Ling 105
Sounds of Language

Thursday, November 21, 2024

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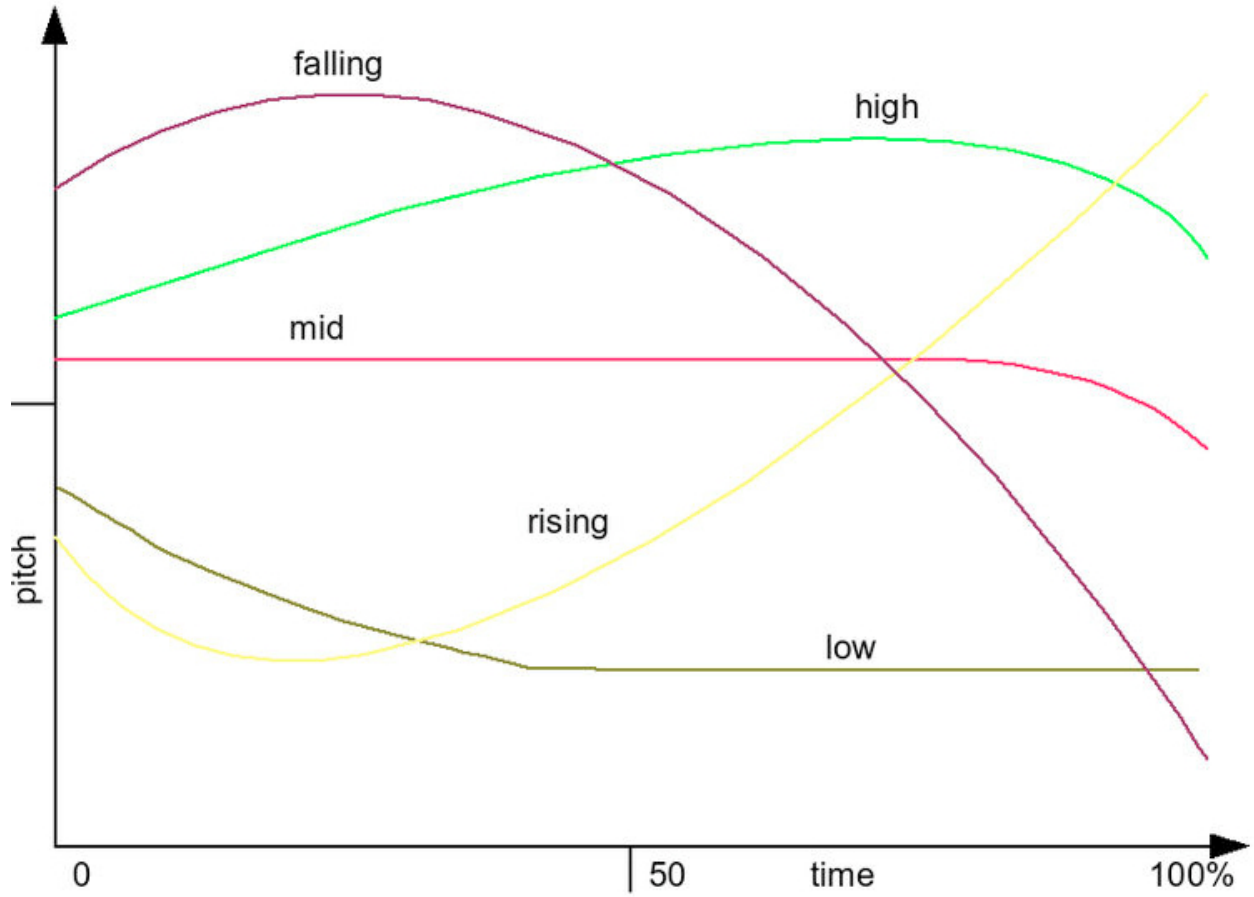
Readings for this/next week (last ones!)

- Stress: *LJ* chap. 10 (skip the section on "Timing")
- Tone: *Odden* chap. 10 (excerpt posted on Canvas)

Tone: phonemic use of F0

- [nàː] (name), [nâː] “face,” [náː] “aunt,” [nǎː] “thick,” [nāː] “field” (NB. diacritics) ♪ ♪ ♪ ♪ ♪



Tone vs. stress

- Some differences between stress and tone
  1. Tone is signaled by f_0 alone (not loudness, duration, etc.)
  2. In many tone languages, every syllable is specified for tone

e.g. Hausa	màtʃè	"woman"
	gídáː	"house"
	tébùr	"table"
	jànzú	"now"

