

日本語を母語とする学習者によるフランス語口母音の知覚と産出：後舌狭母音/u/に関連した地域的変異による影響

Perception and production of French oral vowels by Japanese-speaking learners: does dialectal variation play a role?

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L2 learner's production perceived by native (and other) listeners

L2 speaker
(Learner)

L1 listener

Speech signal

Dialectal variation in learner's L1 (source language)?

Dialectal variation in listener's L1 (target language)?

Coding

Decoding



From Denes and Pinson *The Speech Chain*

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Study 1

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Japanese-speaking learners from Kantô and Kansai

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Étude 2
Dialectal variation in listener's L1 (target language)?
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Outline

1. Previous studies on L1 variation (perception)
2. Vowels /u/-/ø/ in French as a foreign language learned by Japanese-speaking learners from Tokyo (background)
3. Study 1 : Perception and production of French oral vowels by Japanese-speaking learners with different dialects
 - 3.1. /u/ in Tokyo and Kansai Japanese
 - 3.2. Perception of the French vowels /u/-/ø/ by naïve Japanese-speaking listeners from Kansai (Ôsaka)
 - 3.3. Production of the French vowels /u/-/ø/ by Japanese-speaking learners of French as a foreign language from Kansai
4. Study 2 : French vowel /u/ produced by Japanese-speaking learners and identified by listeners from France and Québec

1. Previous studies on L1 variation (perception)

- Morrison (2008): perception of (synthesized stimuli of) /i/-/ɪ/ in English by Spanish speakers from Mexico and Spain.
- Chládková & Podlipský (2011) : perception of Dutch vowels by Czech-speaking listeners from Bohemia and Moravia.

Effect of L1 variation

- Chládková et Podlipský (2011) : perception of Dutch vowels by Czech-speaking listeners from Bohemia and Moravia.

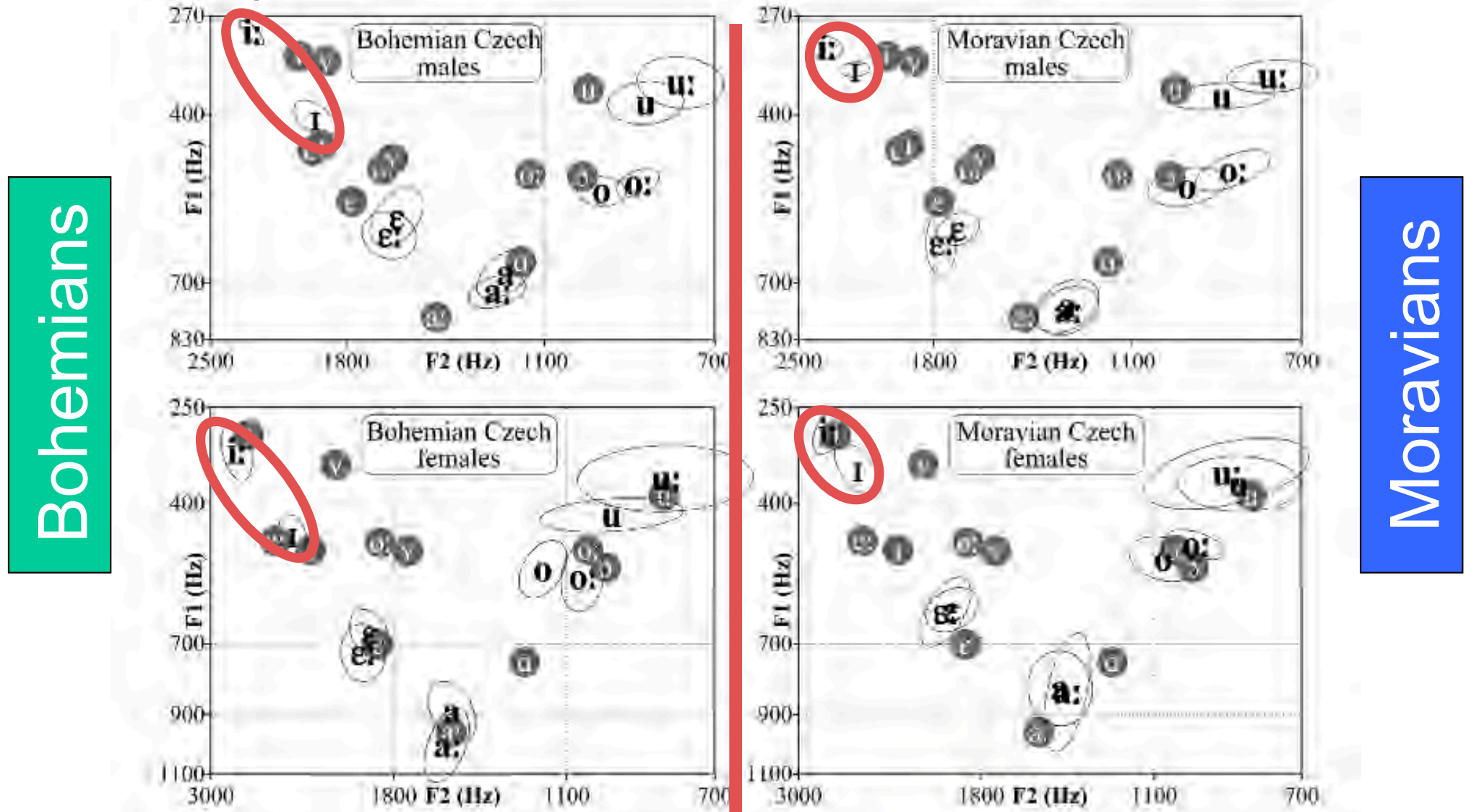
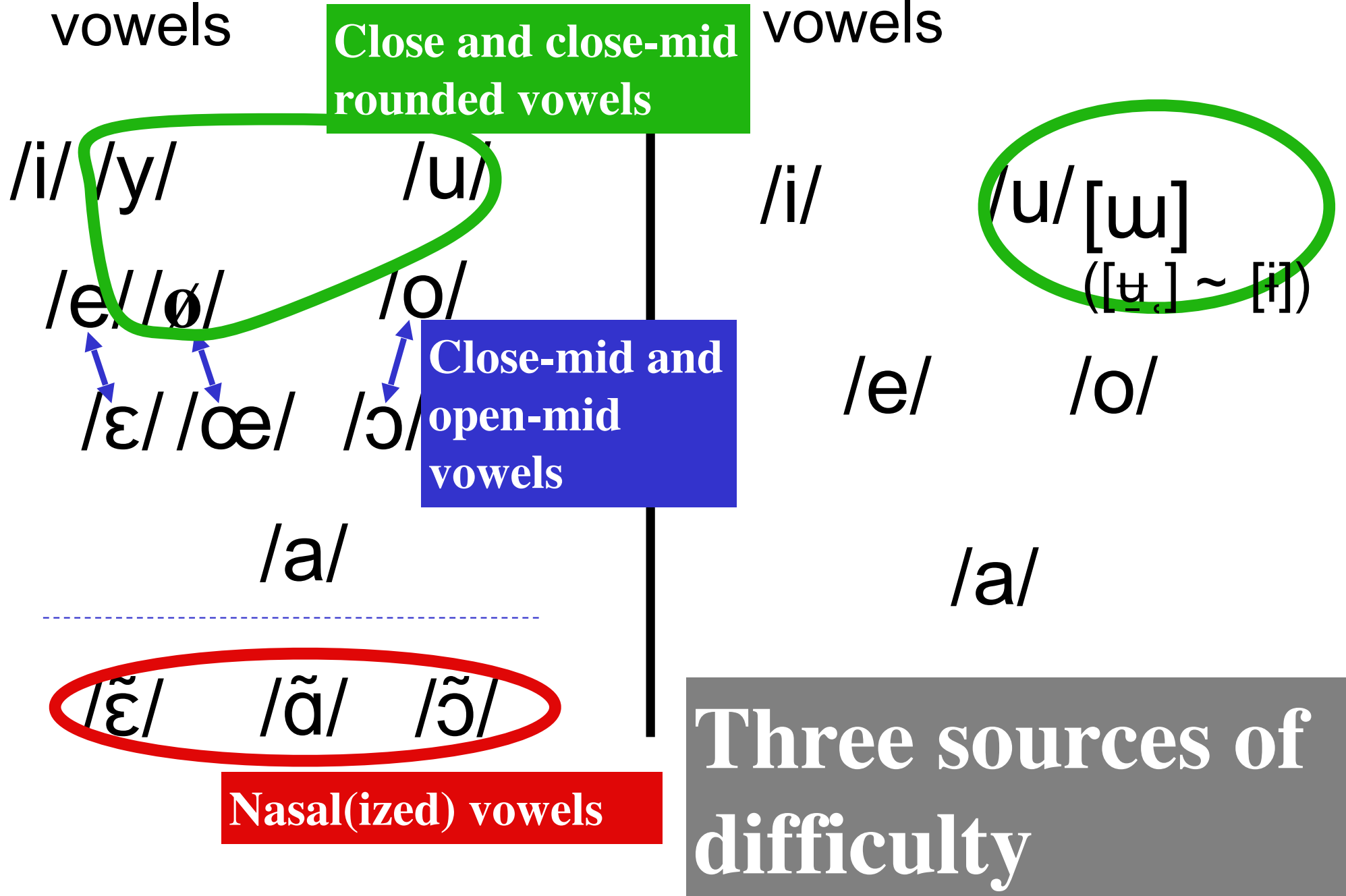


Fig. 1. Average F1 and F2 values of the Dutch vowel stimuli from the present study (white symbols in gray circles, male values in top panels, female values in bottom panels), and F1 and F2 of Czech vowels (black symbols, ellipses show 1 standard deviation from the mean (data from Chládková et al. 2009).

2. Vowels /u/-/ø/ in French as a foreign language learned by Japanese-speaking learners from Tokyo (background)

- Parisian French: 13 vowels

- Tokyo Japanese: 5 vowels



Three sources of difficulty

Vowels /u/ /y/ /ø/ in French: illustration

/u/

/y/

/ø/

Focal vowels:
several formants
grouped together
-> reinforcement
of energy

Non-focal vowel: no
grouping of formant
(acoustically 'central')

