

## **Today's objectives:**

- **Model the relationship between morphology and phonology**
- **Analyze alternating morphemes**

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*Background preparation:*

- Data set: Lamba

# 0. Today's plan

- Checking in with features
- Segmenting words into morphemes in a data set
- Morphology and phonology in the mental grammar
- A phonological approach to alternating morphemes

# 1. Checking in — Our feature model

Data set: [Arabic consonants](#) (prep questions)

- How can we **apply our model** (features) to **describe** each consonant group?
- Other questions about using features to **identify** (describe) and **distinguish** sound classes?
  - For more practice: try filling in the [feature chart handout](#)

## 2. Morphology and phonology

Data set: [Lamba](#) (PP)

### Group discussion

- Break the words in this data set into **morphemes**
  - How many distinct morphemes are there?
  - What meaning can we determine for each morpheme?

## 2. Morphology and phonology

Data set: [Lamba](#) (PP)

### Debriefing

- Some key points to understand about working with **morphologically complex words**

Handout - "[Morphology and phonology](#)" (101 review)

- What is a **morpheme**?
- How do we **identify** morphemes in a data set?
- What part of the grammar **adds** a morpheme to a base to create a new word?
  - See this useful [graphic](#) from Henry S. Thompson

## 2. Morphology and phonology

Data set: [Lamba](#) (PP)

### Group discussion

- Which suffixes have multiple surface forms?
  - A morpheme with multiple surface forms (determined by environment) is said to **alternate**
- What **determines** which form appears?

## 2. Morphology and phonology

Data set: [Lamba](#) (PP)

### Debriefing

- Which suffixes **alternate**?
- What **determines** which form appears?

## 2. Morphology and phonology

Data set: [Lamba](#) (PP)

- How do we **model** the grammar of a language with an alternating morpheme?
  - We discussed two broad ways of approaching this question last time — what were they?



## 2. Morphology and phonology

Data set: [Lamba](#) (PP)

- How do we **model** the grammar of a language with an alternating morpheme?
  - *Allomorphy*: The lexical entry for the morpheme contains **all of the surface forms**, and the grammar has to **choose** the right one
  - *Phonological process*: There is a **single underlying representation (UR)** for the morpheme, and the grammar **changes its features** in some context

How can we decide between these hypotheses?

## 2. Morphology and phonology

Data set: Lamba (PP)

- Since two different suffixes show the same pattern of alternation, this is a good case for proposing a **phonological process** that affects both suffixes
- What **determines** which form appears?
  - *Hypothesis 1*: Lexicon contains /-e.../, and then...
  - *Hypothesis 2*: Lexicon contains /-i.../, and then...

How can we decide between these hypotheses?

## 2. Morphology and phonology

Data set: [Lamba](#) (PP)

- What **determines** which form appears?
  - *Hypothesis 1*: Lexicon contains /-e.../, and then...
  - *Hypothesis 2*: Lexicon contains /-i.../, and then...
- How can we decide between these hypotheses?
  - Take each hypothesis in turn and consider what phonological process(es) would be needed **under that hypothesis**
  - Compare: Is one of the options for the phonological process(es) **preferable**?

## 2. Morphology and phonology

Data set: Lamba (PP)

- Which hypothesis is preferable?
  - *Hypothesis 1*: Lexicon contains /-e.../, and then...
    - What would the phonological process be?
  - *Hypothesis 2*: Lexicon contains /-i.../, and then...
    - What would the phonological process be?
- Things to consider when comparing two hypotheses
  - *[A very important criterion — next class]*
  - Can the environment needed for a process be stated **insightfully** in our model?

### 3. Modeling a morpheme alternation

- In a case of morpheme alternation, we propose that the grammar goes through the following steps:
  - *Morphology*: Select the **UR** of each morpheme in the word and **assemble** them
  - *Phonology*: Any **phonological process** whose conditions are met will apply
- Next time: We will look some more at how to **represent** a phonological process in our model of the grammar