5aSC12: Quantity, quality, both or neither? Vowel contrasts in Hakha Chin monophthongs

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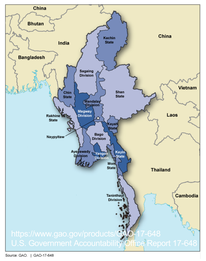
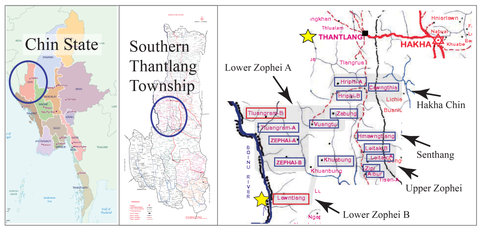
177th Meeting of the Acoustical Society of America ~ Louisville, KY ~ May 17, 2019

Hakha Chin/Laiholh

- Under-documented Tibeto-Burman language spoken in Western Myanmar/ Burma and by many of the >20,000 Burmese refugees living in Indiana.[1, 2]
- Profound multilingualism, much dialectal variation.





	FRONT	CENTRAL	BACK
HIGH	ii i (ɪ ɪ)		u uu (ʊ ʊ)
MID	ee e	ə/ʌ	o ɔɔ
LOW		aa	

- Monophthongs have alternately been reported as contrasting in
  - Length [3]
  - Quality [4]

The Issue

- Quantity contrastive only in closed syllables[5]

CVV	CVVC	CVC	CVC?	CV
[laa] *mule*	[laam] *to dance*	[lam] *road*	[lam?] *to tread'*	[ka] 1.sg

Previous claims:

- Length is 'extremely contrastive'[3]
- Phonemic length distinctions is realized phonetically as a quality distinction[4]
- In syllables closed with sonorants, sonorant length may be the most relevant factor[6]

In our preliminary work with two speakers, one shows both quantity & quality distinctions; the other shows neither.

Methods

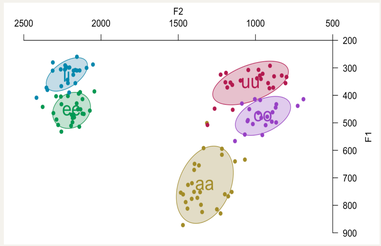
- 1 male talker (~20 yrs) from Thantlang and 1 female talker (~20 yrs) from Lawngtlang were recorded producing a curated wordlist with contrasting syllable shapes.
  - VV#: Open syllables with long vowels
  - VVN: long vowels, sonorant codas.
  - VN: short vowels, 'smooth" sonorant codas
  - VN?: short vowels, 'checked' (glottalized) sonorant codas
  - VT: short vowels, stop codas
  - VVT: long vowels, stop codas

Results

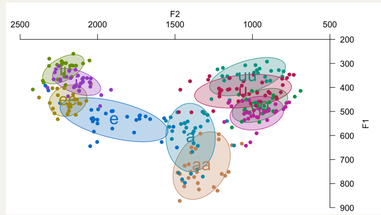
Thantlang Speaker Data

Hakha Chin is his only Chin language.

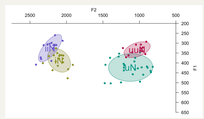
Five well-differentiated vowel qualities in long vowels.



All monophthongs: long/short clouds are often overlapping, but somewhat distinct.

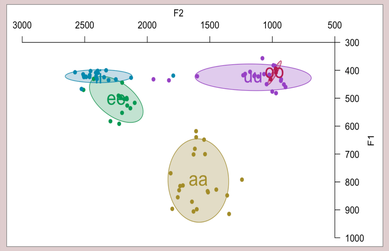


Drilling down into more specific environments: high vowels before sonorants. Quality contrast maintained for Thantlang speaker.

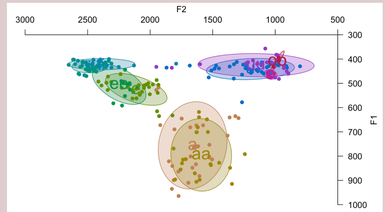


Lawngtlang Speaker Data

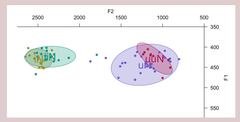
Speaks Hakha & Zophei, a related language from the Maraic sub-group.



(Four) well-differentiated vowel qualities in long vowels.

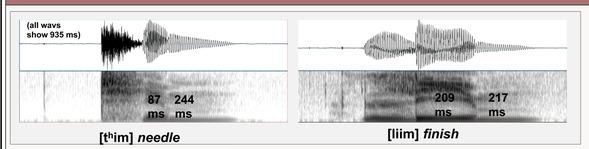


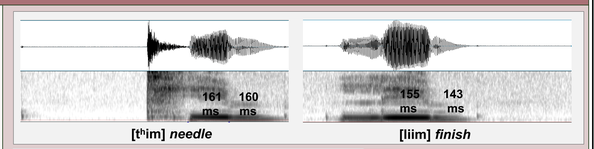
All monophthongs: near-complete overlap in long/ short clouds. No apparent quality distinction.