F2/F3

F3

F2

F1

F1/F2

2000 Hz

5000 Hz

0.16

0.16

0.1654

0.00000

Visible part 0.165415 seconds

0.165415

0.00000

Visible part 0.165415 seconds

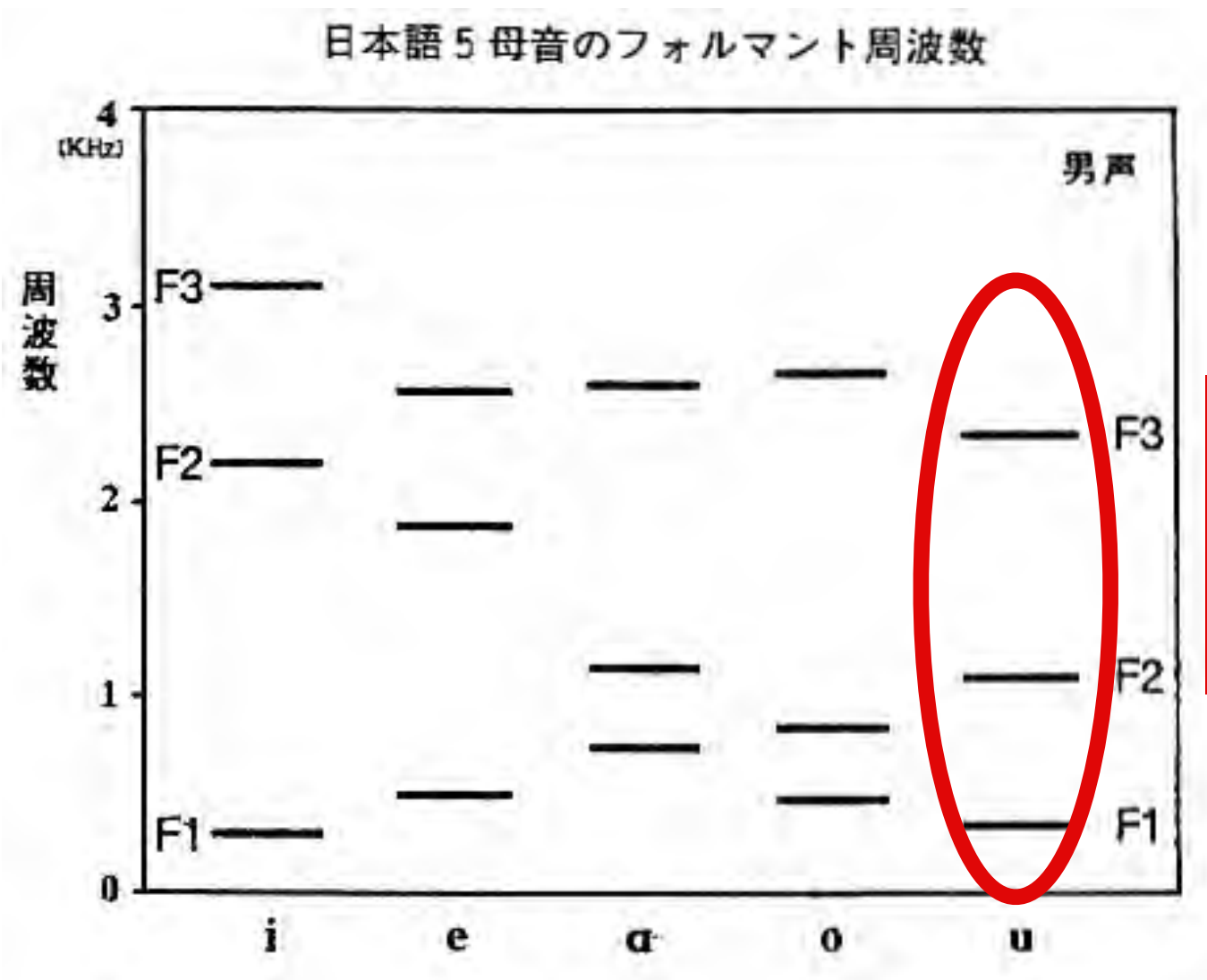
0.165415

0.00000

Visible part 0.165415 seconds

0.165415

5 vowels of Tokyo Japanese

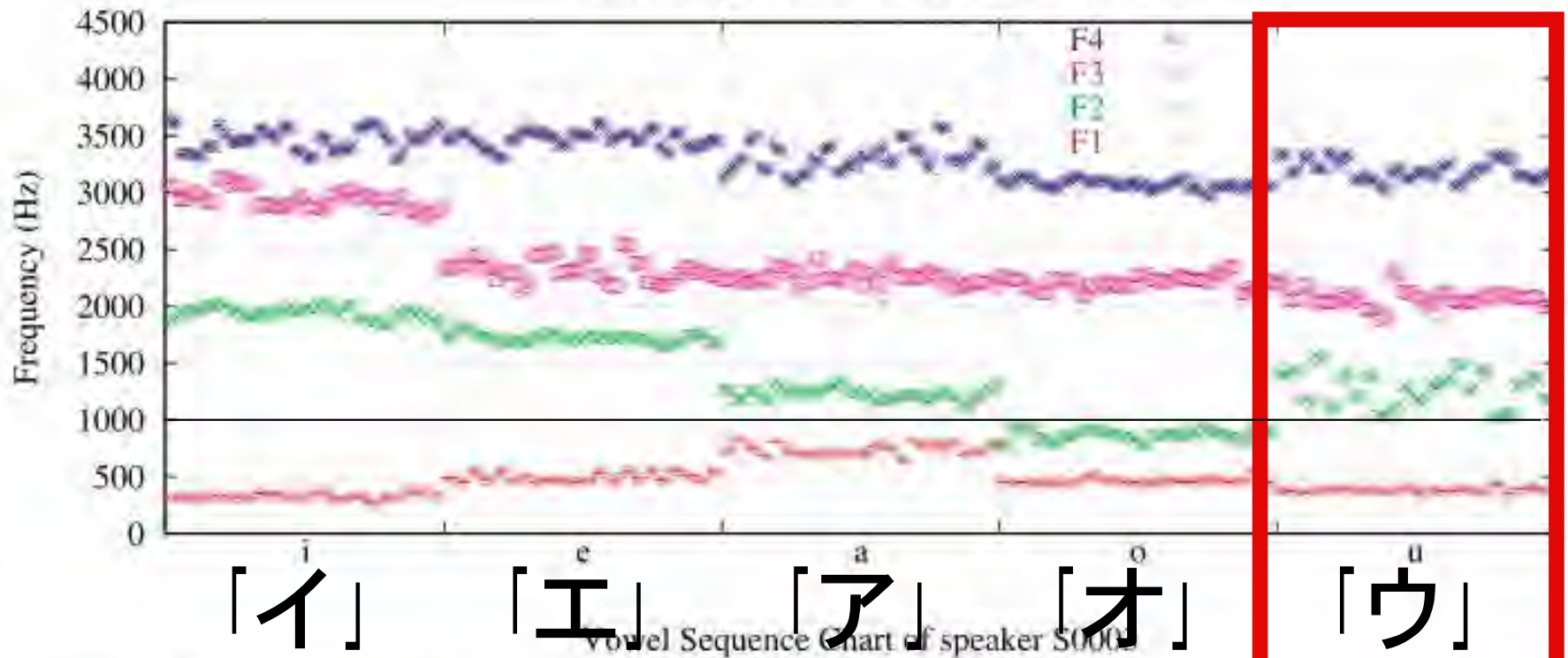


/u/「ウ」:
non-focal
vowel

- The first three formants for the 5 vowels (phonemic transcription) of Tokyo Japanese (male speaker). Sugito (1995)

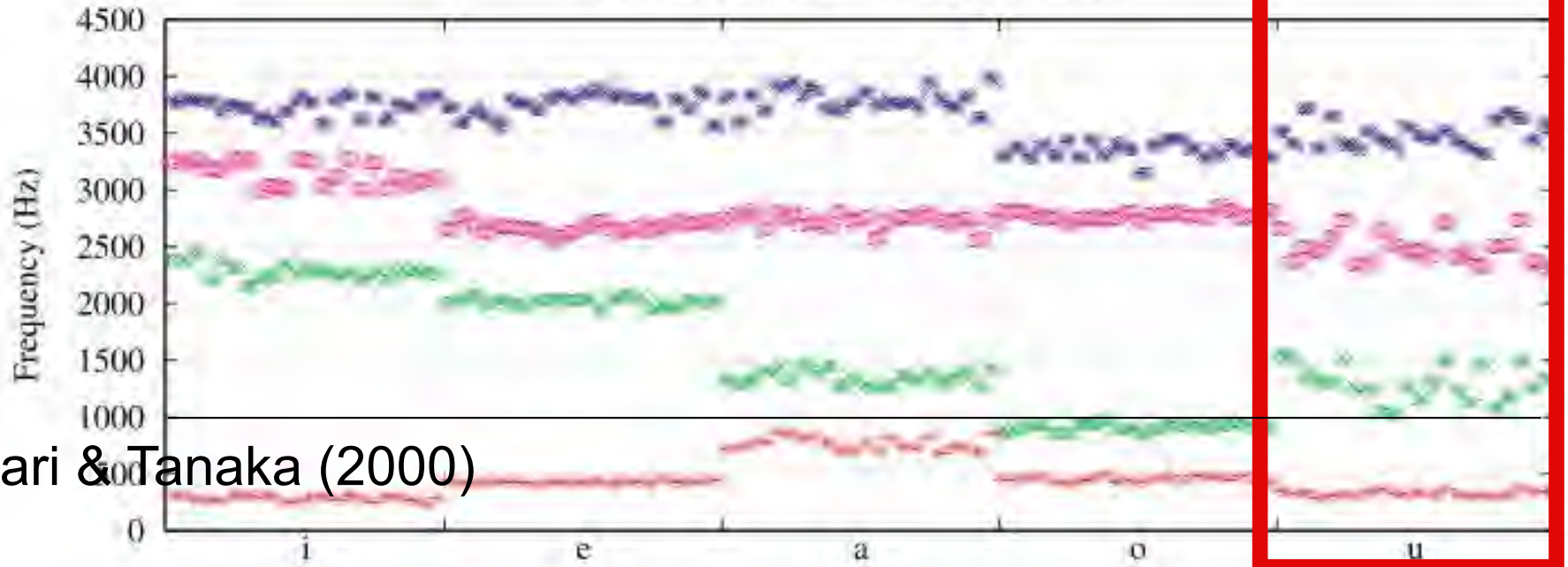
5 vowels of Tokyo Japanese

Vowel Sequence Chart of speaker S0001

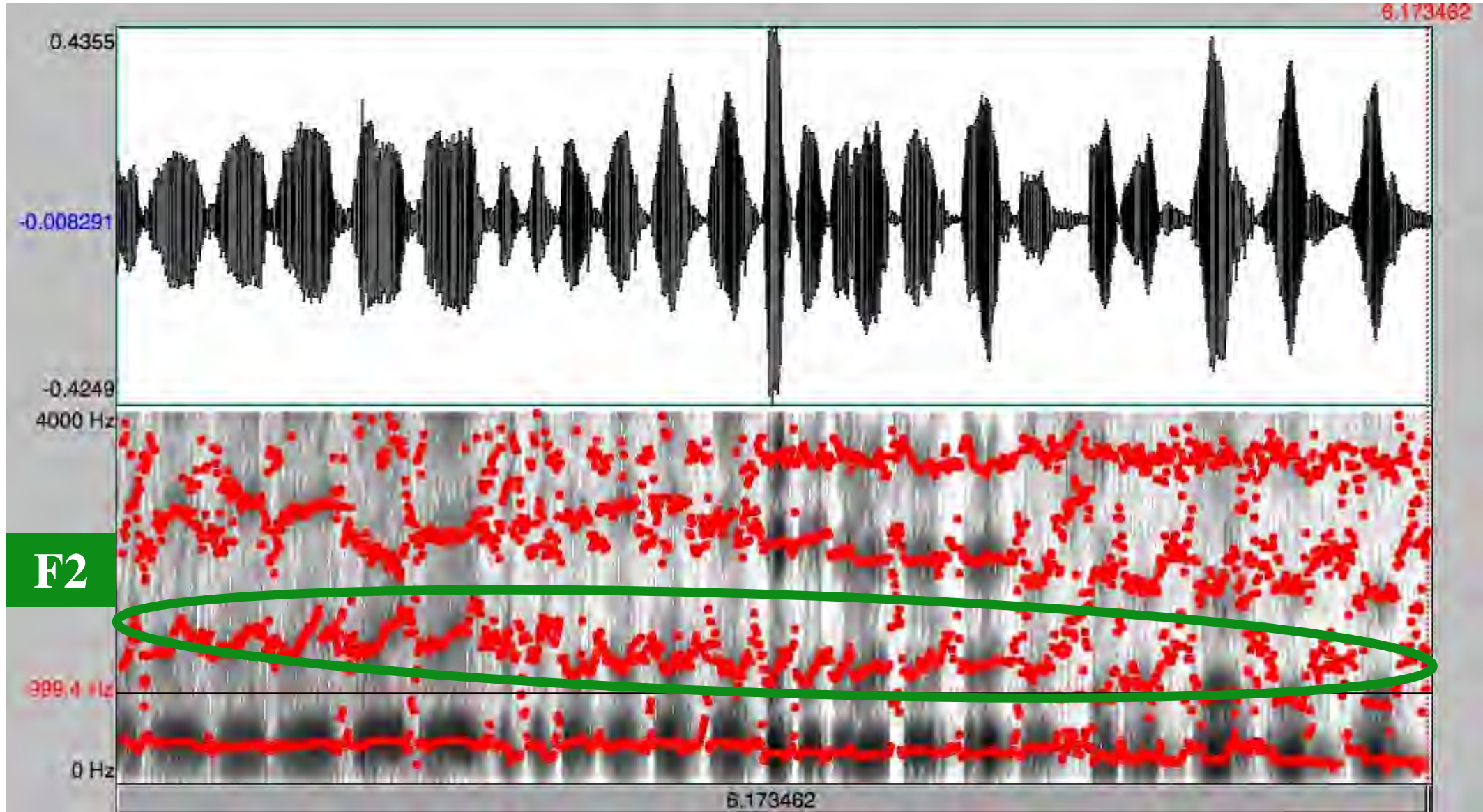


Corpus:
word list
in
isolation

- Mokhtari & Tanaka (2000)



