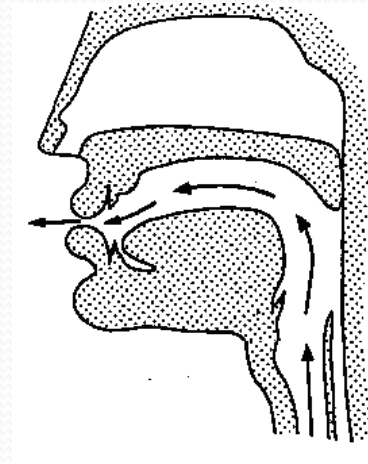


VOWEL SOUNDS

Introduction to Phonetics and Phonology

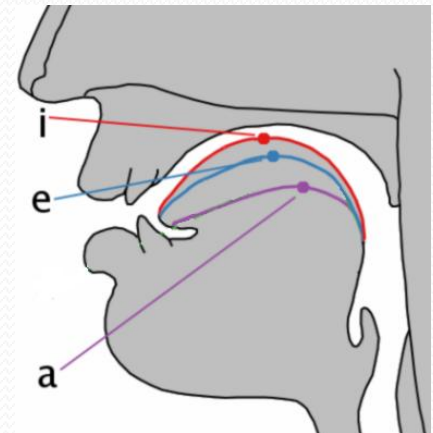
What is a vowel?

- It is a sound in which there is a continuous vibration of the vocal cords and the airstream is allowed to escape from the mouth in an unobstructed manner, without any interruption.



How do we distinguish the different vowel sounds?

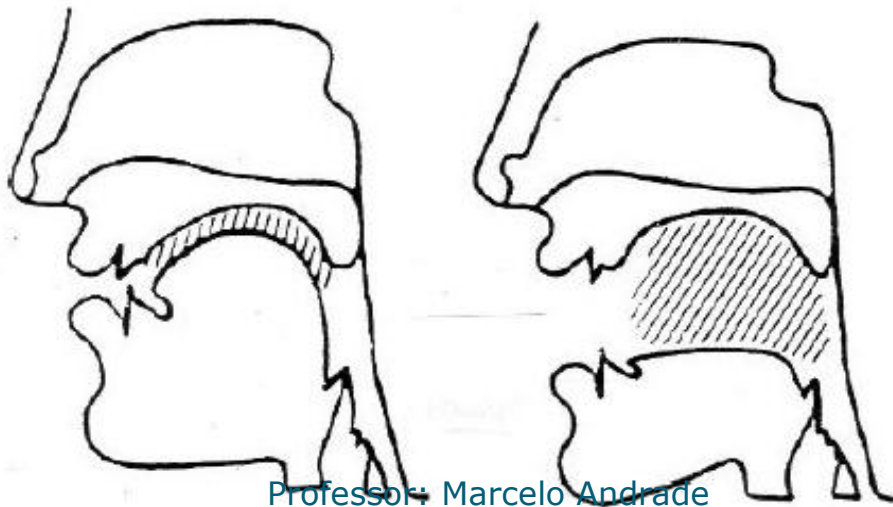
- Vowel sounds can be distinguished from each other by WHICH PART of the tongue is involved (front, central, back) and by HOW HIGH the tongue is when the sound is produced (high, mid, low)



Tongue height

Tongue position is described using two criteria: the height (how high is the tongue) and the part of the tongue involved in the production of the sound.

