

Introduction to Linguistics

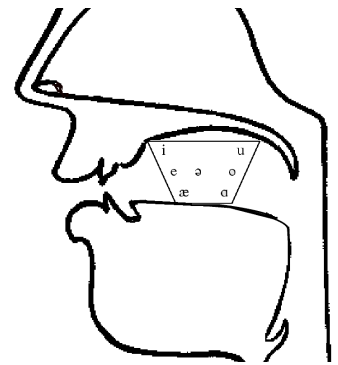
Phonetics 2

Vowels

- ◆ central in the syllable
- ◆ may bear stress
- ◆ native speakers' feelings about number of syllables based on number of vowels
- ◆ made by shaping the oral cavity while allowing free passage of air

Criteria for Describing Vowels

- ◆ Primary criteria for describing vowels:
 - ◆ distance between top of tongue and roof of mouth (= 'height')
 - ◆ position (forward or back) in the oral cavity (= 'backness')
 - ◆ shape of the lips (= 'rounding' or 'spreading')



Vowel Features

- a) height: high mid low (American)
- OR: close close-mid open-mid open (IPA)
- b) backness: front central back
- c) shape of lips: rounded spread

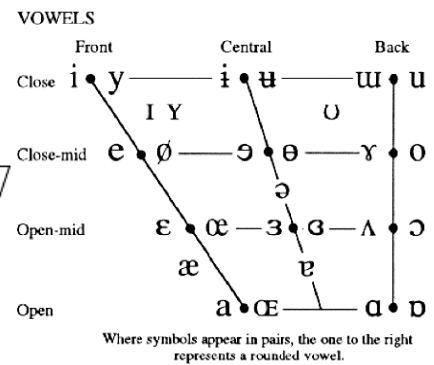
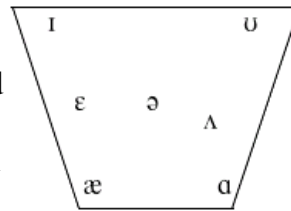
Vowel Space

Cardinal Vowels

- ◆ absolute points in vowel space, according to the IPA chart

English Short Vowels

- ◆ English vowels may be divided into short and long
- ◆ this equates with the traditional distinction of *lax* and *tense*
- ◆ short vowels occur in closed syllables, i.e. those with a following consonant



ɪ	ship, bit, nip, etc.	ʊ	put, took, Luke, etc.
ɛ	bet, shed, lead, etc.	ʌ	shut, mud, bug, etc.
æ	cat, map, tan, etc.	ɑ	bomb, calm, etc.

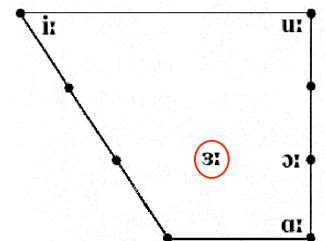
Schwa

- ◆ schwa, [ə], does not have a contrastive function in English
- ◆ very frequent as the reduced form of vowels in the absence of stress, e.g. banana [bəˈnænə], sofa [səʊfə]

English Long Vowels

- ◆ English long vowels are pure vowels that are both long and tense
- ◆ they may occur in single, open syllable words such as see [si:], do [du:], law [lɔ:]

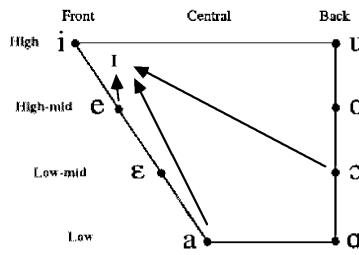
i:	meat, bean, see, etc.	u:	moon, boot, clue, etc.
ɜ:	bird, fur, etc. (British English)	ɔ:	caught, thaw, law, etc.
		ɑ:	aunt, taunt, etc. (British Eng)



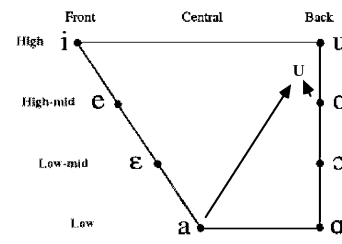
Diphthongs

- ◆ a diphthong is a special kind of vowel with a complex peak, consisting of two vowel qualities combined
- ◆ the usual way to represent such complex vowels is by a sequence of 'pure' vowels that begin and end them, for example English *high* [haɪ] and *how* [haʊ]
- ◆ one of the simple vowels is typically less prominent than the other, resulting in a gliding entry or exit (on-glide vs off-glide)