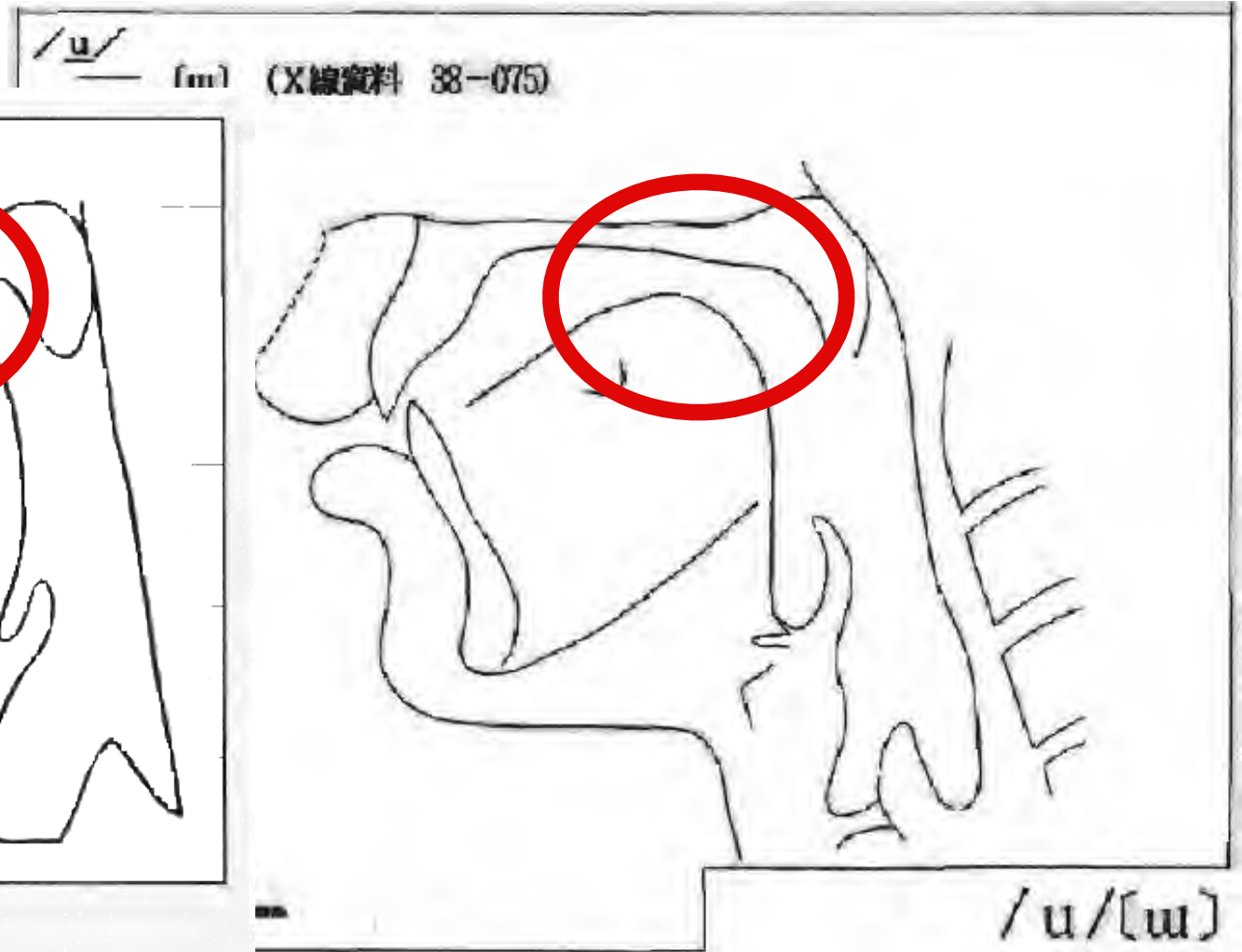
/u/ in Tokyo Japanese



- 4 speakers (2 female & 2 male) x 6 repetitions
- /sorewa u to iimasu/

Articulation

French /u/ and Japanese /u/ [ɯ]: tongue position



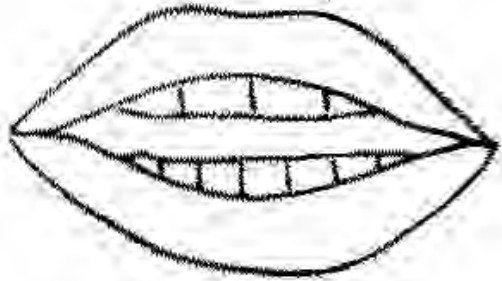
9. Articulation [u].

• **Wioland (1991)**

• **Uemura & Takada (1990)**

French /u/ and Japanese /u/ [ɯ]: lips

FR



Voyelle [i]



イ [i]

JP



Voyelle [u]



ウ [ɯ]

Lips rounded



Voyelle [o]



オ [o]

• Wioland (1991)

• Takebayashi (1996)

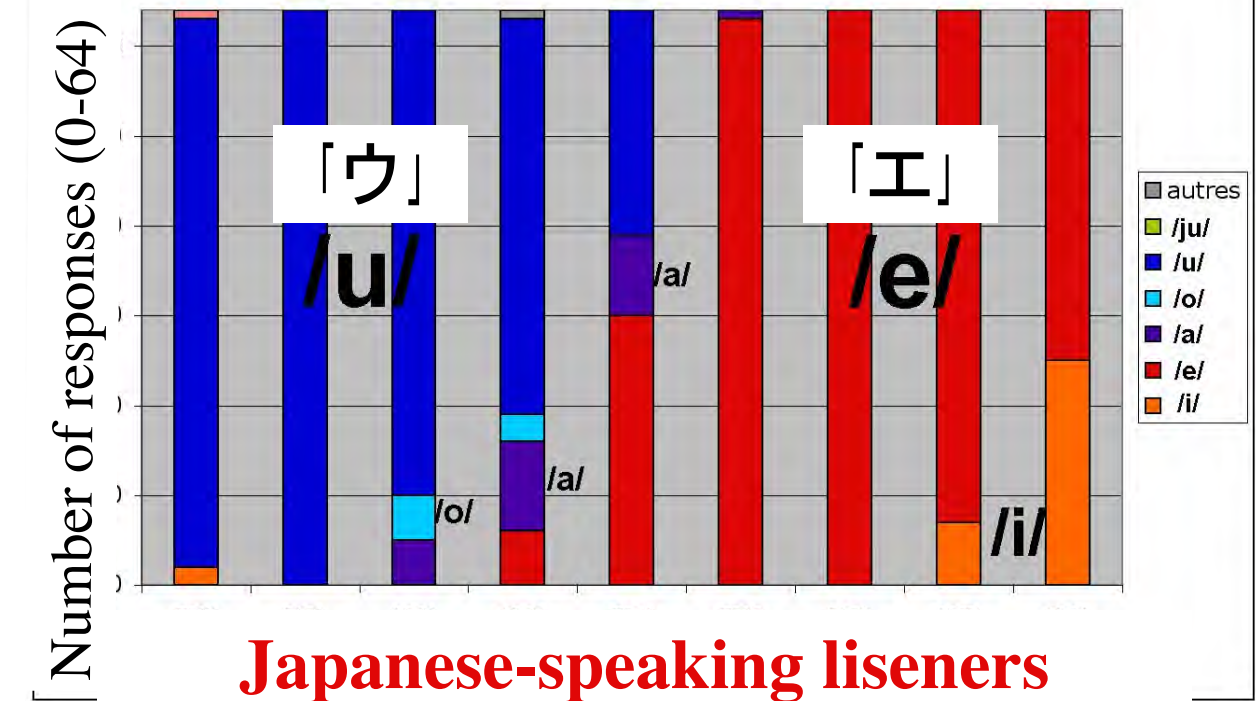
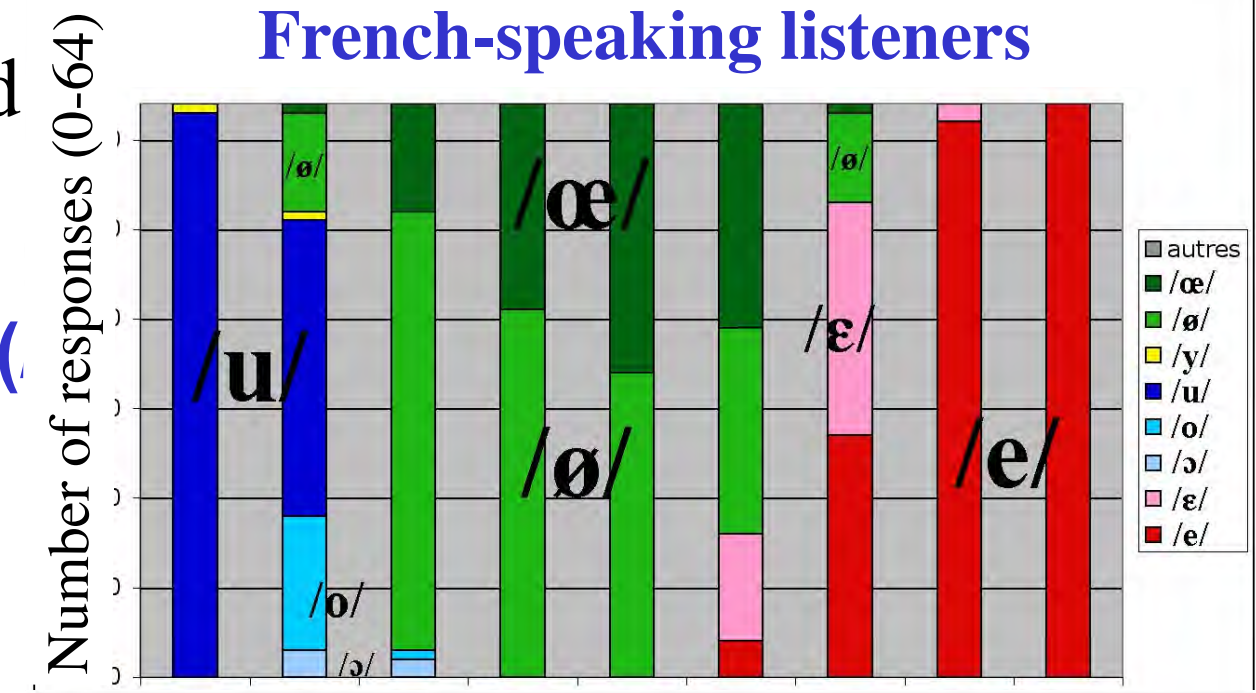
Perception:

Synthesized stimuli
categorized by
French-speaking
and
Japanese-speaking listeners

Perception of synthesized vowels

- Vtcalc : **Continuum 1 (u/->/ø/-> tongue fronting + delabialization)**

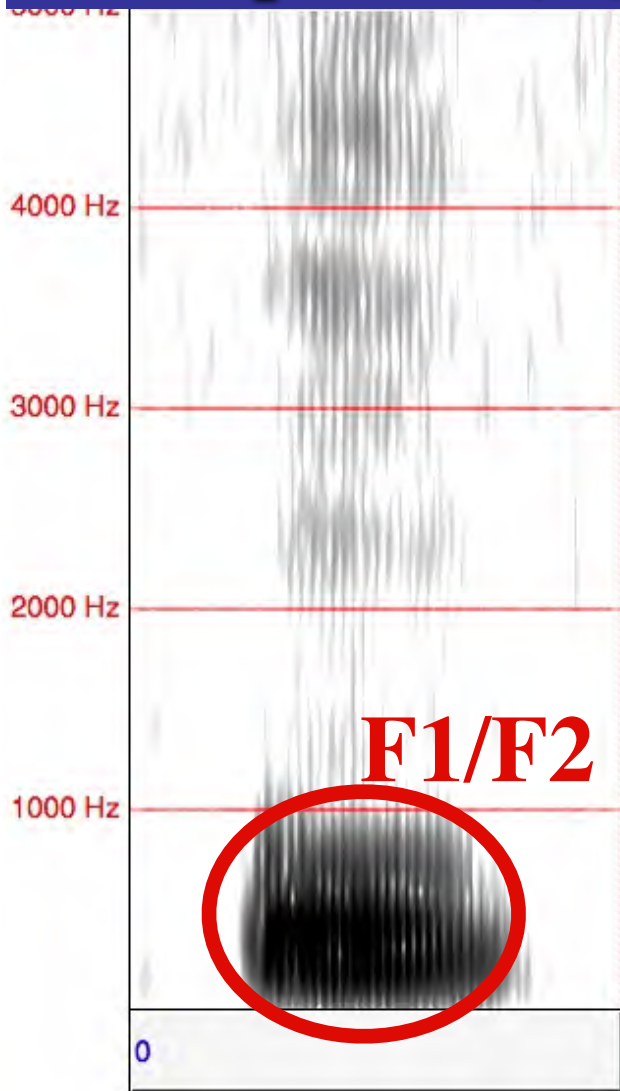
- Fr: /u/ -> /ø-œ/ (-> /e/)
- Jp: /u/ 「ウ」 (-> /e/)



