

Convergence and divergence in Eastern Cham language contact

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Claims

- Eastern Cham ‘monosyllabization’ involves multiple processes
 - Some do not seem to be due to language contact
 - Others may have arisen as follows:
- Eastern Cham and Vietnamese have **convergent** phonetic processes:
 - a) In the environment of a sonorant:
Unstressed syllable > homorganic sonorant
 - b) In the environment of an obstruent:
Unstressed syllable > homorganic nasal
- Eastern Cham phonologizes these processes, resulting in phonological **divergence**
 - Contrastive sonorant length
 - Novel consonant clusters: nasal + stop

Outline

1. Previous literature
 - What is monosyllabization, and is it a contact effect?
2. Descriptive account of Eastern Cham monosyllabization
 - Results of a sociolinguistic survey (n = 28)
3. Monosyllabization as language contact
 - Closer look at Vietnamese phonotactics
4. Nasalization as the phonologization of phonetic processes

1. What is monosyllabization?

- Eastern Cham (Austronesian: Vietnam) is spoken by about 120,000 people in south-central Vietnam
- Likely every speaker is bilingual with Vietnamese, the dominant sociopolitical language (Brunelle 2008)
- Eastern Cham is in a quasi-diglossic situation: (Brunelle 2005, 2009a; Brunelle & Phú forthcoming)
 - H (formal): largely preserves classical Cham script from several centuries ago → disyllabic roots
 - L (colloquial): casual speech, subsequent sound changes → monosyllabic roots

Proto-Chamic (Thurgood 1999)	Cham script (Akhār Thrah)	H (formal)	L (colloquial)
* <i>măta</i> ‘eye’	ꨀꨣ ꨀꨣ <ma-ta>	<i>măta</i>	<i>pta</i> ~ <i>mta</i> ~ <i>nta</i>

1. What is monosyllabization?

- Eastern Cham is an SVO language with no bound morphology in the L (colloquial) variety
 - Historically, many roots were sesquisyllabic:
 - **Presyllable**: minor, unstressed, reduced syllable
- mă.ta*
- **Main syllable**: major, stressed, full length syllable
 - ‘Monosyllabization’: Deletion or reduction of presyllables
-

1. Previous literature

- Some monosyllabization is evident in classical Cham script
 - Increasing contact with Vietnam in this period (e.g. Po 1994)
 - Presyllable deletion (a–b: Aymonier & Cabaton 1906)
 - Vowel elision, between stop + sonorant (c: Brunelle & Pittayaporn 2012: 417)

- (3)
- a. <*ikan*> ~ <*kan*> ‘fish’
 - b. <*hadaḥ*> ~ <*daḥ*> ‘gleam’
 - c. <*palǎj*> ~ <*plǎj*> ‘village’

- This results in no new consonant clusters
 - Cf. **pluh* > *plūh* ‘ten’

1. Previous literature

- A new kind of monosyllabization is seen in the 1960's
(David Blood 1967: 24)

- Nasalization to *m* (a–b)
- Nasalization to homorganic nasal (c–d)

- (4)
- | | | |
|----|---|-------------|
| a. | < <i>lipəw</i> > ~ < <i>mpəw</i> > | ‘wash hair’ |
| b. | < <i>məta</i> > ~ < <i>mta</i> > | ‘eye’ |
| c. | < <i>rituh</i> > ~ < <i>ntuh</i> > | ‘hundred’ |
| d. | < <i>likəy</i> > ~ < <i>ŋkəy</i> > | ‘male’ |

* < x > brackets indicate orthography of the respective linguist.

1. Previous literature

- Alieva (1991: 223) reports variation between syllable deletion and vowel elision
 - Presyllable deletion (a–d)
 - Vowel elision, anywhere (a–d)

(5)

- a. <*kopaw*> ~ <**k***paw*> ~ <*paw*> ‘water buffalo’
- b. <*lipow*> ~ <**l***pow*> ~ <*pow*> ‘thousand’
- c. <*lomu?*> ~ <**l***mu?*> ~ <*mu?*> ‘fat’
- d. <*poria?*> ~ <**p***ria?*> ~ <*ria?*> ‘silver’

* <x> brackets indicate orthography of the respective linguist.

1. Previous literature

Summary

- There are at least three mechanisms of monosyllabization:
 1. Syllable deletion (Classical Cham script)
 - *<ikan> ~ <kan> ‘fish’*
 2. Vowel elision (Alieva 1991)
 - *<palăj> ~ <plăj> ‘village’*
 3. Nasalization (David Blood 1967)
 - *<lipəw> ~ <mpəw> ‘wash hair’*
- All are attested in contemporary Eastern Cham (Bùi 1996: 34, 49; Brunelle & Phú forthcoming)

* *<x>* brackets indicate orthography of the respective linguist.

1. Is it a language contact effect?

- There are many contact effects from VN > Eastern Cham
 - Borrowings, functional words, phonotactics
- Monosyllabization is often considered to be one such contact effect, due to the monosyllabicity of Vietnamese (Alieva 1991, 1994; Thurgood 1996, 1999; contra Brunelle 2009a; Brunelle & Pittayaporn 2012; cf. discussion in Brunelle 2009a)

Vietnamese	Eastern Cham
<i>phải</i> [fǎj] ‘must’	<i>phaj</i> [p ^h àj] ‘must’ (Brunelle 2008: 31)
<i>là</i> ‘COP’	<i>la</i> [là] ‘COP’ (Brunelle & Phú forthcoming)
/ŋ/ → [ŋ̄m] / V _{rd} —	/ŋ/ → [ŋ̄m] / V _{rd} — (Baclawski Jr. 2016)
Monosyllabic?	Monosyllabization?

1. Is it a language contact effect?

- But does monosyllabization stand up to scrutiny as a language contact effect?
(Mougeon, et al 2005; Poplack & Levey 2010; a.o.)
 1. Was the feature present in an earlier variety?
 - Deletion and vowel elision: Yes (cf. Cham script)
 - Nasalization: Unclear
 2. Could the feature have evolved language-internally?
 - Deletion and vowel elision: Yes
Brunelle & Pittayaporn (2012) argue for its typological naturalness
 - Nasalization: Unclear

1. Is it a language contact effect?

- But does monosyllabization stand up to scrutiny as a language contact effect?
(Mougeon, et al 2005; Poplack & Levey 2010; a.o.)
- 3. Does degree of speaker contact correlate with use of the feature?
 - Deletion and vowel elision: No
Brunelle (2005, 2009a) only finds correlation with quasi-diglossia
But it could have arisen by contact, then attained social meaning
 - Nasalization: Not yet tested
- 4. Does degree of contact among varieties correlate with use of the feature?
 - Generally, yes:
Châu Đốc Cham and Kompong Chhnang Cham have more disyllabic roots and are in contact with Khmer instead of Vietnamese
(Brunelle 2009b)

1. Is it a language contact effect?

- But does monosyllabization stand up to scrutiny as a language contact effect?

