Today's objectives:

- **Diagnosing syllable structure**
- **Describing syllable "options"**
- **Rules to build syllables**

Background preparation:

- *PP: Tibetan*

0. Today's plan

- Where we are: Our phonological model and syllable-building rules

- Analysis of Tibetan

  - Morpheme URs (review!)
  - Non-syllable-based analysis (mostly review)
  - Syllable-based analysis / comparison

- Syllable structure in our phonological model

  - Describing syllable-structure options
  - Proposing syllable-building rules

1. Syllables and mental grammar, part 1

- Syllable structure is **phonological** (not phonetic); we have to discover its properties based on **evidence**

- Two **languages may differ** in how they assign segments to syllables

But phonologists have also found:

- The way a **particular language** assigns segments to syllables is fully **predictable** (consistent)

- Should syllable structure be **stored in URs**, or assigned by the **phonological grammar**? Why?

1. Syllables and mental grammar, part 1

- Our model of the phonological mental grammar currently includes…

  - A set of **features**

  - The concept of a **segment**, made up of features

  - Word boundary (#)

  - Phonological rules that manipulate features (called "**segmental rules**"): A → B / C __ D

  - **The concept of a syllable (σ), made up of segments**

  - We will also need to add:
    Rules for assigning segments to syllables

2. Morpheme alternations in Tibetan

- Data set: <u>Tibetan</u>

    - Prep question #1: *What is the UR for the Tibetan morpheme that means 'nine'?*

    - Reminder — What is the recommended approach to a prep question like this?

2. Morpheme alternations in Tibetan

Group discussion

- Data set: Tibetan

    - What is the best UR proposal for 'nine' (and the other morphemes in the data set)? Why?

2. Morpheme alternations in Tibetan

Group discussion

- Data set: Tibetan

    - What is the best UR proposal for 'nine' (and the other morphemes in the data set)? Why?

Debriefing

    - What complication do you find when you try to segment **all** the morphemes in this data set?
    - What are the logically possible approaches?
    - Which approach is best, and why?

Group discussion

- Data set: Tibetan

    - Prep question #2: *Write a rule for this alternation using our model before we introduced syllables*

2. Morpheme alternations in Tibetan

Group discussion

- Data set: [Tibetan](#)

    - Prep question #2: *Write a rule for this alternation using our model before we introduced syllables*

Debriefing

    - Try stating the rule in words before formalizing
    - Remember: Apply your rule to the data set to make sure its **predictions** match the data

Group discussion

- Data set: [Tibetan](#)

    - Prep question #3: *How could we approach this alternation using syllable structure? Which approach is preferable here?*

    - *Hint:* There are some similarities to the way we handled epenthesis in Cairene Arabic last class

2. Morpheme alternations in Tibetan

Group discussion

- Data set: [Tibetan](#)

  - Prep question #3: *How could we approach this alternation using syllable structure? Which approach is preferable here?*

Debriefing

  - What insight from Cairene epenthesis is useful?
  - How could we decide whether the segmental approach or the syllable approach is better?
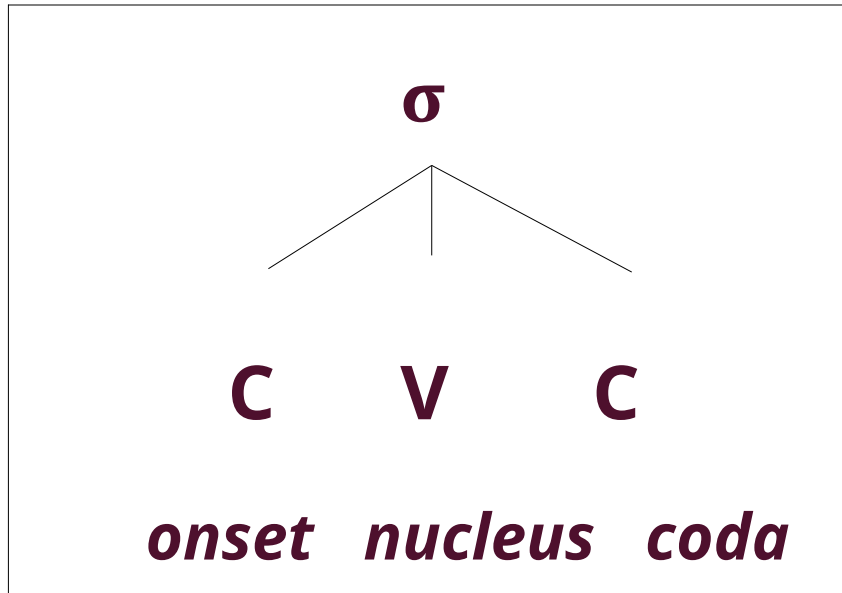
- The parts of the syllable, and some notation

