Lesson 13

Tone

13.1 Today

1. Tone, pitch, and intonation
2. Tone is contrastive
3. Tonal melodies have a degree of autonomy from speech segments

13.2 Some definitions

- Pitch: The frequency of vocal fold vibration.
- Tone: The use of pitch as a contrastive feature in the lexicon or morphology of a language.
- Intonation: The use of pitch at the level of the phrase or utterance to convey abstract meanings, usually about the information structure of the utterance.

13.3 Intonation

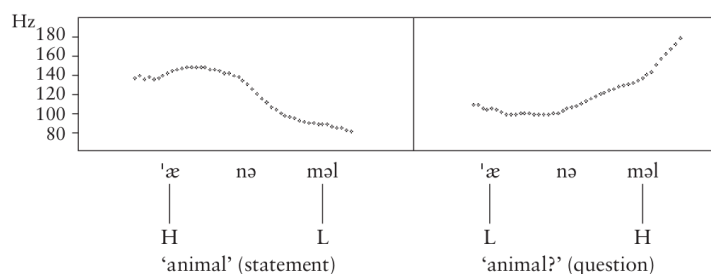Example: English Tunes (from Hayes 2009)

Figure 15.2 English intonation

13.4 Tonal languages use pitch to make lexical contrasts.
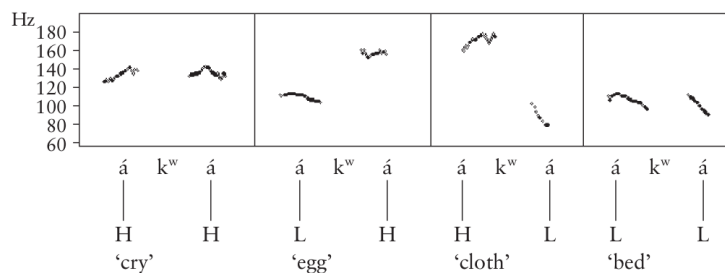
Example: Igbo (from Hayes 2009)

Figure 15.1 Phonemic tone in Igbo

Example: Mandarin

Segmental form	Tone	Gloss
ma	high level	'mother'
ma	mid rising	'hemp'
ma	low fall/rise	'horse'
ma	high falling	'scold'

There are many different notations in use (see https://en.wikipedia.org/wiki/Tone_letter).

13.5   Common notation for description that we will mainly use

Accent	Name	Meaning	HLM notation
á	acute	high	H
à	grave	low	L
â	circumflex	falling	HL
ǎ	caron	rising	LH
ā	macron	mid	M (or nothing)

13.6   Representation of Tone: Tone is Autosegmental

Importantly, tone appears to be *independent* of segments. 'Autosegmental' means 'being autonomous from segments'. Some reasons to think so are:

1. Morphemes may contain only tonal material, not segmental material (Efik).
2. When vowels delete, their tones may not (Ogbia).
3. If a tone changes, it can affect a whole span of segments, not just one (Shona).

We will use "autosegmental diagrams" to represent tone theoretically.

13.7   Summary

1. Pitch can be used to convey meaning in language.
2. Languages which use pitch to constrast lexical items are tonal languages.
3. Representing tones with features appears more complicated than representing them autosegmentally.
4. Autosegmental representations can straightforwardly account for tonal morphemes and tonal stability.

13.8   Case Study: Efik

		a.	b.	c.	d.	e.	f.
		'buy'	'live'	'think'	'put'	'go'	'run'
(1)	1sg.pres	ńdèp	ńdù	ŋ́kèrè	ńdòrì	ŋ́kà	ḿfèhè
(2)	2sg.pres	èdèp	òdù	èkèrè	òdòrì	àkà	èfèhè
(3)	3sg.pres	édèp	ódù	ékèrè	ódòrì	ákà	éfèhè
(4)	1sg.fut	ńjédép	ńjédù	ńjékéré	ńjédòrì	ńjékǎ	ńjéfèhé
(5)	2sg.fut	èjédép	èjédù	èjékéré	èjédòrì	èjékǎ	èjéfèhé
(6)	3sg.fut	éjédép	éjédù	éjékéré	éjédòrì	éjékǎ	éjéfèhé
(7)	1sg.pst	ŋ́kédép	ŋ́kódù	ŋ́kékéré	ŋ́kódòrì	ŋ́kákǎ	ŋ́kéfèhé
(8)	2sg.pst	èkédép	òkódù	èkékéré	òkódòrì	àkákǎ	èkéfèhé
(9)	3sg.pst	ékédép	ókódù	ékékéré	ókódòrì	ákákǎ	ékéfèhé
		'lay'	'dig'	'walk'	'come'	'pass'	'show'
(10)	1sg.fut	ńjésín	ńjédɔ̀k	ńjésàŋá	ńjétó	ńjébě	ńjéwút
(11)	3sg.fut	éjésín	éjédɔ̀k	éjésàŋá	éjétó	éjébě	éjéwút
(12)	1sg.pst	ŋ́késín	ŋ́kɔ́dɔ̀k	ŋ́kásàŋá	ŋ́kótó	ŋ́kébě	ŋ́kówút
(13)	3sg.pst	ékésín	ɔ́kɔ́dɔ̀k	ákásàŋá	ókótó	ékébě	ókówút
		'come'	'kill'	'pray'	'cover'	'fly'	'be called'
(14)	1sg.pst	ŋ́kédí	ŋ́kówòt	ŋ́kɔ̀bɔ́ŋ	ŋ́kékíbí	ŋ́kéfě	ŋ́kékèrè
(15)	3sg.pst	ékédí	ókówòt	ɔkɔ̀bɔ́ŋ	ékékíbí	ékéfě	ékékèrè

