Tone absorption and the decomposability of tone features

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Goal of talk

- Contribute to the discussion of this question: "Should a tone be decomposed into multiple features?"
  - "...although tone features may occasionally be useful, they are not essential." (Hyman 2010)
  - "... tonal features show an analytic advantage over tonal primitives". (McPherson 2016)

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Outline

- ▶ Tone representation options
- ▶ What constitutes evidence on this question?
- ▶ Evidence from Bena-Yungur (Nigeria)
- ▶ Evidence from Soyaltepec Mazatec (Mexico)
- ▶ Conclusions and further research

Tone representation options

- Tonal primitives
  - H, M, $\underline{M}$, L   Hyman
  - T, H, M, L   Clements et al
  - S, H, L, X   McPherson
  - H, M_1, M_2, L   Snider
- Scalar representation
  - 5, 4, 3, 2, 1
- Decompositional tone features
  - [+upper, +raised]   [+upper, -raised]   [-upper, +raised]   [-upper, -raised]
  - [+upper, +raised]   [-upper, +raised]   [+upper, -raised]   [-upper, -raised]

Phenomena handled by different representations

		Tonal primitives	Scalar representations	Decomposable features
Assimilation	**Complete**	Y	Y	Y
	Partial			Y
Dissimilation		Y	Y	Y
Natural classes	**Adjacent**	Y	Y	Y (exc. $\{M_1, M_2\}$)
	Non-adjacent			Y
Shift			Y	*

Clements et al:
- "evidence for…features…assimilation [involving]…becoming more like…but not identical" (p. 7)
- "crucial question…[feature] model predicts…non-adjacent tones may form natural classes" (p. 10)

Hyman:
- "scalar chain shifts such as…H → M → L are notorious problems [for features]"

Evidence for tone features

- Evidence for:
  - Partial assimilation
    - Including register phenomena (Snider 1998)
  - *Partial-triggered absorption
  - Non-adjacent tones forming a natural class
  - *Genuine explanation, avoiding arbitrary stipulation
- Evidence against:
  - {M1, M2} a natural class
  - Non-analyzeable tone chain shift

Bena-Yungur (Nigeria)

- ▶ Traditionally Adamawa
- ▶ Tentatively Benue-Congo (many clear cognates)
- ▶ H, M, L

Evidence from Bena-Yungur

L in a HL contour is absorbed into a following L:

1a)   kálsa᷈ # bèmbèm   →   kálsɘ̌ bèmbèm

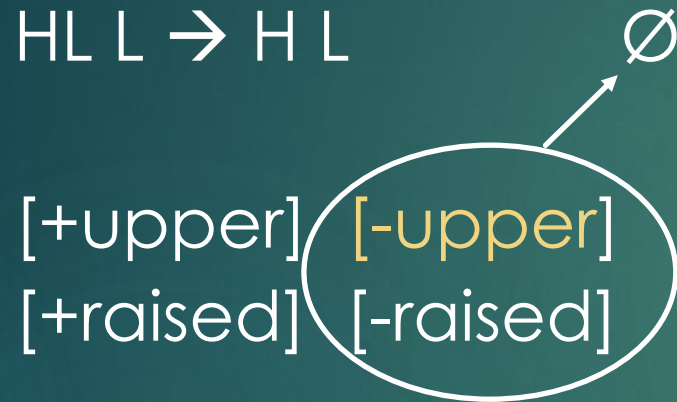   'fat monkeys (sp.)'

but also into a following M:

  b)   kwáːno᷈ # yā   → kwáːnɘ̌ yā

      'this plate'

"L and M tones often behave as if they were identical in the application of the tone absorption rule".
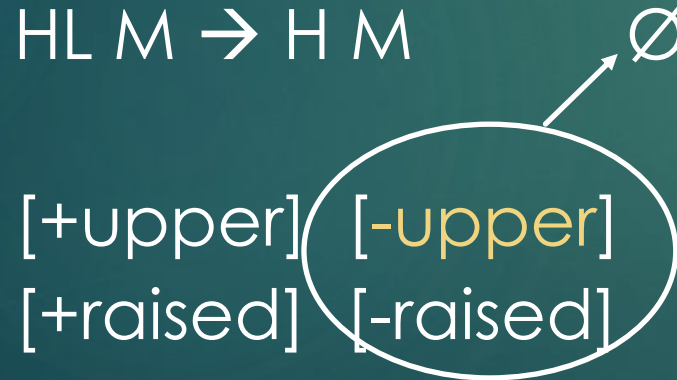
Evidence from Bena-Yungur

HL L → H L   Ø

[+upper]   [-upper]   [-upper]
[+raised]   [-raised]   [-raised]

HL M → H M   Ø

[+upper]   [-upper]   [-upper]
[+raised]   [-raised]   [+raised]

Soyaltepec Mazatec (Mexico)

H   ti ˥   tʃʔũĩ ˥

           'flame'   'chayote'

M$_1$ hi ˧   ʃʔui ˧

           'you'   'ember'

M$_2$ ti ˧   ʃa ˧

           'boy'   'wildcat'

L   ti ˩   ʃkũ ˩

           'fish'   'eye'

Evidence from Soyaltepec Mazatec

2a) na^{M2}ʃu^{M1H},
'flower'

i ^{M2}su^{M2},
'blue'

na^{M2}ʃu^{M1} i ^{H}su ^{M2}
'blue flower'

H of M1H spreads right

b) na^{M2}ʃu^{M1H},
'flower'

si ^{M2}nɛ^{H},
'yellow'

na^{M2}ʃu^{M1} si ^{M2}nɛ^{H}
'yellow flower'

H of M1H absorbed(!)

c) ngu^{M2M1},
'one'

na^{L}t ʃu^{L},
'squash'

ngu^{M2} na^{M1}t ʃu^{L}
'one squash'

M1 of M2M1 spreads right

d) tu ^{M2M1}
'fruit'

si ^{M2}nɛ^{H},
'yellow'

tu^{M2} ↓si ^{M2}nɛ^{H}
'yellow fruit'

M1 of M2M1 downsteps

Evidence from Soyaltepec Mazatec

$M_1 H\ M_2 \rightarrow M_1\ M_2$

$$\varnothing$$

[-upper] [+upper]   [+upper]

[+raised] [+raised]   [-raised]

Summary

- Bena-Yungur and Soyaltepec Mazatec evidence 'partial-triggered' tone absorption

- Decomposable tone features are necessary to account for these phenomena

- Use of features provides explanation and avoids stipulating arbitrary rules

- In addition to Seenku (McPherson 2016), we have evidence from these two languages in support of a theoretical model with tonal features

Future research

- How many languages do we need?
  - Clements et al: "This paper has argued against universal tone features, …not against language particular tone features, which are motivated in some languages."
  - Hyman: gives an example from Gban in which "tone features work like a charm"
  - One clear case of the necessity of tone features should be enough, though multiple cases will add weight.
  - Since Snider (1998) shows that register is phonological, there are many cases of register phenomena that could be compiled, over against Clements' observation of "the virtual absence of clear cases of phonological assimilation [in the Africanist literature]" (he seems to exclude register phenomena as phonetic).
- Analyzing cases of tonal chain shift; e.g. Guébie (Sande 2018)
- Analyzing reported cases of an $\{M_1, M_2\}$ natural class; e.g. Jibu (Hyman, 2010, p. 68)

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Thank you!

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