



Feet in SLM

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Feet in Sri Lanka Malay – No stress please

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Sri Lankan Malay prosody:

① **There is no word stress in SLM**

(cf. Betawi Malay, Roosman 2007; Javanese Indonesian, Goedemans & van Zanten 2007).

② **Words are parsed into bimoraic feet**

Evidence from pre-final syllable lengthening (and gemination) processes



- Sri Lankan Malay (SLM) is the language of the ethnic group of the Malays in Sri Lanka
- It is an off-shoot of Trade Malay (Austronesian) with heavy morphosyntactic influence from the adstrates Sinhala (Indo-Aryan) and Tamil (Dravidian).
- The morphosyntactic markup has changed dramatically in the last 300 years, the phonology less so (Adelaar 1991, Smith & Paauw 2007, Slomanson 2007, Ansaldo 2008)



- The Malays arrived between the 17th and the 19th centuries mainly as soldiers and exiles and had close ties to the colonial administration (Hussainmiya 1990)
- Today they live mostly in towns in the Southern upcountry
- They are all multilingual
- 0.3% of the population, 40.000 speakers, decreasing (Bichsel-Stettler 1989)
- documented by the DobeS project



- retention of the historic vowel system a,e,i,o,u plus marginal schwa
- development of retroflexes and prenasalized stops under adstrate influence (Tapovanaye 1995)
- change of word order from SVO to SOV
- heavy increase of nominal and verbal morphology under adstrate influence (Smith & Paauw 2004, Slomanson 2007, Ansaldo 2008)



- complex onset
- no diphthongs
- simple coda
- initial extrasyllabic s-
- (S)C(C)V(:)(C)
- example *sbra:nak* 'having been born'
- long vowels, but not phonemic



- 1 CVC.CV(C) *taksir* 'think'
- 2 CV: CV(C) *ti:ga* 'three'
- 3 CV.CV.CV(C) *kuṭumuŋ* 'see'
- 4 Cə.CV: CV(C) *cəca:wak* 'wash'

Moraic structure



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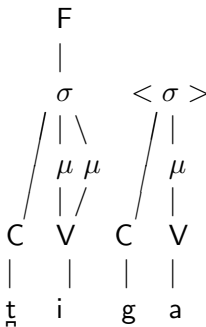
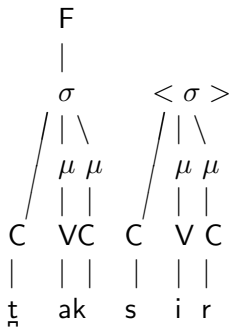
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Moraic structure



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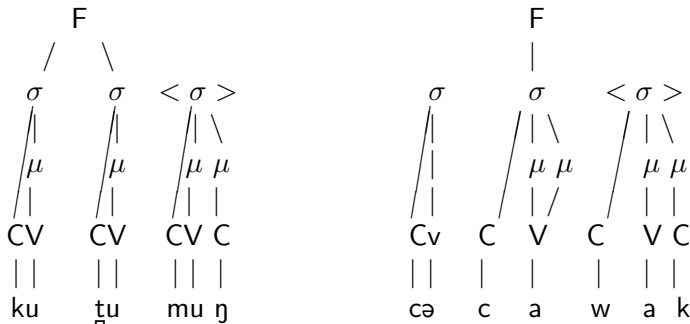
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- trisyllables with schwa often drop the schwa *s(ə)pa:t̩u* 'shoe', or even the whole first syllable (*kə)pa:la* 'head'.



- *ka:ca* 'mirror'
- *ma:ta* 'eye'
- *kacama:ta* 'spectacles'
- *maṭaka:ca* 'spectacles'
- → in compounds, the long vowels of non-final roots disappears
- *ma:kaŋ* 'eat'
- *makanan* 'food'
- → affixation makes the long vowel disappear as well (Tapovanaye 1996)
- Vowel length is not lexically determined

Compounds



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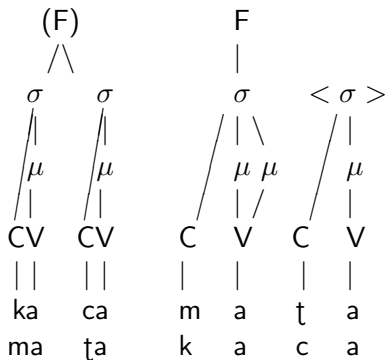
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Affixation



