

Vowel variation and change in Thai Mon and Burmese Mon varieties

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Narinthorn Sombatnan Behr
Ph.D. candidate
Department of Linguistics, Chulalongkorn University

Introduction (1)

- Mon is a register language.
 - [klɜ̃ŋ klɜ̃ŋ həne] ‘a boat comes to the pier’
 - [klɔ ki həki] ‘a dog is barking at a centipede’
- An analysis of the vowel system might be problematic due to the fact that breathy vowels tend to be more centralized than the clear ones (Shorto, 1966; Bauer 1982)

Introduction (2)

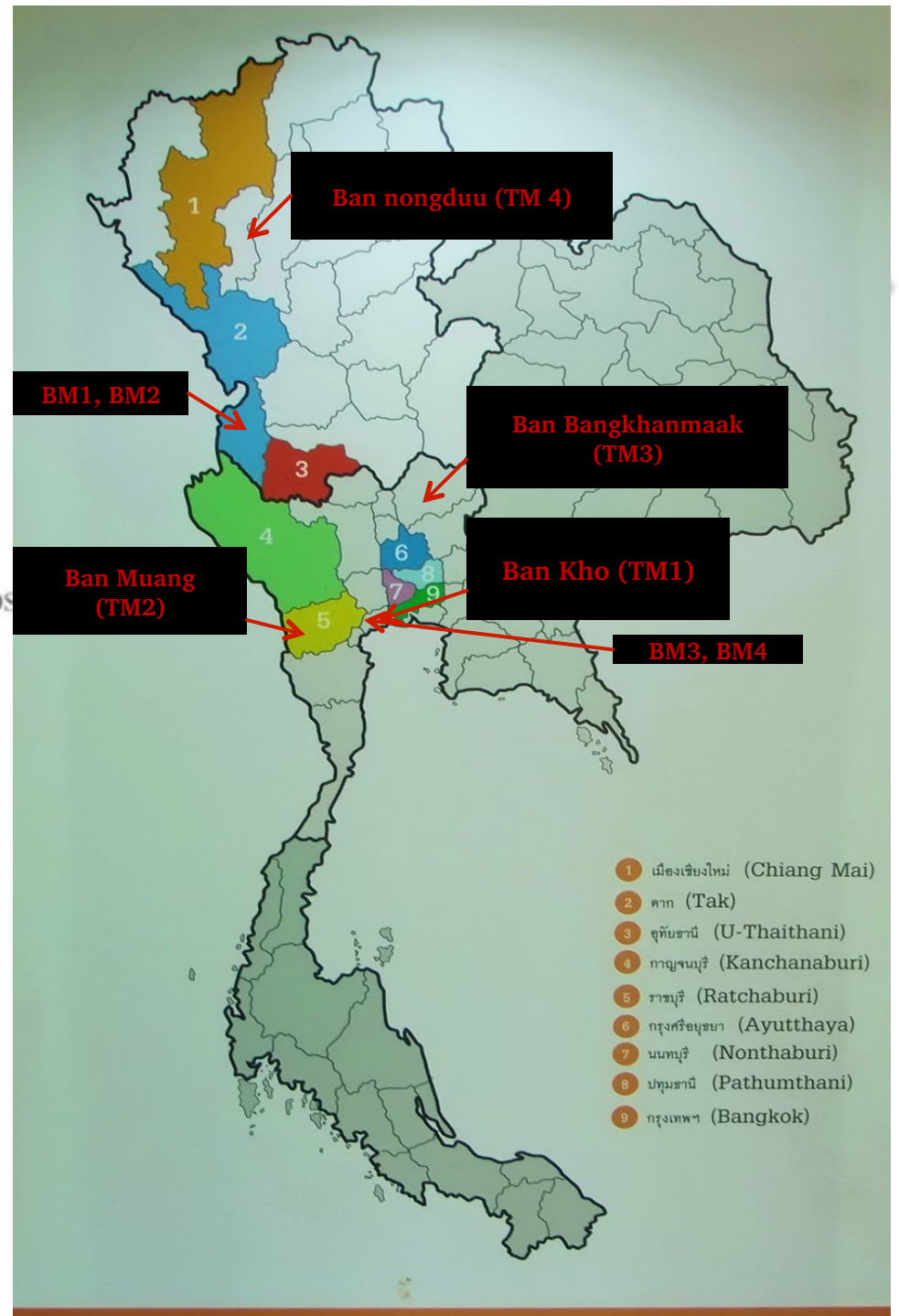
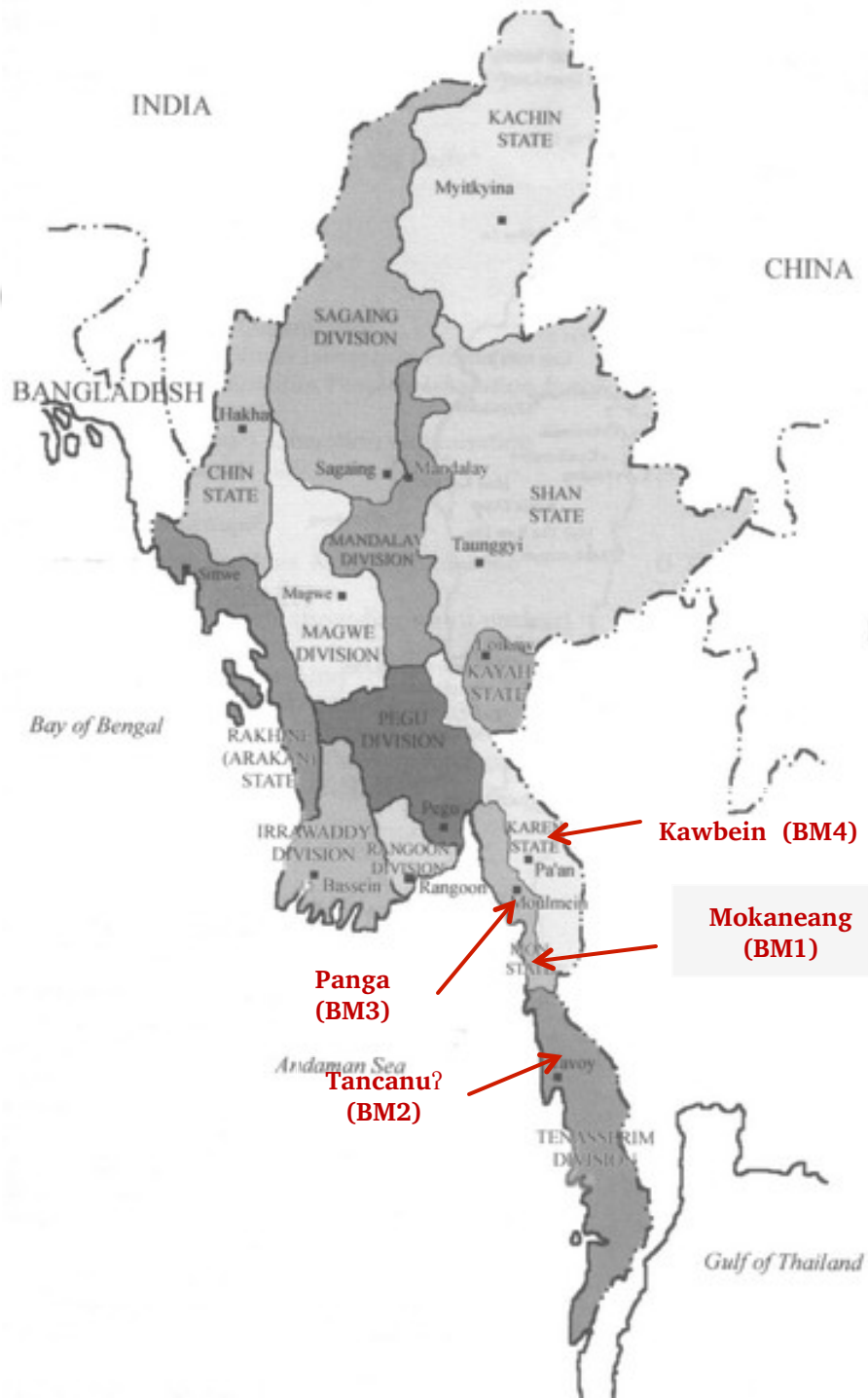
- Thai Mon and Burmese Mon are dialects of the same language. (Huffman 1987-1988)
- These varieties are spoken in different communities. The varieties might not be the same in terms of vowels.