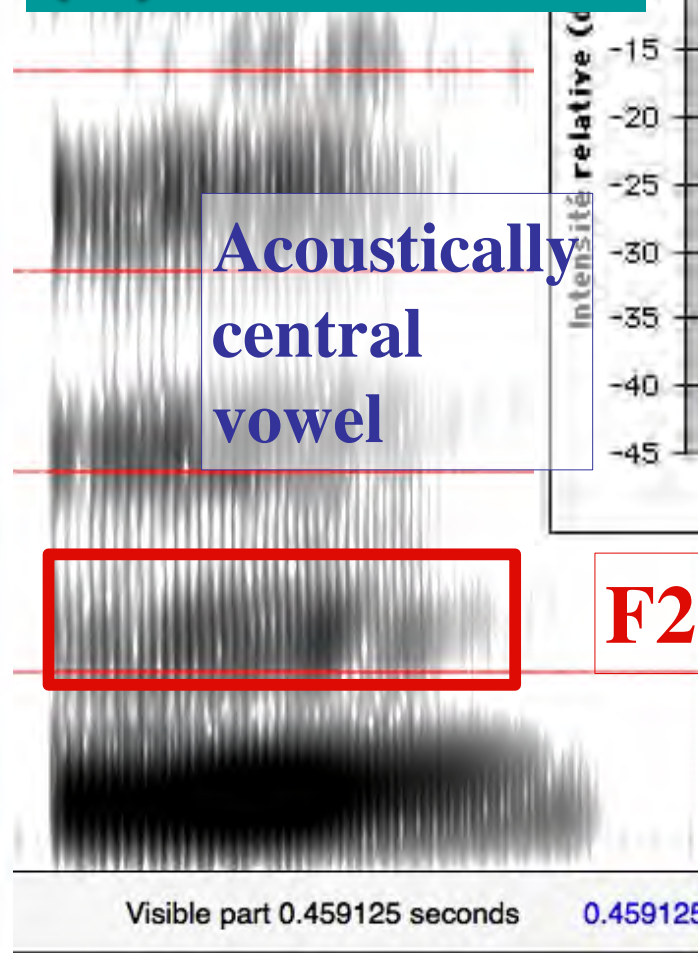
French /u/ pronounced by Japanese-
speaking learners

French /u/

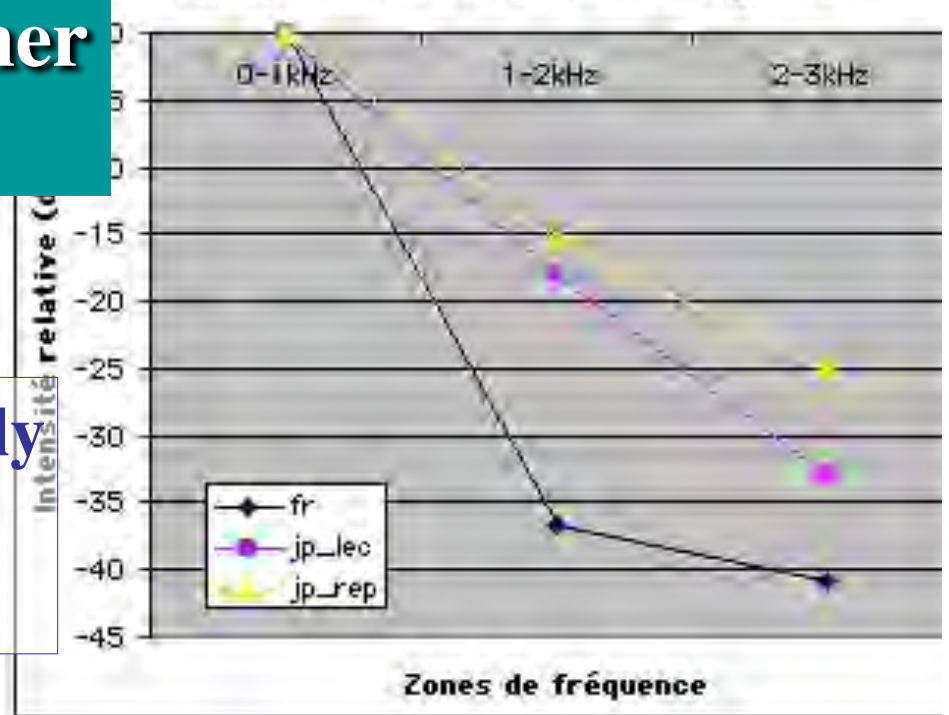
Natif speaker (m)



Japanese-speaking learner (m)



Intensité relative de la voyelle /u/

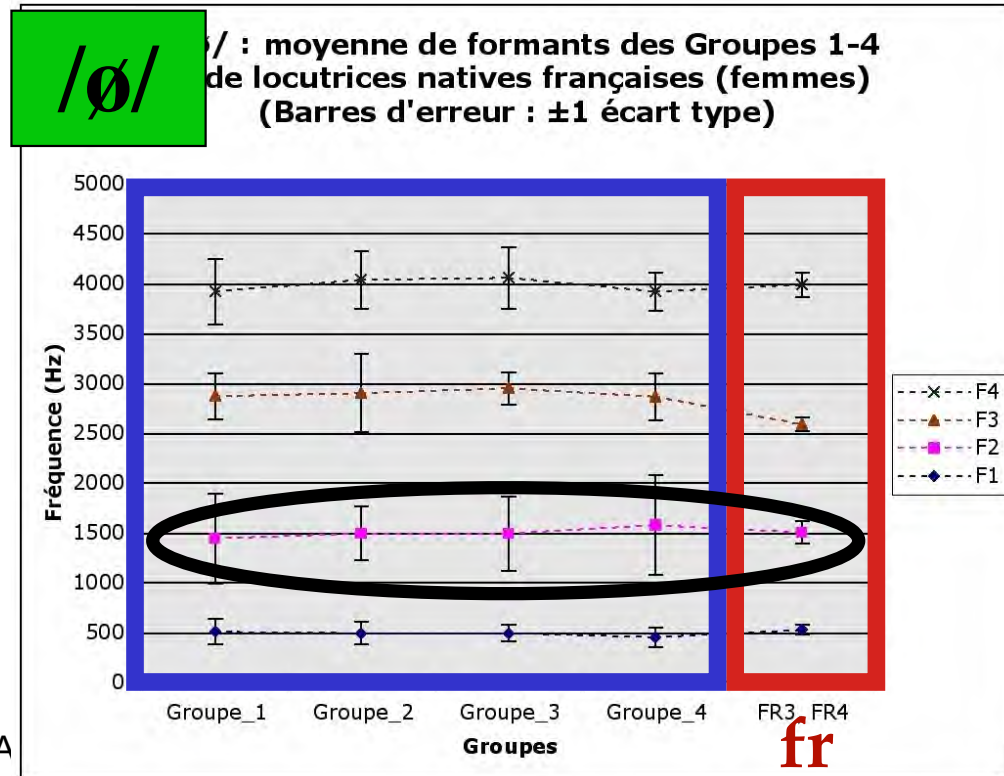
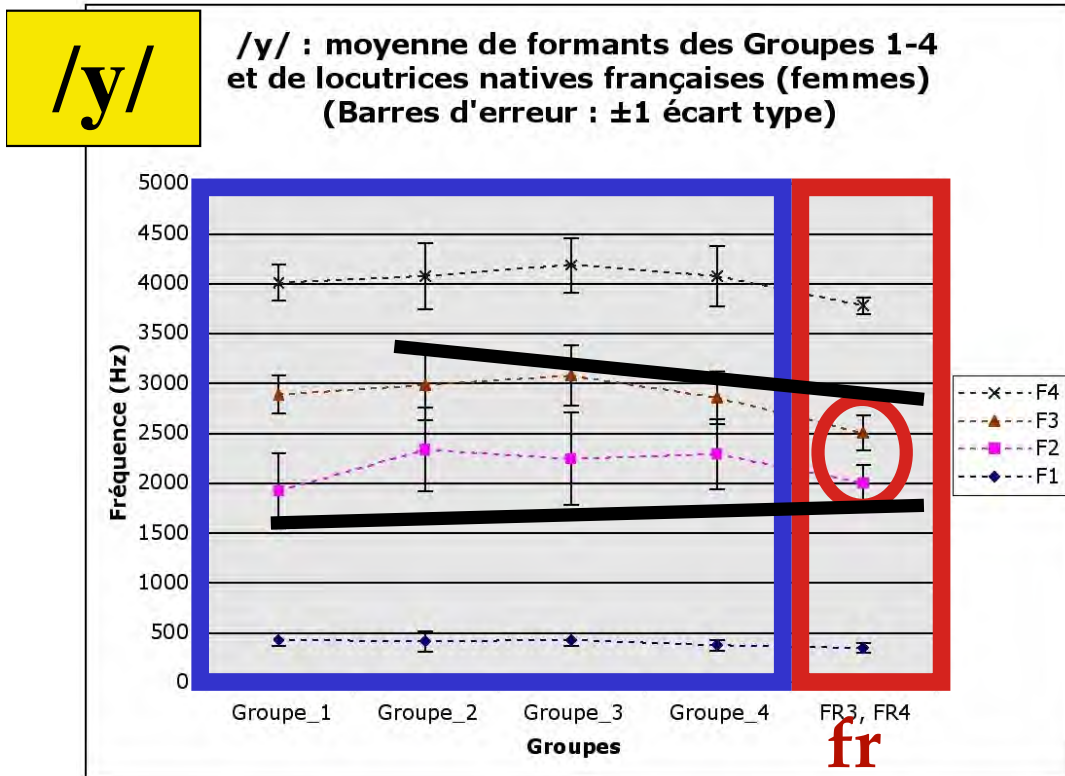
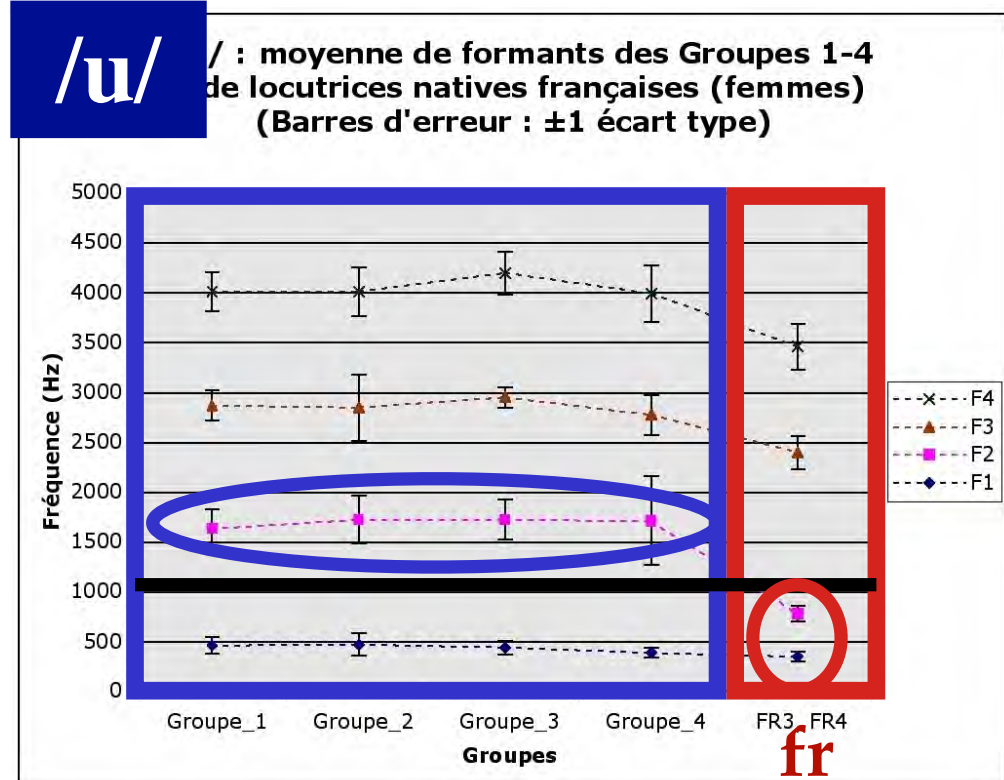