(Mougeon, et al 2005; Poplack & Levey 2010; a.o.)

5. Is the feature *identical* in both languages?

- Most assume that Eastern Cham has replicated Vietnamese word structure
 - Proto-Chamic: Disyllabic > sesquisyllabic roots
 - Vietnamese: Monosyllabic roots
- But it's not so simple as that. See, Section 3...

*Both Eastern Cham and Vietnamese have some trisyllabic roots (~1% of each lexicon).
Feel free to ask me how these roots fit in here.

1. Summary

- There is evidence to doubt that deletion/elision are due to contact with Vietnamese
 - It could still be a contact effect, but it would be difficult to prove so
- The status of nasalization is much less clear
 - Classical Cham script may not have marked syllabic nasals
 - Other studies have not focused on nasalization

	Expected for contact effect	Deletion/elision	Nasalization
1. Earlier variety?	No	Yes	?
2. Natural change?	No	Yes	?
3. Speaker contact?	Yes	No	?
4. Variety contact?	Yes	Yes	?
5. Identical feature?	Yes	?	?

2. Sociolinguistic survey

- “Without a full sociolinguistic survey, it is difficult to lay out precise rules [of monosyllabization]”
(Brunelle & Phú forthcoming)
- We made first steps towards such a survey:
 - Core sample of 28 speakers, aged 18-37 (median: 22)
 - 16 identified as female, 12 as male
 - From the Cham villages of Ninh Thuận province
 - Interviewed in Ho Chi Minh City and the Cham villages (2015-6)
- Survey structure
 - Instructed to speak colloquially
 - Word list, followed by Sentence task with 50 words
28 historically disyllabic roots

2. Sociolinguistic survey

- Forms were coded impressionistically (by author)
 - Disyllabic vs. monosyllabic
 - Identity of reduced presyllables
 - Due to recording conditions (loud cafes), acoustic measurements were infeasible
- Total: 1,252 tokens
 - 52 disyllabic (spread among 6 female, 7 male speakers)
 - 1,200 (96%) monosyllabic forms

2. Results: Mono- vs. disyllables

- Logistic mixed effects models with likelihood ratio tests (R environment, `lme4`, `pwr` packages)
- Fixed effects:
 - Age (18-37)
 - Gender (16 female, 12 male)
 - Village (10 from Palei Hamu Craok, 7 from Hamu Tanran, 6 from Palei Ram)*
 - Task (Word list, Sentence)
- Random effects:
 - Individual speaker
 - Location of interview (Ho Chi Minh City, Cham villages)
 - Lexical item
 - Order in interview

*Làng Bầu Trúc, làng Hữu Đức, làng Văn Lâm, respectively

2. Results: Mono- vs. disyllables

- Age, Gender, Task n.s.
- Village significant, such that Palei Hamu Craok uses fewer disyllabic roots
(Observer effect: participants recruited by assistant from Hamu Craok)

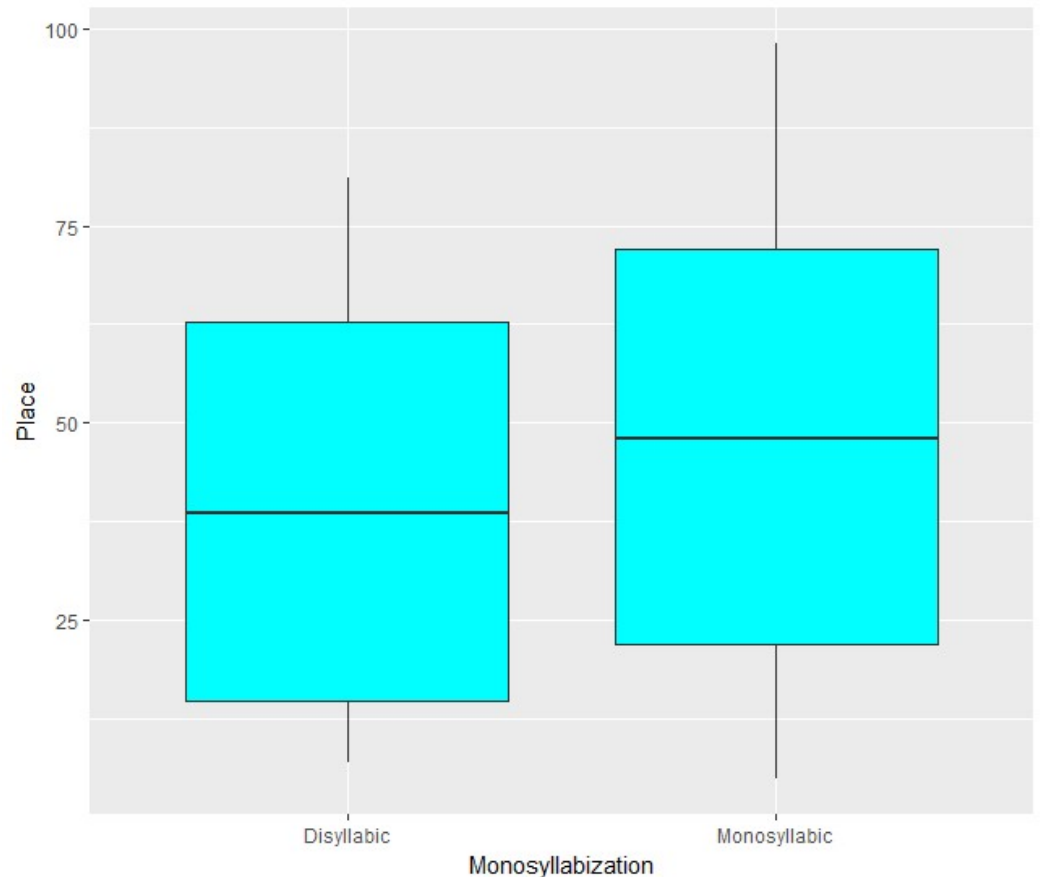
Fixed effects	Estimate	Std. Error	z value	Pr(> z)
Gender:M	0.008649	0.915453	0.009	0.992
Task:Sentence	0.4896	0.3522	1.39	0.164
Village:HAMU CRAOK	2.8966	1.4373	2.015	0.04387 *
Village:HAMU TANRAN	-0.2374	1.196	-0.198	0.84266
Village:RAM	0.1833	1.1143	0.164	0.86937