Objectives

- To analyze **vowel systems** in the Thai Mon (TM) and the Burmese Mon (BM) varieties synchronically
- To investigate **the phonetic characteristics of vowels** in the TM and the BM varieties

Hypotheses

- Whether the TM vowel systems are different from those of BM.
- Whether the TM vowels have simpler phonetic characteristics.



Methodology

- Three sets of wordlists:
 - 500 vocabulary items adapting and adding from 436 SEA wordlist
 - 300 items selecting from Shorto (1962) and Diffloth (1984)
 - 112 words from Bauer's unpublished dialect checklist.

Results

- Vowel systems
- Vowel variation: phonetic characteristics of vowels

Results: vowel systems (1)

TM1

TM2

TM3 and TM4

/i/, /i̥/ /u/, /u̥/
 /e/, /e̥/ /o/, /o̥/
 /ɛ/, /ɛ̥/ /ɜ/, /ɜ̥/ /ɔ/, /ɔ̥/
 /a/, /ḁ/ /ɑ/

/i/, /i̥/ /u/, /u̥/
 /e/, /e̥/ /o/, /o̥/
 /ɛ/, /ɛ̥/ /ɜ/, /ɜ̥/ /ɔ/
 /a/, /ḁ/ /ɑ/

/i/, /i̥/ /u/, /u̥/
 /e/, /e̥/ /o/, /o̥/
 /ɛ/ /ɜ/, /ɜ̥/ /ɔ/
 /a/, /ḁ/ /ɑ/

/ea/, /e̥a/, /ai/, /ḁi/, /ui/, /u̥i/,
 /oa/, /o̥a/, /ao/, /oi/, /ɔe/, /ɔ̥a/, /ɔ̥a/