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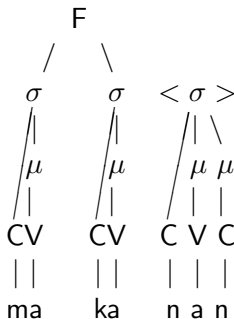
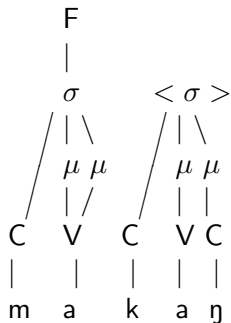
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- Vowel length is not lexically determined, rather
- the penultimate is lengthened by $> 50\%$ when
 - it is open
 - it is in a disyllable
 - it is in a trisyllable with initial schwa
- The final consonant of the penultimate is geminated when
 - the penultimate nucleus is schwa
 - *pərraŋ* 'war'



- stress-to-length is a well-known pattern in the world's languages
- Italian (D'Imperio & Rosenthal 1999), Norwegian (Rice 2006)
- is this the case in SLM?
- phonetic cues for stress in the world's languages:
 - intensity
 - pitch
 - vowel quality
 - duration
 - duration in this case explanandum, not explanans

Stress cues in SLM?



- 49 words of varying syllable structures were tested in 6 different environments
- plain citation, embedded citation, topic, broad focus, narrow focus, question

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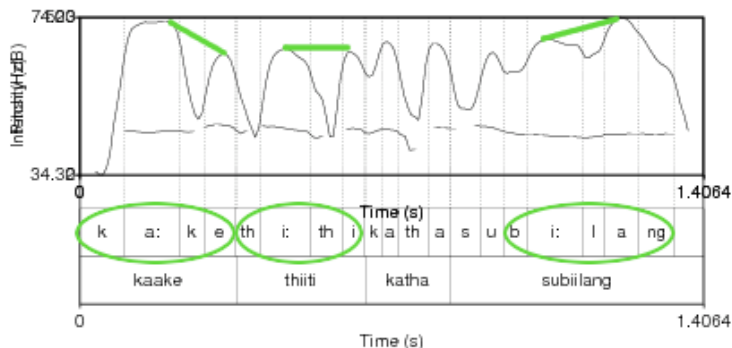
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Stress cues in SLM?



- phrasal pattern:
- initial and final syllables have higher intensity
- pitch drop to final boundary



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Stress cues in SLM?



- word level:
- no systematic difference in intensity between penultimates and other syllables
- no systematic difference in f_0 between penultimates and other syllables

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- the following images show the word *thaandak* 'dance' in four different contexts
- all of them have a long penultimate vowel, but none of them have intensity or pitch cues for stress

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Different contexts



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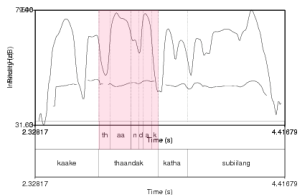
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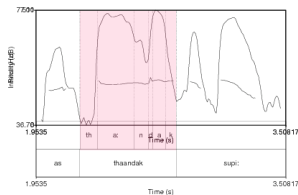
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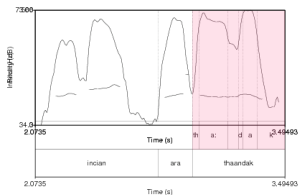
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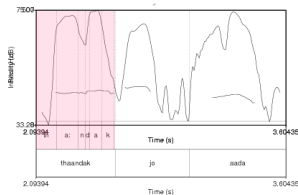
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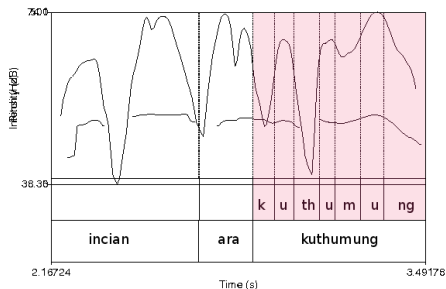
old information



broad focus



narrow focus



- penultimate and antepenultimate have equal f_0 and amplitude
- final syllable has pitch drop and higher amplitude because of end of utterance

Conclusion: no stress cues



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- Neither pitch nor intensity differentiate penultimates from other syllables
- No independent cues for lengthening
- Sri Lankan Malay feet are stressless
- Sri Lankan Malay feet are headless (cf. Halle & Vergnaud 1987ab; Crowhurst 1991; Halle & Idsardi 1992; Hagberg 2006)



- NONF: Final syllables are not parsed into a foot.
- FTBIM: Feet are minimally and maximally bimoraic.
- PARSE: Syllables are parsed into feet.

