

W3-2: Japanese vowels

JAPN398D: The Sounds and Dialects of Japanese

9/13/2023

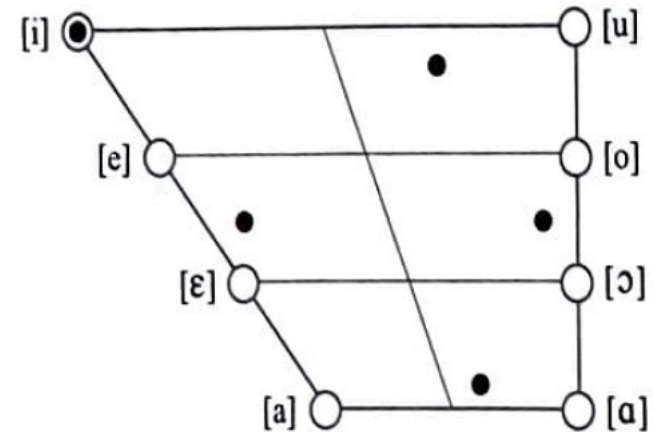
Today's class

- 5 vowels in Tokyo Japanese
 - Other topics
- Long vowels
- Vowel sequences
- えい and おう
- Vocalic vs. Consonantal
- Vowel coalescence

5 vowels in Tokyo Japanese

- Tokyo Japanese has **5 short vowels**.

- かま (鎌) 'sickle'
- かみ (神) 'deity'
- かむ (噛む) 'bite'
- かめ (亀) 'turtle'
- かも (鴨) 'duck'

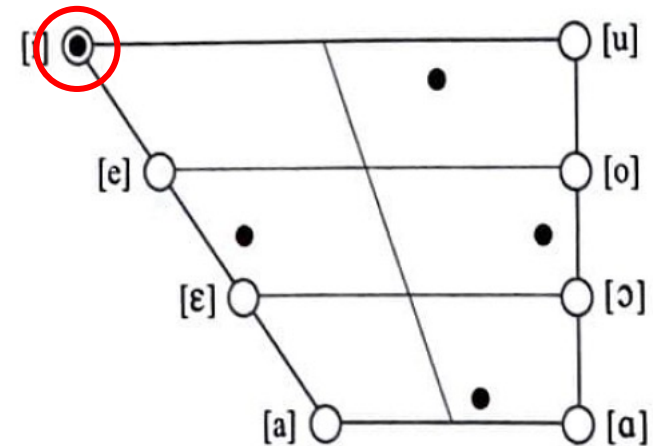


Vance (2008): Figure 3-1

- Initial-accented → HL

5 vowels in Tokyo Japanese

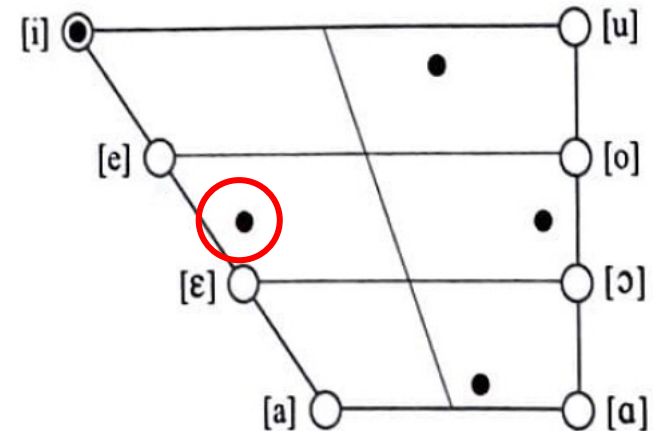
- High front unrounded い
 - Phonemic (= underlying) transcription: /i/
 - Phonetic (= surface) transcription: [i]
- Japanese い is essentially the same as English /i/ (e.g. *me*).



