

Today's topics:

- **Phonological rules**
- **Modeling *systematic* exceptions**

Background:

- *Data sets: Fricatives, alveolar obstruents*

0. Today's objectives

After today's class, you should be able to:

- Determine, from a data set, whether two sounds should be analyzed as **distinct phonemes** or **allophones** of the same phoneme
- State **phonological rules**, using **sound properties**, to account for phonemes with multiple allophones
- Identify when phonemes or phonological rules are specific to a particular **lexical stratum**

0. Course information / strategies

- One of the goals of this course is to show how linguistics concepts can be applied to Japanese
- This may mean looking at data (sounds, words, sentences) of Japanese from a somewhat **unfamiliar perspective**
- One of your **key responsibilities** is to be **reading assigned handouts** and **reviewing outlines**
 - Doing this will help you master the material!
- **Prep questions** are usually asking you to **apply** knowledge, skills, and concepts from the course!

1. Warm-up/check-in

- Key concepts
 - One **phoneme** may have multiple **allophones**
 - We diagnose this when ...
 - We model this by proposing ...

1. Warm-up/check-in

- Key concepts
 - One **phoneme** may have multiple **allophones**
 - We diagnose this when the **choice** between two (phonetically similar) sounds is **predictable** based on the **environment**
 - We model this by proposing that there is **one mental category**, and **rule(s)** for creating the other allophone(s) in the relevant context(s)
- Questions/discussion?

1. Warm-up/check-in

- Carrying out a phonological analysis:
 - Examine the **environments** for patterns
 - Determine whether it is **predictable** which sounds occur, given the environment
 - **Predictable** → Allophones of *same phoneme*
 - **Unpredictable** → *Distinct phonemes*
 - Write a **phonological rule** to account for the allophones of a phoneme
- Questions/discussion?

2. Analyzing phonemes/allophones

Data set -

“Alveolar/alveopalatal obstruents, part (I)”, set (1)

- What do we conclude for [s] vs. [ʃ]?
 - Is it predictable from the **environment** which sound will occur?
 - Should we analyze these as separate **phonemes**, or as **allophones** of the same phoneme?

2. Analyzing phonemes/allophones

Data set -

“Alveolar/alveopalatal obstruents, part (I)”, set (1)

- What do we conclude for [s] vs. [ʃ]?
 - What phonological rule do we need?
 - How does this rule relate to / t / in set (2)?
- Rule = ***target*** → ***change / environment***
- Express rules using sound properties

2. Analyzing phonemes/allophones

For discussion

- How does our analysis relate to the kunrei romanization system?
- Should we argue that two sounds are allophones of the same phoneme because they are spelled with the same letters?

2. Analyzing phonemes/allophones

For discussion

- How does our analysis relate to the kunrei romanization system?
- Should we argue that two sounds are allophones of the same phoneme **because** they are *spelled* with the same *letters*?
 - What is cause, and what is effect?
 - Does spelling always provide a good guide to phonemes?

3. A fuller picture of J. segmental phonology

Data set -

“Bilabial, palatal, and glottal fricatives”, part 2

- Questions to discuss:
 - Are we seeing evidence for separate **phonemes**, or multiple **allophones** of the same phoneme?
 - How would we analyze this in terms of mental **representations** and phonological **rules**?
 - Can we reconcile the analysis of part 2 with the analysis of part 1?

3. A fuller picture of J. segmental phonology

Data set -

“Bilabial, palatal, and glottal fricatives”, part 2

- What analysis would we propose for part 2?
 - Is this inconsistent with part 1, or can the two analyses coexist?
 - What is different about the origin of the words in part 1 and part 2 of this data set?

3. A fuller picture of J. segmental phonology

Data set -

“Alveolar/alveopalatal obstruents, part (II)”,
sets (5b) and (5c)

- Questions to discuss:
 - Are we seeing evidence for separate **phonemes**, or multiple **allophones** of the same phoneme?
 - How would we analyze this in terms of mental **representations** and phonological **rules**?

3. A fuller picture of J. segmental phonology

Data set -

“Alveolar/alveopalatal obstruents, part (II)”,
sets (5) and (6)

- What do we have to conclude here?
 - Are there **phonological rules** relating these three consonants?
 - Are any of the consonants separate **phonemes**?
 - Do the answers to these questions depend on what **word class** we are considering?

4. Implications for linguistic theory

- Some of the differences between “native” and “loanword” items in Japanese
 - “Loanword” items have a **larger inventory of phonemes**
 - Some phonological **rules are actually suspended** in “loanword” items
- Our model of human language must be able to handle these facts! Some proposals:
 - Mental lexicon distinguishes lexical strata
 - Mental grammar can refer to these strata

5. For next time

- Review our approach to the segmental phonology of Japanese
 - See summary handout
- Bring questions, comments, observations!