Today's topics:

- **Restrictions on syllable structure: Diphthongs, clusters**
- **Sonority**

Background preparation:

- Handout: "…Describing syllabification options"

0. Today's objectives

After today's class, you should be able to:

- Apply phonological evidence from a data set to determine whether a language has diphthongs
- Identify phonological generalizations about allowable diphthongs and onset clusters in individual languages
- Describe the sonority scale, and apply it to restrictions on syllable structure

0. Course information

- Any questions about **skill-check HW #3**?

  Remember what we have learned about…

  - using **phonological evidence** to make arguments about where syllables are divided
  - starting our argumentation about a syllable-based phenomenon from the **straightforward cases** / **universal assumptions**

  Apply concepts from class! Think deeply!

- Any questions about drawing **syllable trees**?

1. Diphthongs

Diagnosing diphthongs

- Given a surface form that sounds like [bai], how do we determine whether this is [ba.i] or [bai] ([baj])?

1. Diphthongs

Diagnosing diphthongs

- Given a surface form that sounds like [bai], how do we determine whether this is [ba.i] or [bai] ([baj])?
  - Syllable structure is phonological
  - We need to decide based on **phonological evidence**

- Data set — Japanese vowel sequences

  - Which of these vowel sequences has the status of a diphthong?

1. Diphthongs

Restrictions on diphthongs

- One of the syllable-structure options on our checklist is **restrictions on legal diphthongs**

Discussion

- Data set — Japanese vowel sequences

  Data set — Finnish diphthongs
  - Can we state any (tentative) generalizations about allowable diphthongs in these languages?

2. Onset clusters

Restrictions on onset clusters

- Languages that allow onset clusters typically do not allow all combinations of consonants

- **Case study:** Legal English onset clusters
  - English has this difference (*a*.**[st]***ute* / *co***[n.t^{h}]***ain*)
  - Checking in: Are these legal onset clusters in English? (What is your evidence?)
    [ph] [ps] [cl] [ck] [kw]

2. Onset clusters

Discussion

- **Generate data** about legal English onset clusters
  1. Clusters that start with voiceless stops or fricatives other than [s]
  2. Clusters that start with voiced stops or fricatives
  3. Clusters that start with [s]
  4. Combinations of two consonants that are not legal onset clusters (at least 10; include different classes of consonants in your combinations)
- Can you state any **generalizations** about your data?

2. Onset clusters

Debriefing

- What questions or issues came up for your group in this activity?
- What patterns can we identify overall?
  - Can we make any relatively simple **generalizations** about any of the subcases of legal onset clusters?

2. Onset clusters

Debriefing

- Can we make any relatively simple **generalizations** about any of the subcases of legal onset clusters?
  - Some potential clusters are ruled out because:
    - Place of articulation too similar
    - Obstruents have to agree in voicing
- Pay special attention to lists 1 and 2 (clusters that begin with stops and fricatives other than [s])
  - Any insightful generalizations here?

3. The sonority scale

- Handout – Sonority
  - What is sonority / the sonority scale?
  - What kinds of phonological patterns can it help us explain?
- Does the sonority scale shed any light on…
  - Possible **diphthongs** in Japanese and Finnish?
  - Possible **onset clusters** in English?
- For more examples of sonority-based patterns: Data set – Deriving the sonority scale

4. For next time

- Be working on SC HW #3 (bring questions!)
  - Remember that you are encouraged to discuss assignments like these with your classmates, but write up your assignment on your own
  - This includes: no use of generative AI
- Prepare for scientific ethics discussion:
  - What is a “native speaker”?
  - Is there harm in using this term?
  - Is there a need to use this concept?
- Two short readings and quick prep questions