Vance (2008): Figure 3-1

5 vowels in Tokyo Japanese

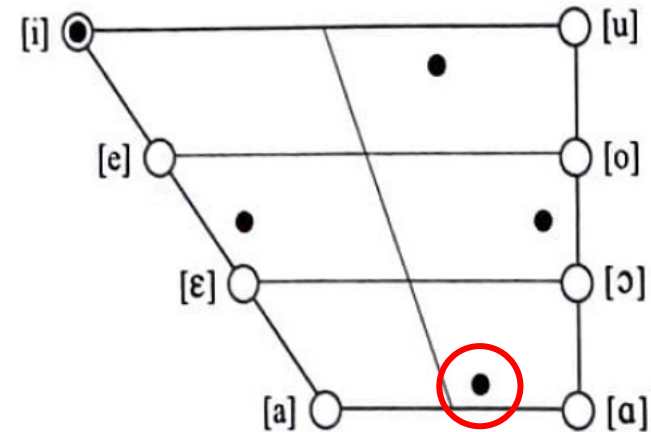
- Mid front unrounded $\bar{\epsilon}$
 - Phonemic transcription: /e/
 - Phonetic transcription: [e̞] ([e])
- The tongue position is between /e/ and /ε/.
 - /e/ in /eɪ/ (e.g. *say*)
 - /ε/ (e.g. *bet*)



Vance (2008): Figure 3-1

5 vowels in Tokyo Japanese

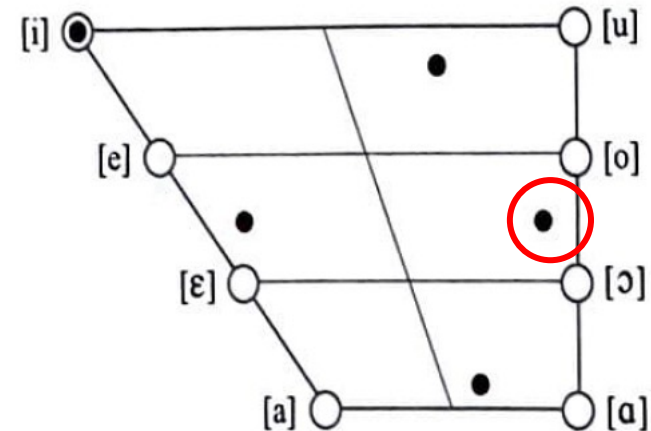
- Low back unrounded あ
 - Phonemic transcription: /a/
 - Phonetic transcription: [ɑ̟] ([ɑ])
- The tongue position is between /ɑ/ (low back) and /a/ (low front).
 - /ɑ/ (e.g. *box*)
 - American English does not have /ɑ̟/.



Vance (2008): Figure 3-1

5 vowels in Tokyo Japanese

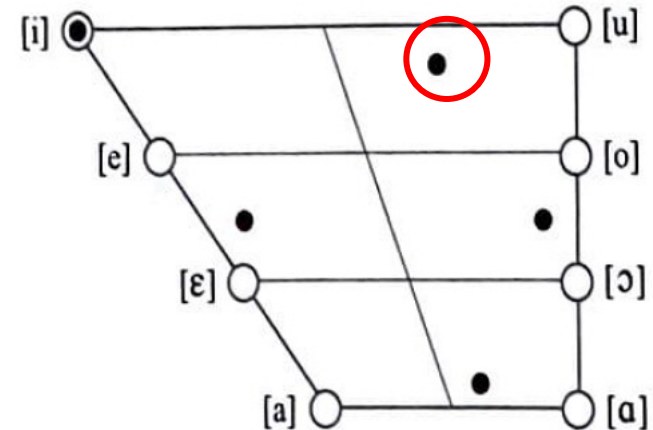
- Mid back rounded お
 - Phonemic transcription: /o/
 - Phonetic transcription: [ɔ̞] ([o])
- お is slightly rounded.
- The tongue position is between /o/ and [ɔ̞].
 - /o/ in /oɪ/ (e.g. *soy*)
 - [ɔ̞] (e.g. *boss*)



Vance (2008): Figure 3-1

5 vowels in Tokyo Japanese

- High back **unrounded** う
 - Phonemic transcription: /u/
 - Phonetic transcription: [ɯ̟], ([ɯ])
- The tongue position is a bit farther forward than /u/.
 - /u/ (e.g. *boot*)



Vance (2008): Figure 3-1

5 vowels in Tokyo Japanese

- How to pronounce [ɯ]:
 - Pronounce ㄨ with the mouth shape of ㄨ (= lip compression).



<https://en.wikipedia.org/wiki/File:Ja-U.oga>

5 vowels in Tokyo Japanese

- Non-low back vowels are rounded by default.
 - Tokyo Japanese is unusual because it has [ɯ], but it does not have [u].