/ea/, /e̥a/, /ai/, /ḁi/, /ui/, /u̥i/,
 /oa/, /o̥a/, /ao/, /oi/, /ɔe/

/ea/, /e̥a/, /ai/, /ḁi/, /ui/, /u̥i/,
 /oa/, /o̥a/, /ao/, /oi/, /ɔe/

BM1 and BM2

BM3 and BM4

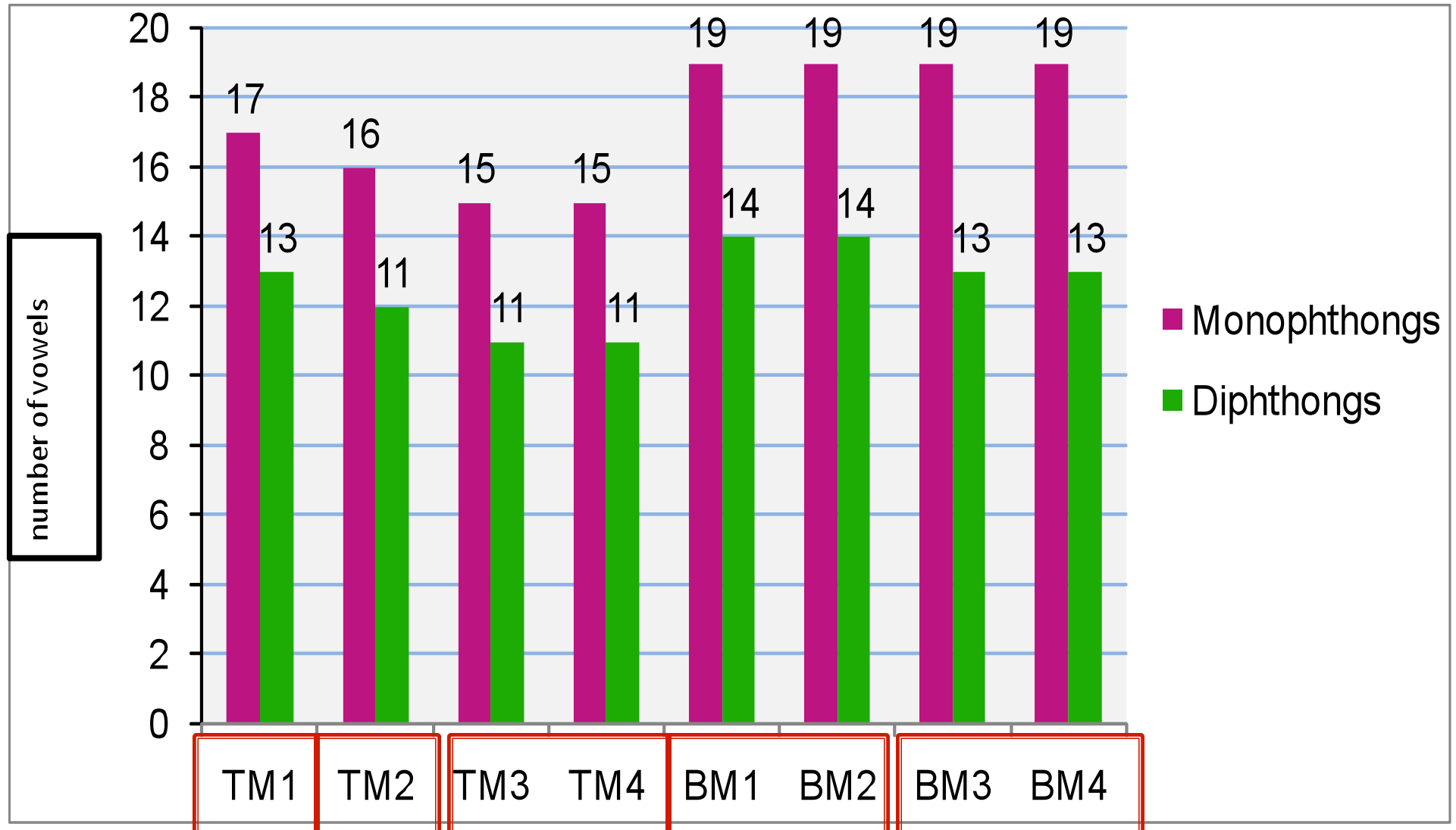
/i/, /i̥/ /i̥/, /i̥̥/ /u/, /u̥/
 /e/, /e̥/ /o/, /o̥/
 /ɛ/, /ɛ̥/ /ɜ/, /ɜ̥/ /ɔ/, /ɔ̥/
 /a/, /ḁ/ /ɒ/

/i/, /i̥/ /i̥/, /i̥̥/ /u/, /u̥/
 /e/, /e̥/ /o/, /o̥/
 /ɛ/, /ɛ̥/ /ɜ/, /ɜ̥/ /ɔ/, /ɔ̥/
 /a/, /ḁ/ /ɒ/

/ea/, /e̥a/, /ai/, /ḁi/, /ui/, /u̥i/,
 /oa/, /o̥a/, /ao/, /oi/, /ɔ̥i/, /ɔ̥e/,
 /ɔ̥a/, /ɔ̥a/

/ea/, /e̥a/, /ai/, /ḁi/, /ui/, /u̥i/, /oa/,
 /o̥a/, /ao/, /oi/, /ɔ̥i/, /ɔ̥a/, /ɔ̥a/

