

Syllables

Announcements

Reading for this week: Spencer ch.3; Homework 5 due Thursday 9/16/03

What is the syllable?

Words can be broken down into syllables:

fə.nɑ.lə.dʒi sɪ.lə.bəl fʊ.nɪm æ.lə.fʊn

There is no exact phonetic description of the syllable. A syllable is not a sound, but an abstract unit of sounds.

The shape of a syllable varies drastically from language to language. Native speakers seem to have strong intuitions about dividing words into syllables.

Syllables play an important role in phonology. Phonological rules and constraints often need to refer to the unit of the syllable. Many processes such as *devoicing*, *epenthesis* (adding a sound), *deletion*, *stress*, and *tone* often rely on the concept of the syllable. Syllables also help explain how sounds are combined and ordered in a language.

Take a look at the French language game *Verlan*:

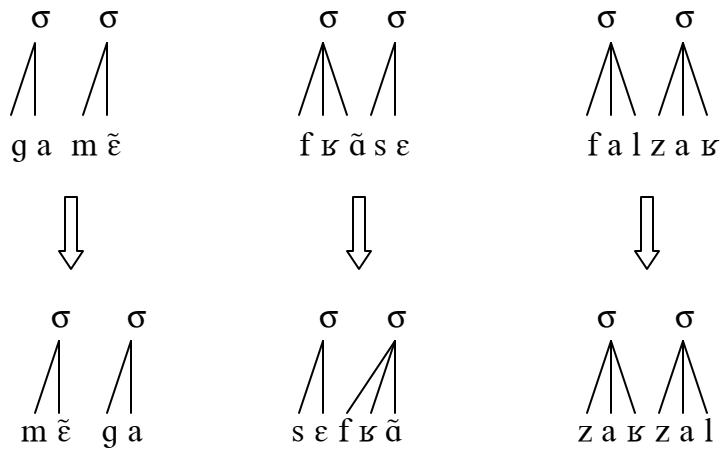
<i>French</i>	<i>Verlan</i>	
gamē	mēga	'kid' (m.)
gamin	minga	'kid' (f.)
kopē	pēko	'mate' (m.)
kopin	pinko	'mate' (f.)

The rule so far looks like: *move first two sounds to the end of the word*. This doesn't work for the following words:

fʁãse	sɛfʁã	'French' (m.)
fʁãsez	sɛzʁã	'French' (f.)
falzɑ̃	zɑ̃fal	'pants'
ɑ̃koʁ	koʁɑ̃	'again'

The rule gets a little more complicated: *move first one or two consonants (if any), first vowel and sometimes the following consonant to the end of the word*. Bleh.

If we refer to syllables (Greek letter sigma σ), the rule becomes much simpler: *move the first syllable to the end of the word*.



Note how the syllable is represented on a different level or *tier* from the phones. This representation is a part of **non-linear phonology**. Before this point we had been doing only **linear phonology** – or just the phone level.

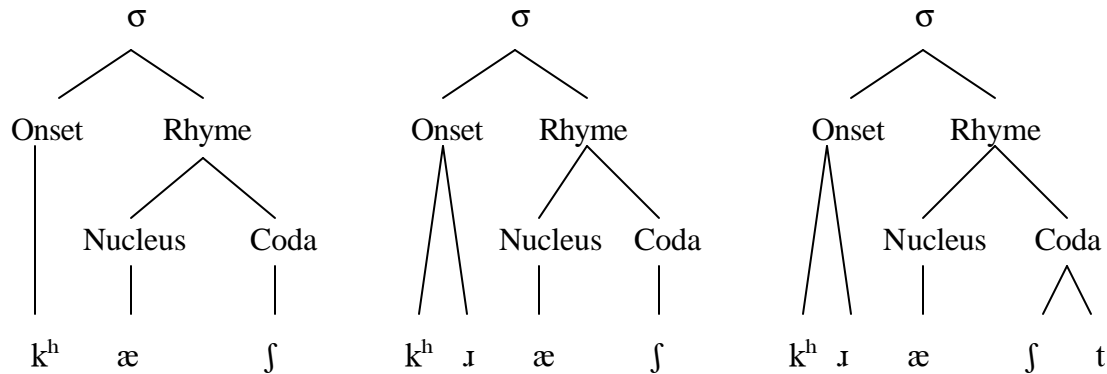
Syllable Structure

Every syllable must contain a syllabic segment – the **nucleus** of the syllable. The nucleus can be a vowel or a syllabic consonant.

Onset: any consonant or sequence of consonants preceding the nucleus.

Coda: any consonant or sequence of consonants following the nucleus.

The nucleus is said to form a unit with the coda called the **rhyme**. The hierarchy of the syllable looks like this:



Rhyming: evidence for the rhyme

When words rhyme they have the same nucleus and coda. The onset does not matter:

bat sat rat mat brat slat splat...

lift rift miffed sniffed drift ...

hand band brand canned stand strand ...

Evidence for the onset:

Alliteration is a literary device used in poetry, tongue twisters and common phrases. Words alliterate when they have the same onset:

*Peter Piper picked a peck of pickled peppers.
sink or swim, do or die, the more the merrier, watchful waiting, live and learn,
back to the basics, it takes two to tango, balance the books, ...*

Consider the English language game Pig Latin (or *Igpay Atinlay*). You remove the whole onset of the first syllable, move it to the end of the word and add –ay [eɪ].

