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Similar production, different perception

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Similar production, different perception: Social meaning in cross-linguistic speech perception

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@ZacBoyd_ @JoFrhwld @dialect



Sociophonetics, Gender, & Sexual Orientation



- Phonetic variation can serve as a robust cue to both speaker gender identity and sexual orientation.
 - These social meanings are indexed regardless of the speaker's actual identity (some straight men 'sound gay', etc.)
- Interestingly, some of these cues appear to be cross-linguistic.
 - e.g., sibilants, especially /s/

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/s/ Variation and Gayness

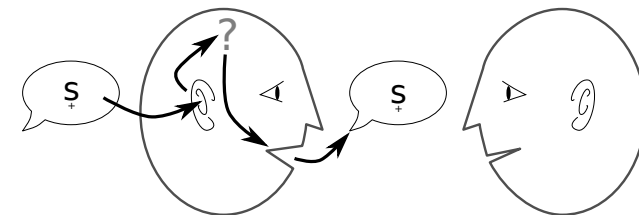


- /s/ US & UK Englishes
 - Campbell-Kibler 2011; Crist 1997; Levon 2007, 2014; Munson 2007; Munson *et al.* 2006; Podesva & Hofwegan 2016; Zimman 2017
- /s/ Other Languages
 - Danish: Maegaard and Phrao 2015; Phrao *et al.* 2014; Dutch: Boyd 2014; Hungarian: Rác and Papp 2015; Spanish: Mack 2010; Walker *et al.* 2014
- Compared to straight men, gay men's /s/
 - Higher Centre of Gravity (CoG) (Niebuhr *et al.* 2011: 10)
 - Negative Skewness

(c.f. Munson *et al.* 2006; Munson 2007; Zimman 2013)

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Today's Talk



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Today's Talk



1. Few studies have looked at this variation in **French** or **German**, and,
2. Few studies have considered bilingual or cross-linguistic recognition of indexical cues (but see Vaughn 2014; Szakay et al. 2016).
3. TODAY:
 - F & G speakers: /s/ indexicality in production?
 - F & G listeners: /s/ indexicality in perception?
 - Both in native language and cross-linguistically (i.e. non-native G/F, English, & Estonian)

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French and German Production – Boyd 2017



- White / Highly Educated / Middle Class / Cis-Gendered Male / Millennials (age 21-30)
- L1 French or German (19 Speakers)
 - French: 4 Gay; 4 Straight
 - German: 7 Gay; 4 Straight
- L1 & L2 English

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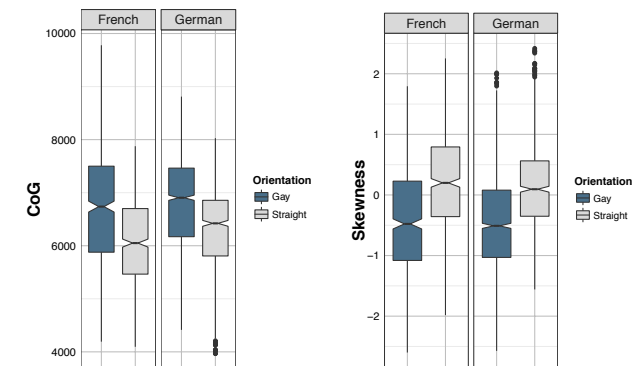
French and German Production – Boyd 2017