The main lesson here is that morphemes may contain tones without segments!

13.9 Case Study: Ogbia

	Unsuffixed	tonal melody	Definite	tonal melody	Gloss
(1)	ə́dírí	L . H . H	ə́dírə̂	L . H. HL	'book'
(2)	ə̀túrú	L . H . H	ə̀túrə̂	L . H . HL	'nail'
(3)	ə̀wúdúm	L . H . H	ə̀wúdúmə̂	L . H . H . HL	'life'
(4)	ə̀dè	L . L	ə̀də̀	L . L	'farm'
(5)	ə̀bə̀dì	L . L . L	ə̀bə̀də̀	L . L . L	'monitor lizard'
(6)	ə̀gbùdùm	L . L . L	ə̀gbùdùmə̀	L . L . L . L	'bush cow'
(7)	ə̀pùsí	L . L . H	ə̀pùsə̂	L . L . HL	'cat'
(8)	ə̀dùmó	L . L . H	ə̀dùmə̂	L . L . HL	'riddle'
(9)	ə̀píkò	L . H . L	ə̀píkə̀	L . H . L	'feather'
(10)	èmú	L . H	èmə̂	L . HL	'head'
(11)	ə̀gôl	L . HL	ə̀gólə̀	L . H . L	'gold'

The main lesson here is that deletion of a vowel does not mean deletion of its tone! The phenomenon of a vowel deleting and its tone remaining is called "tonal stability".

13.10   Case Study: Shona

	Word/Phrase	Melody	Gloss
(1)	mbwá	H	'dog'
	né # mbwà	H # L	'with a dog'
(2)	hóvé	H . H	'fish'
	né # hòvè	H # L . L	'with a fish'
(3)	mbúndúdzí	H . H . H	'army worms'
	sé # mbùndùdzì	H # L . L . L	'like army worms'
(4)	hákátà	H . H . L	'diviners bones'
	sé # hàkàtà	H # L . L . L	'like diviner's bones'
(5)	bàdzá	L . H	'hoe'
	né # bàdzá	H # L . H	'with a hoe'
(6)	chàpúpù	L . H . L	'witness'
	sé # chàpúpù	H # L . H . L	'like a witness'
(7)	bénzíbvùnzá	H . H . L . H	'inquisitive fool'
	sé # bènzìbvùnzá	H # L . L . L . H	'like an inquisitive fool'
(8)	fárái	H . H	'personal name'
	nà # Fárái	L # H . H	'with Farai'
(9)	mbwá	H	'dog'
	sá-mbwá	H-H	'owner of a dog'

The main lesson here are that changing a tone can result in whole span changing! This suggests a span of tones is better represented as a single tone with multiple associations!

13.11 Case Study: Margi

	Word	Gloss	Word	Gloss
(1)	sál	'man'	sálárì	'the man'
(2)	kùm	'meat'	kùmárì	'the meat'
(3)	ʔí.mí	'water'	ʔím.já.rì	'the water'
(4)	kú	'goat'	kwárì	'the goat'
(5)	tágú	'horse'	tágwárì	'the horse'
(6)	ʃèré	'court'	ʃèrérì	'the court'
(7)	tóró	'threepence'	tórórì	'the threepence'
(8)	ə́ncàlá	'calabash'	ə́ncàlárì	'the calabash'
(9)	tì	'morning'	tjǎ.rì	'the morning'
(10)	hù	'grave'	hwǎrì	'the grave'
(11)	úʔù	'fire'	úʔwǎrì	'the fire'
(12)	cédè	'money'	céděrì	'the money'
(13)	fà	'farm'	fǎrì	'the farm'

Like Ogbia, tones persist even when their underlying vowels do not!

Bibliography

Hayes, Bruce. 2009. *Introductory Phonology*. Wiley-Blackwell.

Kennedy, Robert. 2016. *Phonology: A Coursebook*. Cambridge University Press.