Production of /u y ø/ by 40 Japanese-speaking learners

(Kamiyama, Vaissière, 2009)

- 4 groups of learners
- 2 natives speakers of French

Carrier sentence: « Je dis /I/ comme dans ... »



Perception et production des voyelles orales du français par des japonophones avec des dialectes différents

Perception and production of French oral vowels by Japanese speakers with different dialect backgrounds

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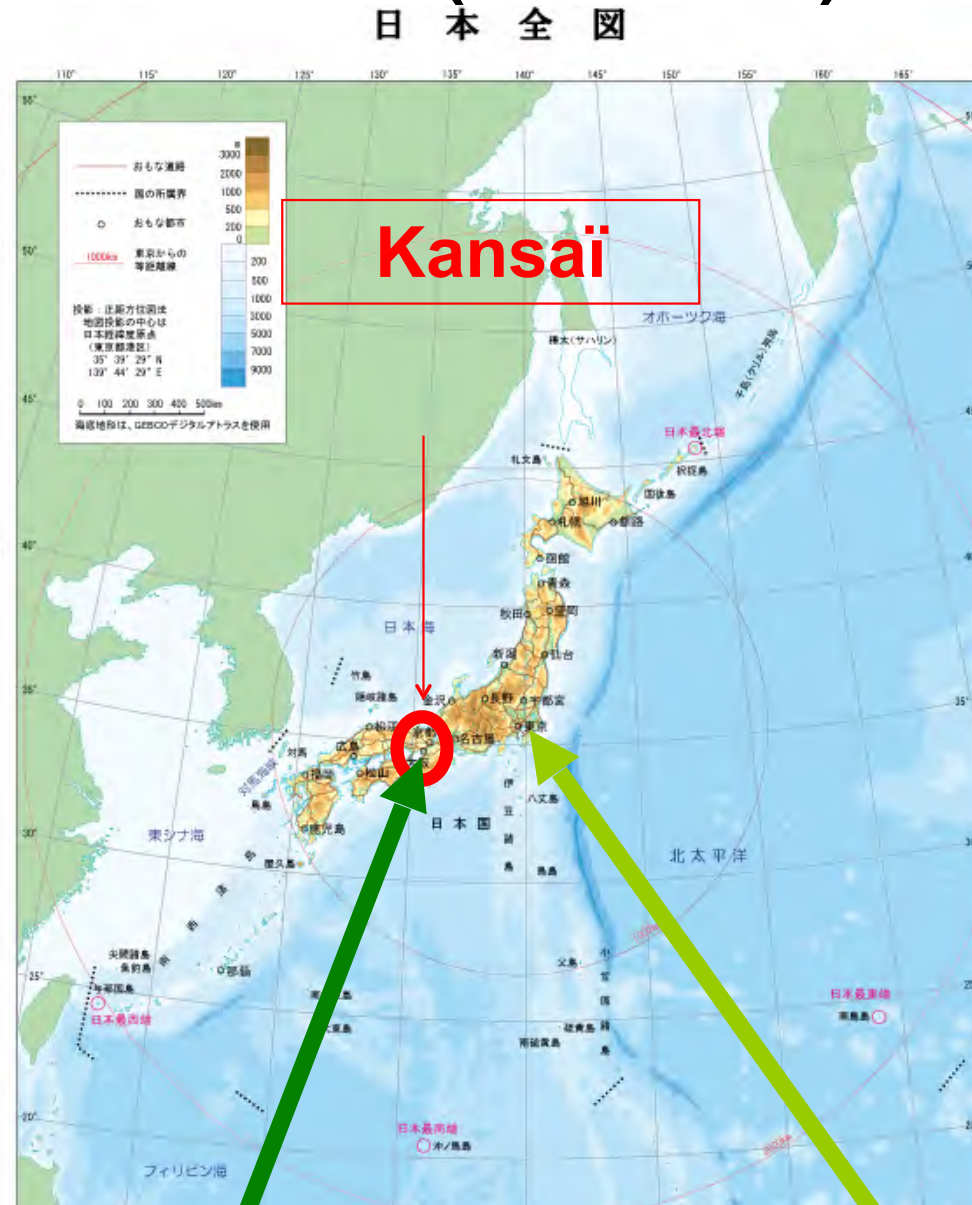
3. Musée National d'Ethnologie, Osaka, Japon

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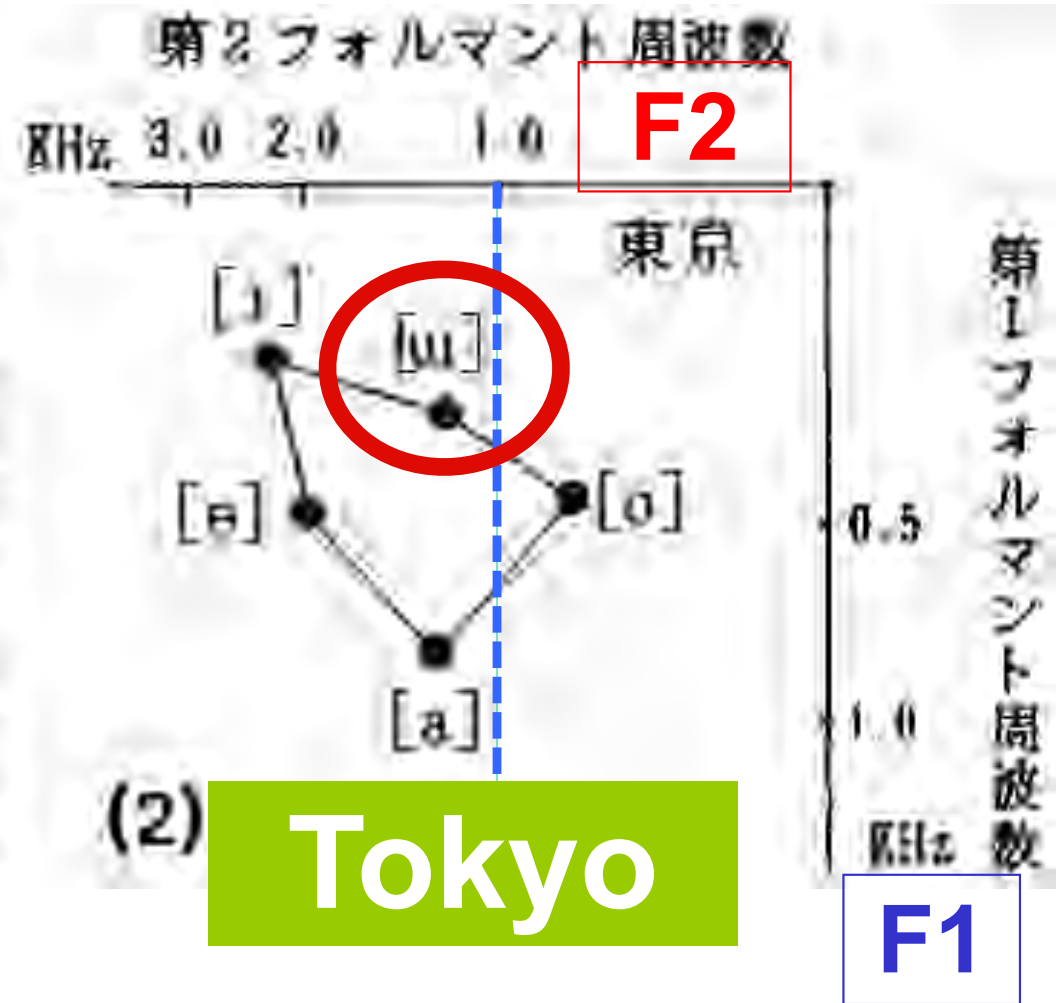
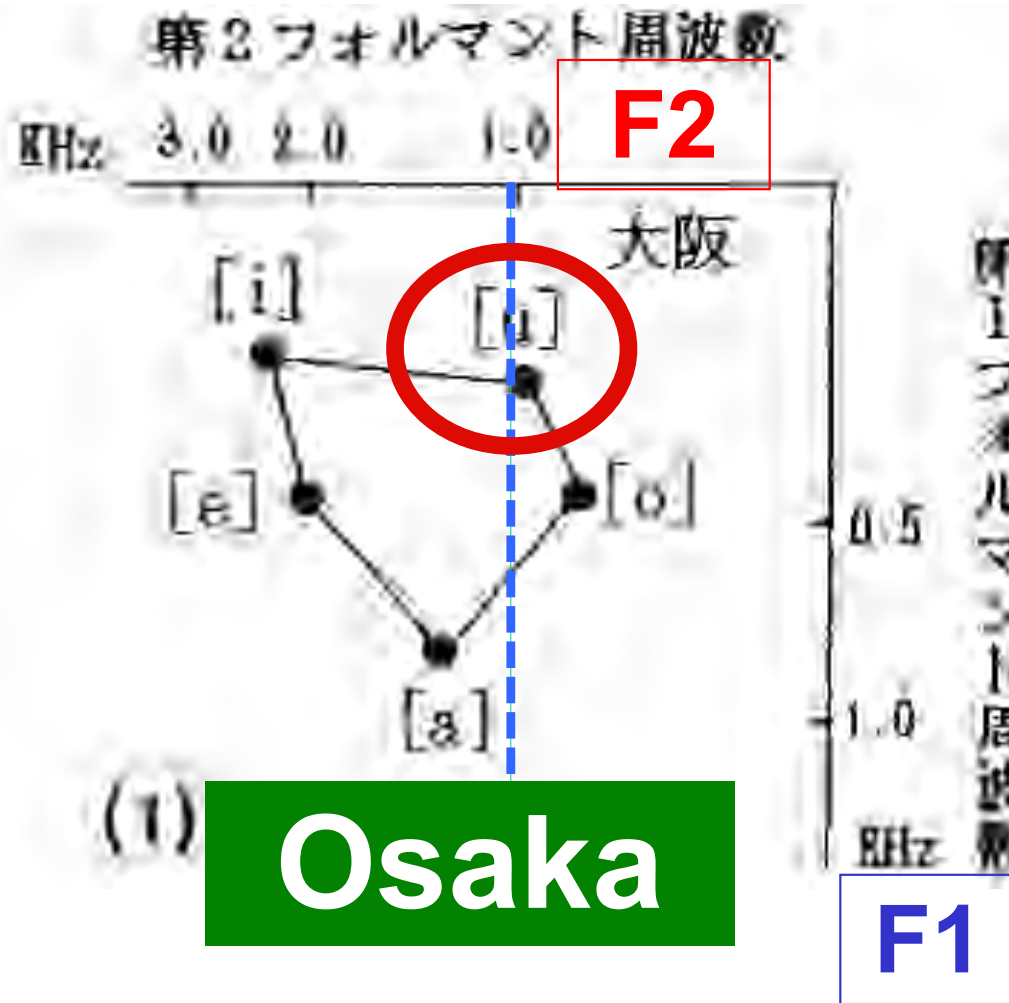
takeki.kamiyama@univ-paris8.fr