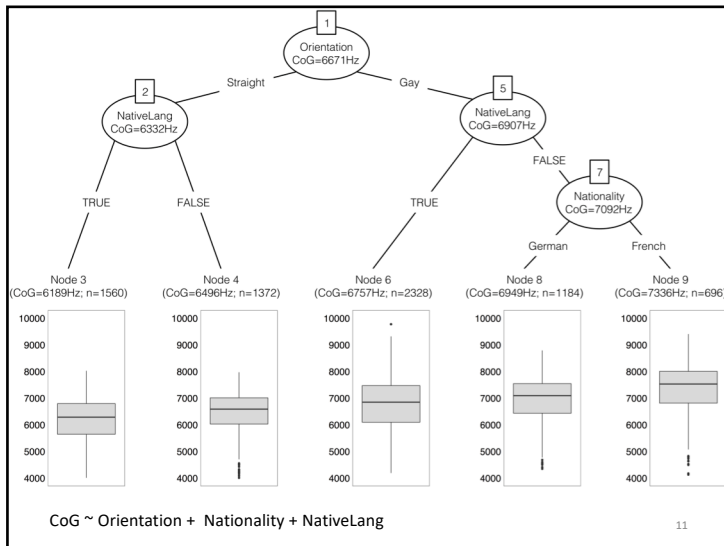
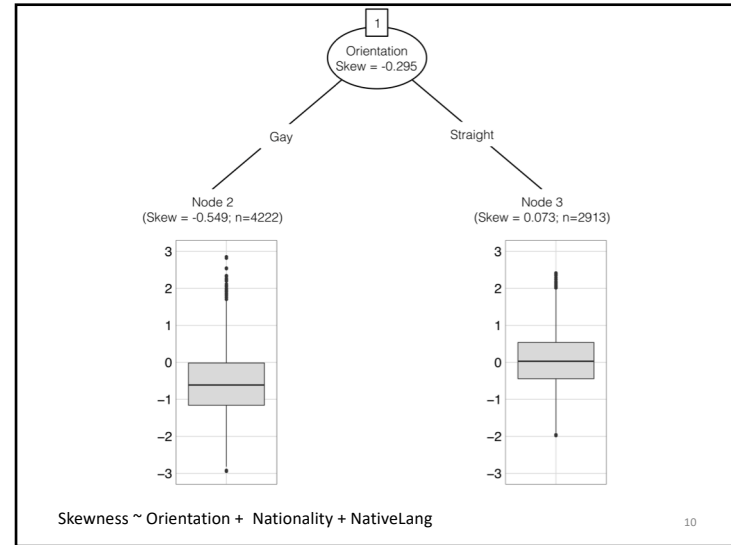
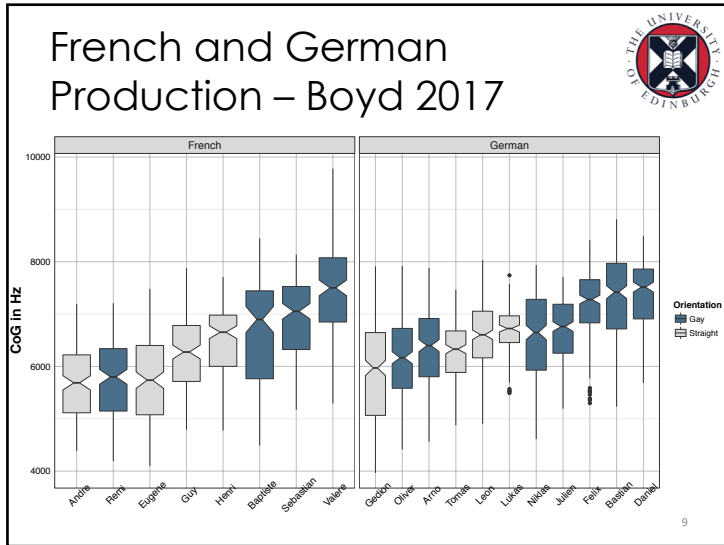
- Results:
 - Both French and German speakers vary /s/ according to sexual orientation.
 - Higher /s/ CoG (and more negative skew) appears to be an indexical marker of gay identity (at least in production)

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French and German Production – Boyd 2017



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French and German Production – Boyd 2017

Q: "Can you tell if someone is gay by how they speak?"

"Something in Speech"	Prosody	/s/ in English	/s/ in L1
18/19	13/19	1/19	0/19

‘Oh, I’ve heard of [the “gay lisp”] in English, but we definitely don’t have it’ – German Gay

Core Questions



- To what extent might French and German *listeners* use /s/ variation as a cue to perceiving someone as gay?
- Do these socio-indexical cues extend cross-linguistically to languages the listener is (un)familiar with?

