

Today's topics:

- **Descriptive generalizations**
- **Valid ranking arguments**
- **Informative losers**

Background preparation:

- McCarthy (2008), sec 2.1–2.2
- Data set - Māori loanwords

0. Today's key points

- Formalizing constraint-based phonology
 - Some issues / (future) questions
 - Markedness and faithfulness constraints
 - Questions so far?
- Descriptive generalizations
- Ranking arguments and informative losers
- Hands-on practice

1. Formalizing constraint-based phonology

- Some questions to address for an OT model (Which of these have we started to answer?)
 - How do constraints **interact**?
 - What is a possible **output candidate**?
 - What are **inputs** like?
 - What is a possible **constraint**?

1. Formalizing constraint-based phonology

- Constraints fall into two classes
 - ***markedness*** constraints
 - ***faithfulness*** constraints

1. Formalizing constraint-based phonology

- **markedness constraints**
 - impose *requirements on surface forms*
 - conceptually, they correspond to...
 - phonotactic generalizations
 - cross-linguistic implicational universals
 - the “driving forces” behind phonological phenomena (phonetic, etc.)
 - Formally, any constraint that *looks only at output forms in assigning violations* is a markedness constraint

1. Formalizing constraint-based phonology

- **faithfulness constraints**

- penalize differences between two corresponding forms (such as an input and an output) along a specified dimension
 - MAX penalizes deletion from input to output
 - DEP penalizes epenthesis from input to output
 - IDENT[F] penalizes a discrepancy in the feature [F] between input and output
- Formally, any constraint that *compares two forms and assigns violations on the basis of differences* is a faithfulness constraint

2. Descriptive generalizations

- McCarthy (2008) emphasizes the usefulness of making a good **descriptive generalization**
 - How does a **descriptive generalization** relate to a **data set**?
 - How does a **descriptive generalization** relate to a **formal phonological analysis**?
 - What are some good **reasons** for including a clear, well-structured descriptive generalization in a phonology paper?
(or other kinds of linguistics papers!)

2. Descriptive generalizations

- DE: Māori loanwords
 - What are some descriptive generalizations we can make about **syllable structure** in Māori?

3. Ranking arguments and informative losers

- One of the most important OT analysis skills is the ability to make a **valid ranking argument**
 - This in turn depends on the ability to come up with **informative losing candidates**
- What kind of **evidence** do we need in order to determine which constraints outrank which?

4. The logic behind constraint rankings

A non-phonology example

- You want to find out whether your friend thinks *money* or *happiness* is more important
- So, you create imaginary job offers and ask which one they would choose

4. The logic behind constraint rankings

- Is this an **effective** test of whether your friend gives a higher priority to money or happiness? Why?

<i>Job #1</i>	<i>or</i>	<i>Job #2</i>
<ul style="list-style-type: none">• Pays a good salary• Work is unpleasant		<ul style="list-style-type: none">• Pays a terrible salary• Work is fun

4. The logic behind constraint rankings

- Is this an **effective** test of whether your friend gives a higher priority to money or happiness? Why?

<i>Job #3</i>	<i>or</i>	<i>Job #4</i>
<ul style="list-style-type: none">• Pays a good salary• Work is fun		<ul style="list-style-type: none">• Pays a terrible salary• Work is unpleasant

4. The logic behind constraint rankings

- Is this an **effective** test of whether your friend gives a higher priority to money or happiness? Why?

<i>Job #5</i>	<i>or</i>	<i>Job #6</i>
<ul style="list-style-type: none">• Pays a good salary• Work is unpleasant• Makes you famous		<ul style="list-style-type: none">• Pays a terrible salary• Work is fun• No fame here

4. The logic behind constraint rankings

Some points to conclude from these examples

- If we are trying to figure out which of two priorities (constraints!) is ranked higher:
 - (a) We need to find a case of **constraint conflict**
 - One constraint prefers one candidate, and the other prefers the other one
 - (b) We need to be sure there is not some third constraint (“fame”?) that could actually be deciding between the two candidates

4. The logic behind constraint rankings

Where OT is *not* like people making decisions

- Which job do you think your friend would pick if money was the top priority?

<i>Job #7</i>	<i>Job #8</i>
<ul style="list-style-type: none">• Pays a medium salary• Work is fun	<ul style="list-style-type: none">• \$5.00 more / month• Work is unpleasant

- In classic OT, if MONEY » HAPPINESS, the grammar would pick Job #8!

5. Informative losers

- If we are trying to propose an analysis (find a constraint ranking) for one particular language...
 - What information do we start with?
 - What else do we need to find?

5. Informative losers

- What we know
 - The **output**—this is the surface form observed in the language
 - After doing phonological analysis as usual, we have a proposal for the **input** (UR)
- What we need to know
 - The constraint ranking
- What kind of tableau is good for this?

5. Informative losers

- We need to add **losing candidates** to our tableau
 - We need W/L marks showing constraint conflict
- Remember what we saw in the “money vs. happiness” example...
 - We have to choose **informative losers**, which set up situations of **constraint conflict**, in order to argue for valid constraint rankings

6. Developing ranking arguments

- DE: [Māori loanwords](#)
 - Practice with **informative losers** and **ranking arguments**