  3. Tone isn't culminative or rhythmic like stress
  4. Tone is subject to different kinds of rules, such as spreading

Grammatical tone

- Both stress and tone can signal grammatical distinctions
- E.g. Somali tone

náil	“male lamb”	naíl	“female lamb”
ínan	“boy”	inán	“girl”
náʕas	“stupid man”	naʕás	“stupid woman”
qaálin	“young male camel”	qaalín	“young female camel”
ʕeesáan	“young he-goat”	ʕeesaán	“young she-goat”

Pitch accent

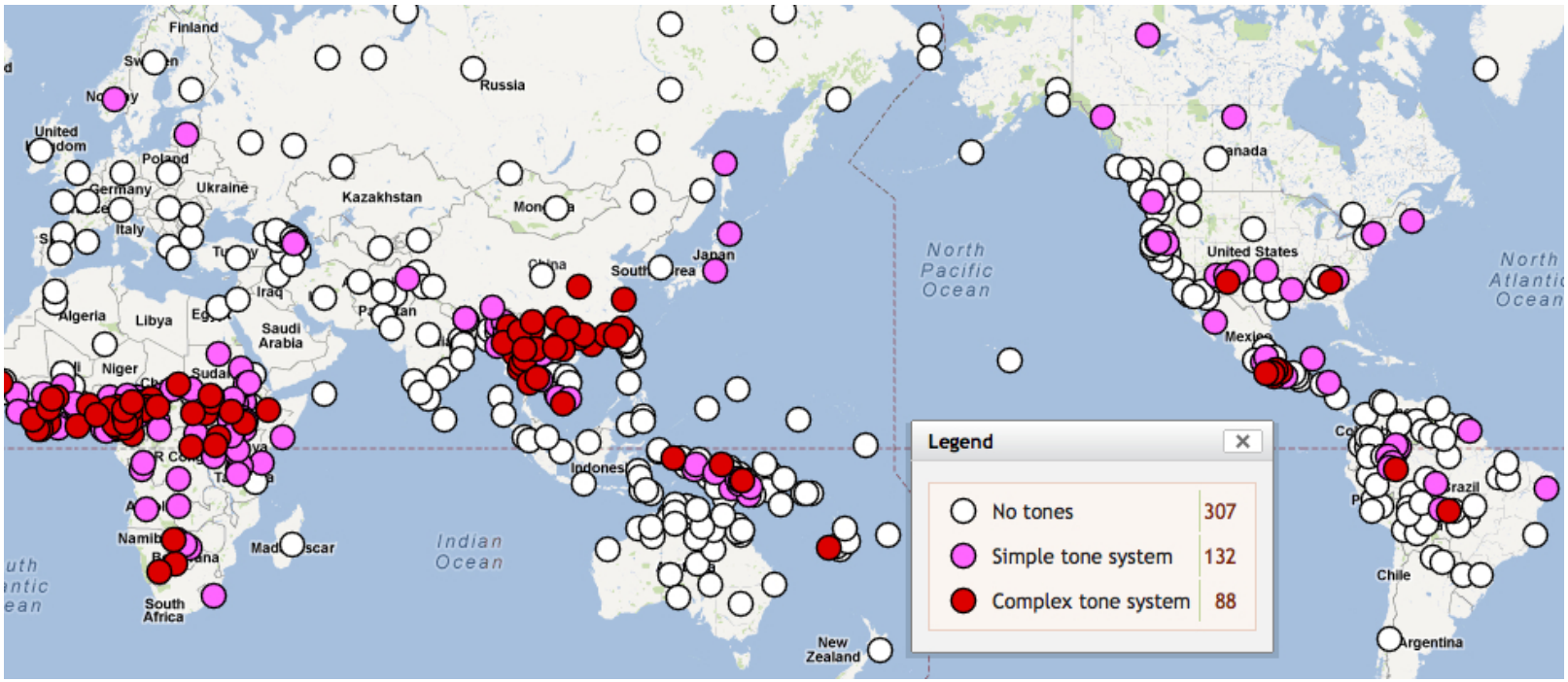
- Pitch accent systems (e.g. Japanese, Ancient Greek) are intermediate between tone and stress
  - Like stress
    - Culminative
    - Usually (but not always) obligatory
    - Not marked on every syllable
    - Usually just one type of accent
  - Like tone
    - Purely a pitch phenomenon
    - Can be tonally complex (e.g. rise, fall)
    - Not rhythmic (e.g. no "secondary pitch accents")

Stress, tone, or pitch accent?

