

Gender and sound change

November 7, 2016

Interesting findings in language journals

- 네|가 vs. 니|가 vs. 너|가
- Korean /f/ pronunciation
 - An [example](#) from 1998 (at 6:49)
 - (Also, hear examples of /o/ > /u/ at 6:08, 6:38, 9:31, 9:48, and 9:58)
- Language and gender
 - Gender-specific words like 배|지|다
 - Gendered terms like 오빠
 - Gendered association of 애|교
- A lot of stuff on abbreviations and loanwords

Sound change

- **Sound change** is when a pronunciation changes from one sound to another across a speech community.
 - Generally irreversible – Once it changes, it does not change back.
 - Can affect all instances of a sound (phoneme), or only in a certain environment.
- What happens when the sound change occurs in only some speakers but not others?
- What happens when the sound change is not fully complete even within individual speakers?

Two kinds of sound change

- **Change from above** is when the new pronunciation comes from the outside and/or speakers are aware of the new pronunciation.
 - e.g. When a pronunciation comes in from a different dialect, and people recognize it as being new. Although it may or may not be prestigious (i.e. carry overt prestige), it is probably a stereotype.
- **Change from below** is when the change in pronunciation is initiated from within the speech community. Speakers are often not aware of these changes until they are well developed.
 - i.e. They are not adopting an outside form, but are in fact changing their own pronunciation themselves.
 - Once people become aware, these can develop into stereotypes.

Language change and gender

- *When the variable is stable* (i.e. there exists variation, and the change is not going in a single clear direction), women typically use standard forms more frequently than men do.
 - Korean: 말다 pronounced as [막따] vs. [말따]
 - English: “-ing” vs. “-in” e.g. “I’m goin(g) home.”
- *When there is change from above*, women favor the prestige form more than men.
 - Loanwords are adapted more by women than men.
- *When there is change from below*, women are more often the innovators.
 - People are not aware of the change – at first!