$\underline{\text{t}}\text{iga}$	NONF	FTBIM	PARSE
$(\underline{\text{t}}\text{i}_{\mu}.\text{ga}_{\mu})$	*!		
$(\underline{\text{t}}\text{i}_{\mu}^{\cdot}.\text{ga}_{\mu})$	*(!)	*(!)	
$(\underline{\text{t}}\text{i}_{\mu}).<\text{ga}_{\mu}>$		*!	*
$\text{☞}(\underline{\text{t}}\text{i}_{\mu}^{\cdot}).<\text{ga}_{\mu}>$			*



- WBP: Coda consonants are moraic.

taksir	NONF	FTBIM	PARSE	WBP
(ta _μ k.si _μ r)	*!			**
(ta _μ k).<si _μ r>		*!	*	**
☞ (ta _μ k _μ).<si _μ r>			*	*
(ta _μ :k).<si _μ r>			*	**!
(ta _μ :k _μ).<si _μ r>		*!	*	*



ku _̃ tu _̃ mu _̃ ŋ	NONF	FTBIM	PARSE
☞ (ku _̃ tu _̃).<mu _̃ ŋ>			*
ku _̃ .(tu _̃ mu _̃).<mu _̃ ŋ>			**!
(ku _̃ mu _̃).(<tu _̃ mu _̃ ŋ>)	*!		
(ku _̃ mu _̃ tu _̃).<mu _̃ ŋ>		*!	*
ku _̃ .(tu _̃).<mu _̃ ŋ>		*!	**
(ku _̃ tu _̃ mu _̃).<mu _̃ ŋ>		*!	*



- TROCH: Feet are left-headed.
- IAMB: Feet are right-headed.

ku _μ tumu _η	PARSE	TROCH	IAMB
☹ (ku _μ .tu _μ).<mu _μ η>	*	*(!)	*(!)
☞ (kú _μ .tu _μ).<mu _μ η>	*		*
☞ (ku _μ .tú _μ).<mu _μ η>	*	*	



- *PROHD: Don't project an edge. (counterpart to Head Location Parameter, Halle & Idsardi, 1992).

ku _ḥ tu _ḥ mu _ḥ ŋ	*PROHD	PARSE	TROCH	IAMB
☞ (ku _ḥ tu _ḥ).<mu _ḥ ŋ>		*	*	*
(kú _ḥ tu _ḥ).<mu _ḥ ŋ>	*!	*		*
(ku _ḥ tú _ḥ).<mu _ḥ ŋ>	*!	*	*	



- NON-FOOT(ə): Schwa-headed syllables have no metrical projection.

cəcawak	NON-FOOT(ə)	NONF	FTBIM	PARSE
cə.(ca _μ .wa _μ k)		*!		*
☞ cə.(ca _μ ː).<wa _μ k>				**!
(cə _μ .ca _μ).<wa _μ k>	*!			*
cə.(ca _μ).<wa _μ k>			*!	**



- NONF, FTBIM >> NON-FOOT(ə)

pəraŋ	NONF	FTBIM	NON-FOOT(ə)	PARSE
(pə.ra _μ ŋ _μ)	*!		*	
(pə _μ).<raŋ>		*!	*	*
(pə).<raŋ>		*!	*	*
(pə _μ).<raŋ>		*!	*	*
(pə: _μ).<raŋ>		*!	*	*
☞ (pə _μ r _μ).<raŋ>			*	*



- ❶ **Vowel length in SLM is determined by a bimoraic foot requirement**
- ❷ **Neither intensity nor pitch are predictors of vowel length**
i.e. there is no stress-to-weight effect in SLM
- ❸ **This means that SLM has a moraic structure without having stress**
- ❹ → **Stress is no requirement for foot structure**
(cf. Halle & Vergnaud 1987ab; Crowhurst 1991; Halle & Idsardi 1992; Hagberg 2006)
- ❺ **SLM: morphological rather than metrical feet?**
(cf. McCarthy & Prince 1986, 1987, 1990; Hammond 1989)

Thank you



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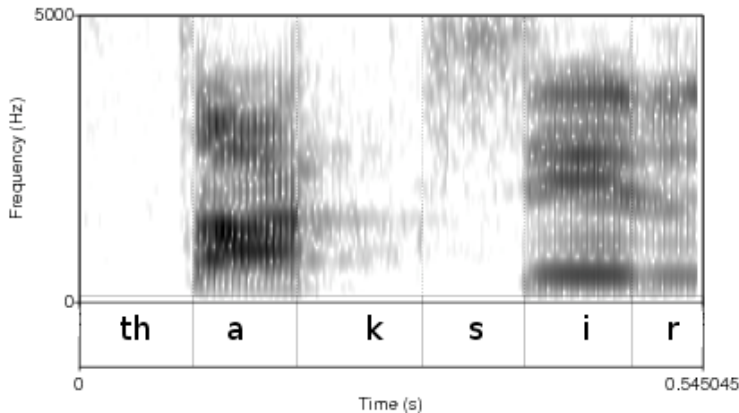
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Disyllables with coda in penultimate