2. Results: Mono- vs. disyllables

- Order of interview weakly significant, such that disyllabic roots were uttered earlier in the interview (Formality effect)
- Welch Two Sample t-test (unequal sample sizes):
 $t(53) = 1.9, p = 0.06$

Inference:

- Monosyllabization is bound up with formality
- In line with its status as a shibboleth of diglossia (Brunelle 2005, 2009a; Baclawski Jr. 2016)



2. Results: Presyllable reduction

- Of the 28 disyllabic roots:
 - 13 involve syllable deletion (6)
 - 4 involve vowel elision (7)

- (6)
- | | |
|---|--|
| a. * <i>ǎsaw</i> > <i>thaw</i> ‘dog’ | g. * <i>tǎpaj</i> > <i>paj</i> ‘rabbit’ |
| b. * <i>ǎpar</i> > <i>pan</i> ‘to fly’ | h. * <i>pǎpun</i> > <i>pun</i> ‘top of’ |
| c. * <i>pǎpɛ</i> > <i>pɛ</i> ‘goat’* | i. * <i>papleɟ</i> > <i>pleɟ</i> ‘sell’ |
| d. * <i>ǎseh</i> > <i>thɛh</i> ‘horse’ | j. * <i>ǎɲĩn</i> > <i>ɲĩn</i> ‘wind’ |
| e. * <i>pĩʔar</i> > <i>ʔan</i> ‘paper’ | k. * <i>ǎkhǎn</i> > <i>khǎn</i> ‘word’ |
| f. * <i>ǎjun</i> > <i>jun</i> ‘to rock’ | l. * <i>pǎproj</i> > <i>proj</i> ‘yesterday’ |
- (7)
- | | |
|---------------------------------------|---|
| a. * <i>hǎla</i> > <i>hla</i> ‘leaf’ | c. * <i>pǎleɟ</i> > <i>pleɟ</i> ~ <i>mleɟ</i> ‘village’** |
| b. * <i>hǎreɟ</i> > <i>hreɟ</i> ‘day’ | d. * <i>mĩʔĩn</i> > <i>mʔĩn</i> ~ <i>ʔĩn</i> ‘play’ |

*Open circles underneath consonants mark breathy register on the following vowel.

**Feel free to ask me about the *p*~*m* alternation.

2. Results: Presyllable reduction

- Of the 28 disyllabic roots:
 - 6 involve deletion and compensatory lengthening
 - The following consonant must be a sonorant

- (8)
- a. **lĩmĩn* > *mĩn* 'elephant'
 - b. **tǎŋĩn* > *ŋĩn* 'fist'
 - c. **tǎraʔ* > *r:aʔ* 'market'
 - d. **çǎmɔʔ* > *mɔʔ* 'mosquito'
 - e. **mǎnujs* > *nɯjh* 'person'
or: *mnujh* (vowel elision)
 - f. **sǎniŋ* > *nĩŋ* 'think'
or: *hniŋ* (vowel elision + **s* > *th* > *h*)

*Feel free to ask why I think sonorant length is contrastive.

2. Results: Presyllable reduction

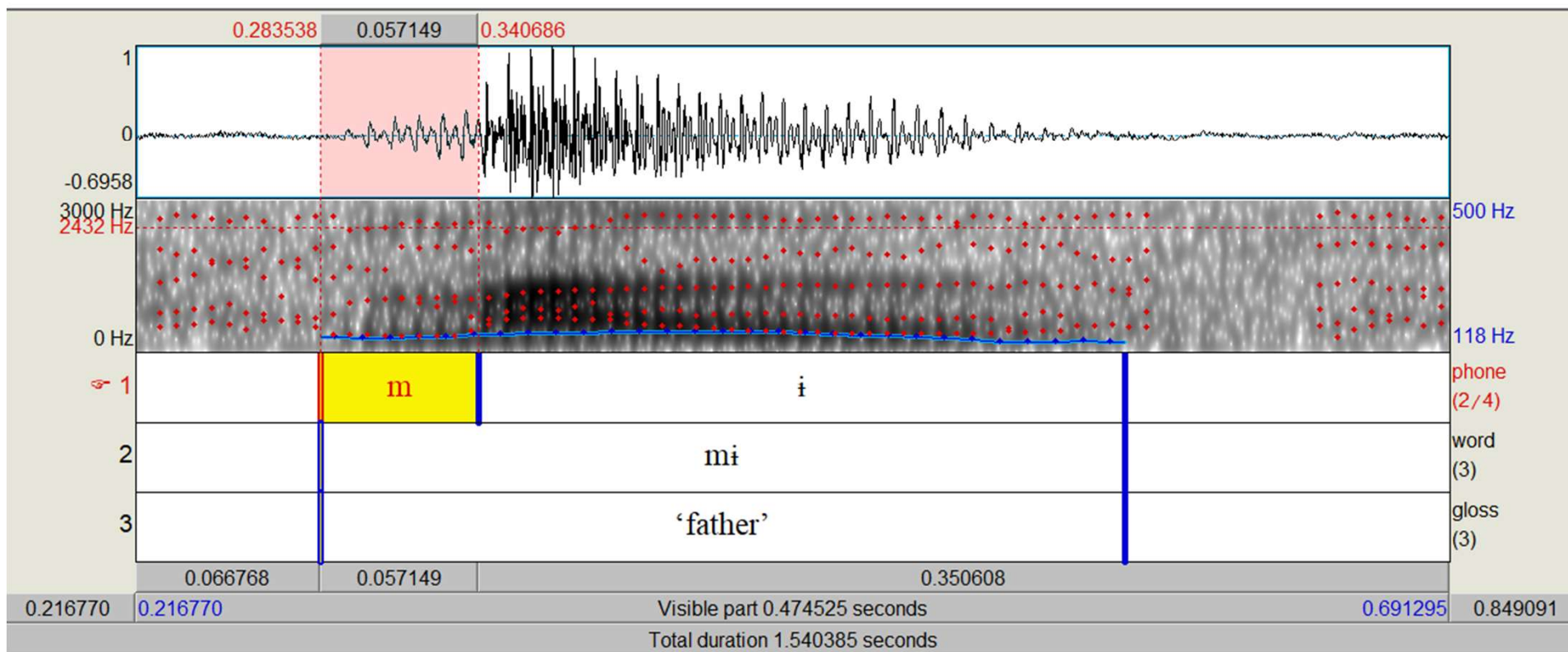
- **mĩ* > *mĩ* ‘father’ [57ms] (**ǎmĩ* in Proto-Chamic)