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Methods



- Levon (2006, 2007) & Pharao *et al.* (2014)
- Matched-Guise Test (Lambert *et al.* 1960)
 - Three [s] guises: [s-], [s], & [s+]
 - Three pitch guises: low-, mid-, & high-
 - One speaker per language stimuli set
- Audio from read speech
 - English (Essex): *Snow White*
 - French (Lyon): *Le Petite Chaperon Rouge*
 - German (Düsseldorf): *Rotkäppchen*
 - Estonian (Püüsi): *Venevere Muinasjutt*

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Stimuli – /s/ guises



/s/ Guise	CoG	Skew
[s-]	5208	1.1502
[s]	6436	0.033
[s+]	7988	-1.0795

- 4+ instances of /s/ per segment
- Not controlled for medial/onset/coda
- Matched for intensity & duration of original speech

	English	Estonian	French	German
[s-]				
[s]				
[s+]				

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Stimuli – Pitch Guises




- Comparison Variable
- Segments containing no sibilants (/s/, /z/, /ʃ/)
- Mid pitch
 - Very minor manipulation which averaged pitch across all speakers
- Low- & high- pitch guises
 - Adjusted mid pitch by $\pm 25\text{Hz}$

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Methods




- Online via Qualtrics
 - 23 German participants
 - 32 French participants
- Guises rated on 6 semantic differentials:
 - **Educated/Uneducated**
 - **Straight/Gay**
 - **Lazy/Hardworking**
 - **Friendly/Unfriendly**
 - **Masculine/Effeminate**
(German: Maskulin/Feminin*)
 - **Natural/Synthetic**



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Analysis



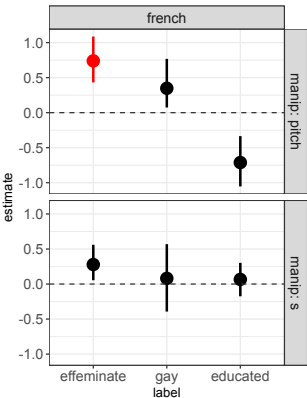
- Estimated pseudomedians and confidence intervals via Hodges-Lehman estimator
 - Linguistic feature (/s/ or pitch)
 - Stimulus language
 - Rating scale
- P-values: one-sample Mann-Whitney U tests
 - Adjusted for multiple comparisons using the Holm-Bonferroni method

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French Results



French listener's rating differences (hi-mid)




Null result for /s/ manipulation.

