A Reanalysis of Minor Syllables: The Interaction of Word Maximality and Positional Markedness

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Goals

- To present a structurally based definition of minor syllables
- To question the necessity of the sesquisyllable as a unique phonological entity

Outline

I. Describe minor syllables
II. Languages with minor syllables
    I. Bunong
    II. Burmese
III. Languages without minor syllables
    I. Vietnamese
    II. Maori
    III. English

Outline cont.

IV. More languages with minor syllables
   I. Trique
   II. Seediq
V. One more language without minor syllables
   I. Kammu
VI. Conclusions

Minor syllables: A Traditional Description

Best understood as part of a sesquisyllable…

[minor syllable + major syllable]$_{\omega}$

A phonologically reduced/less marked (minor) syllable followed by a 'normal'/more marked (major) syllable, where markedness refers to:

-Segmental inventory
-Syllable shape
-Prosodic properties

Ex. /rə.bɨŋ/ "gourd"

Sesquisyllables in SEA linguistics

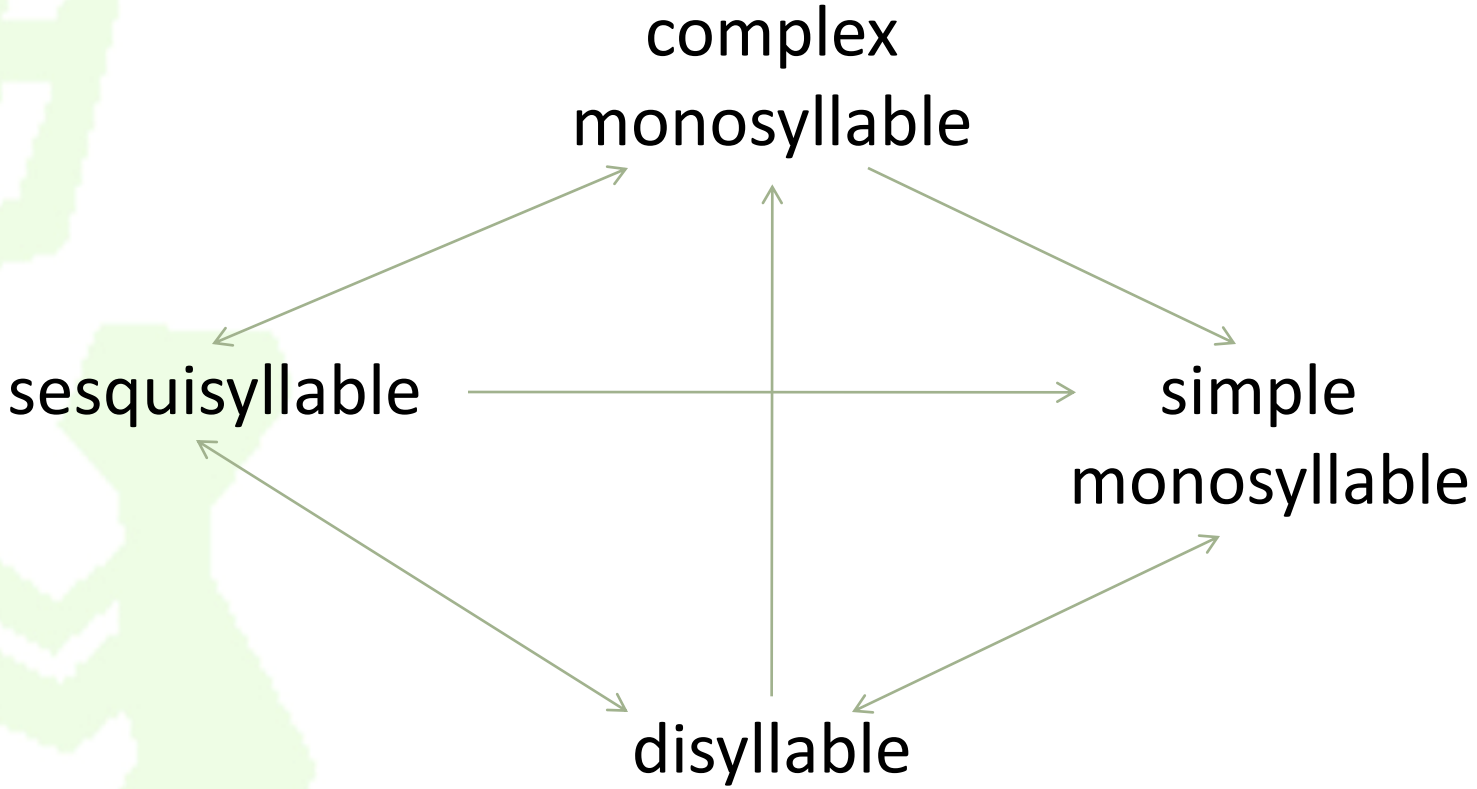
Terms

- Minor syllable (Henderson 1952)
- Sesquisyllable (Matisoff 1973)