7. TextGrid father_03

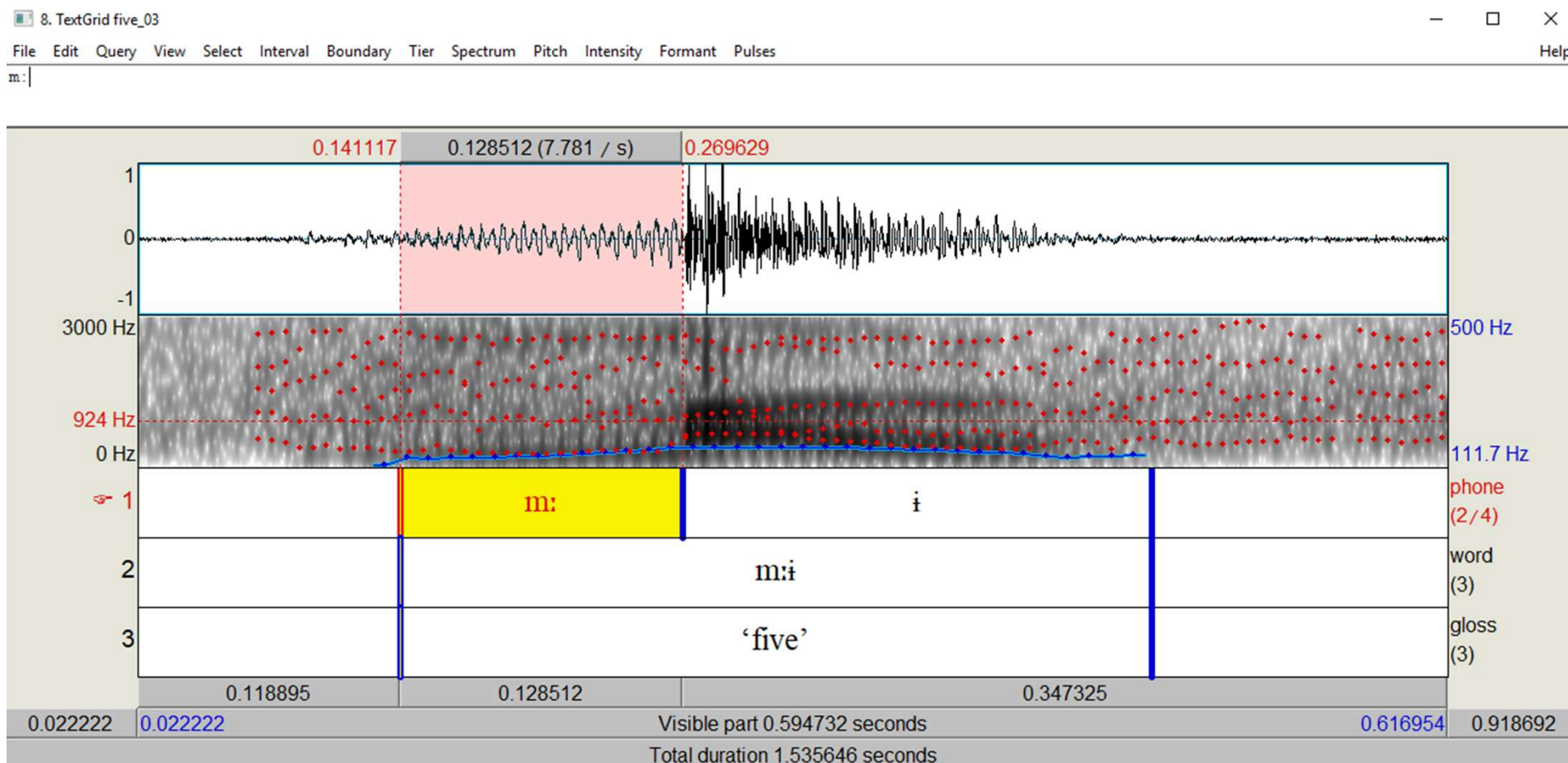
File Edit Query View Select Interval Boundary Tier Spectrum Pitch Intensity Formant Pulses