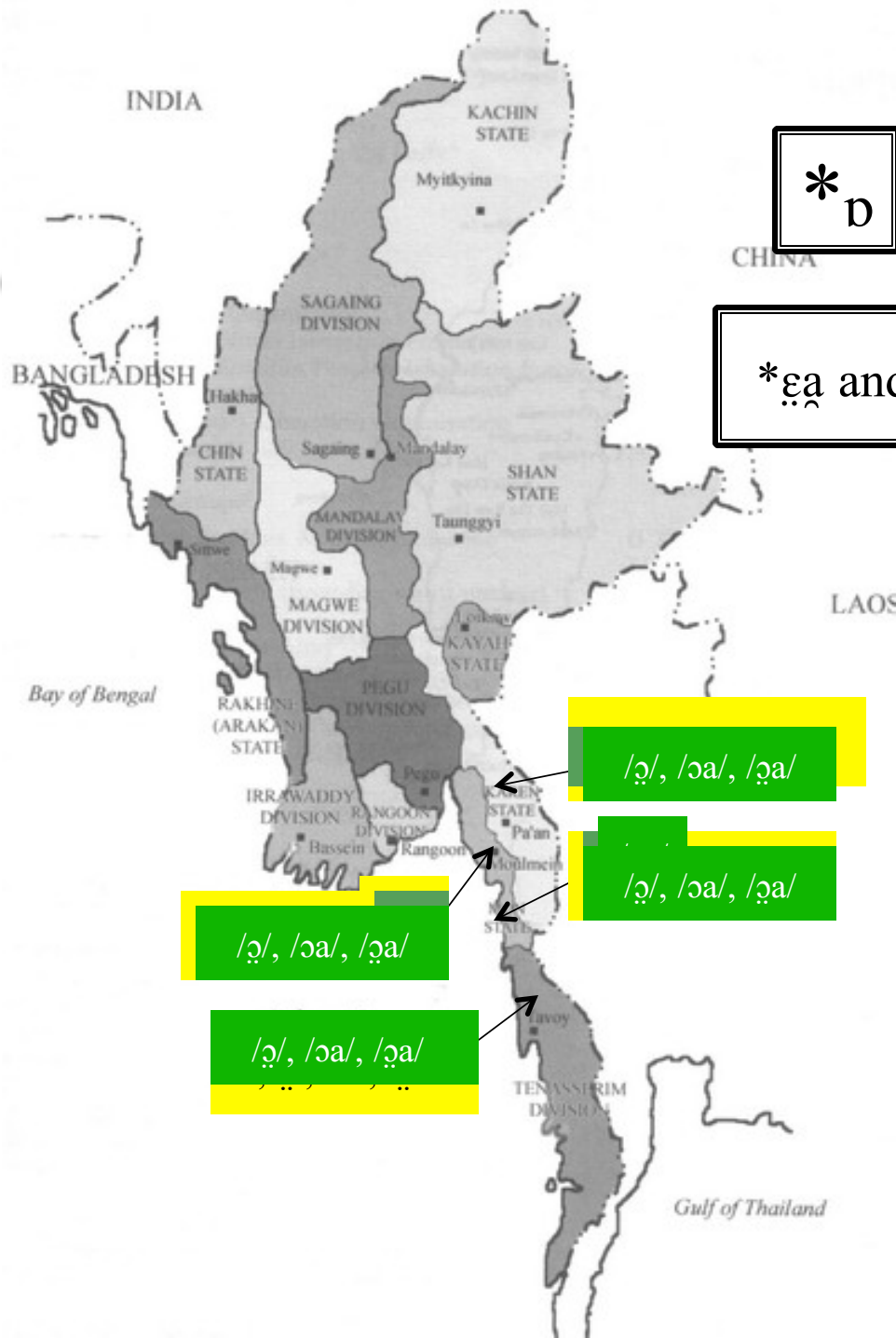
Results: vowel systems (2)