Language change and gender

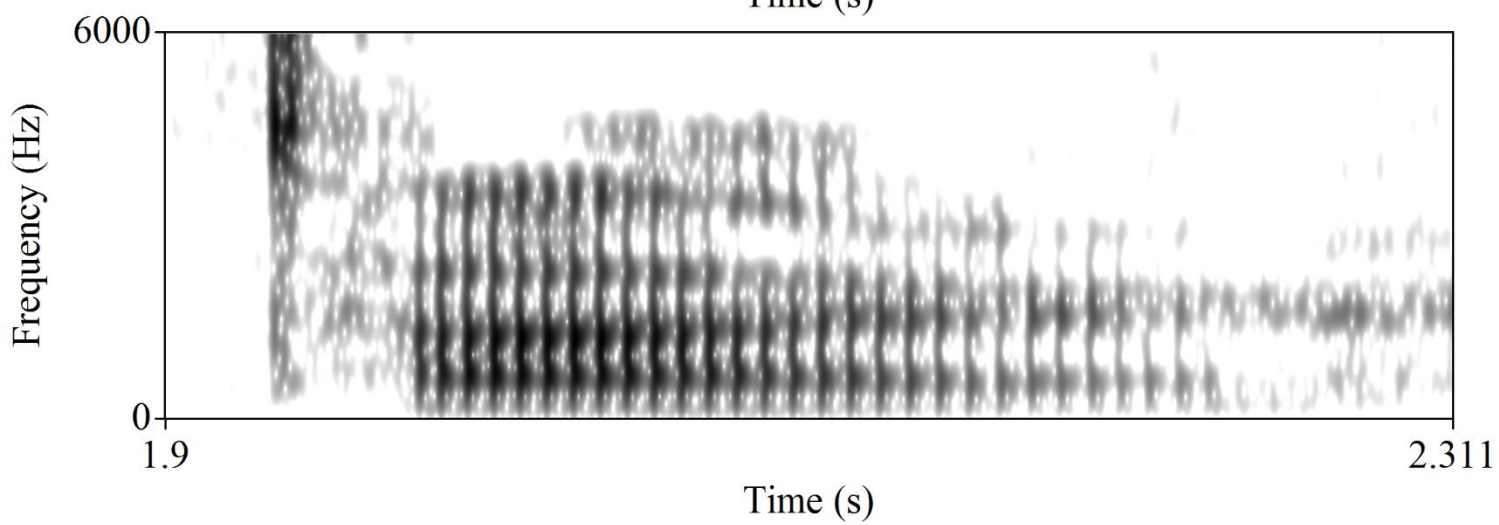
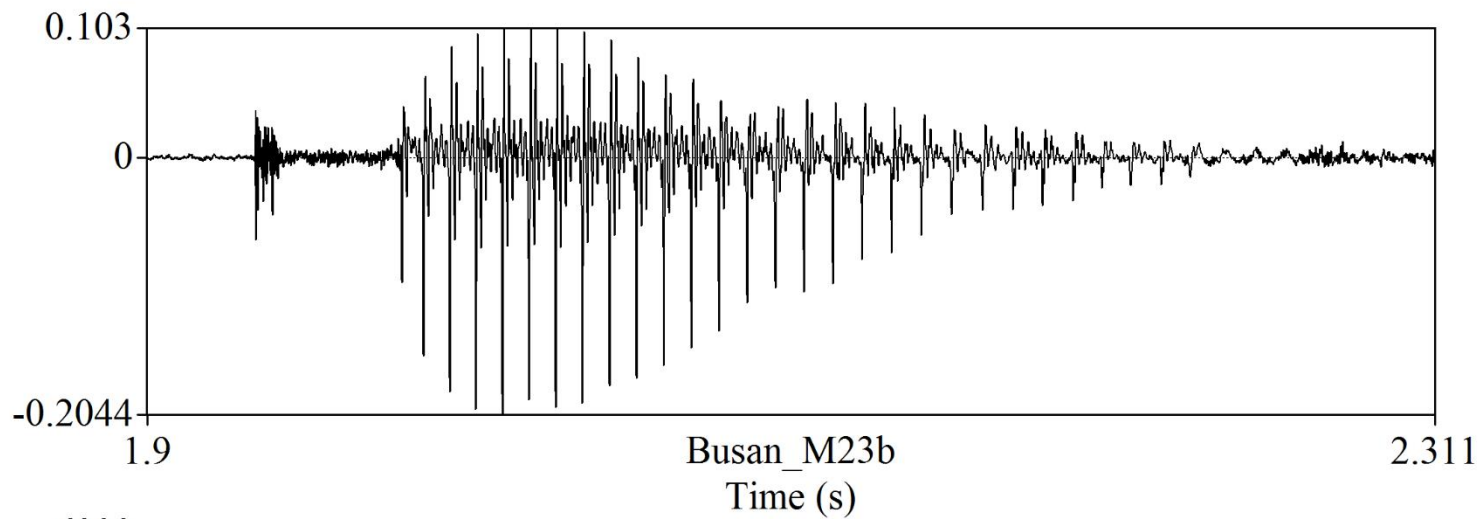
- These principles help explain why women are simultaneously perceived as being more “correct” even though their speech is frequently criticized.
- It is perceived as “correct” when there isn’t an actual change involved, and “incorrect” when there is change involved (and the phenomenon becomes controversial).
- Let’s take a look at a few examples.

Korean stops

- ㅍ /p/, ㅍㅍ /p^{*}/, ㅍㅍㅍ /p^h/
- ㅌ /t/, ㅌㅌ /t^{*}/, ㅌㅌㅌ /t^h/
- ㄱ /k/, ㄱㄱ /k^{*}/, ㄱㄱㄱ /k^h/
- Three main phases
 - Closure
 - Build-up of pressure
 - Release (burst)
- One of the most widely used measure to differentiate stop contrasts is known as VOT, or **voice onset time**, which is the time lag between the burst release and the beginning of the following vowel.

