

Chapter 11

Between the segment and the syllable



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Introduction

- Segments and syllables
 - evidence for both
- How are they related exactly?
- Structure: syllable
 ???
 segments

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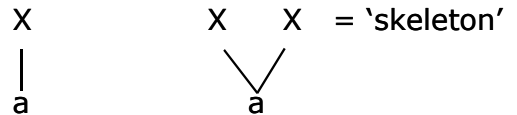
Skeletal tier

- Representation of length
 - long vowels: e.g. English /i:/ vs. /ɪ/
- You can have a long vowel in an open syllable in English (bee) or a diphthong (bye) but not a short vowel (*mi)
 - shows the equivalence of long vowels and diphthongs (in English)
 - and also of a short vowel plus consonant (bit) to a long vowel

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Like tone ...

- Length is independent of segmental features
 - long vowels and diphthongs have two units, short vowels have one (recall Greenlandic)



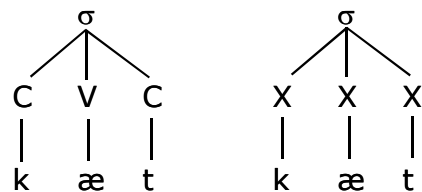
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The X or CV tier

- tier (pronounced like cry a *tear*) = level
- X or CV tier: in between segments and syllable
- CV units are independent, like tone

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CV or X units?



V = X at the middle of the syllable
C = X at the edges

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Syllabification

- = Putting segments into syllables
- This CV-tier will play a role
- Syllabification as a phonological rule (recall French liaison)
 - phonology /kat/ : no syllable structure
 - phonetics : syllabified
 - what kind of rule(s)?

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Syllable formation

- E.g. the word 'metro'
 - two syllables, at least two possibilities
 - met.ro or me.tro (or metr.o ??)
- => syllables maximize their onsets (rule)
- tr- is a possible onset in English (try)
- so: me.tro

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Sonority

- Which part of the syllable is loudest?
 - the vowel (see waveforms)
- Up to the vowel loudness rises, and after the vowel loudness decreases
 - =sonority
- Typical syllables (in different languages):
 - stop – fricative – glide/nasal – vowel – glide/nasal – fricative – stop

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English

t r e n d 'trend'

- stop is first and last position
- vowel in the middle
- liquid before the vowel
- nasal after the vowel

SONORITY SCALE: Obstruents – Nasals – Liquids ([l,r], etc.) – Glides ([w,j], etc.) – Vowels

Recent research

- Yin Ruihua, SISU PhD (2016-):
- What is sonority?
 - phonetic? phonological? a primitive? derived from other factors? History of the concept, how it is used in rules and constraints
- Application of "sonority" to assimilation processes in Korean and other languages

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Sonority violations

- e.g. English
 - speak: s expected after the stop
 - ps- not even allowed in English! (psychology: /sai-/)
 - demands an explanation, why is [s] special?
 - other languages?
 - different theories about this ☺
- perhaps also: final affricates: lurchʃ

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Back to the Skeleton

- Arguments in favour of:
 - "templatic" languages like Arabic (recall Hebrew colours, in the Morphology class)

(7)	ktb	'write'
	ħq	'be true'
	CVCVC	'Plain'
	CVCCVC	'Intensive'
	CVVCVC	'Influencing'
	a	'Active Perfective'
	ui	'Passive Perfective'

- Clearly **independent** role for CV tier

Conjugation	Active	
Plain	katab-a	'he wrote'
Intensive	kattab-a	'he caused to write'
Influencing	kaatab-a	'he corresponded'
Plain	ħaqq - a	'it is true'
Intensive	ħaqqaq-a	'he realized st.'
Influencing	ħaqqaq-a	'he contested sb.'s right'

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French

labe	lezabe	'priest'
lide	lezide	'idea'
ləero	ləero	'hero'
ləɛn	ləɛn	'hatred'

- words in the second group have a "silent" [h]

a.	σ	σ	b.	σ	σ	
		^		^	^	
	V	C	V	C	V	
	a	b	e	ɛ	r	o

can be nicely solved by using the CV tier

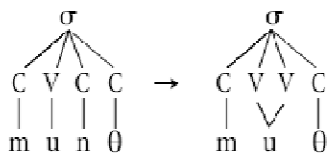
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Lengthening

Dutch	English
gans	goose
mond	mouth
tand	tooth
...	

Dutch (or German) has short V + [n], English has long vowel or diphthong
n was lost but its X-position was taken up by the vowel, which became long

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Moras

- Alternative for the CV-tier
- In (Old) English example, coda consonant (n) deletion leads to lengthening
- Onset consonants never have this kind of effect
 - e.g. English knee, gnat, etc.
 - or American English tune (loss of j)
- Second, coda consonants sometimes count for stress (or English *weight*)
- Onset consonants never do
- So: different kinds of X's

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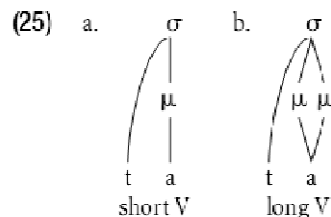
Moras

- So coda consonants are more “weighty” than onset consonants
- Therefore they can get a weight unit (mora) and onset consonants never do
 - coda consonants only get a mora if there is evidence (stress, lengthening)

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Mora theory

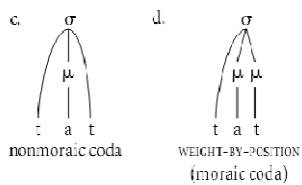
- developed by Hayes (1990)



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Weight-by-position

- Crucial difference in coda consonants
- In some languages (e.g. English), short vowel + coda consonant counts as a long vowel (two positions)



Conclusion

- Independent tier of X (or CV-) units in between segments and syllable structure
- Evidence from syllable-related processes and “templatic” languages
- Building syllable structure
 - one or more rules? max onsets-first
- Alternative for CV units: mora theory

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Homework

- Read chapter carefully. Sections 11.6 and 11.7 are optional
- Homework: Qs 100, 104-107
- Thank you

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