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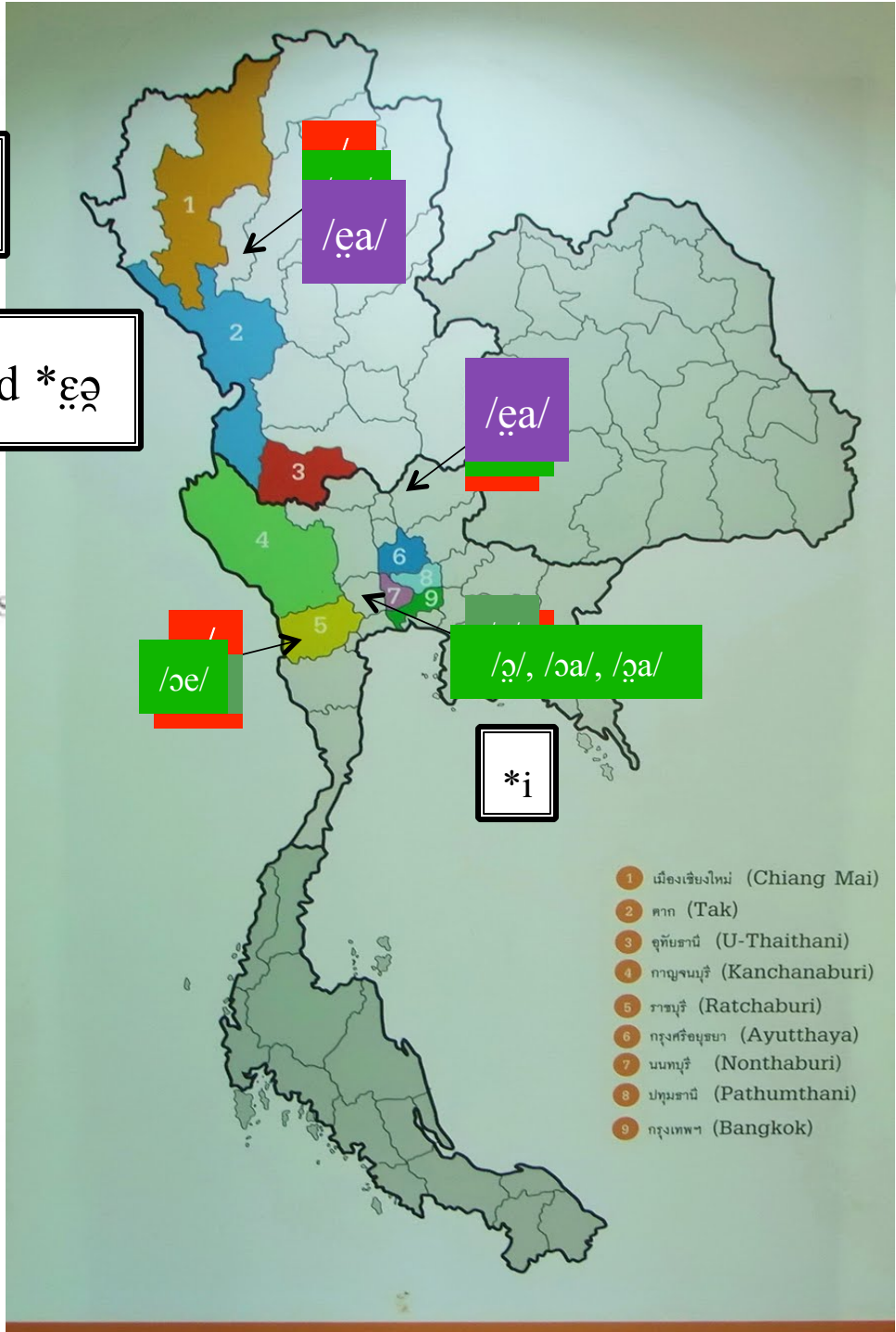
	front vowels		central vowels		back vowels	
high	/i/	/i̟/			/u/	/u̟/
high-mid	/e/	/e̟/			/o/	/o̟/
low-mid	/ɛ/	/ɛ̟/	/ɜ/	/ɜ̟/	/ɔ/	
low	/a/	/a̟/				