- Ibibio (prosody not transcribed)
  - [aku] “priest” ♪
  - [akpa] “first” ♪
  - [akpa] “expanse of ocean” ♪

Distribution of tone languages

- Tone slightly more common than stress
- A language can have both (e.g. Thai)



Autosegmental theory

- Segmental rules: features, natural classes
- Stress rules: iterative footing and/or weight effects
- Tone rules: autosegmental operations (e.g. spreading, linking, delinking)

Tone is unlike segmental features

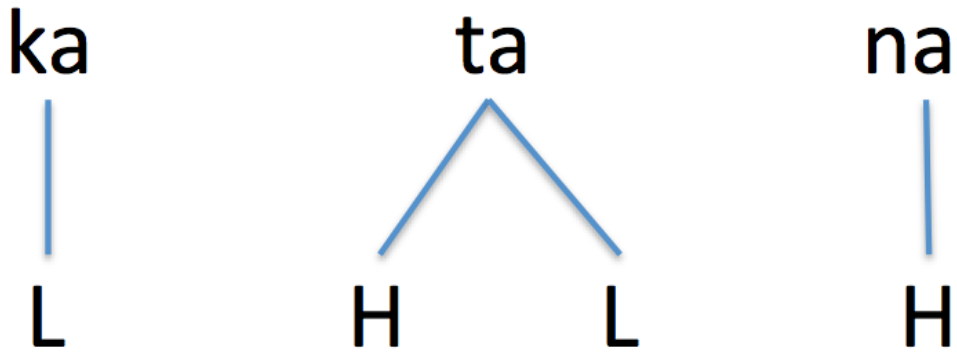
- Tonal overwriting in Hausa (one class of plural)

singular	plural	
tàːsʼúːnìjáː	táːsʼúːníj-óːjíː	“bird”
géːzàː	géz-óːdʒíː	“shrub”
kàːsúwá	káːsúw-óːjíː	“market”
líkítà	líkít-óːtʃíː	“doctor”

- No comparable process for segmental features, e.g.

singular	plural	
mokinta	moginda	voiceless → voiced
tapek	safex	stop → fricative
barmip	darnit	place → coronal

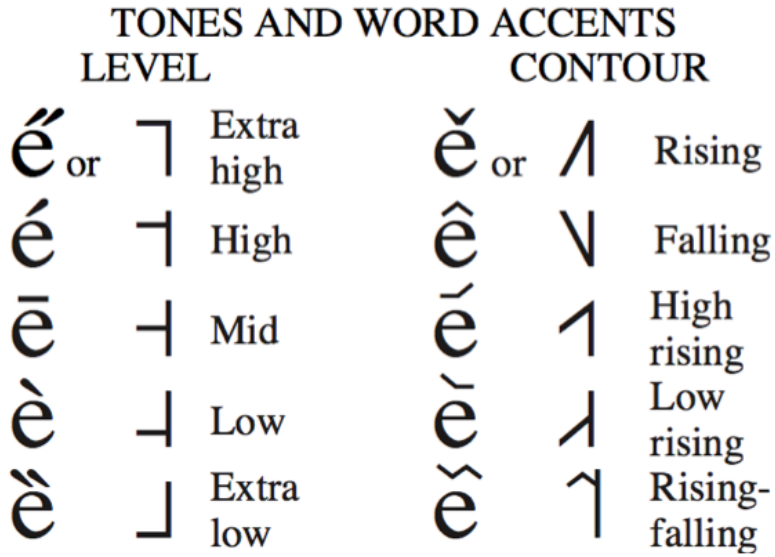
[kàtâná] autosegmentally



- Two tiers: TBU (tone-bearing units [for our purposes, syllables]), tonal
- Tiers linked by association lines
- Contour vs. level tones
- Contour tones are compositional
- Tones can spread over multiple TBUs (indeed, you should assume that adjacent identical tones are a single tone linked to multiple syllables)

Autosegmental theory

- For merely transcribing tones, IPA diacritics or icons (it offers a choice) are sufficient



- But tone *rules* only make sense in terms of two-level representations

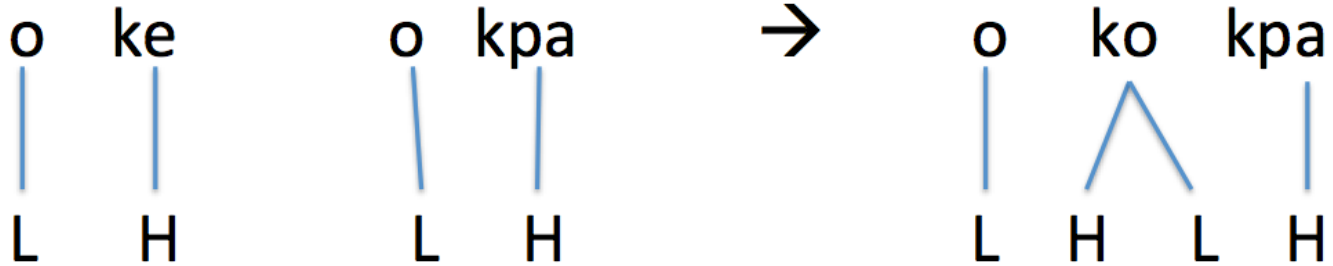
Tonal fusion

- Yekhee (Elimelech 1978)