p-values

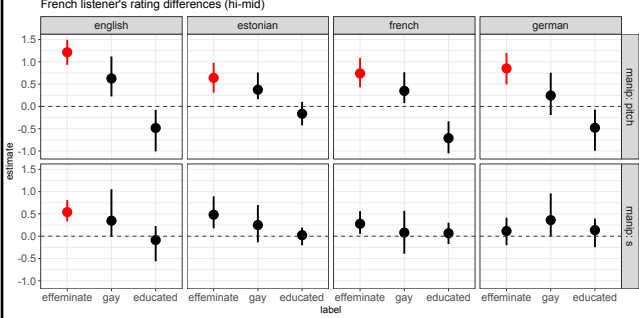
- p(adj) > 0.05
- p(adj) < 0.05

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French Results



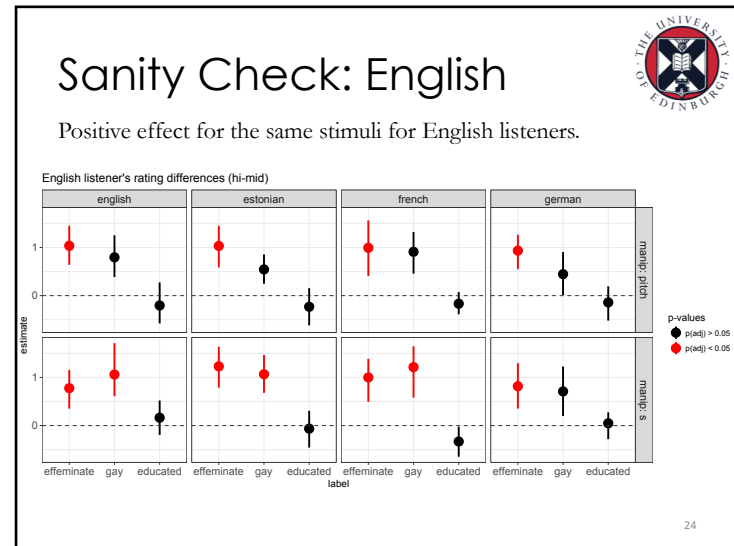
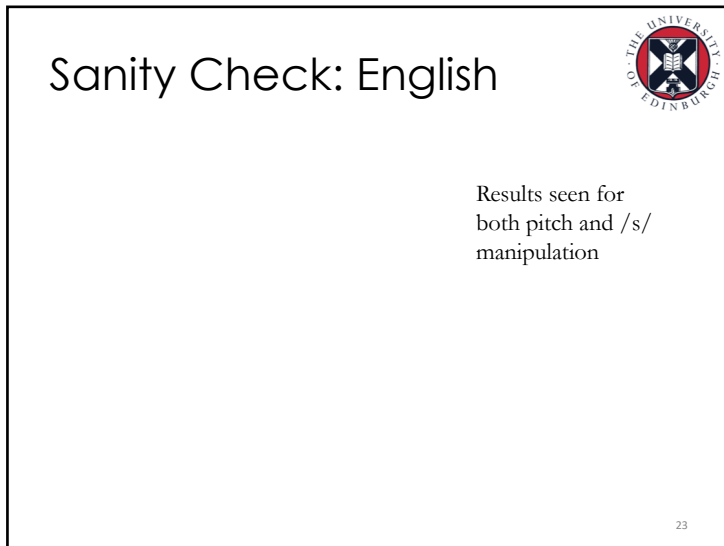
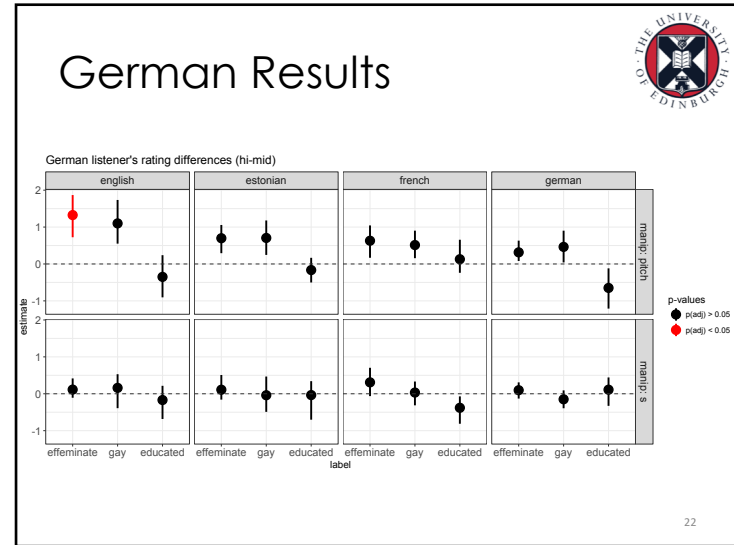
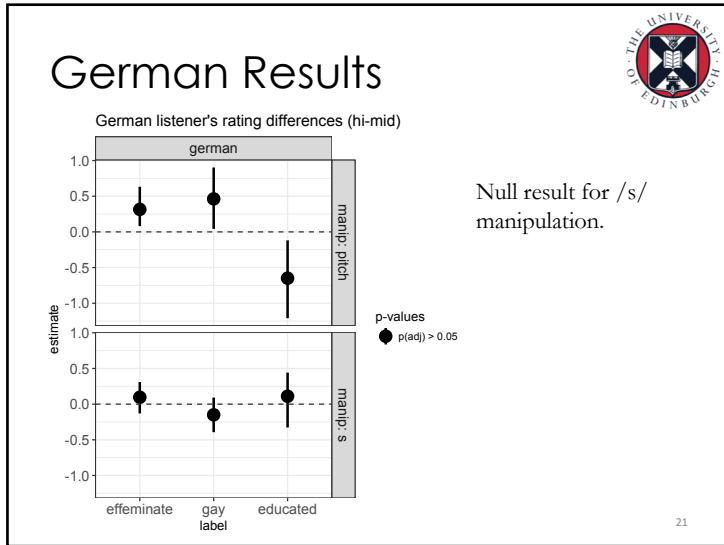
French listener's rating differences (hi-mid)



p-values

- p(adj) > 0.05
- p(adj) < 0.05

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All together now

Graph of All three languages together on /s/ stimuli



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Summary

- /s/ results:
 - French and German listeners do not hear [s+] as “gay” or “effeminate”
 - Contrast to English listeners who hear it as “gay sounding” in native lang. stimuli as well as other languages (*i.e. indexical transfer* from English to other languages)
- No effects seen for listeners’:
 - Sexual orientation or gender
 - English (or other) language ability