σ

C   V   C

- The parts of the syllable, and some notation

σ

C   V   C

onset   nucleus   coda
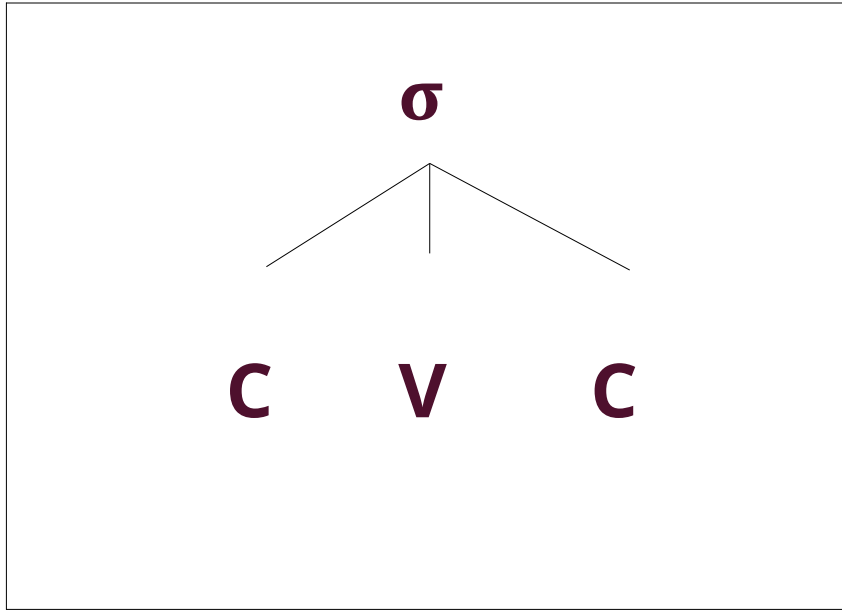
σ   syllable

V   abbreviates "[+syll]"

C   abbreviates "[–syll]"

- **Nucleus**: The core or main part of the σ; every syllable has a nucleus by definition; always [+syll]

- **Onset**: All segments in the σ that precede the nucleus

- **Coda**: All segments in the σ that follow the nucleus

- Onset and coda are always [–syll] (by definition)

4. Syllables and mental grammar, part 2

- How is a **…VCV…** sequence syllabified in…

  - English?

    [əpʰil]   'appeal'

  - Cairene Arabic?

    / Raːgil / → [**RAːgil**]   'man'

4. Syllables and mental grammar, part 2

- How is a **...VCCV...** sequence syllabified in...

    - English?
        | [ə**p̲ʰ**lɔd] | 'applaud' |
        | [kʰəm**p̲ʰ**ɛɹ] | 'compare' |
        | [əs**p̲**ajɹ] | 'aspire' |

    - Cairene Arabic?
        | / faʕlu / →[**FAʕ**lu] | 'his term' |

    - Tibetan?
        | / rgu+bd͡ʒu / → [gu**b̲**d͡ʒu] | 'ninety' |

- Phonologists have compared syllable structures in languages from across the world, and found both consistent **similarities** and **specific points of difference**

  Examples of this that we have just seen:

  - **All languages:** A consonant right before a nucleus is syllabified as an *onset*
  - **Some languages:** *Onset clusters* are allowed (but not in all languages)

4. Syllables and mental grammar, part 2

- Our first step:

  Observe and **describe** what syllable-structure patterns are possible out there in the world

  - Handout - "[Syllable structure: Overview / Describing syllabification options](#)"

4. Syllables and mental grammar, part 2

- Our first step:

    Observe and **describe** what syllable-structure patterns are possible out there in the world

- Our next step:

    What kind of **syllable-building rules** can we **add to our model** to account for (a) universal patterns and (b) options for individual languages?
    - Handout - "<u>Syllable-building rules</u>"

- Try it for Cairene Arabic, Tibetan, or English!