3.1. /u/ in Kansai (Ôsaka) Japanese

Geospatial Information Authority of Japan (GSI), 2012



5 vowels of Ôsaka and Tôkyô

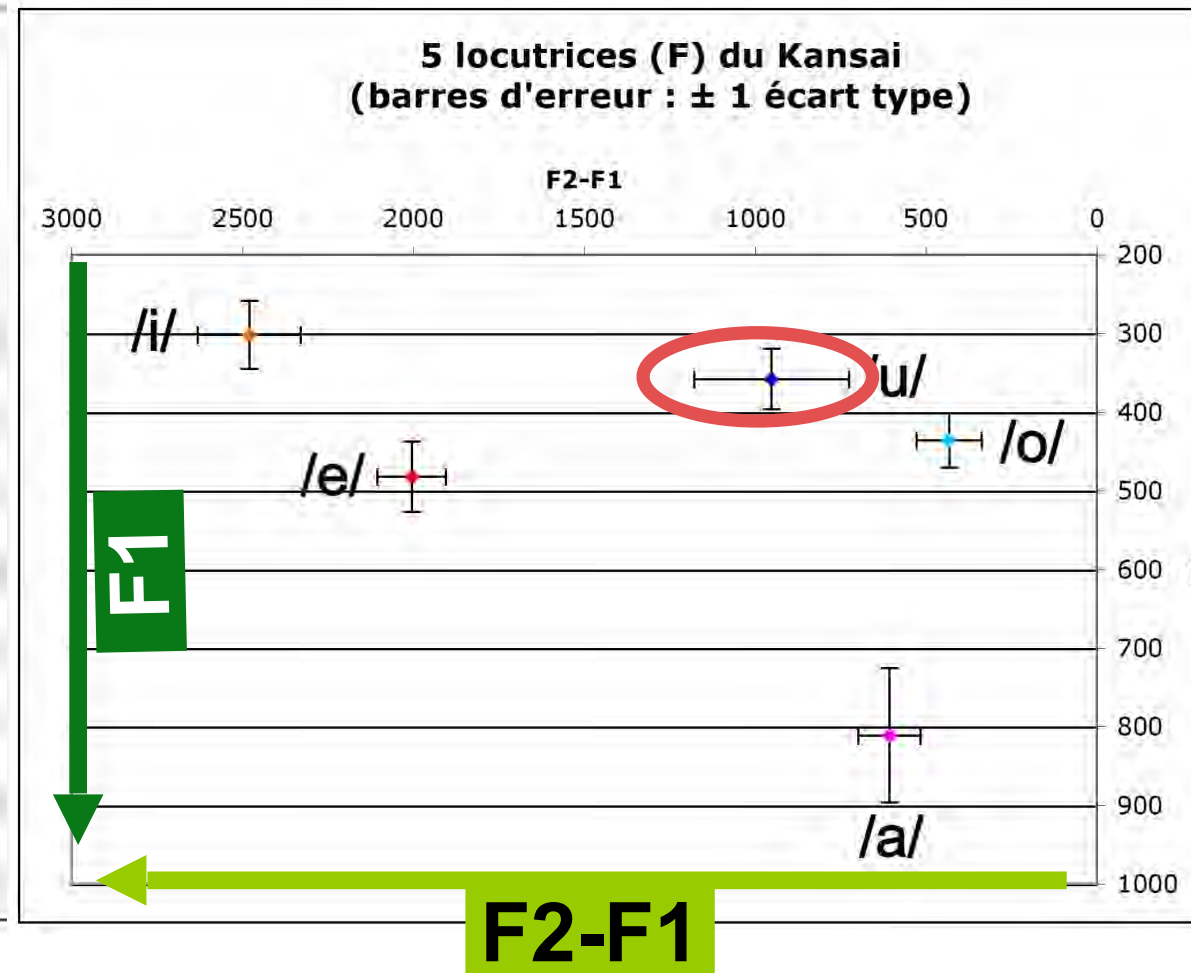
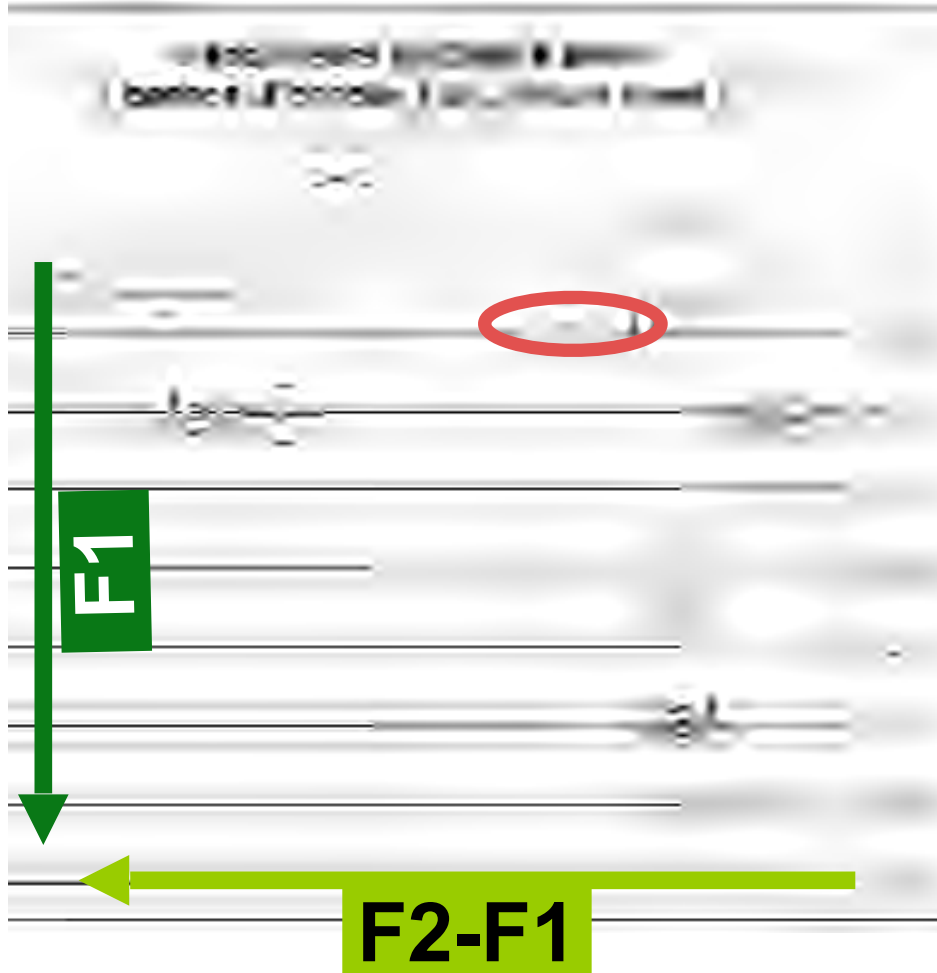


Sugito (1995)

Kansai vowels: F1 / F2-F1

6 male sp.

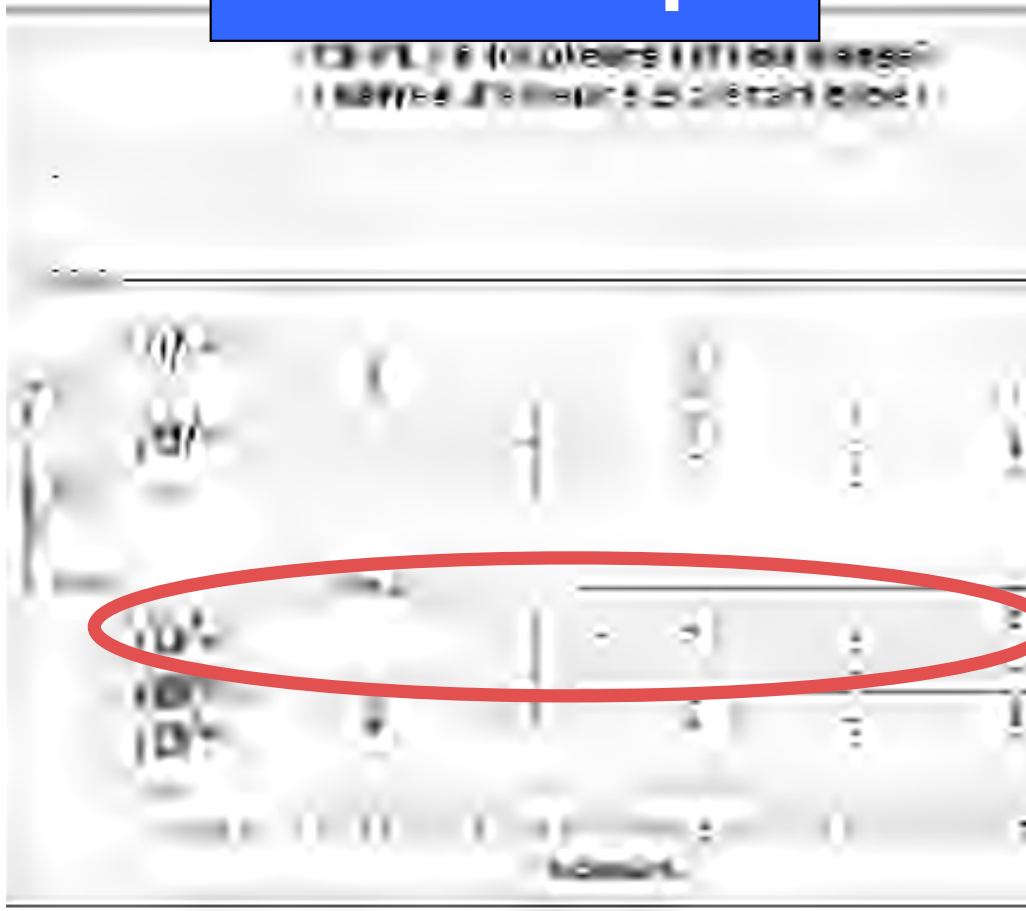
5 female sp.



Kansai vowels: F2-F1

6 male sp.

5 female sp.

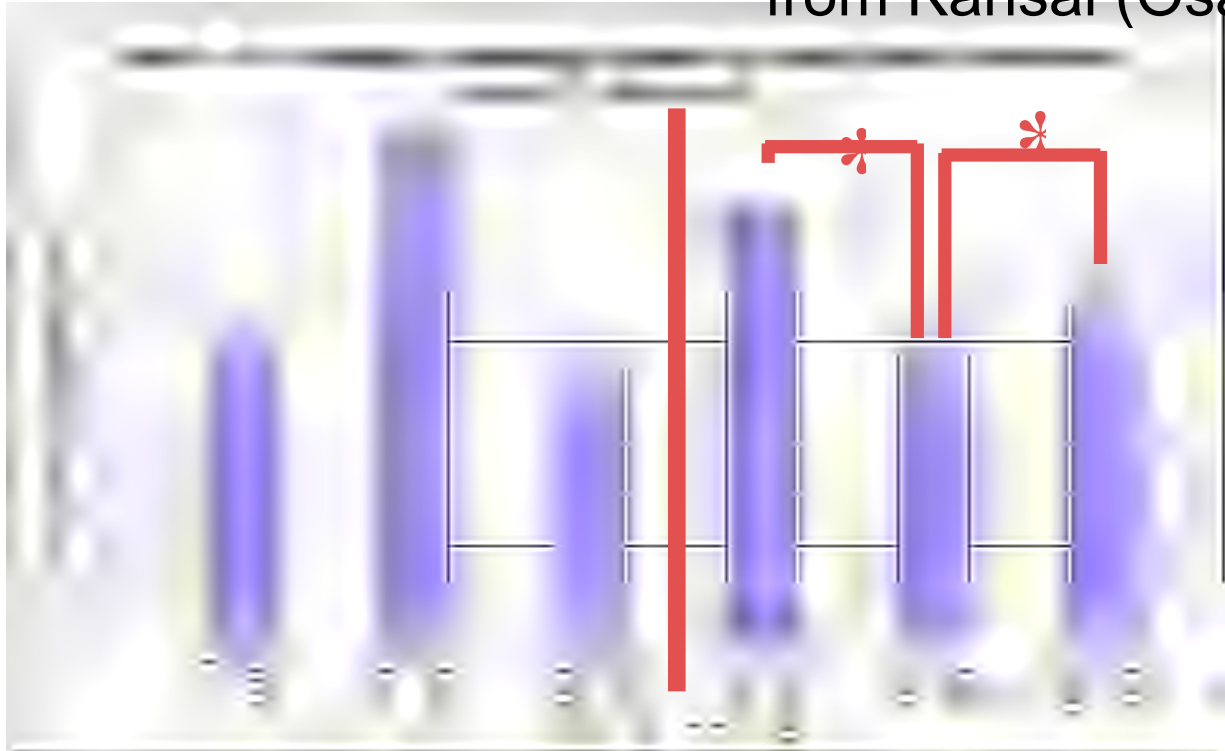


- Vowels in isolation /i e a o u/ (as well as /ja ju jo/) in a carrier sentence: 3 measures by vowel x 5 repetitions

