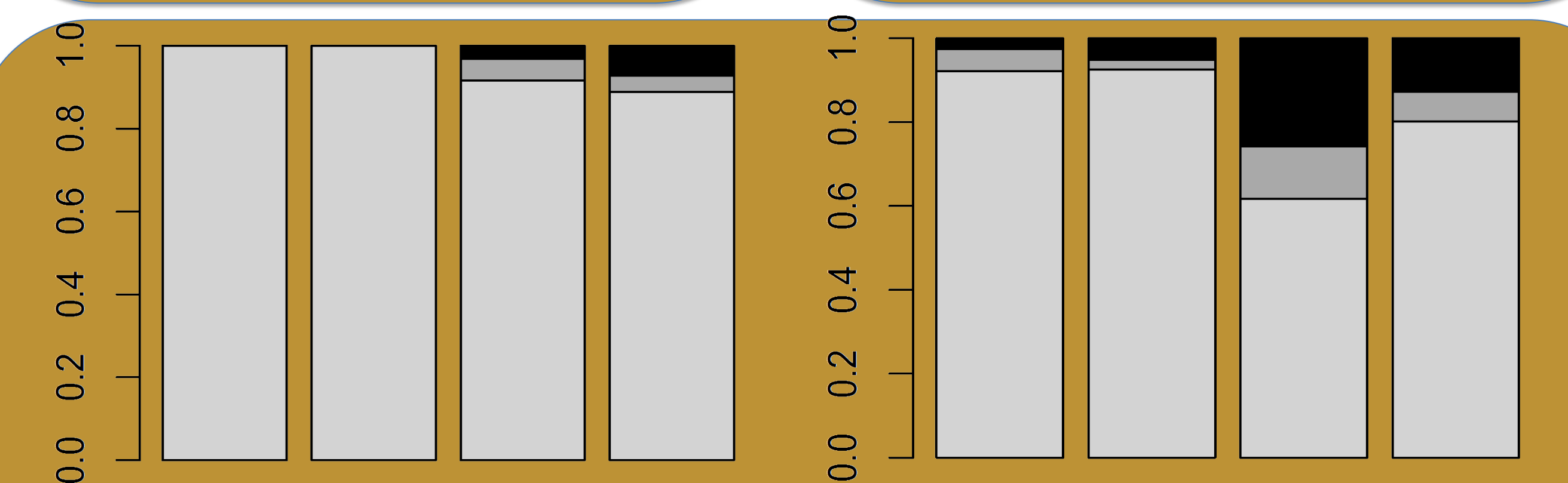
### Results: Voicing (4 speakers)

#### Quasi-systematically voiced T4 items

- <sup>4</sup>bli ‘four’ (except when preceded by a classifier)
- <sup>4</sup>bre: ‘eight’
- <sup>4</sup>bra: ‘cliff’
- <sup>4</sup>baŋ ‘strength’
- <sup>4</sup>baŋba ‘be strong’
- ...

#### For comparison, some voiceless T4 items

- <sup>4</sup>plu ‘seed’ (never voiced by 3 speakers, voiced by 1)
- <sup>4</sup>tu: ‘six’ (occasionally vcd)
- <sup>4</sup>pra: ‘flour’ (never)
- ...



**isolation vs. carrier sentence**  
 % of voiced (black) and partly voiced (dark grey) ~ tone

## Concluding remarks

- As expected, breathiness has disappeared on tone 4, presumably because it conflicts with the present high-pitch of this tone. This is in line with the idea that low pitch and breathiness are mutual enhancers (e.g.: Silverman, 1977).
- The retention of voicing on tone 3 can also be considered as an enhancing feature, and is favored by sentence-internal position.
- More intriguing is the retention of voicing on tone 4 items, which is systematic on **some lexical items, that all begin with a labial stop, and especially in a consonant group** (contrary to the Gurung pattern).