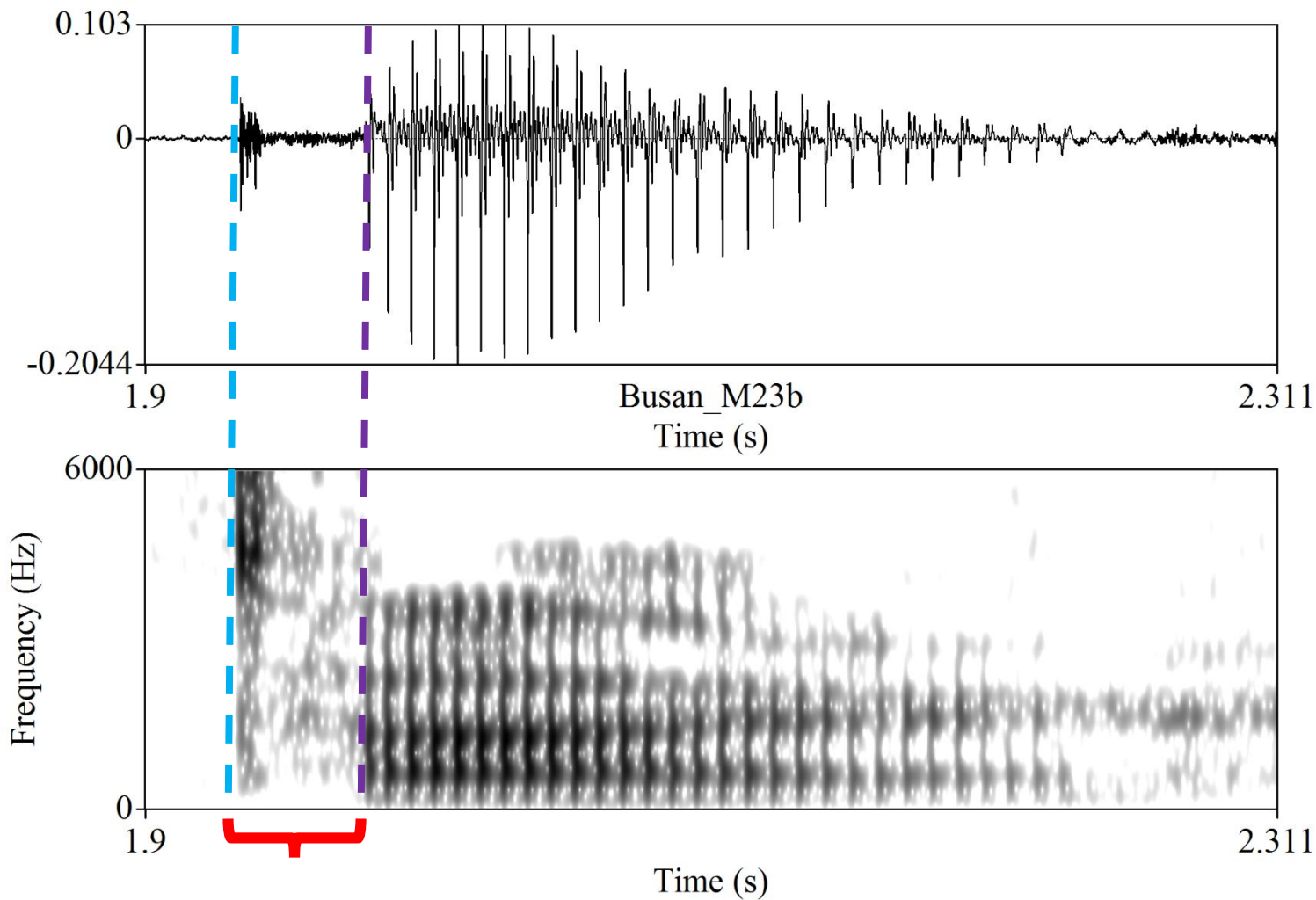
/ta/ “타”

Busan_M23b



/ta/ “타”

