

- **(Un)predictable information in a grammar model**
- **Pitch accent phonetics**
- **Pitch accent phonology**
- **Working with OJAD**

Background:

- *Kawahara (2015), sec 1*

0. Today's objectives

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

- Identify pitch accents by listening
- Describe the phonetic characteristics of accented and unaccented words
- Relate the concepts of predictable / unpredictable information to the linguistic analysis of pitch accent
- Use OJAD to retrieve pitch-accent information for Tokyo Japanese

1. Warm-up and review

- Is it **necessary** for a child acquiring Japanese to **memorize**...?

- Which words have short [o] vs. long [o:]
- Which words have voiceless high vowels

Why?

1. Warm-up and review

- Is it **necessary** for a child learning Japanese to **memorize**...?
 - Which words have short [o] vs. long [o:]
 - Which words have voiceless high vowels
- A fundamental distinction in linguistic theory:
 - **Unpredictable** information *must* be **memorized**
 - By definition!
 - **Predictable** information *can* be enforced by the mental grammar
 - So, is it? → Look for further supporting evidence

1. Warm-up and review

- Example: Our approach to phonemes/allophones

- Distribution of two sounds is _____
 - *must* be **memorized**/stored case by case
 - **contrastive** / separate **phonemes**

- Distribution of two sounds is _____
 - *proposal*: the **grammar** takes care of it
 - **allophones** of same phoneme

1. Warm-up and review

- Example: Our approach to phonemes/allophones
 - Distribution of two sounds is **unpredictable**
 - *must* be **memorized**/stored case by case
 - **contrastive** / separate **phonemes**
 - Distribution of two sounds is **predictable**
 - *proposal*: the **grammar** takes care of it
 - **allophones** of same phoneme

1. Warm-up and review

- Next, we will take a similar approach to aspects of **prosodic phonology**
 - Segmental phonology: Phenomena involving **segments** (consonants and vowels) and their properties
 - Prosodic phonology: Phenomena involving **domains larger than single segments**, such as
 - Pitch/tone
 - (Stress — not found in Japanese)
 - Syllable/word structure

What aspects are **predictable** / **unpredictable**?

2. Pitch accent: Overview

Work groups

- Based on the Kawahara (2015), sec 1 reading, what is **pitch accent** in Japanese (in the first sense)?
- Japanese language students: In your experience, how is pitch accent in Japanese **different** from **(word) stress** in English?

2. Pitch accent: Overview

- Kawahara (2015: sec 1.2) on **pitch accent** (emphasis added)
 - an **abrupt fall in** fundamental frequency (i.e., F_0 or **pitch**) that is found in many words in Tokyo Japanese
 - for example, [...] “the word /kokoro/ ‘heart’ has [a] pitch accent on the second syllable”
 - When the term is used in this sense, it refers to a **physical, acoustic event**, that is, a tonal fall
 - or it can refer to **phonological prominence** associated with that tonal fall

2. Pitch accent: Overview

- Japanese **pitch accent** vs. English **(word) stress**
 - English word stress is indicated mainly by **duration** and **vowel quality** (full vs. reduced)
 - These attributes are *not* part of the Japanese pitch-accent system
 - Vowel length is independent of pitch accent
 - Japanese vowels are never reduced to schwa the way unstressed English vowels are

2. Pitch accent: Overview

- Genki I textbook (1 ed.), p 22:

Japanese has a pitch accent: all syllables are pronounced basically either in high or low pitch. Unlike the English stress accent in which stressed syllables tend to be pronounced longer and louder, in Japanese each syllable* is pronounced approximately in equal length and stress. The pitch patterns in Japanese vary greatly, depending on the region of the country.

āsa ‘morning’ nāmae ‘name’ tākai ‘high’

THAT IS ALL THEY SAY IN THE WHOLE BOOK.

*Really ‘syllable’? We’ll discuss this next time.

3. Pitch accent: Phonetics

Work groups

- Which of the following words have an audible pitch accent? Where is it?