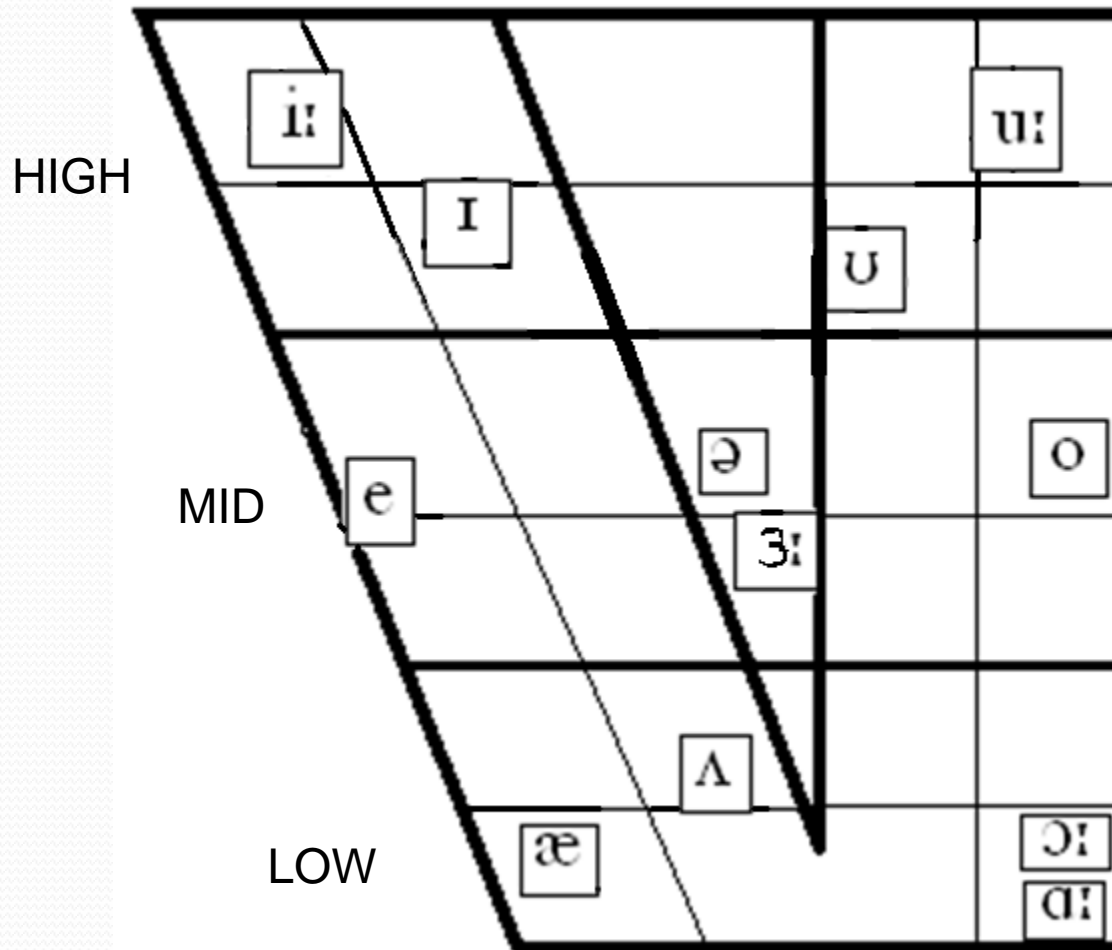
In English the tongue may either be **high**, i.e. when the speaker produces e.g. [i:, u:] in [bi:t, bu:t] *beat, boot*, **intermediate**, e.g. [e, ɔ:] in [bet, bɔ:t] *bet, bought*, or **low**, e.g. [æ, a:] in [bæt, ba:t] *bat, Bart*.