Languages

- Sedang (Smith 1979)
- Kammu (Svantesson 2004)
- Thai (Bennett 1995)
- etc.

Compounding-Prefixation Cycle



(Matisoff 2003)

Formalisms: A Caveat

- Optimality Theory (Prince and Smolensky 2003)
  - System of constraints
  - Freely ranked
  - Violable
- Constraints as competing tendencies

Phonology of Minor Syllables

- Convergence of Constraints
  - Word Maximality
    - Align (Ft, R, PrWd, R)
    - Align (Ft, L, PrWd, L)

      → PrWd = Ft
  - Phonological Prominence
    - Positional Faithfulness (Beckman 1997)
    - Positional Markedness (Kiparsky 1995, Smolensky 1995, de Lacy 2004, inter alia)

Phonological Prominence

- Salience, loudness, length
- For example, stressed syllables are more salient than unstressed syllables
  - “baby” ['bej.bi]
- In this case, “position” refers to the stressed syllable

Bunong

(Mnong, Phnong)

Mon-Khmer
~52,000 speakers

Minor syllables:

Reduced segmental Inventory (no implosives, no vowels except /ə/)

Reduced syllable shape (no clusters, no codas)

Bunong

Minor syllables conditioned by sonority

[rə.bɨŋ] “gourd” vs [breah] “God”

Constraints:

- SON-SEQ: Complex onsets rise in sonority
- PRWD=FT: A prosodic word is exactly one foot
- FT=σ: A prosodic foot is exactly one syllable
- PARSE-σ: Syllables are parsed into feet

SON-SEQ:
Complex onsets rise in sonority

X		✓
/rbɬŋ/	vs	/brah/
[rə.bɬŋ]		[breah]
“gourd”		“God”

PRWD=FT:

A prosodic word is exactly one foot

Feet are used for assigning stress

Ex. Alabama	[(ˌæ.lə).('bæ.mə)]	X
	[ˌæ.lə.('bæ.mə)]	✓
	[('bæ.mə)]	✓

F_T=σ:
A foot is exactly one syllable

- Possible foot types
  - Trochees ('σ σ) X
  - Iambs (σ 'σ) X
  - Monosyllables ('σ) ✓

PARSE-σ:
Syllables are parsed into feet

Ex. Alabama	[(ˌæ.lə).('bæ.mə)]	✓
	[ˌæ.lə.('bæ.mə)]	X
	[('bæ.mə)]	✓

Bunong

/rbɨŋ/	Son-Seq	PrWd=Ft	Ft=σ	Parse-σ
(rbɨŋ)	*!			
(rəC).(bɨŋ)		*!		
(rə.bɨŋ)			*!	
☞rə.(bɨŋ)				*
/brah/				
☞(brah)				
(bəC).(rah)		*!		
(bə.rah)			*!	
bə.(rah)				*!

Bunong

- Effects of maximality constraints are visible in the surface forms and we can see them at work in the grammar
- Effects of positionally-based constraints are evident in the output/surface structures but are not apparent in the grammar because lack of alternations

Burmese

Because minor syllables result from compounding and reduction, the effects of positionally –based constraints are apparent in the grammar.