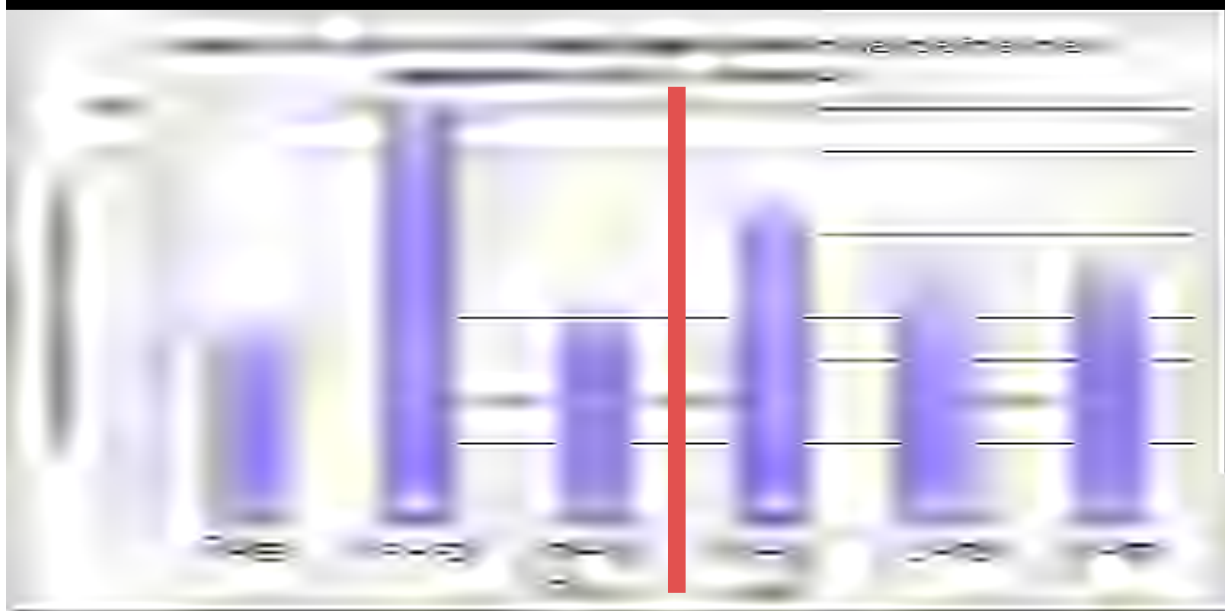
3.1. /u/ in Osaka Japanese

- F2: inter- (and intra-)speaker variability
- Tendency towards higher F2: more resemblance with the Tokyo /u/ (standardization ?)
- Sociolinguistic factors to be considered?

3.2. Perception of French /u/-/ø/ by naïve Japanese-speaking listeners from Kansai (Ôsaka)



- Difficulty :
 $/u-\emptyset/ > /y-\emptyset/ > /u-y/$

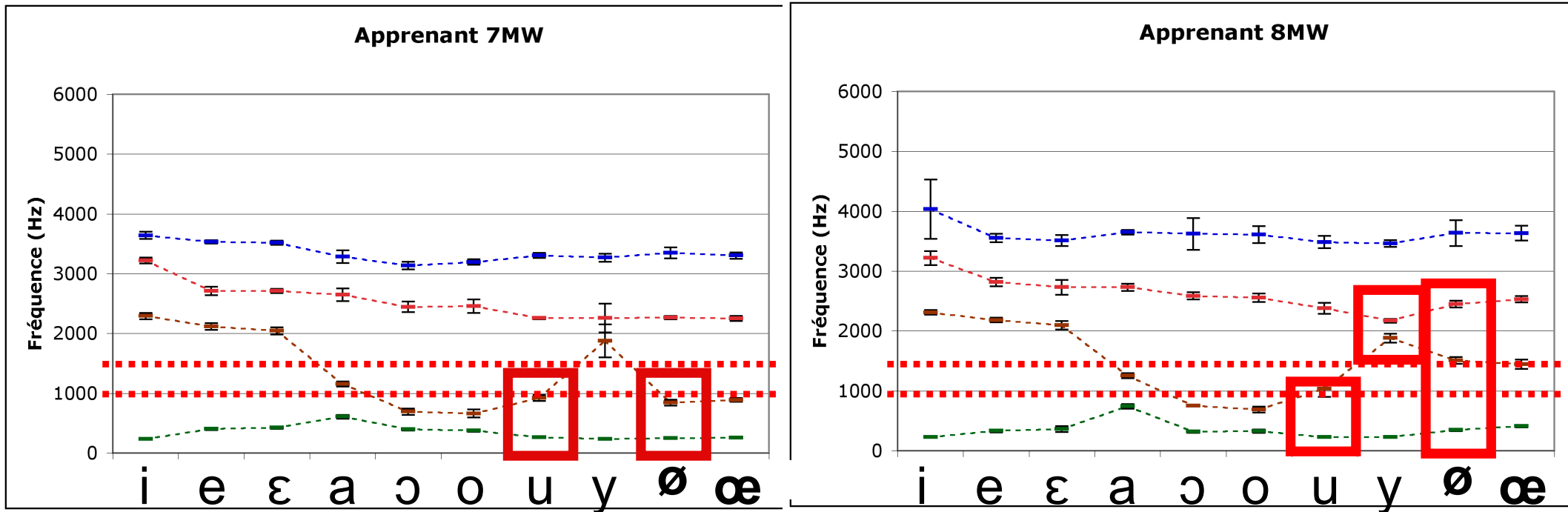


- Similar tendency observed with listeners from Tokyo
- Difficulté :
 $/u-\emptyset/ > /y-\emptyset/ > /u-y/$

3.2. Perception of French /u/-/ø/ by naïve Japanese-speaking listeners from Kansai (Ôsaka)

- The auditory discrimination of the phonemic contrast /u/-/ø/ is not particularly made easier compared with other contrasts for naïve listeners from Kansai, despite input of phonetic realizations of /u/ with lower F2 than that of Tokyo.

3.3. Production of French /u/-/ø/ by Kansai speakers learning French as a foreign language: two (male) learners from Kansai

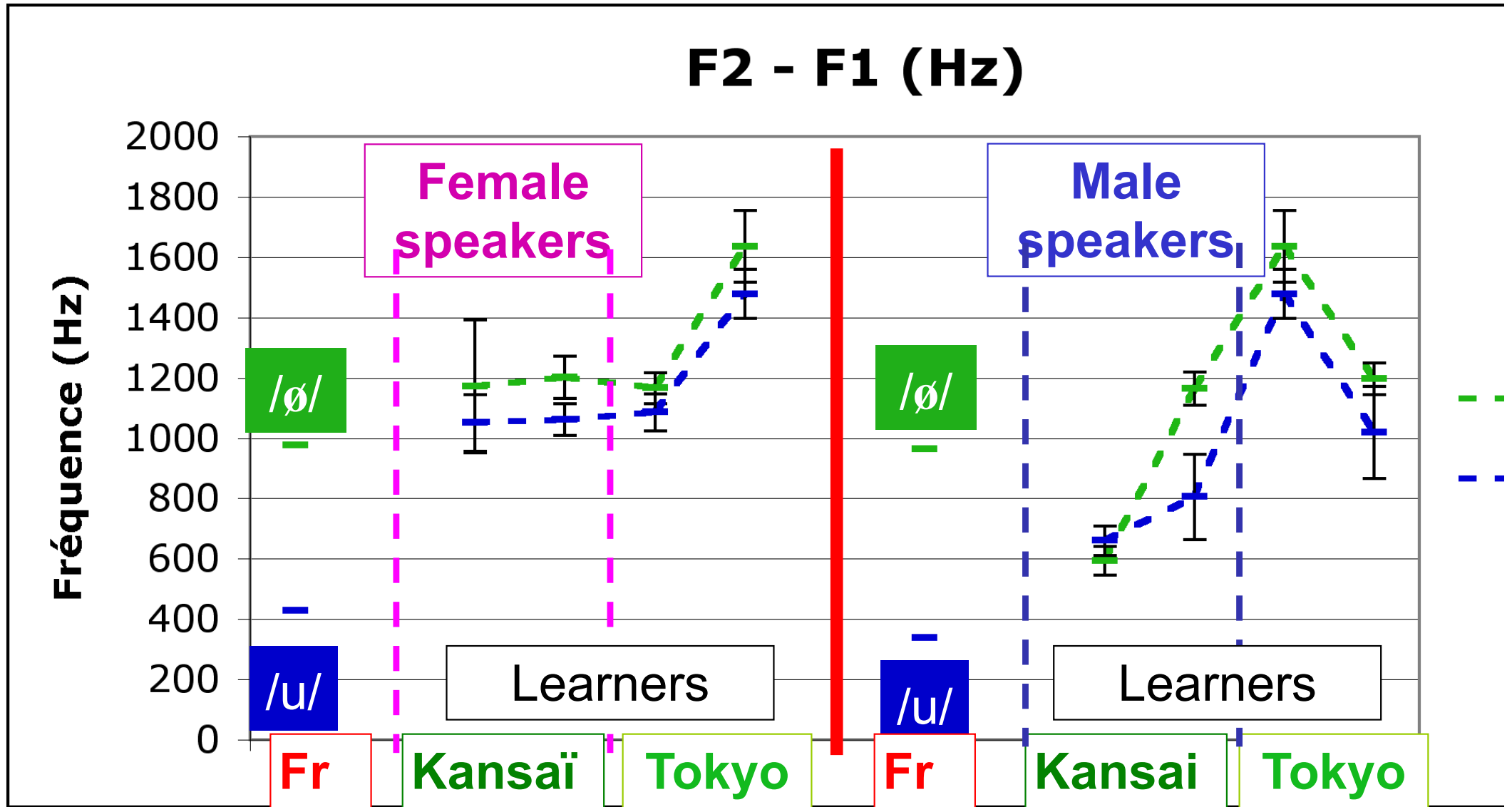


	i	e	ε	ə	ɔ	o	u	y	ø	œ
F4	3638	3532	3517	3283	3135	3195	3304	3265	3347	3301
F3	3221	2708	2710	2646	2444	2458	2258	2256	2264	2251
F2	2290	2117	2043	1153	691	659	920	1876	841	887
F1	231	405	423	606	394	376	260	233	248	255

	i	e	ε	ə	ɔ	o	u	y	ø	œ
F4	4031	3549	3510	3648	3621	3611	3484	3459	3636	3633
F3	3218	2814	2728	2728	2585	2554	2377	2171	2448	2529
F2	2308	2182	2094	1254	750	687	1035	1881	1510	1442
F1	228	330	360	741	317	324	230	225	344	411

- Kamiyama, T. (2012). Production des voyelles du français par des apprenants japonophones : effet du dialecte d'origine. *Actes des XXIXèmes Journées d'étude sur la Parole* (Grenoble, France, 4-8 juin 2012), 771-778.

3.3. Production of French /u/-/ø/ by Kansai speakers learning French as a foreign language: 2 male and 2 female learners from each region



Vowels in isolation in a carrier sentence; 3 measures by vowel

3.3. Production of French /u/-/ø/ by Kansai speakers learning French as a foreign language

- /u/ with **lower F2 (c. 1000 Hz)** produced by **2 (male) learners from Kansai**, but with an **F1/F2 distance larger** than native speakers.
- One of the Kansai learners who pronounced /u/ with **lower F2 (c. 1000 Hz)** produced **similar /ø/**.
- **Phonetic** acquisition of /u/ may be made easier, but the **phonemic** acquisition (contrast /u/-/ø/) is still a major difficulty for (male?) learners from Kansai.

3. Study 1: Conclusion

- (Intra- and) inter-speaker variation of F2 for Kansai /u/
- Auditory discrimination of the phonemic contrast /u/-/ø/ does not seem to be made easier
- Some learners from Kansai pronounce French /u/ with a lower F2 (~ 1000 Hz) than other learners (those from Tokyo), but the acquisition of the phonemic contrast /u/-/ø/ is still a difficult task.