Help



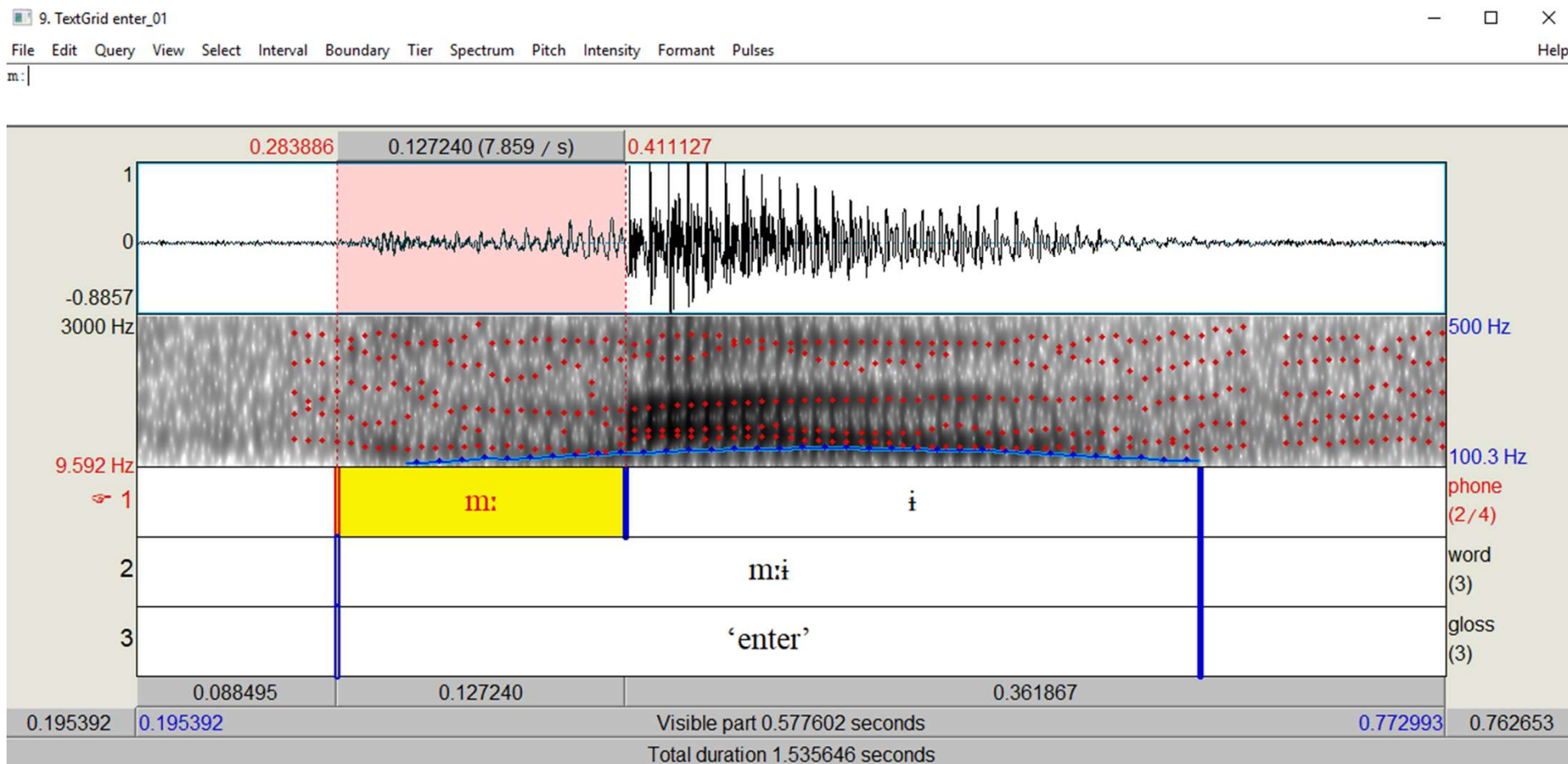
2. Results: Presyllable reduction

- **lĩmi* > *mĩ* ‘five’ [128ms]



2. Results: Presyllable reduction

- **tămɪ* > *mɪ* ‘enter’ [127ms]



2. Results: Presyllable reduction

- Of the 28 disyllabic roots:
 - 4 involve nasalization
 - The following consonant must be an obstruent
 - Impressionistically, similar phenomenon before *k* and *p*
 - Deletion and vowel elision with *p* are also possible

- (9)
- a. **răsa* > *mtha* ~ *ntha* 'Sambhur deer'
or: *ptha* (vowel elision), *tha* (deletion)
 - b. **măta* > *mta* ~ *nta* 'eye'
or: *pta* (vowel elision), *ta* (deletion)
 - c. **lǐsej* > *mthej* ~ *nthej* 'cooked rice'
or: *pthej* (vowel elision), *thej* (deletion)
 - d. **mǝtǝh* > *mǝtǝh* ~ *nǝtǝh* 'wake up'
or: *pǝtǝh* (vowel elision), *tǝh* (deletion)

2. Results: Nasalization

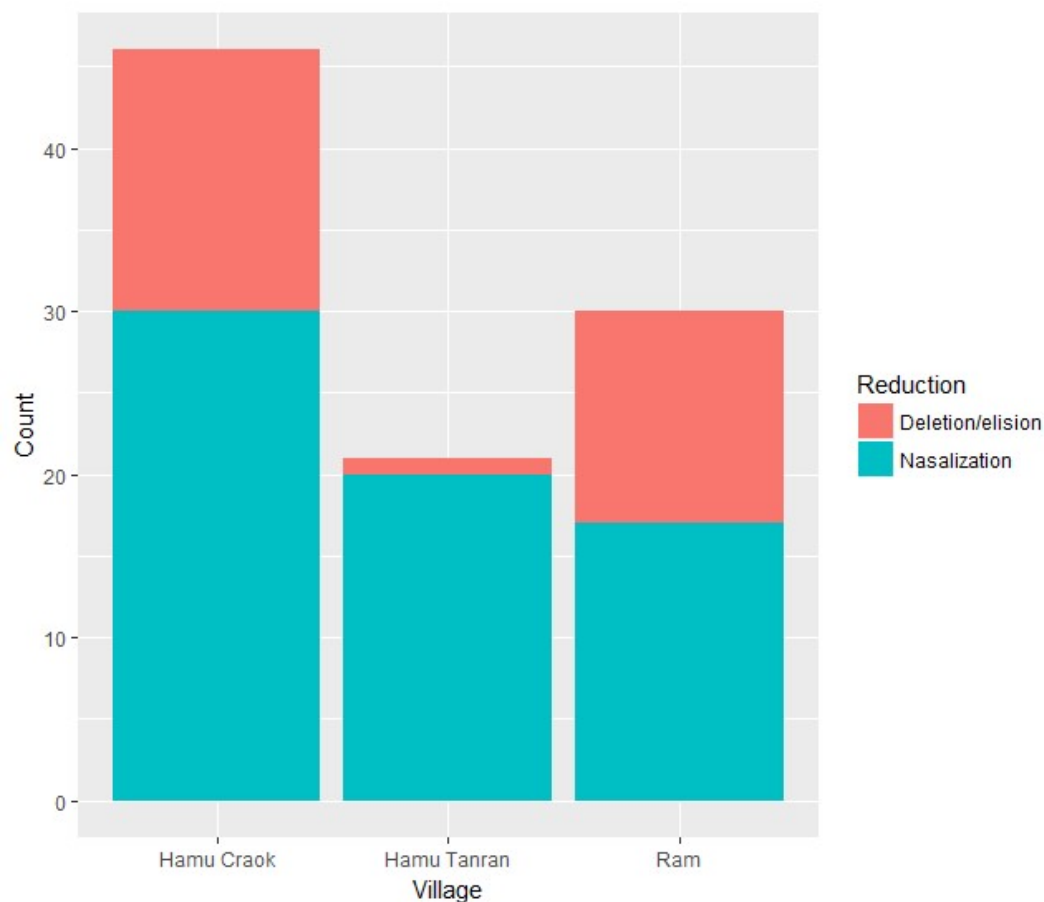
- There is wide variation between m -, n -, p -, and \emptyset -
- 25 of 28 speakers used at least two forms during the interview

Analysis:

- Logistic mixed effects model, likelihood ratio tests
- Reduced to two categories:
 - Nasalization: m -, n -
 - Deletion/ellipsis: p -, \emptyset -
- Age, Gender, Task, Order in interview n.s.
 - However, according to a 2 sample, unequal size power test:
Only expect significance for large effect sizes ($h = 0.8$; Cohen 1992)

2. Results: Nasalization

- Village significant, such that Palei Hamu Tanran predicts nasalization, Palei Ram predicts deletion/ellipsis ($\beta = 9.27, p < 0.01$)

