English consonants & vowels

- 철자와 소리는 구별할 것 (G의 발음: ㄱ)

- Vison: 혀가 닿으면 안됨. Mission과 같음. Z는 닿음

- j (y): year과 ear의 차이: 자음으로 시작하는지 모음으로 시작하는지

- f와 v: 목의 떨림 무/유

- grouping (voiced/voiceless)

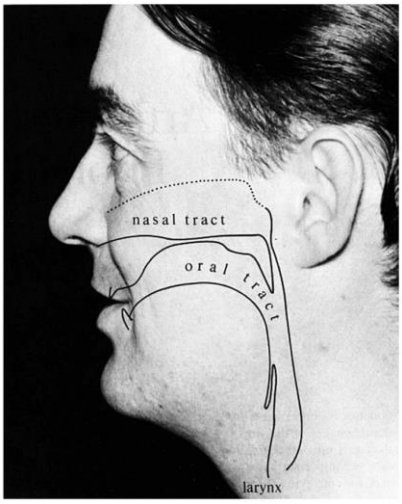
  모든 소리는 voiced와 voiceless. 모든 모음은 voiced이고 자음은 voiced와 voiceless로

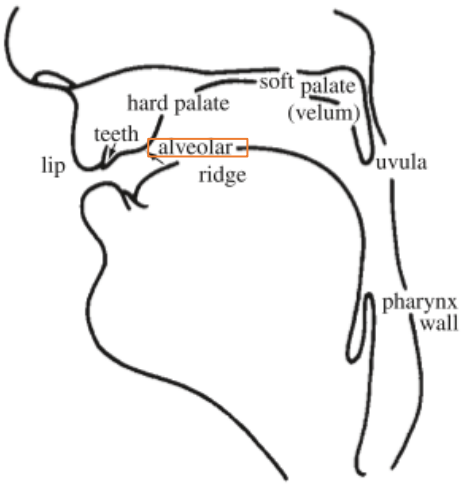
Phonetics (음성학) phonology와 다름

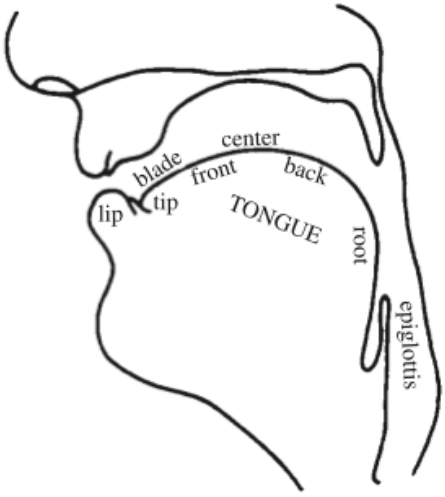
- A study on speech(사람의 말) / phonology : A study of sound system

  - - How speech is described
    - Articulatory phonetics (*from mouth*) ← the most primitive
      - How to produce speech
    - Acoustic phonetics (*through air*)
      - How to transmit speech
    - Auditory phonetics (*to ear*)
      - How to hear speech

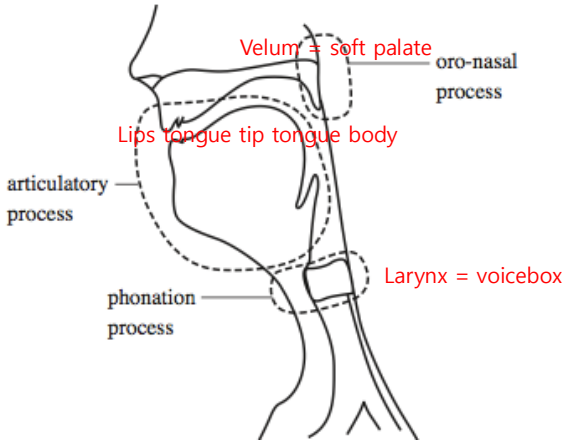
The vocal tract (upper) (lower)







5 speech organs = constrictors = articulators



Nasal : 비음

larynx : voiced인지 아닌지

- voiced: can feel vibration

  e.g. v, z, l, m, a, i, …

- voiceless: can't feel vibration

  e.g. f, s, k, p, h, …

- oral tract와 nasal tract 구분

  velum이 raised되었을 때 nasal tract이 막힌 것(모든 모음, 비음을 뺀 모든 자음들)

  코로 숨을 쉴 때는 velum은 lower 되었겠죠!