	Low back unrounded /ɯ/	Low back rounded /u/
English		✓
Korean, Turkish	✓	✓
Tokyo Japanese	✓	

- Tokyo [ɯ] is more rounded than Korean /ɯ/ (my observation).

う̄ in Osaka Japanese

- Osaka う̄ is more rounded than Tokyo う̄ (Shibatani 1990).
 - Korean < Tokyo < Osaka < English (my observation)

- Tokyo



<https://en.wikipedia.org/wiki/File:Ja-U.oga>

- Osaka (my mother)



Nagoya Japanese vowels

Kawamura Takashi; Mayor of Nagoya



<https://www.youtube.com/watch?v=QDIN1cUyBeg>

- Nagoya Japanese has 8 vowels (Shibatani 1990).
 - + /æ/ (< /ai, ae/), /ü/ (< /ui/), /ö/ (< /oi/)
- そういうのがにやあ (ない) といかんわね。
- さむりやあ (らい) の街ですわね。

Nagoya Japanese vowels



河村 たかし (本人)

@kawamura758

/mæ/

またいろいろ熱心に **あたりミャア**ですが 河村たかし自分のコトバで定例記者会見しゃべっとります。是非見て頂だい 🍷🍉🌍😊

[Translate post](#)



youtube.com

令和5年8月28日 名古屋市長河村たかし 定例記者会見

令和5（2023）年8月28日名古屋市長河村たかしの記者会見です。「防災週間の取り組み」「名古屋市博物館の休館セ...

9:24 AM · Aug 29, 2023 · 12.9K Views

<https://twitter.com/kawamura758/status/1696514167677837533?s=20>

またいろいろ熱心に、**あたり前**ですが、河村たかし（が）自分の言葉で定例記者会見（を）しゃべっています。ぜひ見てちょうだい 🏯🍉🌍😊

ズーズー弁

- In Tohoku Japanese (e.g. Iwate, Fukushima), い and う (high vowels) are centralized (i.e. /i, ü/) and (almost) neutralized (Hirayama 1979, among others).
- Examples
 - 獅子 (しし) 'lion' ・ 寿司 (すし) 'sushi'
 - 地図 (ちず) 'map' ・ 知事 (ちじ) 'governor'

ズーズー弁

- In Aizu Japanese (Fukushima Prefecture),
 1. い and え are neutralized.
 2. し, す, and しゅ are neutralized.
 3. ち, つ, and ちゅ are neutralized.
 4. じ, ず, and じゅ are neutralized.

(Ryukawa and Sato 1983)

ズーズー弁

A (Male): Born in 1916
B (Male): Born in 1909
C (Female): Born in 1912

シス



<https://www.youtube.com/watch?v=iafc3isUgpY>

Long vowels

- English vowels have a **tense-lax** distinction (e.g. u vs. ʊ).
- Japanese vowels have a **short-long** distinction (e.g. あ vs. ああ/アー).
- Common mistakes by English speakers:
 - *ゆめい < ゆ**う**めい (有名) 'famous'
 - *こえん < こ**う**えん (公園) 'park'

Long vowels

- Minimal pairs

- かど（角）‘corner’ vs. カード ‘card’
- ビル ‘building’ vs. ビール ‘beer’
- くろ（黒）‘black’ vs. くうろ（空路）‘air route’
- でた（出た）‘exited’ vs. データ ‘data’
- こと（琴）‘koto’ vs. コート ‘coat’

- These words are initial-accented in Tokyo Japanese → HL(L)

Long vowels

- Word-final long vowels (in Western loanwords) are likely to be shorten.
- Examples
 - コンピューター or コンピュータ ‘computer’
 - プロバイダー or プロバイダ ‘provider’
 - ブラウザー or ブラウザ ‘browser’
 - プリンター or プリンタ ‘printer’
 - スキャナー or スキャナ ‘scanner’
 - サーバー or サーバ ‘server’

Long vowels

- There is no consensus about the phonemic representation of Japanese long vowels.
 1. The 10-vowel analysis
 2. The 5-vowel analysis
 1. The double-vowel analysis
 2. The lengthening-phoneme analysis