Busan_M23b

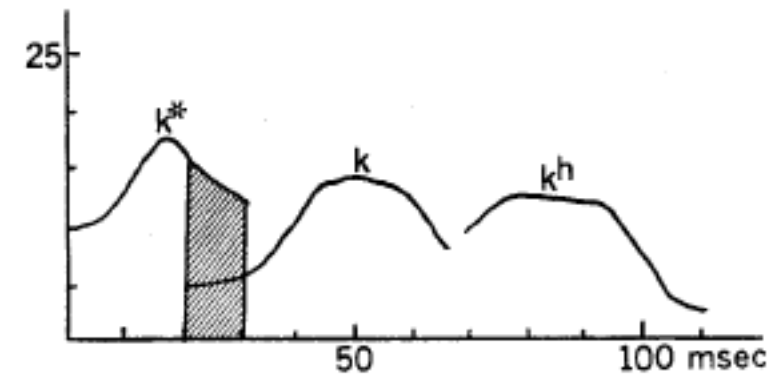
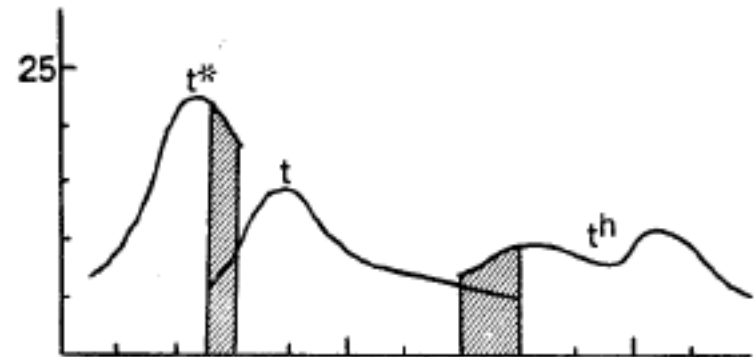
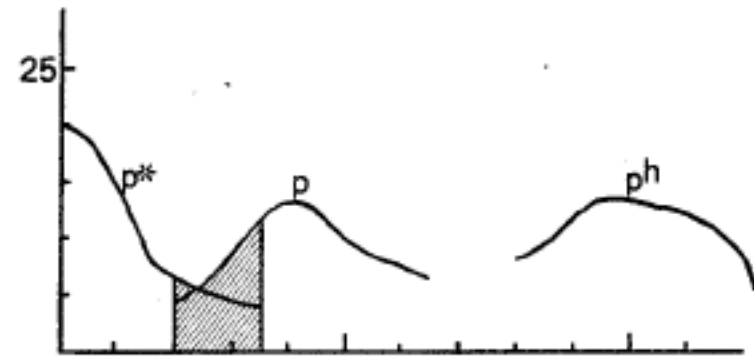


— burst
— voicing

**Voice onset time
(VOT) = 46 ms**

Korean stops

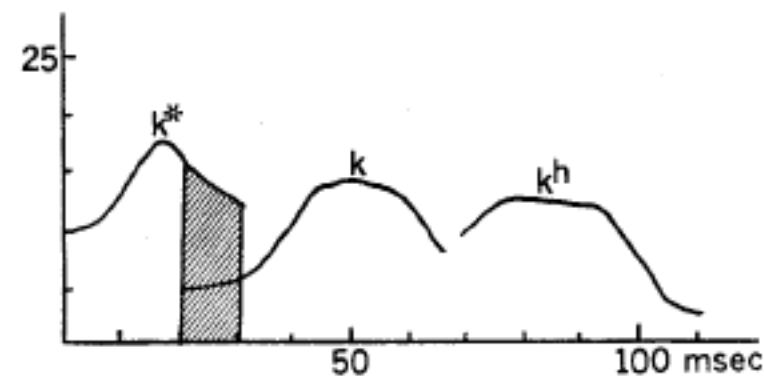
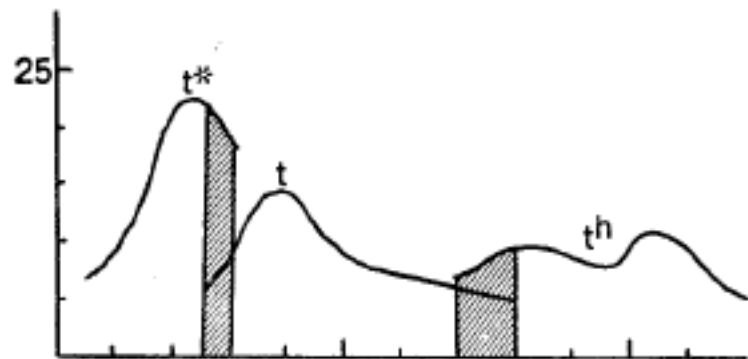
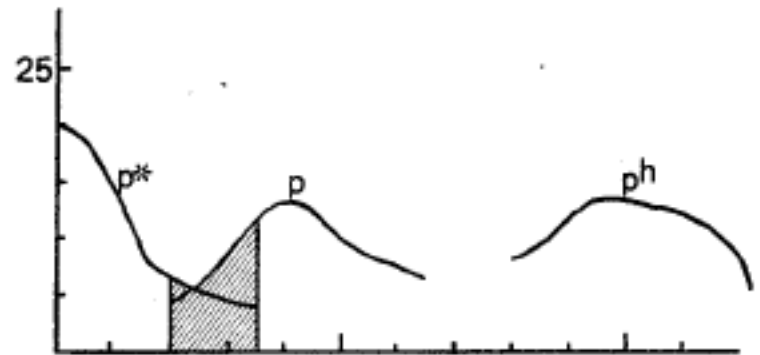
- Three-way contrast between:
 - \square /t*/ “tense”
 - \square /t/ “lax”
 - Ξ /t^h/ “aspirated”
- Historically, the three-way stop contrast could be reasonably differentiated by VOT alone.
 - /t*/ = short lag
 - /t/ = medium lag
 - /t^h/ = long lag