- constrictors (lips, tongue tip, tongue body)

  - Constriction location (CL): where exactly?

    Lips : bilabial, labiodental

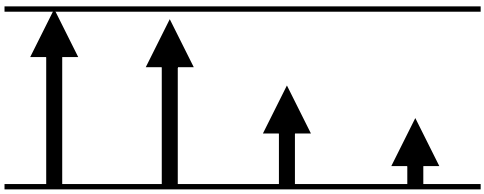
    Tongue body : palatal, velar

    Tongye tip : dental, alveolar, retroflex, palato-Alveolar

  - Constriction degree (CD): how much exactly?

    upper part

    lower part

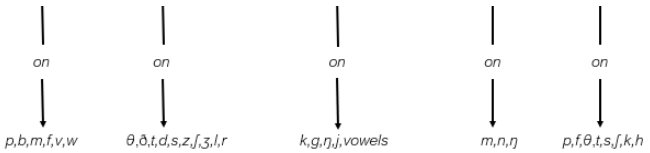


stops fricatives approximants vowels

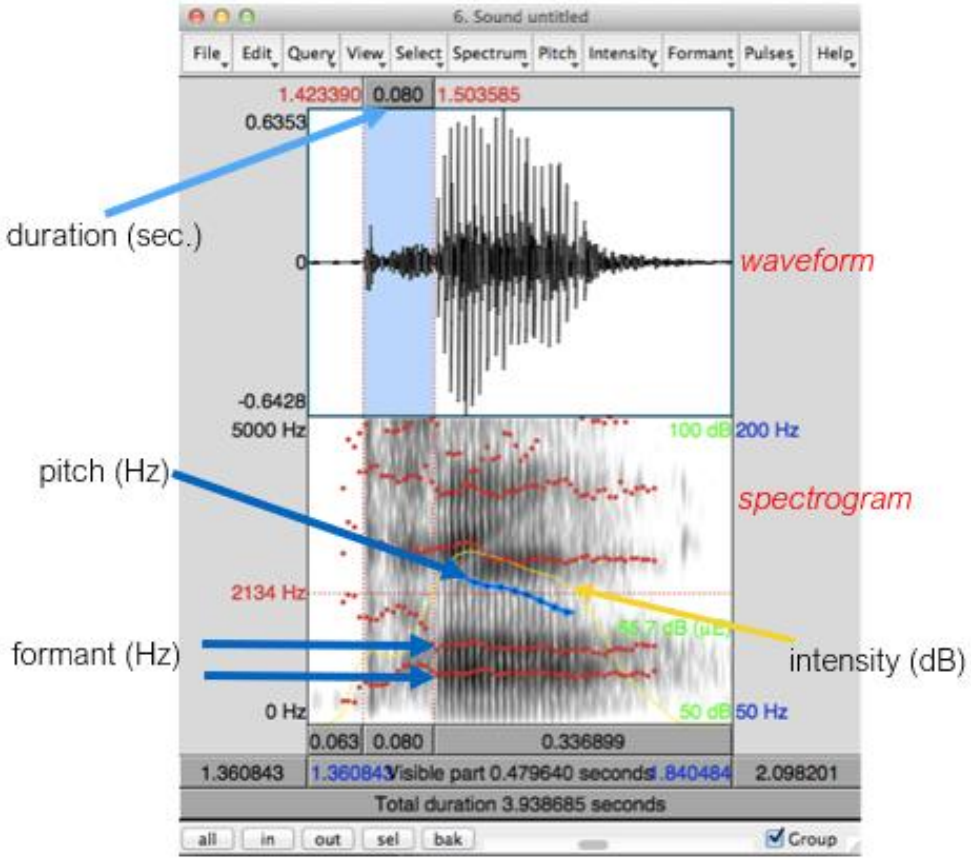
∴ By specifying constrictors, CL, CD, we can produce English consonants & vowels (phoneme)

Phonemes : Individual sounds that form words

- a combination of speech organs' actions
    - lips / tongue tip / tongue body / velum / larynx



Acoustics in Praat



- pitch setting – pitch range : 65-200Hz for male speech, 145-275Hz for female speech