ídzé élà	→ ídzélà	“three axes”
èké élà	→ èkélà	“three rams”
údzé òkpá	→ údzôkpá	“one axe”
òké òkpá	→ òkôkpá	“one ram”
ówà ówà	→ ówŏwà	“every house”

Tonal fusion

- Yekhee segmental rule: V $\rightarrow$ Ø / _V
- Tones "have a life of their own"
- Illustration of autosegmental fusion



Tonal morphemes

- Angas (Odden 2005, spreading of diacritics across two symbols is purely typographic)
- Hint: the "plain" form shows the UR here

plain	case	modified	
téŋ	téŋ	têŋ	"rope"
mús	mús	mûs	"cat"
cén	cén	cên	"hoe"
nyí	nyí	nyî	"elephant"
màs	măs	màs	"locust bean"
pùk	pŭk	pùk	"soup"
ʔàs	ʔăs	ʔàs	"tooth"
ǰólì	ǰólĭ	ǰólì	"ape"
ʔās	ʔāś	ʔās̀	"dog"
žwāl	žwāĺ	žāl̀	"boy"
ɟēm	ɟēḿ	ɟēm̀	"child"

Floating tones

- Mixtec (Goldsmith 1990)

kēː	“will eat”
kēː	“will leave”
sùtʃí	“child”
kōò	“snake”
kēː sùtʃí	“the child will eat”
kēː kōò	“the snake will eat”
kēː sútʃí	“the child will leave”
kēː kôː	“the snake will leave”

Autosegmental operations

- Association
- Delinking
- Mixtec URs & rule?

Across-the-board effects

- E.g. Meeussen's rule, as in Shona & other Bantu languages

	plain	instrumental	
a.	mbwá	né-mbwà	"(with) a dog"
b.	hóvé	né-hòvè	"(with) a fish"
c.	chàpúpù	né-chàpúpù	"(with) a witness"
d.	mbúndúdzí	né-mbùndùdzì	"(with) army worms"
e.	hákátà	né-hàkàtà	(not given)
f.	bénzíbvùnzá	né-bènzìbvùnzá	(not given)

Fixed set of tonal inventories for words

- How are tones mapped to syllables in Mende?
  - Possible tones on monosyllables (5)

high	kɔ́	“war”
low	kpà	“debt”
fall	mbû	“owl”
rise	mbă	“rice”
rise-fall	mbȃ	“companion”

  - Possible tones on disyllables (not 5^2, but still 5)

high-high	pɛ́lɛ́	“house”
low-low	bɛ̀lɛ̀	“pants”
high-low	ngílà	“dog”
low-high	fàndé	“cotton”
low-fall	nyàhâ	“woman”

  - Possible tones on trisyllables (not 5^3, but still 5)

high-high-high	háwámá	“waist”
low-low-low	kpàkàlì	“three-legged chair”
high-low-low	félàmà	“junction”
low-high-high	ndàvúlá	“sling”
low-high-low	nìkílì	“peanut”

Mobile tones

- Nkore (Odden 2005)

òkùgúrù	òkùgúrù kùrùùnjì	“(good) leg”
òmùkózì	òmùkózì mùrùùnjì	“(good) worker”
èmbúzì	èmbúzì nùùnjì	“(good) goat”
èchìkópò	èchìkópò chìrùùnjì	“(good) cup”
èmbíbò	èmbíbò nùùnjì	“(good) seeds”
òmùgúzì	òmùgùzí mùrùùnjì	“(good) buyer”
òmùkámà	òmùkàmá mùrùùnjì	“(good) chief”
èémbwà	èèmbwá nùùnjì	“(good) dog”
òbúrò	òbùró bùrùùnjì	“(good) millet”
kàsúkù	kàsùkú nùùnjì	“(good) parrot”

Tonal independence under reduplication

- Haya (via Larry Hyman)

ò-kù-jùn-à	→	ò-kù-jùn-ààà-jùn-à	“to help here & there”
ò-kù-kóm-à	→	ò-kù-kóm-ààà-kòm-à	“to tie up here & there”

Summary: tonal autosegmentalism

1. Syllables are TBUs
2. Tonal stability (Etsako)
3. Floating tones (Mixtec)
4. Tonal morphemes (Angas)
5. Across-the-board effects (Shona)
6. Fixed tonal inventories (Mende)
7. Mobile tones (Nkore)
8. Independence under reduplication (Haya)
9. Autosegmentalism predicts the right sorts of spreading/assimilation rules (e.g. L + H often becomes rising, not falling)