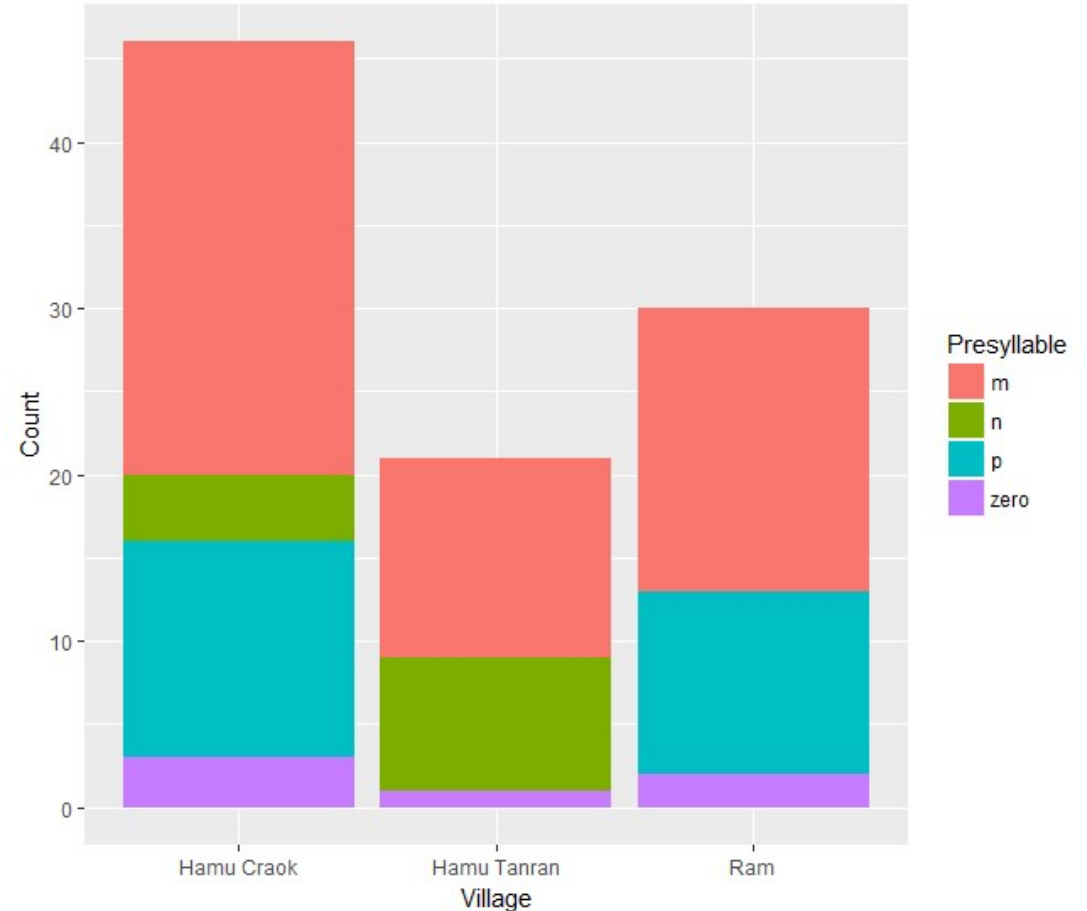


2. Results: Nasalization

- Village significant, such that Palei Hamu Tanran predicts nasalization, Palei Ram predicts deletion/ellipsis ($\beta = 9.27, p < 0.01$)
- Palei Hamu Tanran lacks *p*- form
- Palei Ram lacks *n*-

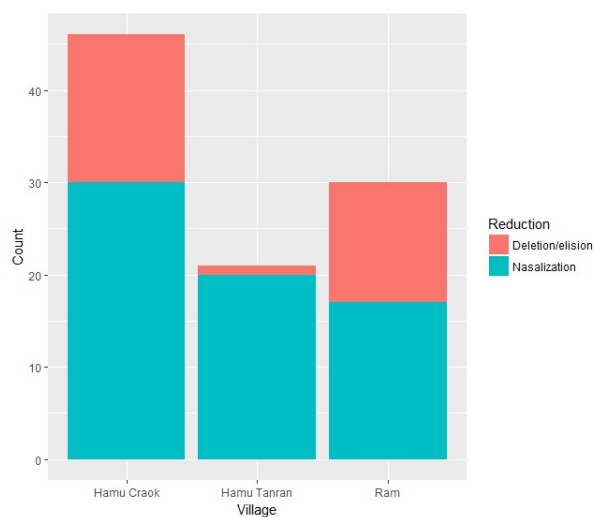
Inference:

- Presyllable reduction is not bound up with formality, instead subject to micro-regional variation

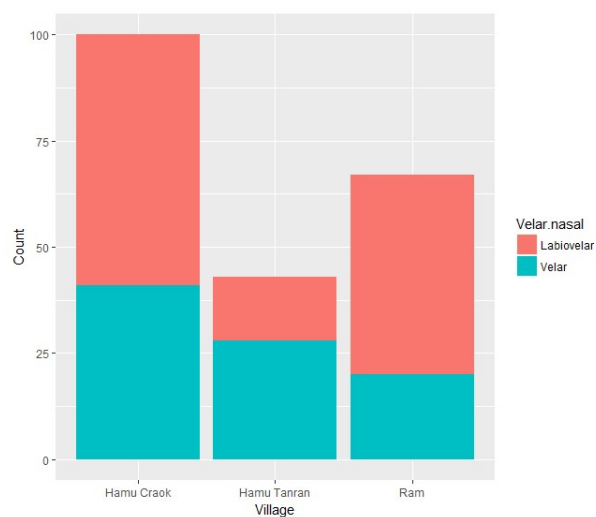


2. Results: Nasalization

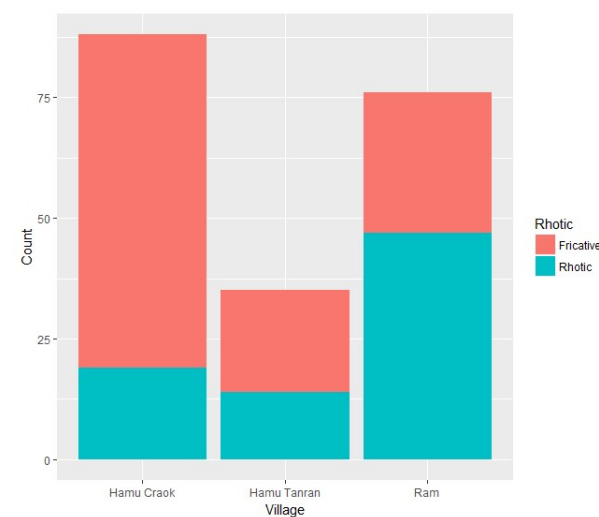
- Village robustly predicts a variety of other phenomena, but in inconsistent ways (Baclawski Jr. 2016)
- Future research is needed to understand why



Nasalization
(novel form in blue)



Labiovelar nasal
(contact form in red)



Pronunciation of /r/
(novel form in red)

2. Results: Summary

- Eastern Cham monosyllabization involves at least four processes:
 1. Syllable deletion (lexically specified)
 2. Vowel elision (lexically specified)
 3. Deletion + lengthening (before sonorants)
 4. Nasalization (before obstruents)
 - Alternates with vowel elision and deletion
 - Variation correlates with geography

3. Back to language contact...

1. Is the feature *identical* in both languages?

- This is looking less likely...