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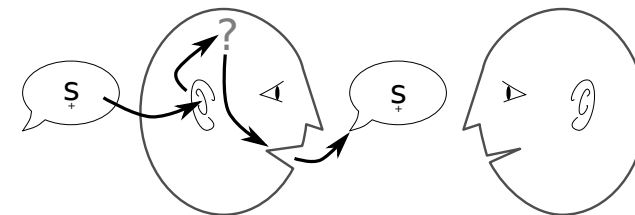
Discussion

- The results show a mismatch between production and perception of /s/ indexicality for both French & German gay/straight identity.
 - This was for own-language, but also other-languages, regardless of proficiency (cf. English listeners).
- Hence, “Gay and Straight French and German Men Use Different /s/-es but Don’t Perceive Them Differently”

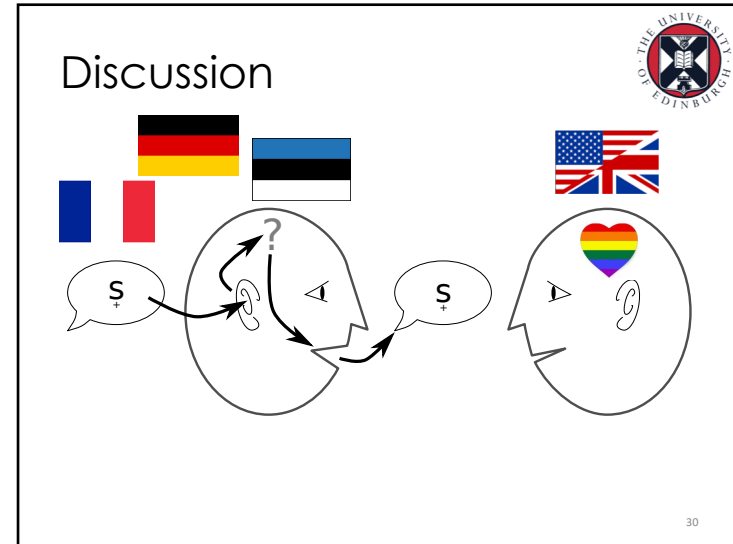
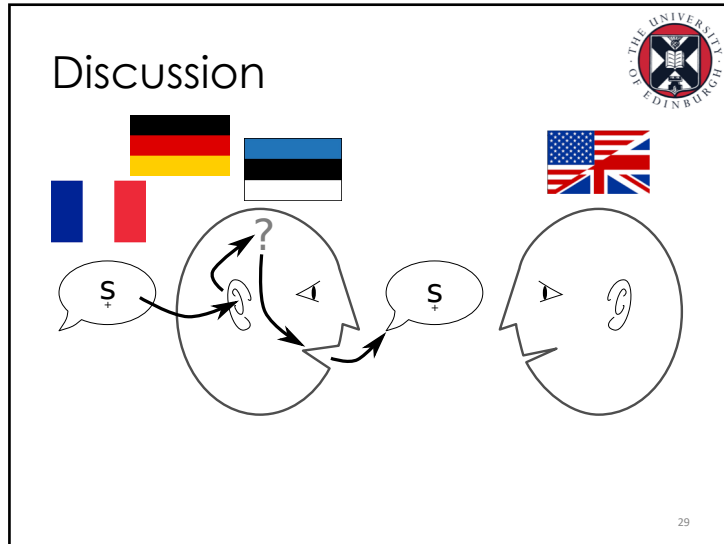


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Discussion



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Discussion



- Our evidence supports the observation that indexicality in production precedes indexicality in perception:
 - Indexical orders rely on “recognition” (Agha 2003) of signs as *being signs*, i.e., as marking stylistic distinctiveness (Irvine 2001).
 - French/German [s+] currently has “meaning potential” (Eckert 2016), waiting for its “baptismal moment” (Silverstein 2003) to be taken up as an index of gay identity.

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Thank You!