/ea/, /e̟a/, /ai/, /a̟i/, /ui/, /u̟i/, /oa/, /o̟a/, /ao/



*d

*ɛ̃a and *ɛ̃ə



- 1 เมืองเชียงใหม่ (Chiang Mai)
- 2 ตาก (Tak)
- 3 อุทัยธานี (U-Thaithani)
- 4 กาญจนบุรี (Kanchanaburi)
- 5 ราชบุรี (Ratchaburi)
- 6 กรุงเทพมหานคร (Ayutthaya)
- 7 นนทบุรี (Nonthaburi)
- 8 ปทุมธานี (Pathumthani)
- 9 กรุงเทพฯ (Bangkok)

Results: vowel systems (5)

■ Diachronic explanation

- /i/ < *i and *u /i̥/ < *i̥ and *u̥
- /əi/ < *i and *ə /ə̥i/ < *e̥ and *ə̥

■ Phonetic explanation

- /i̥-i̥/ caused by tongue movement
- /əi/ < [ə̥i], [ə̥ⁱ] /ə̥i/ < [ə̥̥i], [ə̥̥ⁱ]

Results: vowel systems (6)

Examples

/kim/ ‘to grasp in a hand’ /chim/ ‘blood’

/mip/ ‘happy’ /mit/ ‘tumeric’

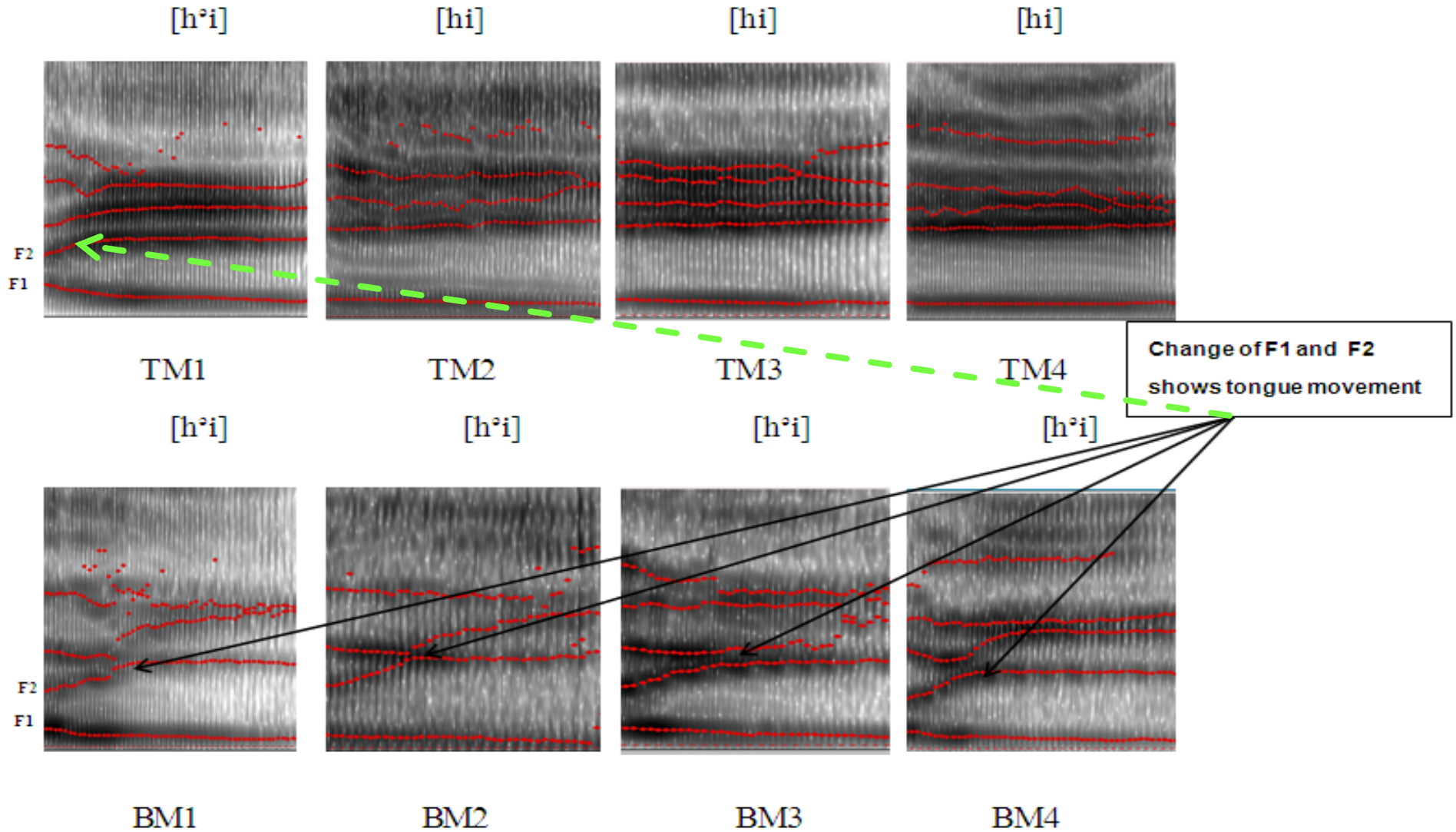
/cih/ ‘go down’ /təi?/ ‘there, then’