- CVC.CV(C)
- *taksir* 'think': both vowels are of about the same length



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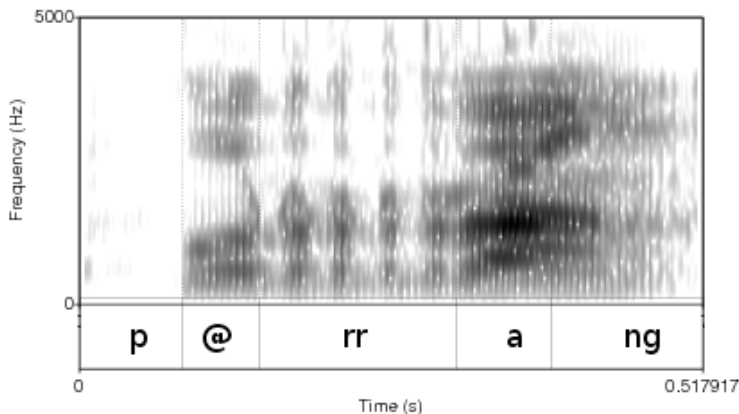
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Disyllables with schwa in penultimate



- *pərraŋ* 'war': the intervocalic consonant is geminated



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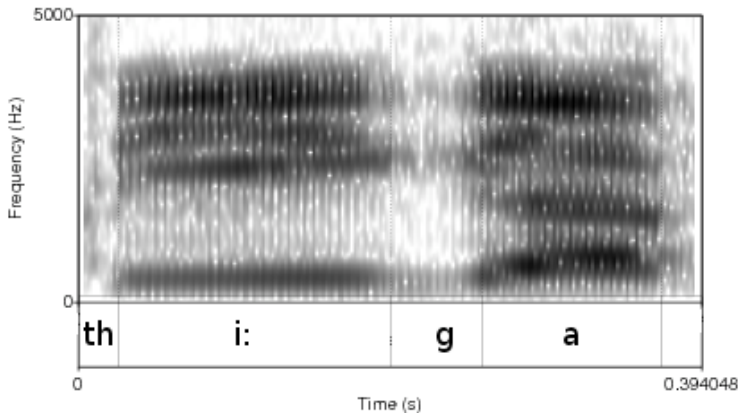
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Disyllables without coda in penultimate



- *ti:ga* 'three': the vowel in the penultimate is about 50% longer than the vowel in the ultimate



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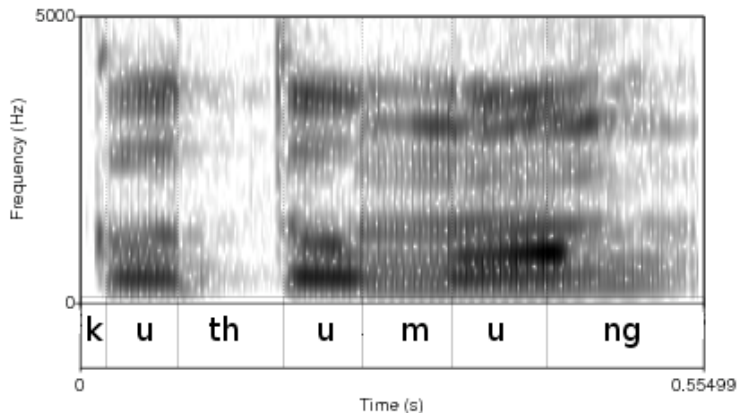
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Trisyllables



- *kuṭumuṅ* 'see': all vowels are of about equal length



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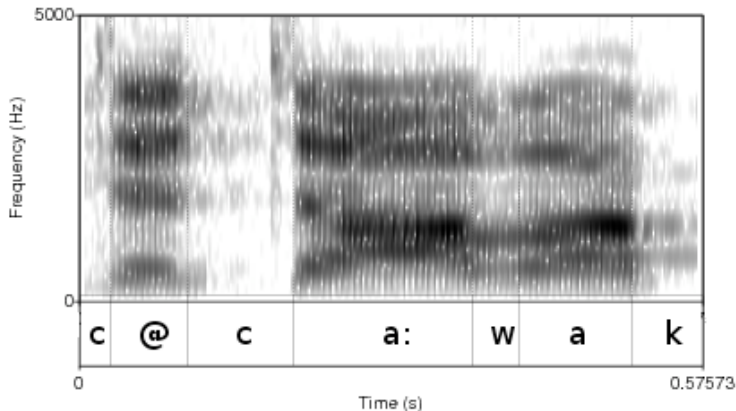
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Trisyllables with initial schwa



- *cəca:wak* 'wash': the vowel in the penultimate is longer than the other two vowels



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