A. Eastern Cham:

- Deletion/elision → monosyllabic roots
- **Deletion + lengthening → geminate sonorants**
- **Nasalization → nasal + stop consonant clusters**

B. Vietnamese:

3. A closer look at Vietnamese

- Vietnamese does not only have monosyllabic roots
- ~50% of the lexicon is composed of opaque and transparent disyllabic compounds (Trần & Vallée 2009, 2017)

(10) *bán* *kết*
 sell conclude → *bán.kết*
 ‘semifinal’ semifinal
 ‘semifinal’

- Word-medial consonants (i.e. *-n-*) have different properties than word-final (i.e. *-t*) (Trần & Vallée 2009, 2017)
 - Longer duration of internal nasals, most stops
 - Greater bursts of some internal stops
 - Greater amplitude of some internal stops

3. A closer look at Vietnamese

- Vietnamese does in fact exhibit geminate sonorants and clusters in fast speech
- Words can reduce to syllabic sonorant clitics in fast speech (Pham 2008)
 - Occurs if the word is unstressed
 - The reduced form retains its tone
 - Deletion + lengthening when adjacent to a sonorant

(11) *đừng có làm...* (fast speech)
dɪŋ² kɔ³ la:m² → **dɪŋ² = ɲ³** la:m²
not have do **not = have** do
'Do not do [it]...' (Pham 2008: (2c))

3. A closer look at Vietnamese

- Vietnamese does in fact exhibit geminate sonorants and clusters in fast speech
- Words can reduce to syllabic sonorant clitics in fast speech (Pham 2008)
 - Occurs if the word is unstressed
 - The reduced form retains its tone
 - Deletion + lengthening when adjacent to a sonorant
 - Reduced to homorganic nasal when adjacent to obstruent

(12) *biết* *bao* *nhieu* (fast speech)
 biɣt⁷ ba:w¹ niɣw¹ → biɣt⁷ = n¹ niɣw¹
 know how much know = how much
 ‘know how much...’ (Pham 2008: (1))

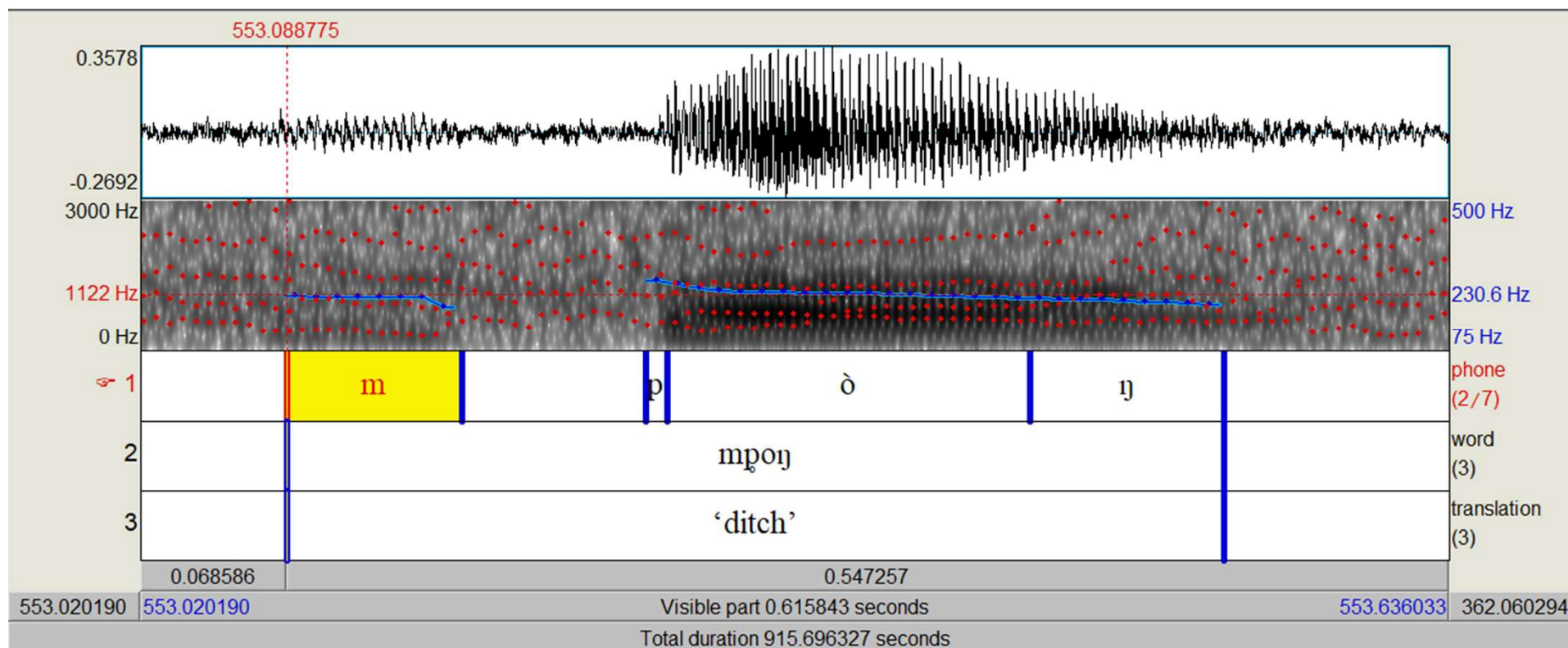
3. A closer look at Vietnamese

- Vietnamese does in fact exhibit geminate sonorants and clusters in fast speech
- Words can reduce to syllabic sonorant clitics in fast speech (Pham 2008)
 - Does occur if the unstressed word is phrase-initial
 - Furthermore, there is variation between *m*- and *n*-

(13) *bài vở làm sao* (fast speech)
 ba:j² vɤ⁵ la:m² sa:w¹ → ba:j² vɤ⁵ **m**²=sa:w¹ ~ **n**²=sa:w¹
 study how how how
 ‘How is (your) school going?’ (Pham 2008: (13c))

3. A closer look at Eastern Cham

- Like Vietnamese fast speech reduction, Eastern Cham nasalized presyllables retain their register
 - **rǐpɔŋ* > *mpɔŋ* = modal nasal + breathy, falling vowel



3. Back to language contact...

1. Is the feature *identical* in both languages?

- Deletion/elision: No
- Nasalization: Yes

A. Eastern Cham:

- Deletion/elision → monosyllabic roots
- **Deletion next to sonorants → geminate sonorants**
- **Deletion next to stops → nasal + stop clusters**

B. Vietnamese:

- Monosyllabic or disyllabic roots
- **Fast speech next to sonorants → geminate sonorants**
- **Fast speech next to stops → nasal + stop clusters**

4. Convergence and divergence

- If Eastern Cham lengthening and nasalization are in fact comparable to Vietnamese fast speech reduction...