VOT (from Kim 1965)

Korean stops

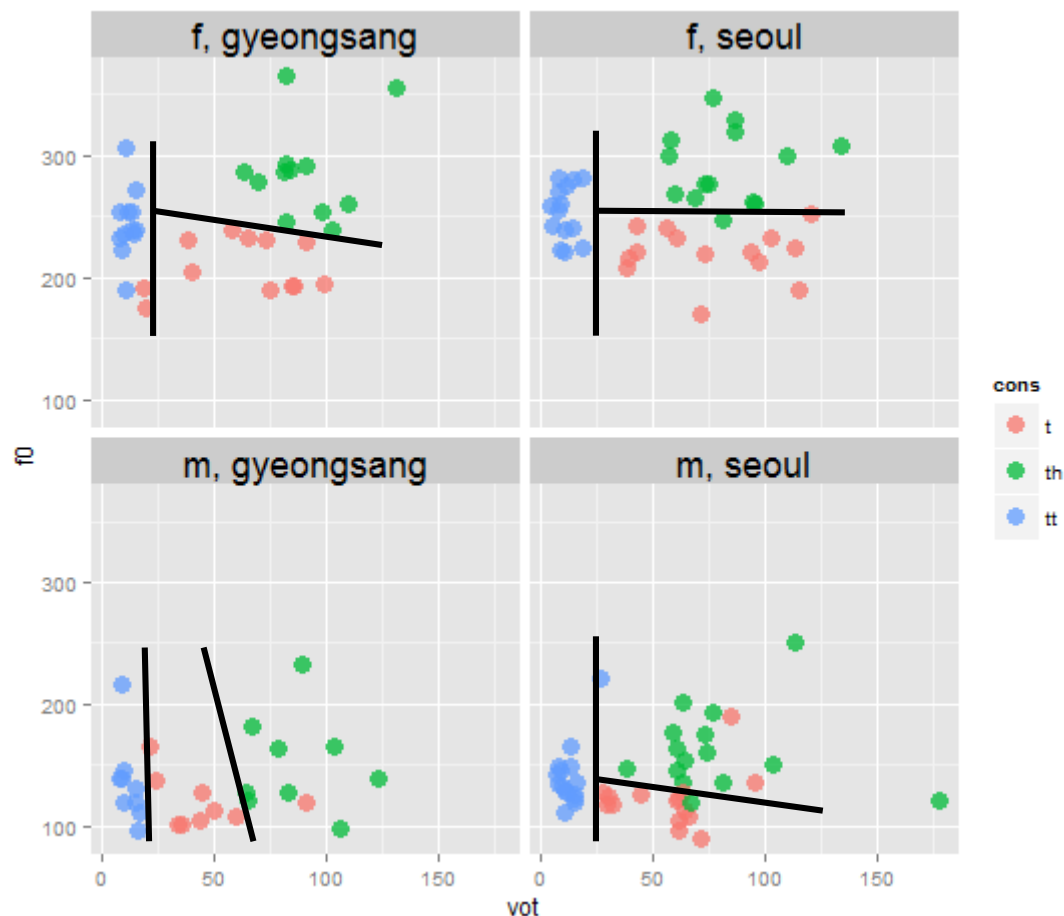
- It was also found that the f_0 (fundamental frequency) of the following vowel could help differentiate between the stops.
 - / t^* / = high f_0
 - / t / = low f_0
 - / t^h / = high f_0
- Listen to [ɫ], [ɛɫ], [ɰɫ], and you should hear “high”, “high”, and “low” pitch.
- Over time, the VOT of [ɰɫ] and [ɛɫ] began to merge, resulting in a sound change ([listen](#) at 0:28).



