

Pitch perturbations at vowel onset in different linguistic contexts in Thai

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Introduction

- CF_0 refers to F_0 perturbations at vowel onset due to the preceding consonant (e.g., F_0 is lower after /b/ than /p/; Kirby & Ladd, 2016)
- **Previous studies have provided conflicting findings about CF_0 effects, particularly in tone languages**
- For example, Kirby (2018) reported little to no CF_0 effects in words in a phrase, but Francis et al. (2006) reported clear effects

Research question

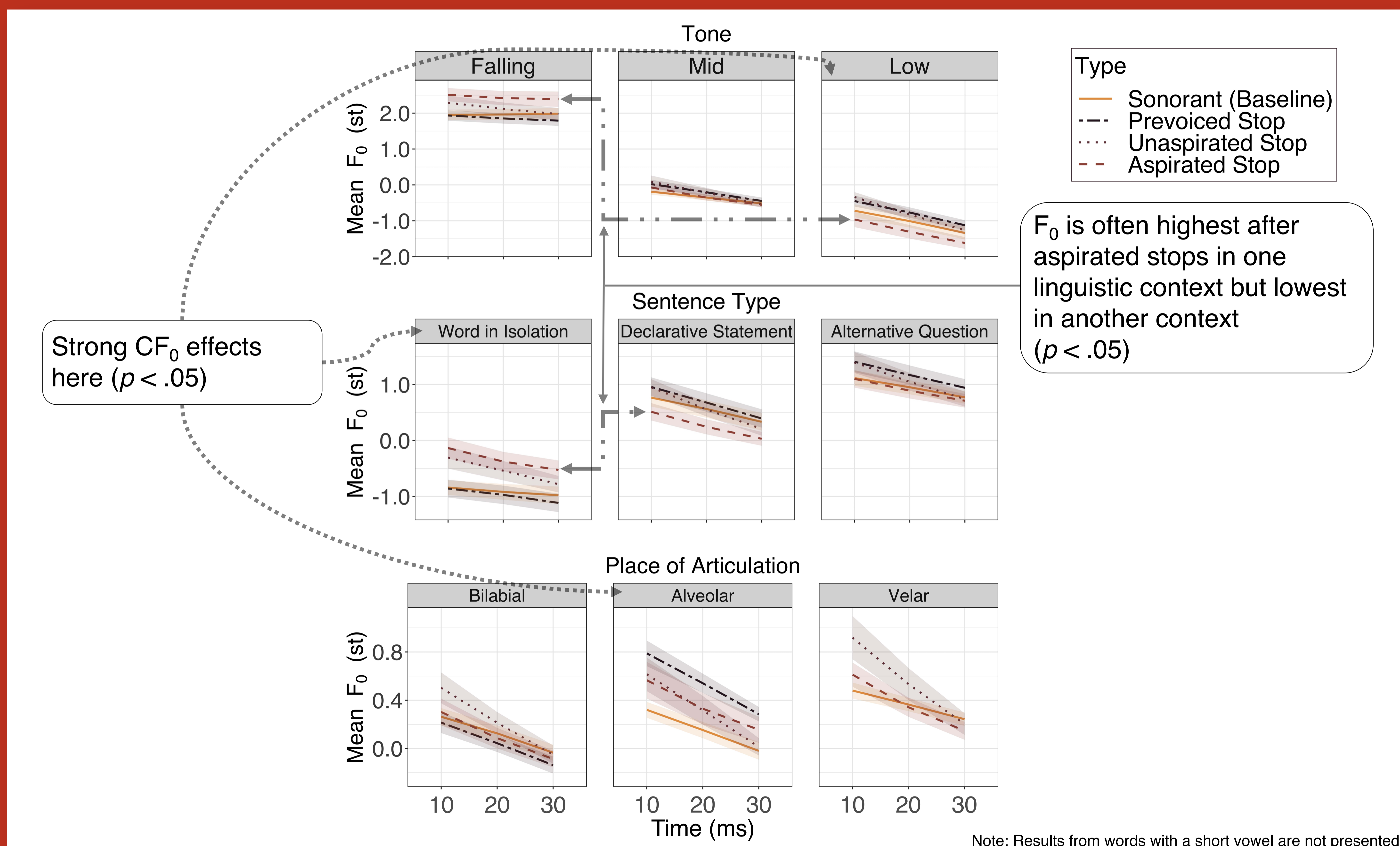
What are the effects of tone, sentence type, and place of articulation on CF_0 ?

Predictions

- Magnitude of CF_0 effects: (a) falling > mid > low tone, (b) in isolation > phrases, and (c) bilabial = alveolar = velar
- Pattern: Aspirated, unaspirated stops > prevoiced stops, sonorants

CF_0 effects change with different tones, sentence types, and places of articulation

Linguistic contexts are important and should be considered in CF_0 studies



Methods

- **Who:** 12 Thai speakers (6 F and 6 M)
- **What:** Monosyllabic words (5,184 tokens) of CVV, CVVS, and CVO structure
- Onset consonants:

	Bilabial	Alveolar	Velar
Plosive	b p p^h	d t t^h	k k^h
Sonorant	m	n l	ŋ

- Falling (/51/), mid (/32/), or low (/21/) tone
- (i) in isolation; (ii) declarative statements; (iii) alternative questions
- /a/ (V) or /a:/ (VV) as the vowel
- F_0 measured at 10, 20, and 30 ms following the onset of voicing
- **Analysis:** Linear mixed-effects models

Example with (i) /k ^h a: ²¹ /
(ii) Declarative Statement /diaw ²⁴ tɕa? ³² p ^h ut ⁵¹ k ^h am ³² wa: ⁵¹ k ^h a: ²¹ haj ⁵¹ faŋ ³² / “I will say the word k ^h a: ²¹ for you”
(iii) Alternative Question /k ^h aw ⁴⁵ ?a:n ²¹ k ^h am ³² wa: ⁵¹ k ^h a: ²¹ ru: ²⁴ k ^h i: ²¹ na? ⁴⁵ / “Did he read the word k ^h a: ²¹ or k ^h i: ²¹ again?”

References

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