Today's objectives:

- **Analyzing alternating morphemes**
- **Proposing URs and rules**

Background preparation:

- PP: Dutch
- Handouts – Morphology and phonology; Morpheme alternations

0. Course information

Today's plan

- Check-in: Morphology and phonology
- Alternating morphemes in Dutch
- How to decide between hypotheses about alternating morphemes
- A procedure for analyzing alternating morphemes

1. Check-in: Morphology and phonology

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

  Review the handout - "Morphology and phonology"

  - What is a **morpheme**?
  - How do we **identify** morphemes in a data set?
  - What part of the grammar **adds** morphemes to form complex words? [graphic, HS Thompson]

1. Check-in: Morphology and phonology

- A morpheme with **multiple surface forms** (determined by their environment) is known as a morpheme that _____

  Review the handout - "Morpheme alternations"

  - What are some examples that we have seen?

1. Check-in: Morphology and phonology

- A morpheme with **multiple surface forms** (determined by their environment) is known as a morpheme that **alternates**

  Review the handout - "Morpheme alternations"

  - Examples:
    - Turkish
    - Lamba
    - Dutch

2. Alternating morphemes in Dutch

Group discussion

Data set - Dutch

- Which morphemes in Dutch **alternate**?
- What **hypotheses** can we formulate about the phonological **grammar** of Dutch in order to account for these alternation patterns?

2. Alternating morphemes in Dutch

Debriefing

- Which morphemes in Dutch **alternate**?
- What **hypotheses** can we formulate about the phonological **grammar** of Dutch in order to account for these alternation patterns?

  Review from last time (Lamba)

  - *Hypothesis 1:* Lexicon contains /-e…/, and then…
  - *Hypothesis 2:* Lexicon contains /-i…/, and then…

  How did we decide between these hypotheses?

2. Alternating morphemes in Dutch

Debriefing

- What **hypotheses** can we formulate about the phonological **grammar** of Dutch in order to account for these alternation patterns?
  - *Hypothesis 1:* Lexicon contains /…/, and then…
  - *Hypothesis 2:* Lexicon contains /…/, and then…
- For each hypothesis, consider what phonological process(es) we would need **under that hypothesis**
  - Compare: Is one of the options for the phonological process(es) **preferable**?

2. Alternating morphemes in Dutch

- Example: [rɑnt] ~ [rɑndən] ‘edge -SG, -PL’
  - Hypothesis 1: UR is / rɑnt /
  - Hypothesis 2: UR is / rɑnd /
- What are the **pros and cons** of each hypothesis?
  - Isolation form is not same as UR (which hyp.?)
  - Phonological process is restricted to only certain morphemes (which hyp.?)
- What are some **predictions** of each hypothesis?

2. Alternating morphemes in Dutch

- Hypothesis 2
  (UR is / rɑnd /; rule *devoices* word-final obstruents)
  - What does this hypothesis predict should happen when a Dutch speaker starts to learn a language that has final voiced obstruents?
  - Listen to this Dutch speaker
    (from Speech Accent Archive (GMU), speaker *dutch8*)

- **productivity**: when a process in the grammar is extended to novel words or contexts
  - Evidence that there *is* a process in the grammar!

3. Analyzing morpheme alternations

- **How many URs**
  does an alternating morpheme have,
  if the alternation is **phonologically productive**?

3. Analyzing morpheme alternations

- **How many URs**
  does an alternating morpheme have,
  if the alternation is **phonologically productive**?
  - Example: Turkish plural has surface forms [-ler] and [-lar] — how many URs does this morpheme have? | **One UR**
    - If the surface form is predictable and the process is productive, the pattern is produced by the grammar (not memorized)
    - Start with the (single) UR and apply phonological rules

3. Analyzing morpheme alternations

1 Isolate the **morphemes** in the data set

2 Identify which morphemes are **alternating**

3 Determine the **phonological context** in which each surface form appears

4 Determine the best **analysis** (UR + rule(s) combination)

5 Make sure your analysis is **formalized** using the tools of our phonological model

3. Analyzing morpheme alternations

Data set - Dutch

4 Determine the best **analysis** (UR + rule(s) combination)

- What did we decide, and why?

3. Analyzing morpheme alternations

Data set - Dutch

4 Determine the best **analysis** (UR + rule(s) combination)

- What did we decide, and why?

- *From last time, now updated:*
  Things to consider when comparing two hypotheses
  - MOST IMPORTANT: Can a consistent generalization be stated across the data set (no "exceptions")?
  - ALSO CONSIDER: Can the environment needed for a process be stated **insightfully** in our model?

3. Analyzing morpheme alternations

Data set - Dutch

5 Make sure your analysis is **formalized** using the tools of our phonological model

- What does this mean?
  What "tools" should we use?

→ We will follow this up next class (and in the preparation questions)