Minor Syllables	Major Syllables
Only /ə/	/ə/ not allowed
Light	Heavy
No tone	Tone bearing

Burmese

- Minor syllables result from compounding a la Matisoff's compounding-prefixation cycle

  $[kə(là:)]_{ω}$ + $[(pye:)]_{ω}$ → $[kələ(bye:)]_{ω}$

  "Indian" + "country" → "India"

- Multiple minor syllables allowed

  thə.mə.(ye:)

  "rice-water" (Green 1995)

Burmese

- Should have marked material in prosodically prominent positions
  - Vowels with place features
  - Long vowels
  - Tone, stress
- Should not have marked material in prosodically weak positions
  - /ə/
  - Long vowels

Burmese

*UM_{FT}: No unmarked material in footed syllables

*M_{UNFT}: No marked material in unfooted syllables

(adapted from de Lacy 2004)

[kə(là:)] + [(pye :)]	PrWd=Ft	*UM_{FT}	Parse-σ	*M_{UNFT}
kə.(là:).(pye:)	*!		*	
(kə.lə).(pye:)	*!			
kə.lə.(pyə)		*!		
kə.là:.(pye:)			**	*!
☞kə.lə.(pye:)			**	

But then…

- If these two criteria are so simple, why don't we see minor syllables more often?
  - Word maximality but no unparsed material allowed in output
    - Vietnamese
  - Word maximality without positional markedness
    - Maori
  - Positional markedness without word maximality
    - English

Vietnamese

- Word maximality; no unparsed material in output
- Historically disyllabic (Ferlus 1982)

/CVCVC/	FT=σ	PARSE-σ	MAX
(CV.CVC)	*!		
CV.(CVC)		*!	
☞(CVC)			*

Maori

- Word maximality; no positional markedness
- Prosodic words are maximally one foot but can be up to four moras
- Feet are trochaic and may be:
  - One heavy syllable ($\sigma_{\mu\mu}$)
  - Two light syllables ($\sigma_{\mu}\sigma_{\mu}$)
  - A heavy-light sequence ($\sigma_{\mu\mu}\sigma_{\mu}$)

$[ta(mái)ti]_{\omega}$ $[(kó{:}re)ro]_{\omega}$

(de Lacy 2003)

English

- Positional markedness; no word maximality
- Vowel reduction in unstressed syllables

Alabama [(ˌælə)('bæmə)]

Expanding foot types

- We now know the conditions necessary for the presence of minor syllables
- So (again), why don't we see them more often?
- Minor syllables typically seen
  - as the light syllable in an iamb (CV.CVC)
  - in languages where feet are maximally one heavy syllable CV.(CVC)

Iambs are misleading

- However, unparsed syllables can occur with other foot types
  - Trique CV.(CV.'CVC)
  - Seediq CV.('CVC.CVC)

- Additionally, sometimes we think we see them but we actually don’t
  - Kammu

San Martin Itunyoso Trique

- Minor syllables + iambs CV.(CV.'CVC)
- Multiple levels of markedness- final syllable most marked; antepenult least marked

	Unfooted Unstressed	Footed Untressed	Footed Stressed
# consonants	10	15	29
# vowels	3	4	8

(DiCanio 2008)

Seediq

- Minor syllables + trochees CV.('CV.CV(C))
- Multiple minor syllables allowed

	Unfooted Unstressed	Footed Stressed	Footed Untressed
Vowels	/u/ or reduplicant	5	5

/heyeg/ + /an/ → hu.(ye.gan)

(Holmer 1996)

Northern Kammu

- Words are maximally disyllabic and stress is right aligned, so usually interpreted as sesquisyllables
- However, “minor” syllables can bear contrastive tone

[kə´m.nòh] ‘cutting board’ [pə´ŋ.kàʔ] ‘to wear by the ear’

[kə`m.nòh] ‘weeding period’ [pə`ŋ.kàʔ] ‘shy’

(Svantesson and Karlsson 2004)

Northern Kammu

- But minor syllables must be unparsed
- Unparsed syllables cannot bear contrastive tone

→ Kammu does not have minor syllables

/kə´m.nòh/	PARSE-σ	*UM$_{FT}$	FT=σ	*M$_{UNFT}$
kə´m.(nòh)	*!			*
kəm.(nòh)	*!			
(kəm.nòh)		*!	*	
☞(kə´m.nòh)			*	

Summary

	Only one minor syllable	Multiple minor syllables
In Southeast Asian languages	Bunong	Burmese
In Non-Southeast Asian languages	Trique	Seediq

Languages which used to have minor syllables but (probably) don't anymore

- Vietnamese
- Kammu

Conclusions

- Minor syllables are a result of the interaction of word maximality constraints and positionally-based constraints
- Thus, minor syllables are not a separate phonological entity
- Thus, sesquisyllables are not a separate phonological entity and don't necessitate special status as a word type

Thank you

Please send questions or comments to

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