1	白	<i>siro</i>	'white'
2	黄色	<i>kiiro</i>	'yellow'
3	色	<i>iro</i>	'color'
4	桃色	<i>momoiro</i>	'peach (color)'
5	紫	<i>murasaki</i>	'purple'

- See [pitch-accent examples](#) in Canvas “Pages”, especially section (A)

3. Pitch accent: Phonetics

Debriefing

- Which of the following words have an audible pitch accent? Where is it?
 - 1 白 *siro* 'white'
 - 2 黄色 *kiro* 'yellow'
 - 3 色 *iro* 'color'
 - 4 桃色 *momoiro* 'peach (color)'
 - 5 紫 *murasaki* 'purple'
- What do we find when we look these words up in OJAD (*Online Japanese Accent Dictionary*)?

3. Pitch accent: Phonetics

- Accent notation for these words in OJAD

1	白	<i><u>si</u>ro</i>	'white'
2	黄色	<i>kiiro</i>	'yellow'
3	色	<i><u>iro</u></i>	'color'
4	桃色	<i>momoiro</i>	'peach (color)'
5	紫	<i>mu<u>ra</u>saki</i>	'purple'

- Why didn't we hear the pitch accent in *iro* 'color'?
 - See [pitch-accent examples](#) in Canvas "Pages", especially section (B)

4. Pitch accent: Phonology

Prep questions

- Which of these could potentially be handled by **rules** in the mental grammar?
 - **Whether or not** a given word **has** a pitch accent
 - *Given information about whether a noun has a pitch accent: **which syllable** bears the **accent***
 - *Given information about where in a word the pitch accent is located: **which syllables** in the word will have **H(igh) or L(ow) tone***

4. Pitch accent: Phonology

- According to Kawahara (2015), sec 1.3–1.4, which of the above are **predictable**? (emphasis added)

[sec 1.3] ...Japanese makes **lexical contrasts** in terms of pitch accent in two ways: (i) **presence** vs. absence, and (ii) if present, **location**

- See [pitch-accent examples](#) in Canvas “Pages”, especially sections (C), (D)

[sec 1.4] ...the **tonal shape** of a particular word can be **completely determined** by the presence/absence of a pitch accent and its location

4. Pitch accent: Phonology

Other **predictable** aspects of Tokyo pitch accent:

- There is **at most one** pitch accent in a word
- Other characteristics described by Kawahara (2015)
 - with additional comments by me
- Only **two levels** of pitch, H(igh) and L(ow)
 - Plus additional sentence-final intonational contours
- The **first two syllables**[?] of a word show “initial lowering” (LH) unless the first syllable is accented
 - This is actually true not of words, but of **phrases**
 - Less likely when a long vowel or [ɳ] is involved

4. Pitch accent: Phonology

- What **rules** would let our model of the phonological grammar **assign H and L tones** to surface forms?
For discussion and examples, see:
 - Kawahara's worked-out examples in sec 1.4
 - Handout - "[Pitch accent](#)"
- **Prep questions** for next time will give you a chance to practice with Kawahara's tone-assignment procedure!
 - Be prepared to **scan/upload some diagrams**, or turn them in on paper at the start of class

5. Online tools: Using OJAD

- **OJAD = Online Japanese Accent Dictionary**
 - Found at: <http://www.gavo.t.u-tokyo.ac.jp/ojad/>
- Note that input must be in **Japanese orthography**
 - Hiragana works — you can use the class [kana charts](#) for most types of hiragana input
 - You can also use the [JDIC dictionary](#) to find a Japanese word from its English translation and then copy/paste it into OJAD

5. Online tools: Using OJAD

- Some things to try using “Word Search”
 - Input *hasi* はし in Word Search box
 - Can you interpret the output? If not, what can help?
 - Input *taberu* ‘to eat’ たべる in Word Search box
 - Can you interpret the output?
 - We’ll be talking more about verb forms later
 - Specify the textbook *Genki* (and clear the Word Search box) — what happens?

5. Online tools: Using OJAD

- Some things to try using “Prosody Tutor Suzuki-kun”
 - Paste in this sentence (Japanese orthography only)
好きな色は、何ですか？
suki-na iro-wa, nan desu ka?
like-MODIFIER color-TOPIC, what COPULA.NONPAST.POLITE QUESTION
‘What is [your] favorite color?’
 - What output do we get? How can we interpret this output?
 - Compare the computer-generated output to the recording of a human (sound file on [Canvas](#))