*pig ® ig-pay
dream ® eam-dray
clutz ® utz-clay
stress ® ess-stray*

Practice

Draw syllable trees for the English words: *pin, tree, ant, strong, happy, camping.*

Syllable Types

The exact shape of syllables depends on the language. Each language puts its own constraints on the possible types of syllables. Many languages require an onset. Some languages do not allow codas. No language forbids onsets.

Linguists often state to the sequence of vowels and consonants to refer to a type of syllable: V, CV, VC, CVC, CCV, CCCV, VCC, VCCC, CVCC, ... (pronounced vee, see-vee, vee-see, see-vee-see, etc.)

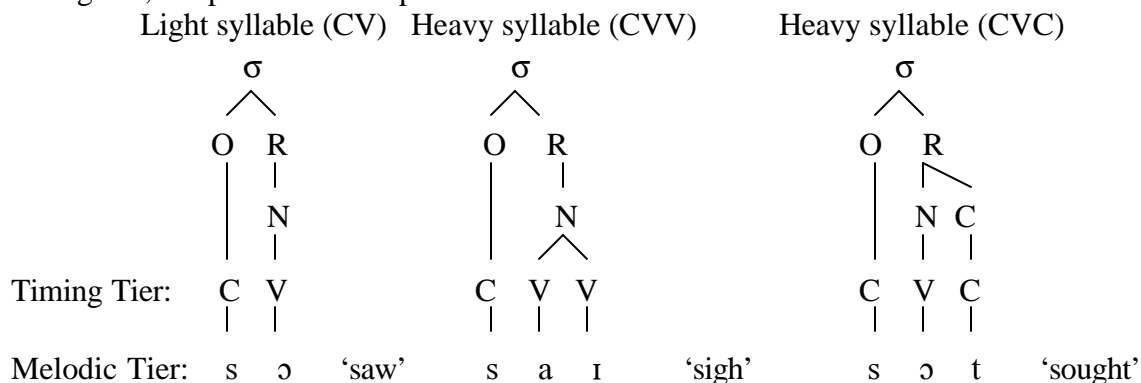
Open syllable: syllable with no coda ki, p^hleɪ, sou, blu

Closed syllable: syllable with a coda kip, p^hleɪt, souk, blum

Heavy syllable: syllable with a vowel and coda or long vowel (and coda)

Light syllable: syllable with a short vowel and no coda

We can describe heavy and light syllables better if we make reference to another tier called the **timing tier** or the **skeletal tier**. Abstract timing slots for consonants and vowels make up the timing tier; the phones make up the **melodic tier**.



Heavy syllable: syllable with a rhyme that consists of two or more timing slots
Light syllable: syllable with a rhyme that consists of one timing slot

Practice

Example (1) Vowel Epenthesis in Yawelmani Yokuts

might <i>verb</i>	future II	non-future	having <i>verbed</i>	future I	verbal noun	gloss
paʔ.tal	paʔ.ten	pa.ʔit.hin	pa.ʔit.mi	pa.ʔit.nit	pa.ʔit	‘fight’
ʔil.kal	ʔil.ken	ʔi.lik.hin	ʔi.lik.mi	ʔi.lik.nit	ʔi.lik	‘sing’
lih.mal	lih.men	li.him.hin	li.him.mi	li.him.nit	li.him	‘run’
ʔaj.jal	ʔaj.jen	ʔa.jij.hin	ʔa.jij.mi	ʔa.jij.nit	ʔa.jij	‘pole a boat’

Yawelmani Yokuts does not allow onsets or codas with more than one consonant.

Underlying Form	/paʔt-al/	/paʔthin/
Divide into syllables	pa.ʔtal paʔ.tal paʔt.al	pa.ʔthin paʔ.thin paʔt.hin paʔth.in
Epenthesis	–	pa.ʔit.hin
Surface Form	[paʔtal]	[paʔithin]

Example (2) Ilokano: Syllables must have onsets

/basa-en/	→	[ba.sa:ʔen]	/masahe-en/	→	[ma.sah.jen]
/pag-saka-an/	→	[pag.sa.ka:ʔan]	/pag-aŋo-en/	→	[pag.saŋ.wen]

Example (3) Spanish s~h alternation and R-less English (reader p.1-2)

Example (4) German devoicing revisited

Kin[t]	‘child’	Kin.[d]er	‘children’	Kin[t.h]eit	‘childhood’
gel[p]	‘yellow’	gel.[b]er	‘yellow’	gel[p.l]ich	‘yellowish’
Mau[s]	‘mouse’	Mäu.[z]er	‘mice’	Mäu[s.l]ein	‘little mouse’
schrei[p]	‘write (imp.)’	schrei.[b]en	‘to write’	schrei[p.k]undig	‘literate’
wa[k]	‘dare (imp.)’	wa.[g]en	‘to dare’	Wa[k.n]is	‘daring experience’
Prei[s]	‘price’	Prei.[z]e	‘prices’	prei[s.v]ert	‘of good value’
Hun[t]	‘dog’	Hün.[d]e	‘dogs’	Hun[t.ç]en	‘little dog’
lö[s]	‘loose’	lö.[z]en	‘to solve’	lö[s.b]ar	‘solvable’