Phonetic convergence:

- Both languages predictably reduce unstressed syllables
 - Geminate sonorants in the environment of sonorants
 - Homorganic nasals in the environment of obstruents

4. Convergence and divergence

- If Eastern Cham lengthening and nasalization are in fact comparable to Vietnamese fast speech reduction...

Phonological divergence:

- In Vietnamese, this reflects the phonetics of fast speech
 - In Eastern Cham, geminate sonorants are contrastive phonemes, so the phonological inventory diverges
 - E.g. /m/ contrasts with /m:/ in fast or slow speech
 - Consonant clusters can violate the sonority hierarchy (e.g. *mt-*)
- Eastern Cham may have phonologized fast speech
- (cf. perhaps English schwa reduction)

4. Conclusion

- Monosyllabization is not a monolithic phenomenon
- Is lengthening/nasalization a contact effect?
 - More research needed on speaker and variety contact
 - Are they typologically frequent?
 - The historical record may or may not be reliable

	Expected for contact effect	Deletion/elision	Lengthening/ Nasalization
1. Earlier variety?	No	Yes	?
2. Natural change?	No	Yes	?
3. Speaker contact?	Yes	No	?
4. Variety contact?	Yes	Yes	?
5. Identical feature?	Yes	No	Yes

4. Conclusion

- Finally, a question for future research:
Are obstruents geminated in a similar manner to sonorants?
- Many speakers describe a difference between pairs like the following
(Though this could also be an effect of homophone avoidance)
 - a) **plɛj* > *plɛj* 'buy'
 - b) **pa-plɛj* 'CAUS-buy' > *plɛj* 'sell' (possibly *p:lɛj*)
(Metalinguistic commentary: “pressed” *p*)
- However, a pilot discrimination task does not suggest that these words are contrastive out of context
- More detailed acoustic and experimental work is needed

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Appendix: Trisyllabic roots

- Both Vietnamese and Eastern Cham have about 1% trisyllabic roots (Trần & Vallée 2009; Lee 1974)
- Eastern Cham trisyllabic roots have the general structure:
 - CV(C).CṼ(C).CV(C)
- The middle presyllable is nasalized: (David Blood 1967: 16)
 - CVN.CV(C)
 - The only sonorants in coda position in both Eastern Cham and VN are nasals
 - Disyllabization brings Cham trisyllabic roots in line with VN disyllabic roots

Eastern Cham trisyllabic > disyllabic roots	
* <i>tamǎkaj</i>	<i>tamkaj</i> ‘watermelon’
* <i>çalikɔ</i>	<i>ṭankɔ</i> ‘bee’
* <i>thalipăn</i>	<i>thampăn</i> ‘nine’

Appendix: $p \sim m$

- Presyllables that reduce to p - can also be realized as m -
 - $*p\check{a}l\epsilon j > pl\epsilon j \sim ml\epsilon j$ ‘village’
 - $*p_{\circ}ilan > p_{\circ}lan \sim m_{\circ}lan$ ‘month’
 - $*p_{\circ}ahr\omega > p_{\circ}raw \sim m_{\circ}raw$ ‘just’
- ...Except if the following consonant is also p -
 - $*p\check{a}p\epsilon > p\epsilon$ (not $mp\epsilon$) ‘goat’
- Likewise, those that reduce to m - can be realized as p -
 - $*lip\epsilon j > mp\epsilon j \sim p\epsilon j$ ‘dream’
 - $*rip\omega\eta > mp\omega\eta \sim p\omega\eta$ ‘ditch’
 - $*mata > mta \sim pta \sim nta$ ‘eye’
- ...Except if the following consonant is a nasal
 - $*m\grave{i}n\grave{u}jh > mn\grave{u}jh \sim n\grave{u}jh$ ‘person’ (not $pn\grave{u}jh$)
 - $*lim\grave{i}n > m\grave{i}n$ ‘elephant’ (not $pm\grave{i}n$)

Appendix: Sonorant length contrast

- Geminates reliably contrast with singleton sonorants in a pilot discrimination task
- Participants (n = 8) listened to audio recordings in a carrier sentence, chose gloss in a forced choice task
- Minimal pairs:
 - a) **ǎmi* > *mi* 'father' vs. **lǐmi* > *mɪ* 'five', **tǎmi* > *mɪ* 'enter'
 - b) **naj* > *naj* 'come' vs. **pǐnaj* > *nɔj* 'woman'
 - c) **ǎsaw* > *thaw* 'dog', **thaw* > *thaw* 'know'
- Participants reliably distinguished length
 - 88% correct for (a), 100% correct for (b)
- Participants did not reliably distinguish between geminates
 - 43% correct for (a) 'five' vs. 'enter'
- Sonorants are not geminated when V- is deleted
 - 36% correct for (c)

Appendix: Other ages/villages

- Additional 5 speakers for qualitative comparison:
 - 2 older men, 2 from Bình Thuận (more contact with VN), 1 from a Raglai village (less contact with VN)
 - Obviously not a large enough sample, but direction for future study
- Older male speakers
 - DV (52 y.o., farmer): 7% disyllabic roots, *m*- nasalizations (+*p*-) (cf. 4% disyllabic roots in larger sample)
 - DSK (79 y.o., scholar): **30% disyllabic roots**, *m*- nasalizations (+*p*-)
→ Only speaker in survey to elide word in nasalization class:
**l̥thɛj* > *lthɛj* 'cooked rice'
- Bình Thuận speakers (theoretically more VN contact)
 - 2 speakers: **1% disyllabic roots** (1/78); *m*-, *n*- nasalizations (+*p*-)
- Speaker from Raglai village (higher indigenous population)
 - Speaker: **35% disyllabic roots** (12/34); *m*-, *n*- nasalizations (+*p*-)