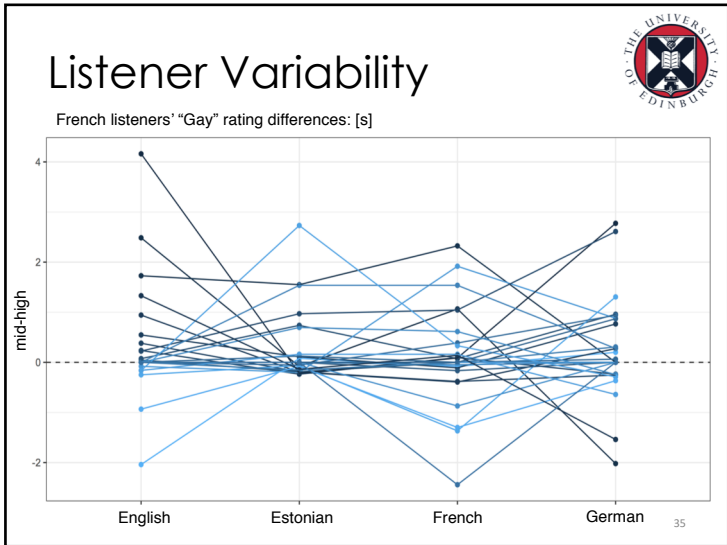
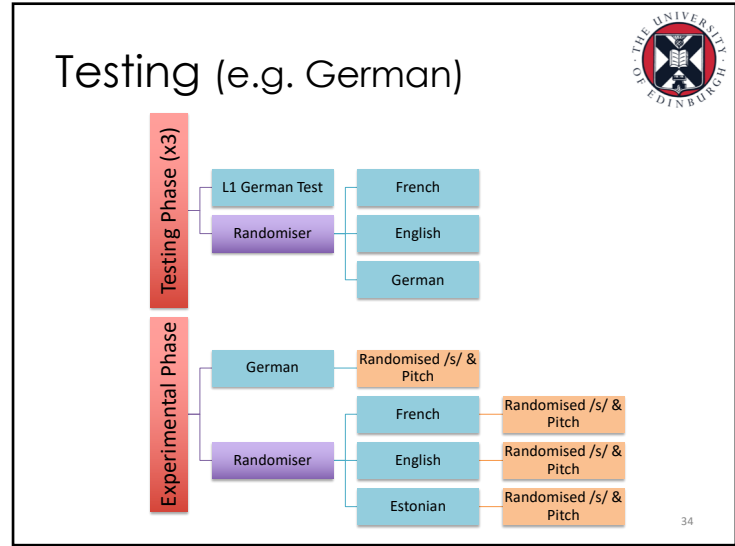
- Thanks for your attention!
- Special thanks to our translators
 - Mirjam Eiswirth (German); University of Edinburgh
 - Michaël Gauthier (French); University of Lyon 2
- Additional thanks to:
 - Our pilot participants for their invaluable feedback
 - Members of the *Language Variation and Change Research Group* at the University of Edinburgh

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Extra Slides



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Respondents



Survey Language	Total	Native Language ≠ Survey Language	Remaining participants
German	27	4	23
French	44	12	32

German Listeners' Birthplace:
Austria (N=13); Germany (N=11); Italy (N=1); Switzerland (N=1); unknown (N=1)

French Listeners' Birthplace:
Belgium (N=1); Canada (N=4); France (N=26); Switzerland (N=1)

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Methods



- Four stimuli languages
 - one speaker per language

Pretest Ratings
(7pt Likert Scale)

Speaker	Straight/Gay	Masc./Effem.
English (Essex)	1.733	2
French (Lyon)	2.866	2.333
German (Düsseldorf)	2.333	1.866
Estonian (Püünsi)	2.333	2

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Other Future Directions



- Listeners were very diverse with respect to regional dialect/accent background.
 - English listeners were raised in Australia (N=1), New Zealand (N=1), the UK (N=9), and the US (N=16).
 - French listeners were from Belgium (N=1), Canada (N=4), France (N=26), and Switzerland (N=1).
 - German listeners were from Austria (N=13), Germany (N=11), Italy (N=1), Switzerland (N=1), or unknown (N=1).
- **Future:** Control for region (especially given known differences in English; Stuart-Smith 2017).

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Discussion



- However, the speakers who produced the distinction were not the same people who responded to the perception survey.
 - **Future:** Production/Perception within the same participant group.
- This matters for understanding the mechanism behind production/ perception mismatches:
 - e.g., in phonetics/phonology (e.g., near-mergers)
 - Note: near-merger is *within* the same speaker-listener

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Stimuli – Pitch Guises



- “Filler Stimuli”
- Segments containing no sibilants (/s/, /z/, /ʃ/)
- Mid pitch
 - Manipulated within $\pm 5\text{Hz}$ across all speakers
- Low- & high- pitch guises
 - Adjusted mid pitch by $\pm 25\text{Hz}$
- Estonian pitch



Estii low



Estii mid



Estii high

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