The 10-vowel analysis

- Japanese has 5 short vowels and 5 long vowels.
 - Short vowels: /i/, /e/, /a/, /o/, /u/
 - Long vowels: /i:/, /e:/, /a:/, /o:/, /u:/
- Under this analysis, these are all minimal pairs.
 - お（尾）‘tail’ vs. おう（王）‘king’ → Length
 - え（絵）‘picture’ vs. おう（王）‘king’ → Quality, Length
 - ええ ‘yes’ vs. おう（王）‘king’ → Quality
 - お（尾）‘tail’ vs. え（絵）‘picture’ → Quality

The 10-vowel analysis

- The 10-vowel analysis does not reflect native-speaker intuition.
- Ask a native speaker!
 - How many vowels does Japanese have?

The 5-vowel analysis

- Japanese has five 5 short vowels.
 - /i/, /e/, /a/, /o/, /u/

1. The double-vowel analysis

- A long vowel is a sequence of two short vowels.
- /ii/, /ee/, /aa/, /oo/, /uu/ → Hiragana! (e.g. ああ)


2. The lengthening-phoneme analysis

- A long vowel is a short vowel followed by a lengthening phoneme.
- /iH/, /eH/, /aH/, /oH/, /uH/ → Katakana! (e.g. アー)

The 5-vowel analysis

- One problem with the double-vowel analysis is that there is a difference between **long vowels** and **sequences of two identical short vowels**.
- In careful pronunciation, 砂糖屋（さとうや）‘sugar dealer’ and 里親（さとおや）‘foster parent’, are different.

• 砂糖屋 → さとう + や 

• 里親 → さと + おや 

The 5-vowel analysis

- 砂糖屋（さとうや） → 3 syllables
 - The double-vowel analysis → /satooya/ or /sa.too.ya/
 - The lengthening-phoneme analysis → /satoHya/ (Phonemic)
 - Phonetic representation: [sato:ja]
- 里親（さとおや） → 4 syllables
 - The double-vowel analysis → /satooya/ or /sa.to.o.ya/
 - The lengthening-phoneme analysis → /satooya/ (Phonemic)
 - Phonetic representations: [satooja] (careful) or [sato:ja] (rapid)
- However, syllable boundaries (.) can solve the problem.

Vowel sequences

- Any sequence of two short vowels are possible ($5 * 5 = 25$).
- Two identical short vowels in **Sino-Japanese words**
 - /ii/ ち-いき (地域) 'region'
 - /ee/ え-えん (会厭) 'epiglottis'
 - /aa/ は-あく (把握) 'grasping'
 - /oo/ ほ-おん (保温) 'keeping warm'
 - /uu/ ふ-うん (不運) 'misfortune'
- There is a morpheme/syllable boundary between the two short vowels.
 - The second vowel is **rearticulated** in careful pronunciation.
 - There is no rearticulation in rapid pronunciation = long vowels.

Vowel sequences

/i/ + ?

- /ie/ いえ (家) 'house'
- /ia/ ギア 'gear'
- /io/ しお (塩) 'salt'
- /iu/ ニウエ 'Niue'

/e/ + ?

- /ei/ れい (例) 'example'
- /ea/ フェア 'fair'
- /eo/ ビデオ 'video'
- /eu/ ゼウス 'Zeus'

Vowel sequences

/a/ + ?

- /ai/ かい (貝) 'shellfish'
- /ae/ まえ (前) 'front'
- /ao/ あお (青) 'blue'
- /au/ アウト 'out'

/o/ + ?

- /oi/ おい (甥) 'nephew'
- /oe/ こえ (声) 'voice'
- /oa/ ドア 'door'
- /ou/ ソウル 'Seoul'

Vowel sequences

/u/ + ?

- /ui/ くい (杭) 'post'
- /ue/ うえ (上) 'above'
- /ua/ シュア 'sure'
- /uo/ うお (魚) 'fish'

- We need to look at pitch accent to determine whether there is a syllable boundary between two non-identical vowels.

- ちょっと待ってくださいね！

えい

- /ei/ and /eH/ are both pronounced [e:] in **fast speech** (homonyms).
 - e.g. けいき (刑期) 'prison term' vs. ケーキ 'cake'
- They are clearly distinct in **careful pronunciation** (not homonyms).
 - [ei] vs. [e:]
- In some varieties (e.g. Kyushu, Shikoku), /ei/ is always [ei] (Hirayama 1979).