FRONT

CENTRAL

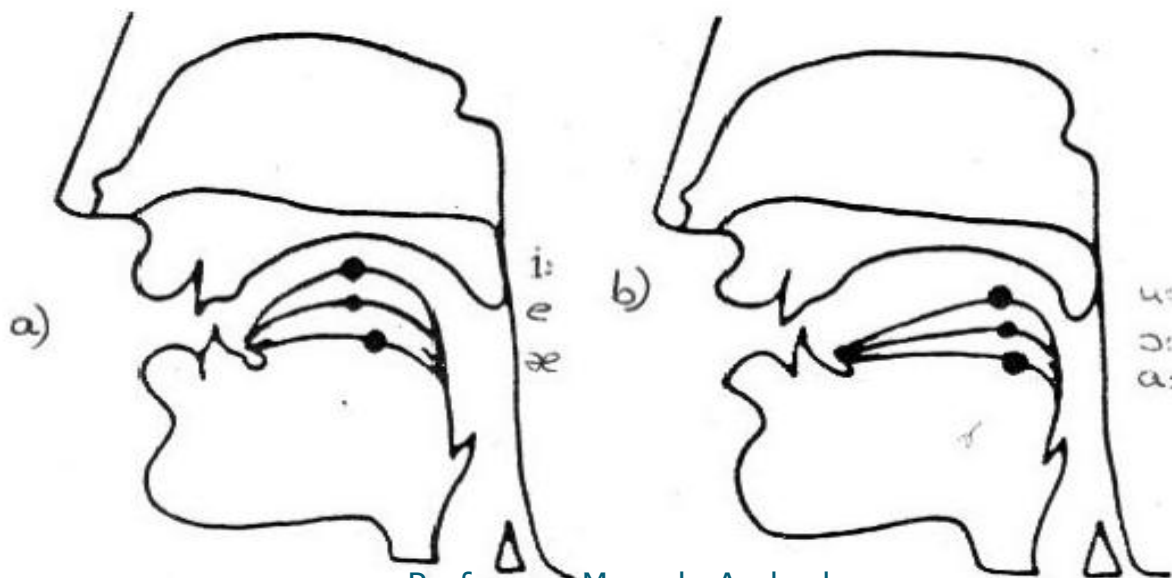
BACK

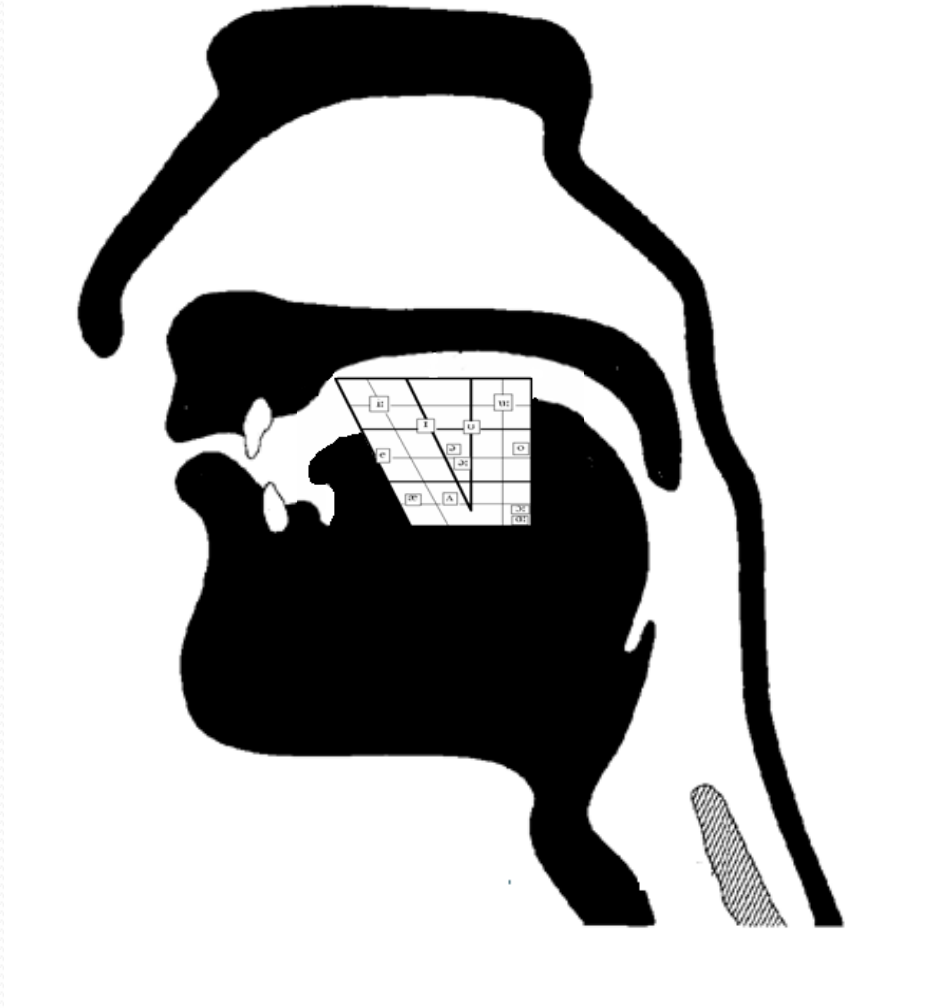


Tongue position

For example [ɛ] is front and [ɔ:] is back, and [æ] front, [ɑ:] back. There are also vowels in between front and back, called **central**, namely [ɜ:, ə, ʌ] as in [wɜ:d, fɔ:wəd, mʌd] *word, forward, mud*. [ɜ:] for instance is between [e] and [ɔ:], as can be seen from [bed, bɜ:d, bɔ:d], *bed, bird, board*.