English Diphthongs



- examples: say [seɪ], eye [aɪ], boy [bɔɪ]

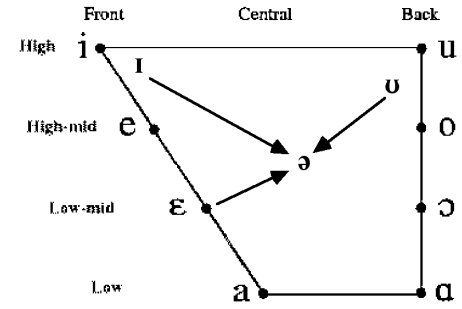


- cow [kaʊ] and low [ləʊ]

Non-rhotic Dialect Diphthongs

- in dialects of English where final [ɹ] is not pronounced (the “non-rhotic” varieties), there is a third category of diphthong with [ə] as the last part of the diphthong
- examples of this include British English ear [ɪə], bear [beə], poor [pʰuə]
- when the [ɹ] resurfaces due to a following vowel, then the diphthong becomes the corresponding simple vowel:

my ear [maɪ ə] BUT: my ear is itchy [maɪɪ ɪz ɪtʃɪ]



Describing Diphthongs

- the usual way to describe diphthongs is by describing the two participating vowels while indicating their relationship, thus:
 - [eɪ] is a high-mid front to high front diphthong
 - [aʊ] is a low front to high back diphthong, etc.
- diphthongs in English function as if they were long vowels and may occur in open syllables in words such as buy [baɪ], plough [plau], etc.

Syllabic Consonants

- a special class of vowel-like elements that appear regularly in English: the syllabic consonants
- they consist of the nasals and liquids used as vowels, but with certain limitations
- syllabic consonants in English may alternate with non-syllabic variants
- depends on their position within the syllable
- in the beginning or end of a syllable they are non-syllabic
- in the nucleus of the syllable they are syllabic
- examine the case of ‘sparkle’:

sparkle_v sparkl-ing_{Adj} sparkling_v
 [spaɹkəl] [spaɹkɪŋ] [spaɹkɪŋ]

- when *sparkle* is an adjective with the suffix *-ing_{Adj}*, the final /l/ is non-syllabic, so that the resulting word has only 2 syllables
- however, when the verbal suffix *-ing_v*, marking the progressive tense, is attached the result is different
- the derived participle form *sparkling_v* has three syllables

button	bottom	bottle	butter
[bʌtɪŋ]	[bɒtɪŋ]	[bɒtəl]	[bʌtɪ]
[bʌɹɪŋ]	[bɒɹɪŋ]	[bɒɹəl]	[bʌɹɪ]
[bʌɹən]	[bɒɹən]	[bɒɹəl]	[bʌɹə]

A	B	C
2 Syllables	2 Syllables	3 Syllables
crackle _v [kʰɹækl]	crackling _N [kʰɹæklɪŋ]	crackling _v [kʰɹækl ɪŋ]
sparkle _v [spaɹk]	sparkling _{Adj} [spaɹkɪŋ] sparkler _N [spaɹklə]	sparkling _v [spaɹkɪ ɪŋ]
rhythm _N [ɹɪðm]	rhythmic _{Adj} [ɹɪðmɪk]	
fatten _v [fæʔn]	fattening _{Adj} [fæʔnɪŋ]	fattening _v [fæʔnɪŋ]

Going Further with the IPA

- the following are internet sites that contain information about the International Phonetic alphabet
- they have sound files linked to the symbols so you can hear the sounds and see the symbols

<http://hctv.humnet.ucla.edu/departments/linguistics/VowelsandConsonants/vowels/contents.html>

<http://www.paulmeier.com/ipa/charts.html>

<http://web.uvic.ca/ling/resources/ipa/charts/IPAlab/IPAlab.htm>