えい

/ei/ in 「きれいだな」 is pronounced [ei].



<https://www.youtube.com/watch?v=wKDIYQ-22zs>

えい

- /ei/ is (always) [ei] when a morpheme boundary is between the two vowels.
 - There is a syllable boundary.
- Examples
 - やけ-いし (焼け石) 'heated stone' → [ei]
 - め-いしゃ (目医者) 'eye doctor' → [ei]
- Compare
 - けい-き (刑期) 'prison term' → [ei] or [e:]

おう

- おう in Sino-Japanese words is /oH/ (= [o:]), not /ou/.
- Examples of homonyms (same pronunciation even in careful speech)
 - とう (党) 'party' → Sino-Japanese word (/toH/ → [to:])
 - とお (十) 'ten' → Native word (/too/ or /toH/ → [to:])
 - こうど (高度) 'altitude' → Sino-Japanese word (/koHdo/ → [ko:do])
 - コード 'cord' → Loanword (/koHdo/ → [ko:do])

おう

「ぞう」 is pronounced [dzɔː].



<https://www.youtube.com/watch?v=pJgs7dLDDfI>

おう (Exceptions: /ou/ → [ou])

1. Loanwords

- ソウル ‘Seoul’ → /ou/ (/oH/ is acceptable.)

2. Compounds (native and Sino-Japanese words)

- やまと-うた (大和歌) ‘Japanese poem’ → /ou/
- ぎょ-う (御宇) ‘imperial reign’ → /ou/

3. Native verbs

- そう (添う) ‘accompany’ → /ou/
- とう (問う) ‘ask, inquire’ → /ou/

Vocalic vs. Consonantal

- Tokyo Japanese is “consonantal”.
 - Centralized vowels in rapid speech(?)
- Osaka Japanese is “vocalic”.

Frellesvig (2010)

Vocalic vs. Consonantal

Osaka Japanese

Baba Nobuyuki; Leader of the Japan Innovation Party



<https://www.youtube.com/watch?v=i2AiyptgzY>

- みんなで考えていく必要があると思いますす。
- 正確な答えになると思います。
- 一度リセットをさせていただく。

Vowel coalescence

- Eastern Japanese (i.e. Kanto and Tohoku) tends to merge two vowels into one (Shibatani 1990). + Kyushu, but short (Hirayama 1979)
 - “Tough-guy” pronunciation (Vance 2008)
- Examples
 - /ai/ → [e:] ない → ねえ
 - /oi/ → [e:] つよい (強い) → つええ
 - /ui/ → [i:] さむい (寒い) → さみい
- This phenomenon is less likely to occur in Tokyo Japanese because of the influence of Kyoto-Osaka Japanese (Shibatani 1990).

Vowel coalescence

Final Fantasy XV



- わりい、やっぱつれえわ。
- わりい < わるい (悪い)
- つれえ < つらい (辛い)

<https://www.youtube.com/watch?v=5R217SyTTWc>

Discussion questions

- How do you memorize words with long vowels (e.g. ゆうめい)?
- How have you pronounced えい and おう?

Mori Masako: "Sensei"



<https://www.youtube.com/watch?v=EYnuZLPbTsE>

大阪タイガースの歌 (1936)

Lyrics: Sato Sonosuke, Music: Koseki Yuji



おう → /oH/ (/oHsaka/ 大阪)
六甲嵐に 颯爽と
蒼天翔ける 日輪の
青春の覇気 美しく
輝く我が名ぞ 大阪タイガース
オウ オウ オウオウ
大阪タイガース
フレ フレフレフレ

<https://www.youtube.com/watch?v=1rXn3kg-sn4>

References

- Frellesvig, Bjarke. 2010. *A history of the Japanese language*. Cambridge University Press.
- Hirayama, Teruo. 1979. 全日本の発音とアクセント. In 日本語発音アクセント辞典. Tokyo: NHK Publishing.
- Ryukawa, Kiyoshi, and Tadahiko Sato. 1983. 会津方言辞典. Tokyo: Kokusho Kankokai.
- Shibatani, Masayoshi. 1990. *The languages of Japan*. Cambridge University Press.