

The Adaptation of Tones in a Language with Registers:

A Case Study of Thai Loanwords in Mon

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Introduction

Goal: Investigate how lexical tones get adapted into a language with vowel phonation contrast.

Case study: Thai loans in Mon, a language with modal/breathy vowel contrast.

Mon spoken in Thailand: a language not passed on to younger generation. (Smalley 1994).

Proposal: when a borrowing language fails to match its phonemes with the phonemes of the donor language, it looks for secondary/redundant cues that are realized phonetically.

Background

Thai: Five lexical tones
Mid 33 (M), High 45 (H), Low 21, (L), Falling 51 (F), and Rising 24 (R).

Mon: Two vowel phonation types (“registers”) (Luangthongkum 1988)

1. modal voice (acoustic cues: high pitch and shorter duration)
2. breathy voice (acoustic cues: low pitch and longer duration)

/p^hɛŋ/ “split bamboo” /p^hɛŋ/ “marijuana”
/cə/ “to shield” /cə/ “to bump into”
/ŋok/ “itchy” /ŋok/ “big”

(Luangthongkum 1988: 15)

My observation from English-Mon glossary (Huffman 1990):

- M → 1st register,
- H and F → 2nd register,
- L → ?
- However, small data

Hypotheses

Hypothesis 1: Mon ignores Thai tones and looks at Thai modal vowels. (Phonological Model: Paradis and LaCharité 1997, 2005)

- All Thai loans are adapted as register 1 (modal phonation)
 - Thai lacks phonemic breathy vowels.
- Tones are not be adapted.

Hypothesis 2: Thai tones/pitch levels align with the f0 correlates of Mon registers (Phonetic Model: Peperkamp and Dupoux 2003)

- H → register 1
- L → register 2
- M, F, R → either register 1 or 2

Methodology

Participants

- 4 adults: 2 F’s and 2 M’s, ages 45-55
- Thai-Mon Bilinguals
- from Bang Kradi, Bangkok, Thailand
- L1 = Mon, L2 = Thai (from school)

Target Words

- Thai loanwords: 130-140 words
- 130-140 words X 4 speakers = 520-560 tokens
- Correspond to Thai five tones
- Recorded outdoors in participants’ village

Word types

- Monosyllables and polysyllables (measured final syllable only)
- CVV, CVVO, CVVS

Carrier sentence:

/oa ham _____ tœ/ (all modal)
“I said _____ already.”

- Randomized

Data measurements: mean f0, excursion size

Data Analysis: Praat (Boersma 2001), ProsodyPro (Xu 2013)

Results

Summary

f0 mean

All speakers:

no sig. difference b/w M and H
F L R are sig. lower than M H

M1 & M2: F L R are sig. lower than M H

W1: F is sig. lower than L, and
F L are sig. lower than R M H

W2: F L R are sig. lower than M H

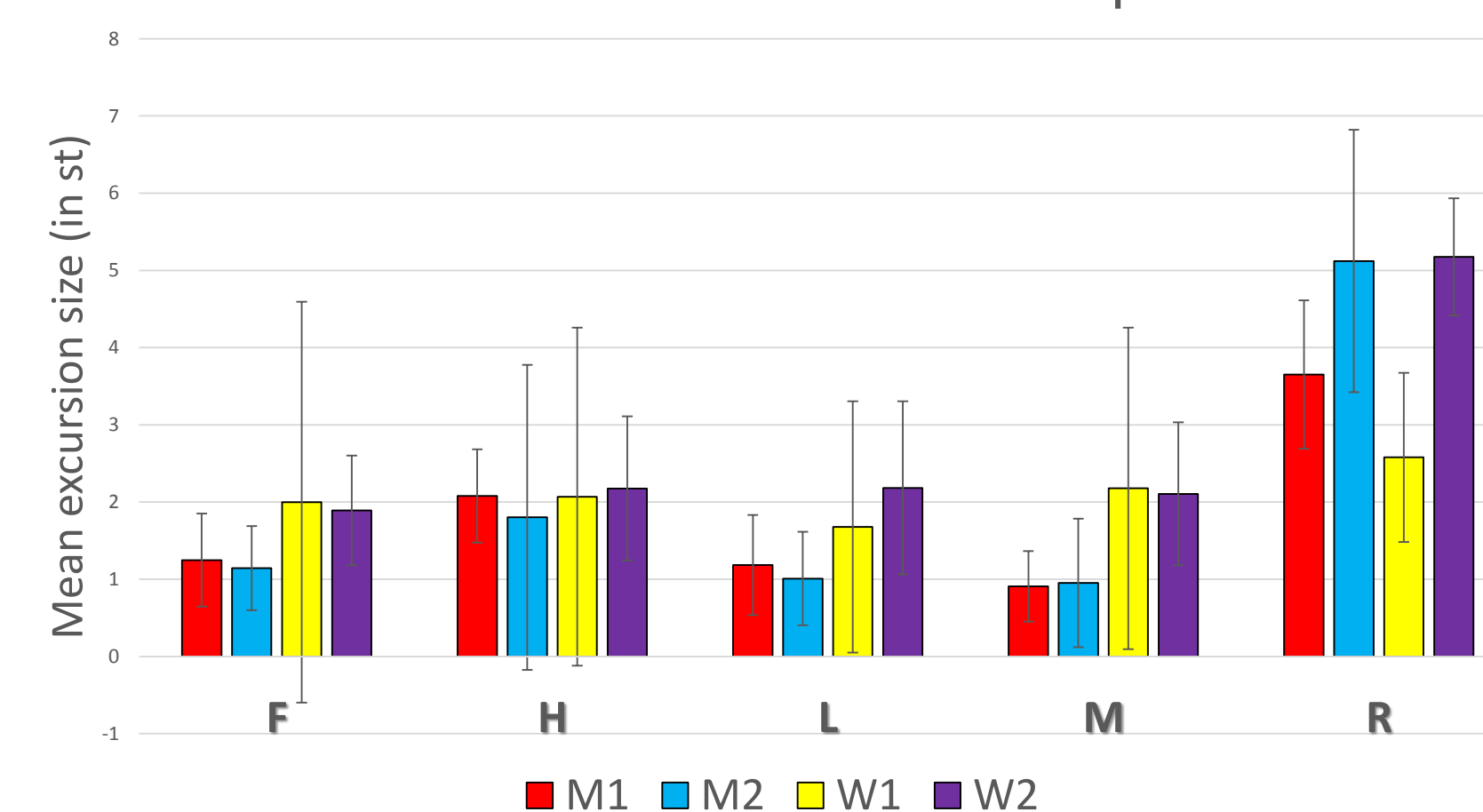
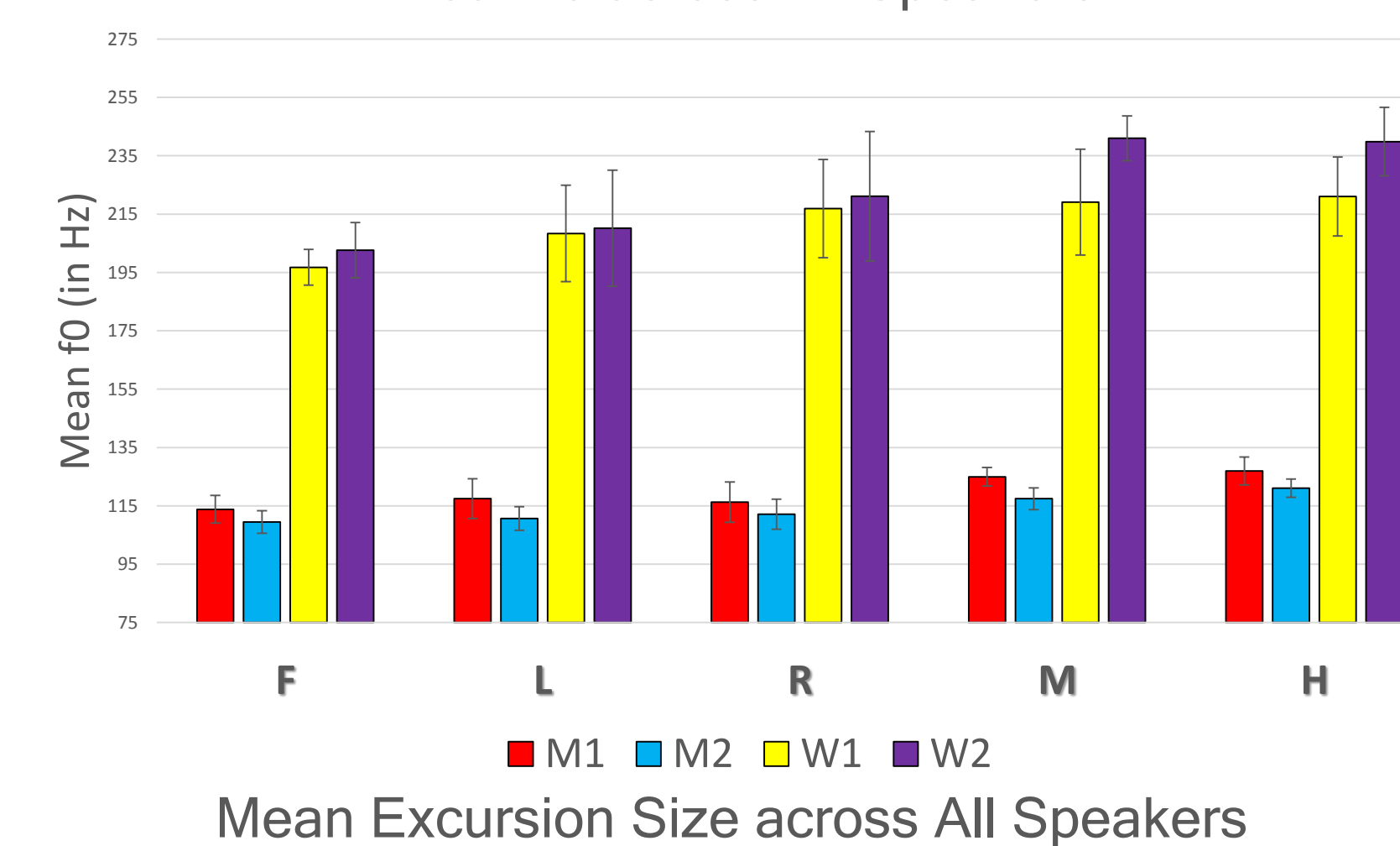
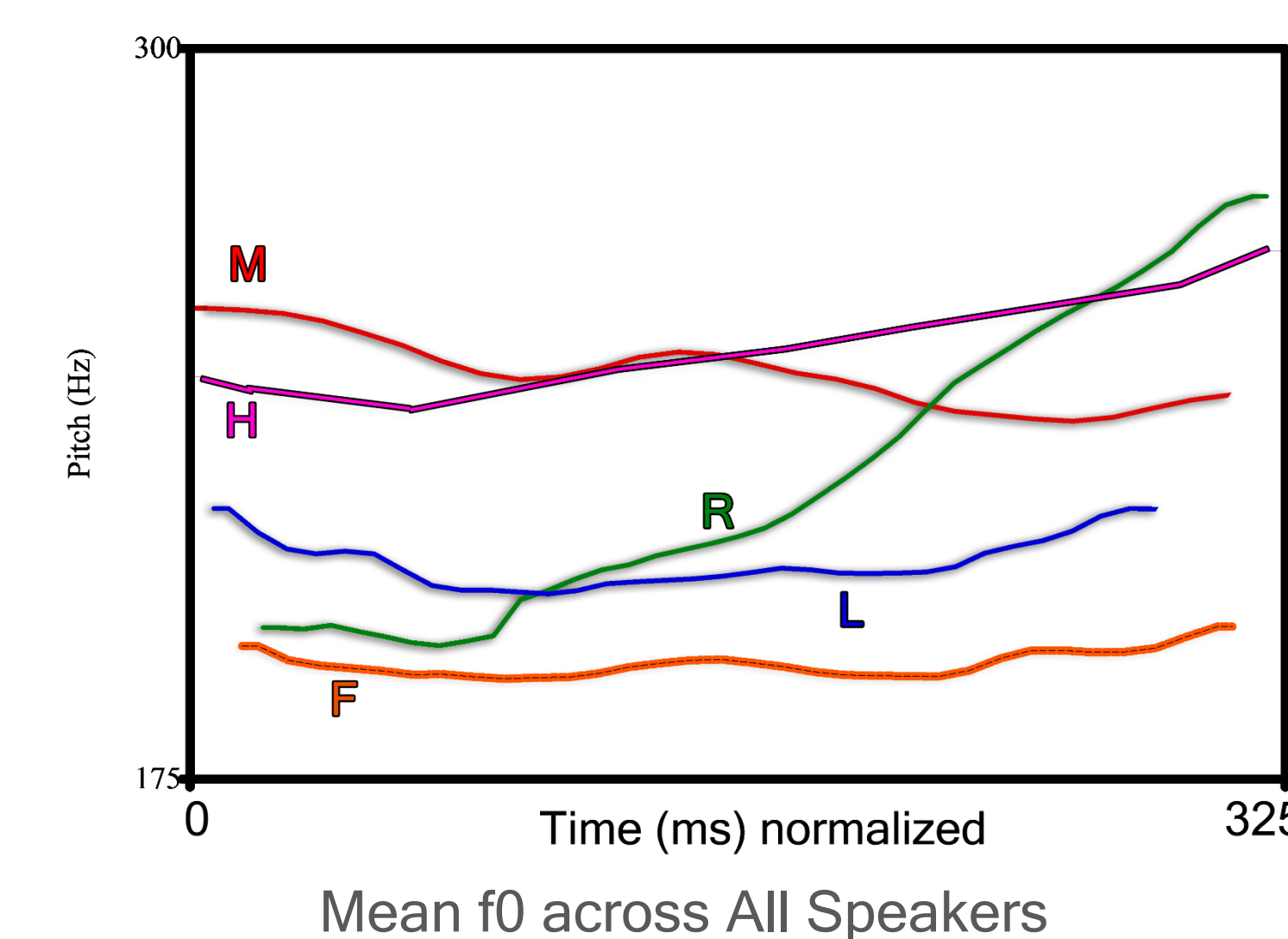
Excursion size

M1: R is sig. larger than H and,
R H are sig. larger than M F L

M2 & W2: R is sig. larger than H M F L

W1: no sig. difference among all tones

An example from one speaker (W2; token per tone)



Discussion/Conclusions

Hypothesis 2 must partially be rejected.

- Mon takes Thai tones into account.
- Mon fails to match its phonation contrast with Thai
 - Thai lacks phonation contrast; primary cue is absent
- So, it looks elsewhere, i.e. secondary cue = pitch
- Similar to Enhancement cases in which redundant cues get adapted over actual phonemes. (E.g. Kenstowicz 2010)

Hypothesis 1 must be rejected.

- Mon takes Thai tones into account.
- Results suggest that**
 - M and H may be adapted as register 1
 - F and L may be adapted as register 2
 - R is imported (unadapted)

Future Research

Vowel phonation in these loans will be measured.

- Possible that tones are imported.
- F is unlikely to be imported
 - If imported, we would have observed a falling tone.

Some questions remain

- Why F is adapted as lowest pitch?
 - What is its relationship with breathy voice?
- Why only some tones are imported?
 - Are some tones more difficult to adapt?

References (handout)

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