VOT (from Kim 1965)

Korean stops today

- The change is more advanced in women than in men, and more in Seoul than in Gyeongsang.
- Note that this is a *change from below*. People are not aware of this change, and it is not a stereotype.
- If you don't believe me, I can send you MANY articles documenting this change in hundreds of speakers 😊



How do Korean women say “가자”?

- To non-native speakers (and even some Koreans), female productions of “ㅈ” sometimes sound like “ts” or “dz”
 - “가자” [kad͡ʒa] > [kad͡ʒa]
 - “진짜” [d͡ʒind͡ʒ*ɑ] > [dzind͡ʒ*ɑ]
 - [김하늘 광고](#)
 - [김규리 제크 광고](#)
- What is your experience? Do you agree or not?

Why might some girls do this?

- It's unclear, of course, but there are several possible explanations
- Subconscious intent to sound more feminine?
 - Front cavity size – smaller cavity size correlates with higher pitch
 - Compare place of articulation for ㅅ|-ㅅ| and ㅅ|-ㅈ|
 - What does it feel like?
- Or maybe they're not trying – it's just an anatomical difference
 - If women have smaller vocal tracts, they will have smaller front cavities

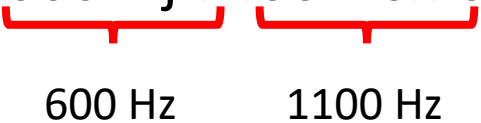
One recent study tested it

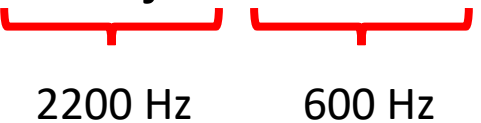
- Kong, Kang & Seo (2014)
- 42 college students – 21 female, 21 male
- Read list of words containing 사, 싸, 자, 짜, 시, 씨, 지, 찌
 - Some word-initial (e.g. 장미, 상추, 시계)
 - Some word-medial (e.g. 이자, 봉사, 개시)
- Measured the frequency of the noise in ㅅ, ㅆ, ㅈ, ㅊ
 - If 자 > 시, then 자 is fronted
 - If 자 = 사, then 자 is very fronted
 - etc. for 지, 짜, 찌

Results

		Word-initial		Word-medial	
		Affricate	Fricative	Affricate	Fricative
/a/ context				가자	가사
lax	female	5769 (± 1562)	7139 (± 1955)	7382 (± 1715)	8043 (± 2852)
	male	4310 (± 841)	6392 (± 1615)	5064 (± 1378)	7335 (± 2465)
tense	female	6532 (± 1411)	8417 (± 2241)	7123 (± 1480)	8456 (± 2361)
	male	4741 (± 1208)	7322 (± 2340)	4960 (± 968)	7885 (± 2279)
/i/ context				가지	가시
lax	female	6448 (± 1513)	5983 (± 1388)	7406 (± 1405)	6260 (± 1140)
	male	4411 (± 638)	4270 (± 1097)	5222 (± 1051)	4492 (± 680)
tense	female	6884 (± 1552)	6593 (± 1596)	4871 (± 1629)	7123 (± 1575)
	male	4788 (± 1136)	4532 (± 788)	4960 (± 882)	4541 (± 771)

Results

- For both genders: $s > j > sh$ (가사 > 가자/가지 > 가시)
- But the differences are different!
- Female: $s \ 8000 > j \ 7400 > sh \ 6300$


600 Hz 1100 Hz
- Male: $s \ 7300 > j \ 5100 > sh \ 4500$


2200 Hz 600 Hz
- Conclusion
 - 좋아 might *not* be “zoa”
 - But 가자 might be “kaza”

Unanswered questions

- Do these fronted 가|자's sound more feminine?
 - i.e. They might sound different, but do they sound *feminine*?
 - Do men and women perceive them differently?
- Do women use this form in some contexts more than others?
 - Does it matter whom they're talking to?
 - Does it matter what they're talking about?