

- Phonetics : Speech(사람이 하는 말에 한정)을 연구하는 학문

- Articulatory phonetics(from mouth : producing) , Acoustic phonetics(through air : transmitting) , Auditory phonetics (to ear : hearing)

- Articulation

5 speech organs = constrictors = articulators

(1) Phonation process : larynx (voicebox) - vocal cords vibrates

— voiced (유성음) : can feel vibration , 모든 모음과 일부 유성 자음 ex) v, z, l, m, a, i, ...

— voiceless (무성음) : cannot feel vibration ex) f, s, k, p, h, ...

(2) Oro-nasal process : velum(soft palate) -

— Velum lowered = nasal sounds : [m], [n], [ŋ] , 숨 쉴 때

(3) Articulatory process : lips, tongue tip, tongue body

- Control of constrictors(articulators)

(1) Constriction location (CL) : where exactly? 앞뒤

— lips → bilabial, labiodental

— tongue body → palatal, velar

— tongue tips → dental, alveolar, palato-alveolar

(2) Constriction degree (CD) : how much exactly? 상하

— upper part > ... > lower part :

stops [p], [b], [t], [d], [k], [g]

> fricatives [f], [v], [s], [z], [θ], [ð], [ʃ], [ʒ], [h]

> approximants [w], [r], [l], [j]

> vowels

- Phonemes : Individual sounds that form words

lips → p, b, m, f, v, w

tongue tip → θ, ð, t, d, s, z, ʃ, ʒ, l, r

tongue body → k, g, ŋ, j, vowels

velum → m, n, ŋ

larynx → p, f, θ, t, s, ʃ, k, h

- Acoustics

— intensity (dB) : pitch와 독립적으로 0 , pitch (Hz) : 성대가 1초에 몇분 떨렸는지, formant (Hz) : 모음을 구별하는 수치적인 지표