/kwɪ?/ ‘fresh water turtle’ /hətəi?/ ‘cockroach’

Results: vowel variation (1)

Vowel	TM1	TM2	TM3	TM4	BM1	BM2	BM3	BM4
/e/	[e]	[e]	[e]	[e]	[e]~[^a e]	[e]~[^a e]~[^e e]~[e ⁱ]	[e]~[^a e]~[^e e]~[ei]	[e]~[^a e]~[^e e]
/ɛ/	[ɛ], [ɛa]	[ɛ]~[^ɔ ɛ], [ɛa]			[ɛ]~[^a ɛ], [ɛa]	[ɛ]~[^a ɛ]~[ɛe], [ɛa]	[ɛ]~[^a ɛ]~[ɛe], [ɛa]	[ɛ]~[^a ɛ], [ɛa]
/o/	[o]~[^a o]	[o]	[o]	[o]	[o]~[^a o]~[^ɔ o]	[o]~[^a o]~[^ɔ o]	[o]~[^a o]~[^ɔ o]	[o]~[^a o]~[^ɔ o]
/o/	[o]~[^a o]	[o]~[^a o]	[o]	[o]	[o]~[^a o]~[^ɔ o]	[^a o]~[^ɔ o]	[^a o]~[^ɔ o]	[^a o]~[^ɔ o]

Results: vowel variation (2)



Results: vowel variation (3)

- Vowels in the Burmese Mon varieties have more complex phonetic characteristics than those of Thai Mon varieties.
- Among the Burmese Mon varieties, vowels in BM3 have the greatest phonetic characteristics.
- Among the Thai Mon varieties, TM1 has more gliding vowels than the others.

Conclusion (1)

Hypotheses

- The TM vowel systems **are different** from those of Burmese Mon.
- **The TM** vowels have simpler phonetic characteristics of vowels than those of BM.

Findings

- The TM vowel systems **are different from** those of Burmese Mon.
- The BM vowels have complex phonetic characteristics.

Conclusion (2)

- Phonation types affect vowel quality in both clear and breathy vowels.
- The Thai Mon varieties differ from Burmese Mon varieties in terms of phonetic characteristics of vowels. (might be contact)
- It is unexpected to find vowels in The Thai Mon varieties more diverse than those in the Burmese Mon varieties.

Problems

- A lot of Thai loanwords in the Thai Mon varieties.
- Some of Proto vowels are not found in the data, i.e. No $*\underset{\sim}{\Lambda}i$, $*\underset{\sim}{\Lambda}i$, $*\underset{\sim}{\Lambda}i$, $*\underset{\sim}{\gamma}i$, $*\underset{\sim}{\gamma}i$, etc.

Work in progress

- Relative amplitude of harmonics and formant frequency
- Formant frequency
- Fundamental frequency
- Duration

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Thank you