

Teaching Fellow:

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Discussion Section A:

Mondays 10:30–11:30 AM, 2 Arrow St Room 420

Section B:

Tuesdays 12:00–1:00 PM, 2 Arrow St Room 408

Office Hours:

Mondays 2:30–3:30 PM, 2 Arrow St Room 423

Discussion Handout 5

2023 Mar 6/7

(1) Today's Schedule

- a. Source, Filter, and Perception
- b. Transcription Practice
- c. Open Floor

Source, Filter, and Perception

(2) Sources:

- a. Periodic movement of a source gives rise to periodic sounds:
 - (i) Voicing is periodic movement of the glottis
- b. Turbulent airflow through a source results in aperiodic 'noise'
 - (i) High airflow through an open glottis creates the [h] sound
 - (ii) High turbulent flow between the tongue and alveolar ridge creates the [s] sound, etc.
- c. How do we determine turbulence? Channel vs. Obstruction
 - (i) [f] vs [ϕ]

(3) Filters:

- a. Any chamber where sound can reverberate is a filter.
- b. Sounds typically move from glottis to lips: creation of turbulence further in the mouth has more space to be filtered.
- c. Nasals include both oral and nasal tracts as filters

Some examples of the ways we make sounds more perceivable:

- (4) In English, we pronounce /s/ and /ʃ/ with different rounding: /ʃ/ tends to be more round.
 - a. Why is this? Perceptual dispersion.
 - b. Do we expect a language that rounds their /s/ more than their /ʃ/? Why?
- (5) How does rounding affect vowels then? How does this affect the rarity of certain vowel systems? In terms of commonness:
 - a. {i, u} > {i, ʊ}
 - b. {i, u, y} > {i, y}
 - c. {i, y, u, e, o} > {i, y, u, e, ø, o} > {i, u, e, ø, o}

Some vowel systems:

- (6) a. Latin: /a e i o u/
b. Japanese: /a e i o ʊ/
c. Malagasy: /i u e a/
d. Navajo: /i e o a/
- (7) a. Chamorro: /i e æ u o a/
b. Nepali: /i e ə u o a/
- (8) a. Italian: /a e i o u ε ɔ/
b. Occitan: /a e i o u ε y/
c. Catalan: /a e i o u ε ɔ ə/
- (9) a. Mandarin: /i y ɨ u e ɤ o a/
b. Finnish: /i y e ø æ u o a/
c. Breton: /i y e ø ε œ u o ɔ a/
- (10) a. Turkish: /i ε y œ ʊ u a ɔ/
b. Igbo: /i ɪ ε a u ʊ o ɔ/
- (11) a. Greenlandic: /i u a/ > [i e u a o]
b. Ubykh: /ə ʁ/ > [i e ə ʁ u o]
c. Swedish: /i y e ø ε œ æ a ʊ ʉ ɔ/
- (12) Manchu: /i ə a ɔ u/