Perception of L2 production by L1 speakers of different dialectal backgrounds: the case of Japanese-speaking learners' /u/ perceived by French and Quebec native speakers

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23/05/2009

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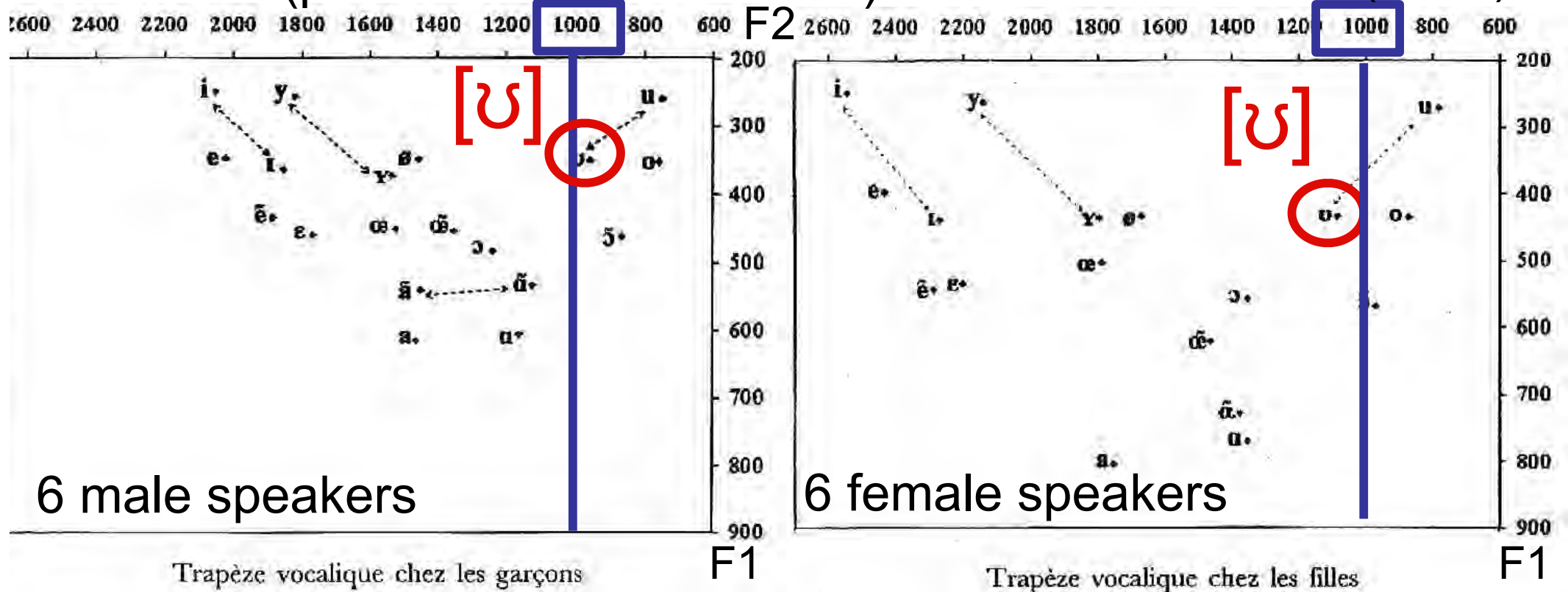


Québec (Laurentian) French

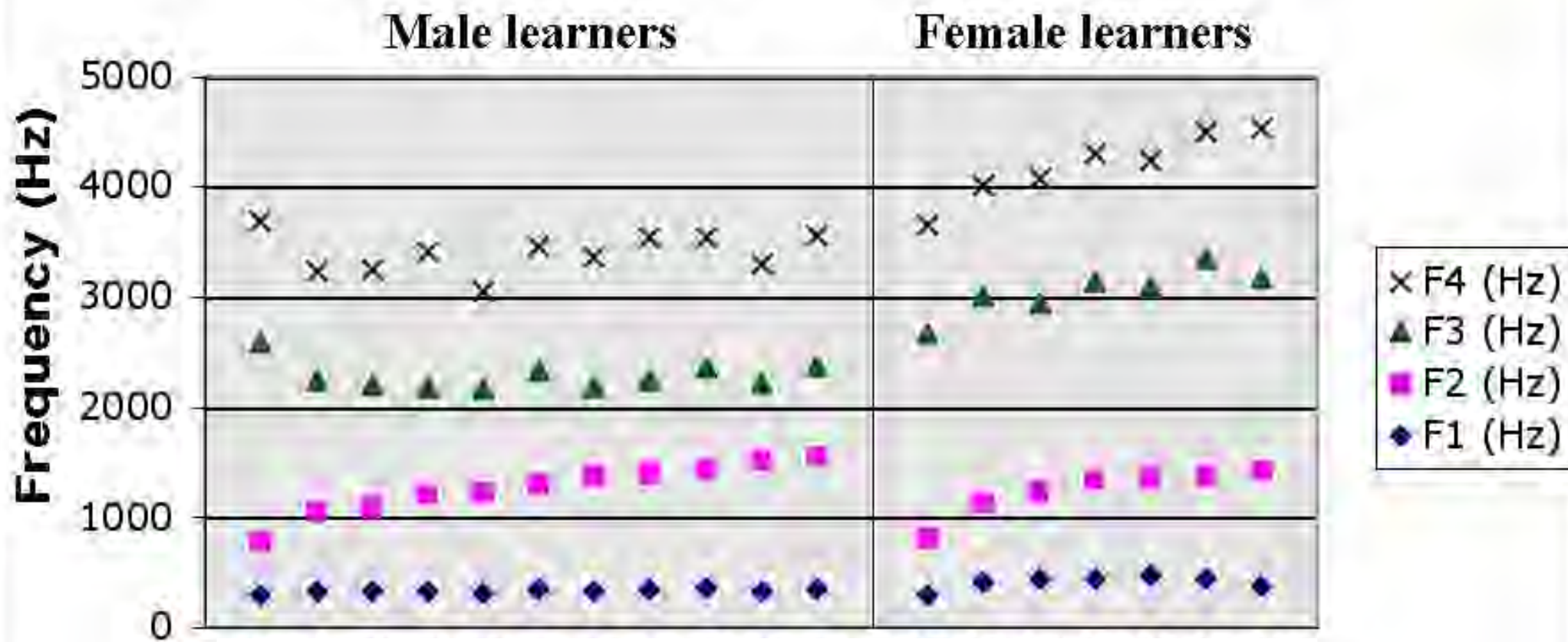
- High (close) vowels /i y u/ have lax allophones [ɪ ʊ ʏ] in closed syllables (« soupe » /sup/ [sʊp]).

150 words (pronounced in isolation?)

Martin (2002)



Stimuli of /u/ pronounced by JSL

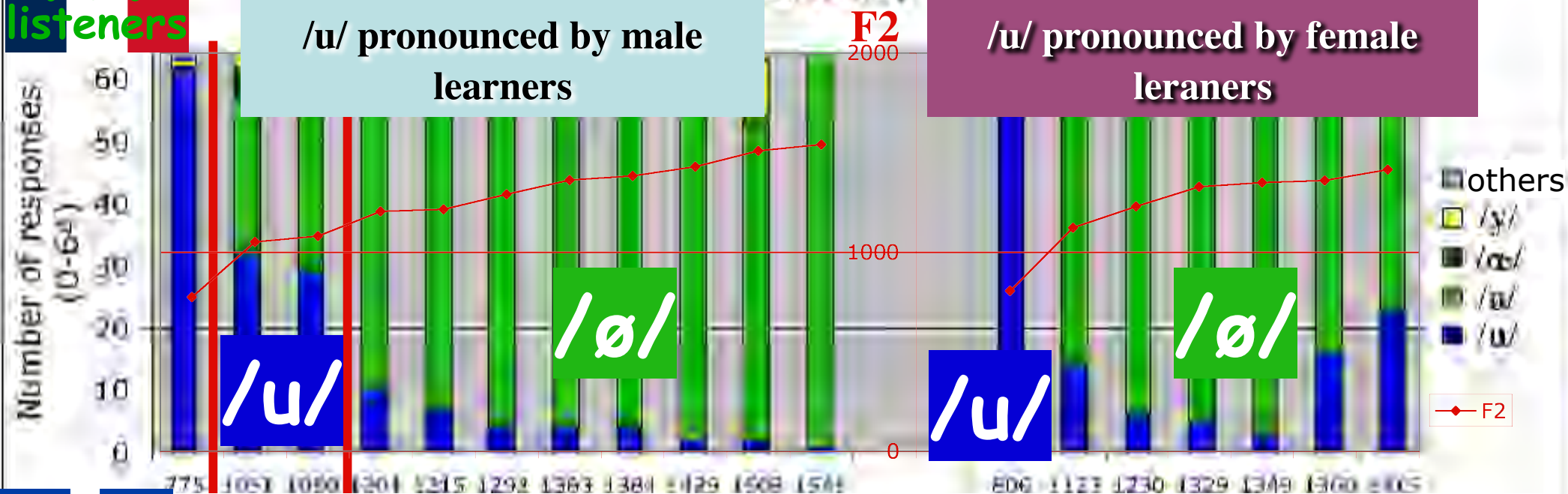


French /u/ in isolation pronounced by 5 Japanese speakers (3 male, 2 female) learning French in Tokyo.

Carrier sentence: “Je dis /u/ comme dans ...” (e.g. Je dis /u/ comme dans “loup”).

Fr.
listeners

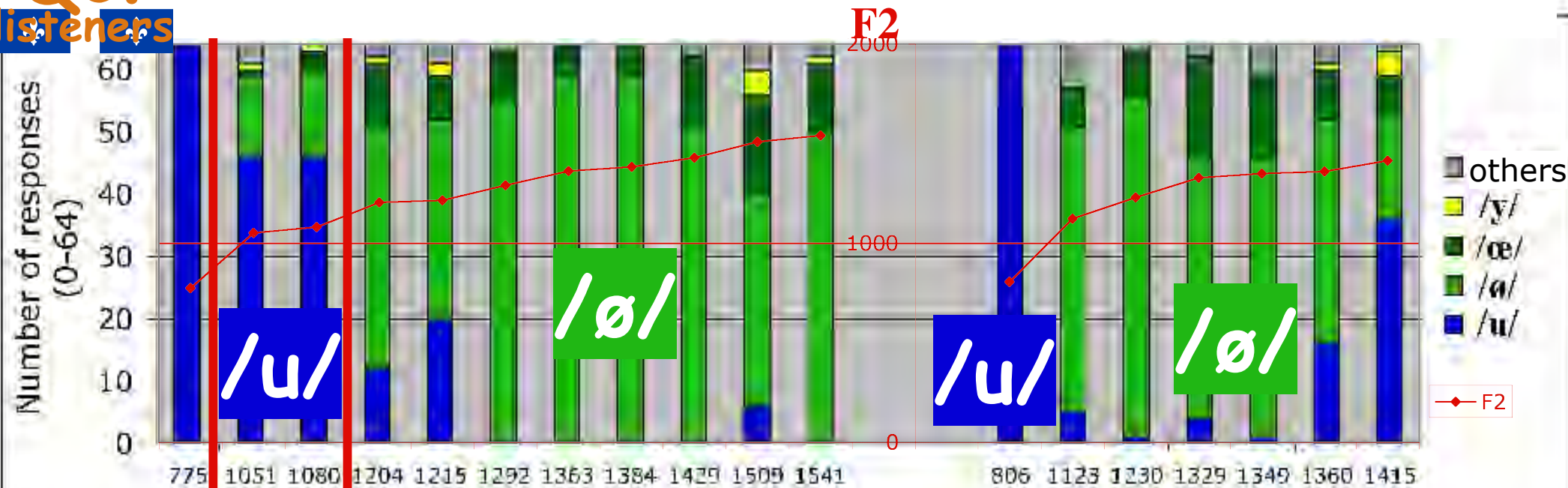
Number of responses for each vowel (16 French-speaking listeners x 4 repetitions)



/u/ pronounced by male learners

/u/ pronounced by female learners

Qc.
listeners




4. Study 2: Conclusion

- French /u/ pronounced by Japanese-speaking learners: variation in judgment between French and Québec listeners concerning the stimuli with F2 between 1000 and 1100 Hz (zone corresponding with the lax [ʊ] in Québec French).
- What about vowels pronounced in open vs closed syllables?
- What about learners living in different environments (Japan, Québec, French-speaking Europe, ...)?

Concluding remarks

- The two series of studies presented here show some effects, even limited, of the variation of phonetic realizations.
- Inter-speaker variability in the same geographic zone to be explored.



ご清聴ありがとうございました。

Merci de votre attention !

Thank you for your attention!

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