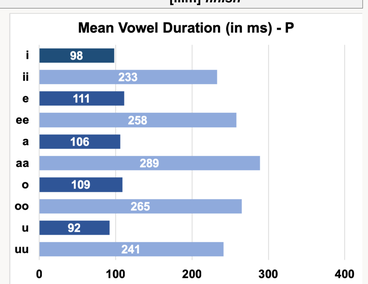
Drilling down into more specific environments: high vowels before sonorants. General Lawngtlang pattern is maintained. No quality distinction.

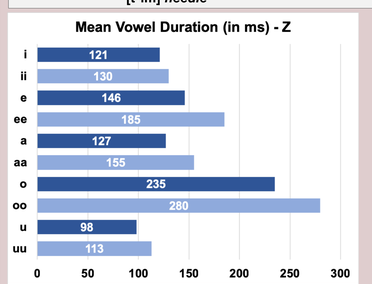
Duration





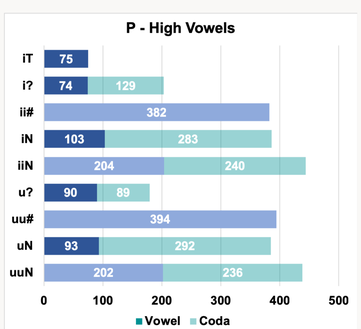
Long/short duration differences are clear in all vowel qualities.

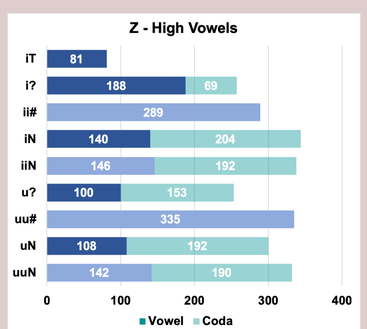




Durational differences are minimal across the board; differences across qualities are clearest (e.g. [o]/[oo] are longest overall).

Duration of high vowels in different syllable types: Maddieson's 2004 suggestion: vowel/sonorant duration ratio is crucial. Checked syllables profoundly short.

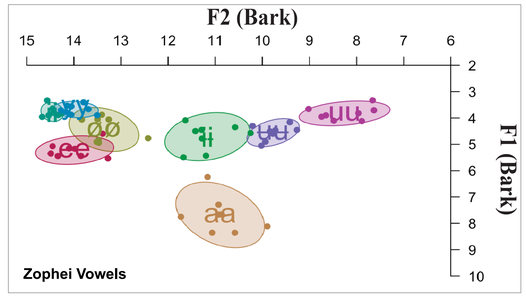




Duration of high vowels in different syllable types: only two observations emerge. Short vowels before stop codas are truly short, vowels in open syllables are truly long.

Both and Neither?

- **Thantlang speaker:** the inventory reported by others is present, with both quantity and quality differences emerging.
- **Not so for the Lawngtlang speaker**. Reduced quality contrasts, minimal length contrasts
- Is her data reflecting influence from Zophei? Probably not.
- Her Zophei vowel space:



- Duration differences are also clear – 100+ ms differences between short and long vowels in Zophei.
- **NEXT STEPS:** expand this to many other speakers from multiple dialect groups and language backgrounds; perception work expanding on Mortenson and Van Bik 2002?

Thoughts

- **Interim message:** two very different patterns in two pilot speakers.
- **Relevant?** Our native speaker collaborators are highly multilingual and live in a diaspora community.
- **Relevant?** Is this reflecting a dialectal difference? Is it representative of a larger pattern?
- **Open Question:** We don't know whether our Lawngtlang speaker perceives a vowel contrast.
- Ask us about the larger project!

References

[1] Eberhard D. M., G. F. Simons, & C. D. Fennig (eds.). 2019. *Ethnologue: Languages of the World.* Twenty-second edition. Dallas Texas: SIL International. Online version: http://www.ethnologue.com.proxyiub.uits.iu.edu. **[2] Refugees Bureau of Population and Migration.** 2018. Refugee arrivals by placement state and nationality. Technical report, U.S. Department of State. **[3] Melnik**, N. 1997. "The sound system of Lai". *Linguistics of the Tibeto–Burman Area 20.2*:9–19. **[4] Peterson**, D. A. 2016. Hakha Lai. *The Sino-Tibetan Languages*, page 258. **[5] Hyman**, L. and K. VanBik. 2002. "Tone and syllable structure of the Hakha (Lai–Chin) noun". *Proceedings of the 28th Annual Meeting of the Berkeley Linguistics Society*. **[6] Maddieson**, I. "Timing and alignment: A case study of Lai." *Language and Linguistics* 5.4 (2004): 729-755.

Acknowledgements

This project was supported by the Office of the Vice Provost for Undergraduate Education at Indiana University. Zai Sung, Thomas Thang, and Peng Hlei Thang are our language consultants extraordinaire. This work would not exist without them, and our continued collaboration with them is a privilege and a delight. Z, T, & P: Nan mah he rian kan ttuan tti khawh hi kan i lawm tuk.