To give an accurate account of tongue position one has to combine height of the tongue and part of the tongue involved.





Length

As you may have seen, there are two types of [i] sound in English placed in two different positions. However for the purpose of description, what is relevant is not the difference of position but that of the perceived length of the vowel. Thus it is said that [i:] is a long vowel and [ɪ] is a short one. The same is valid for [u:] / [ʊ], [ɜ:] / [ə], [ɔ:] / [ɒ]. Symbols for long vowels all have a colon.

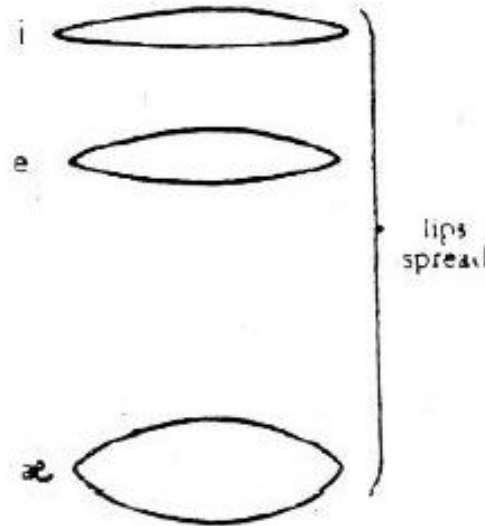
Phonologically, one can establish the rule such as only long vowels may be the last sound of a syllable, whereas short vowels are always followed by at least a consonant. If we take away the final [t] from court, [kɔ:] is a possible syllable (core) whereas [kɒ] could not possibly occur. (Exceptions from this are the three short vowels that occur in completely unstressed syllables, [sɪtɪ, ɪntʊ, swetə] *city, into, sweater*).

Rounding

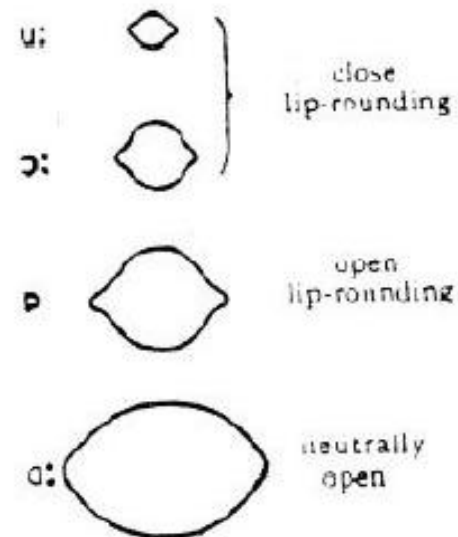
Vowels may also be different from each other with respect to rounding. If you compare [i:] in [tʃi:z] *cheese* with [u:] in [tʃu:z] *choose*, you will see that not only is [i:] a front vowel and [u:] a back vowel, but [i:] is also unrounded where [u:] is rounded. When pronouncing [u:] your lips are rounded, but when pronouncing [i:] the corners of the mouth are much further apart.




no lip rounding



lip rounding



- 
- We use special symbols to represent vowel phonemes. This set of symbols is known as the International Phonetic Alphabet (IPA). There are 20 symbols for vowel phonemes (considering diphthongs).
 - Let's have a look at them:

IPA Symbols for vowel phonemes

i: /bi:/ *bee*

ɪ /bɪt/ *bit*

e /pen/ *pen*

ʌ /bʌs/ *bus*

æ /mæn/ *man*

ɒ /pɒt/ *pot*

ɔ: /spɔ:t/ *sport*

ʊ /fʊl/ *full*

u: /mu:n/ *moon*

ɑ: /kɑ:/ *car*

ə /əbaʊt/ *about*

ɜ: /bɜ:d/ *bird*

aɪ /baɪ/ *buy*

aʊ /kaʊ/ *cow*

eɪ /peɪ/ *pay*

eə /heə/ *hair*

ɪə /fiə/ *fear*

əʊ /rəʊd/ *road*

ɔɪ /bɔɪ/ *boy*

ʊə /puə/ *poor*