Today's objectives:

- **Review assumptions, predictions of a traditional feature model**

Background preparation:

- Data set - Turkish

- Hall (2007) + reading guide

0. Today's key points

- Goals of a feature model

- Discussion and application of the traditional feature model reviewed and summarized in Hall (2007)

1. Model-building in linguistics

- Reminders about **models**

  - A model is an abstract explanatory device that captures structure in the data

  - In building a model, key goals are to
    - **describe**   • **predict**   • **explain**

    the phenomena of interest

    (=facts about the world)

2. A traditional feature model — Hall (2007)

- What facts about the world is this model intended to describe, predict, and explain?
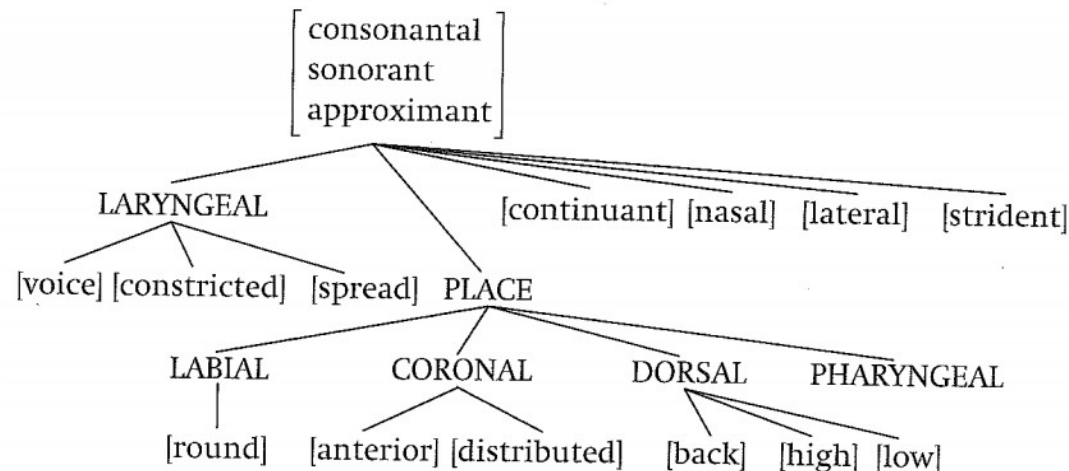
2. A traditional feature model — Hall (2007)

- What facts about the world is this model intended to describe, predict, and explain?

  - Native-speaker behavior concerning
    - natural-class behavior
    - segmental contrasts

- Note: We will use the feature model that Hall (2007) presents as a **reference point** for feature analysis

  - Be aware of points of controversy

2. A traditional feature model — Hall (2007)

- Overview of the model that Hall (2007) presents

  Note that (most of) this model is not *original* with Hall!

  - Why are **features** and **nodes** distinguished?

  - How do **binary** vs. **privative** features differ?

(2) *A feature tree*

$$\begin{bmatrix} \text{consonantal} \\ \text{sonorant} \\ \text{approximant} \end{bmatrix}$$

LARYNGEAL   [continuant] [nasal] [lateral] [strident]

[voice] [constricted] [spread] PLACE

LABIAL   CORONAL   DORSAL   PHARYNGEAL

[round]   [anterior] [distributed]   [back] [high] [low]

2. A traditional feature model — Hall (2007)

- We will use Hall's feature model as our course reference model, in general

    - We can ignore feature geometry unless it is relevant (i.e., we can just specify lists of feature values when that is sufficient)

- But: We should be prepared to **override** the default feature specifications for a class of sounds when the **data** requires this

2. A traditional feature model — Hall (2007)

- RG question (1)

  Hall asserts (p 312), "Features are psychological entities defined in terms of acoustic and/or articulatory realization which provide the link between cognitive representation of speech and its physical manifestation."

  He presents "two arguments for features".

  - What are these two arguments?

  - If these arguments are taken to the extreme, do they pose any difficulties for Hall's initial definition of features?

2. A traditional feature model — Hall (2007)

- RG question (2)

  p 313: "It is usually assumed that if a feature is distinctive in a language then only the sounds for which it is distinctive are marked underlyingly for that feature."

  - I would dispute that this is "usually assumed"; more like "sometimes assumed"

  - To consider: What are some **implications** of such an assumption?

3. Working with this feature model

Major class features

- RG question (3)

  Here are some traditional descriptive terms for the natural classes that are defined by various combinations of the major class features: **consonant**, **obstruent**, **sonorant**, **liquid**, **nasal**. (Another useful term is **vocoid**, which means any [–cons] segment, i.e., vowel or glide.)

  - See if you can use the major class features to designate each class.

3. Working with this feature model

Major class features

- RG question (4)

  How is the **contrast** between glides and high vowels represented in Hall's model?

Laryngeal features

- RG question (9)

  What is the motivation for grouping [±voi], [(±)spread], and [(±)constr] under LARYNGEAL?

    - Reminder: What is the role of the **nodes** in a feature-geometry model?

3. Working with this feature model

Manner features

- RG question (10)

  What questions or problems concerning **liquids** (laterals and rhotics) are raised in note 4?

- RG question (11)

  What value of [±cont] do **nasals** like [n m] have, according to Hall (2007)?

3. Working with this feature model

Place features

- What are the **place features**? How are they organized under **nodes**?

- Do vowels have place features? Do consonants have height, backness, or rounding features?
  - What predictions does this make?

3. Working with this feature model

Place features

- RG question (13)

  What are some options for representing **palatal**

  place of articulation?

4. Applying this feature model

- Back to the alternating morphemes in <u>Turkish</u>

    - For each UR choice, what are we required to say the grammar is doing?

    - How do we decide which approach is more appealing?

    - How does using the vowel features from Hall's model influence this discussion?