

Voice-Gender Effects on Word Gender

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Background

- Gender is a culturally-dependent construct that can be associated with categories of humans, abstract concepts, and even words
- English has very limited grammatical gender, removing that interaction and leaving words with culturally defined gender associations regardless of their sounds or structure [3]
- Grammatical and conceptual gender are not always congruent and may interact cognitively to influence the genders that people associate with words and their meanings [2]

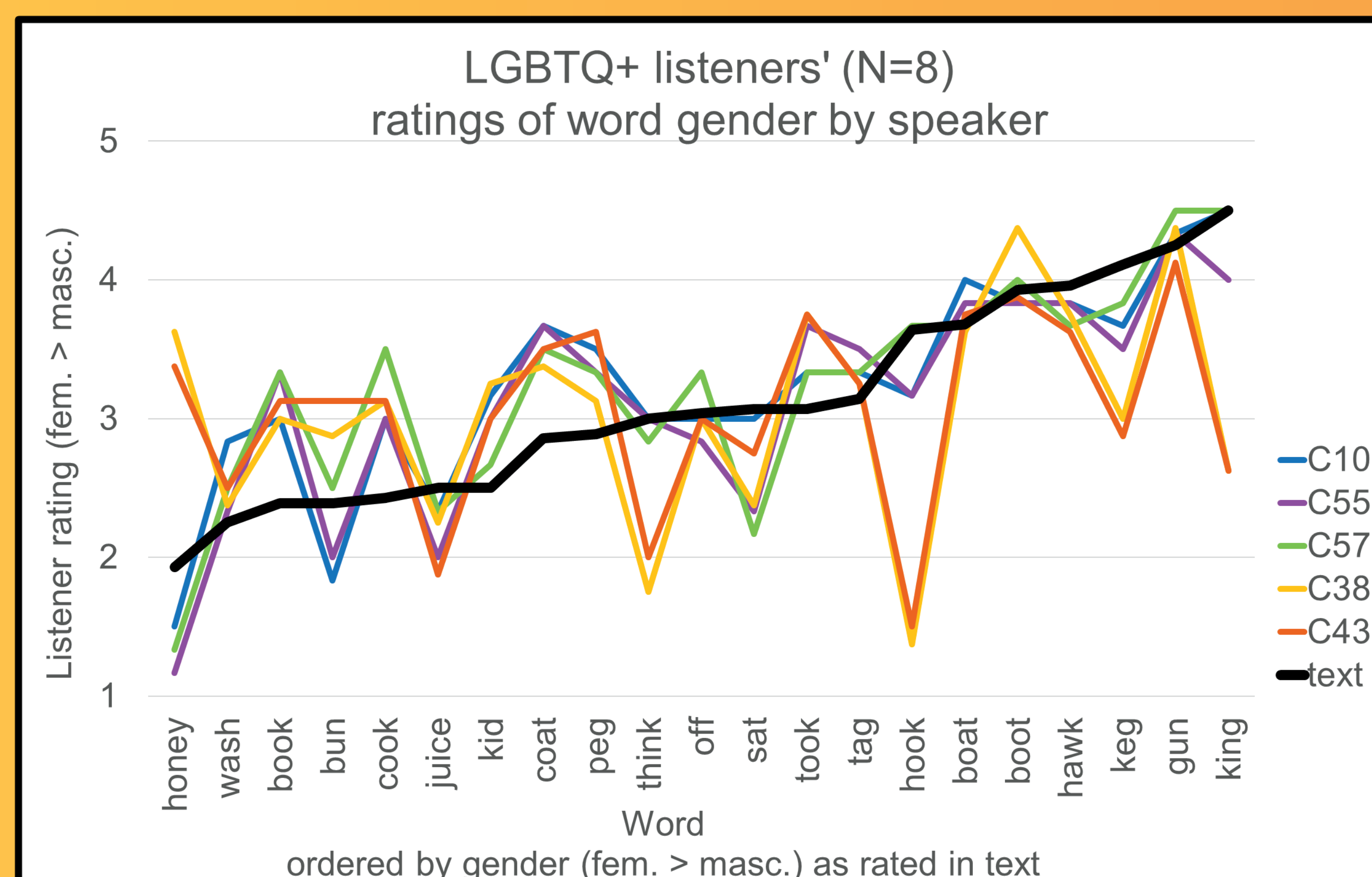
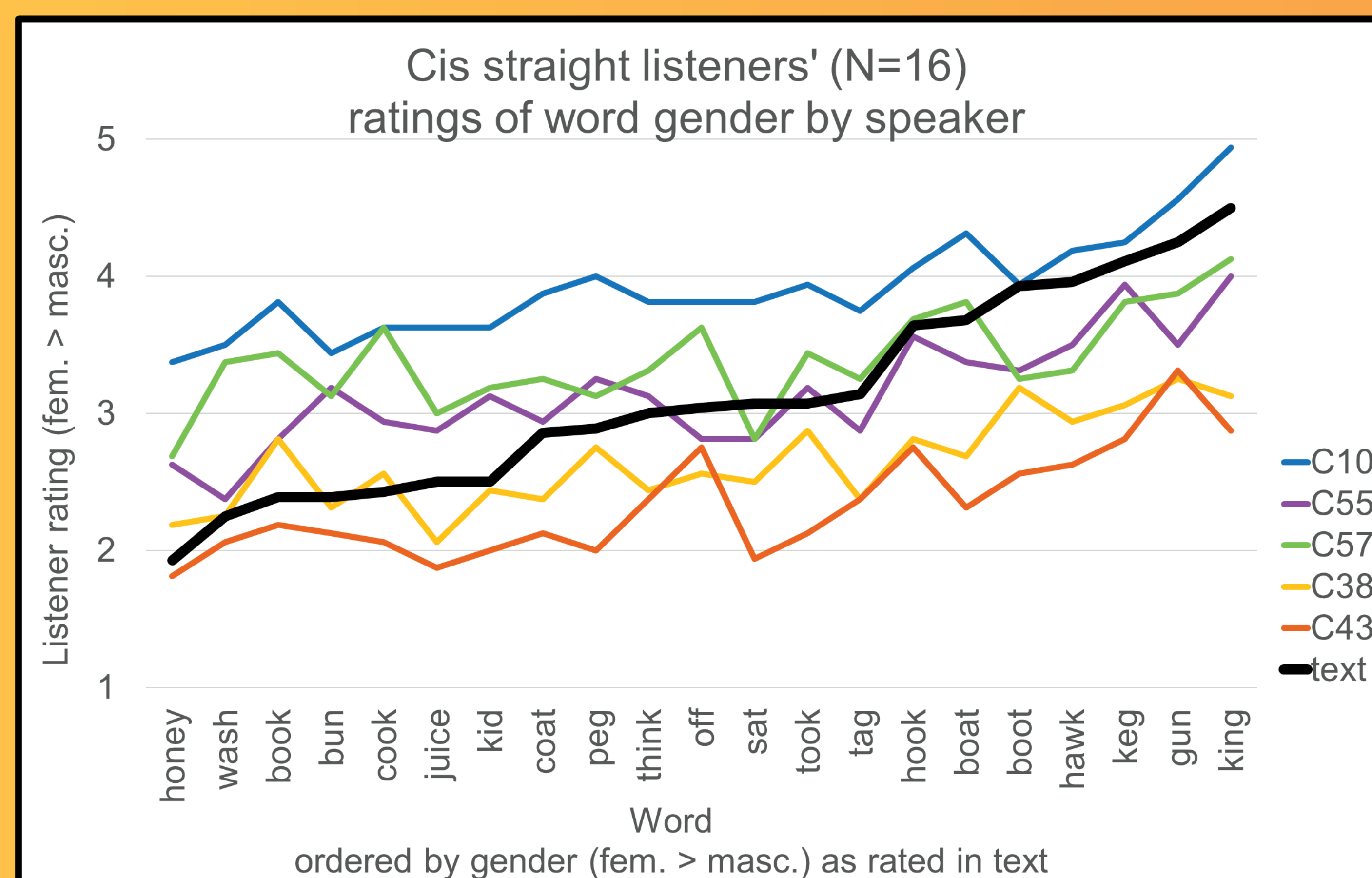
Methods

- Participants rated 20 printed English words as “very feminine”, “somewhat feminine”, “any/no gender”, “somewhat masculine” or “very masculine” to collect data of semantic gender of the words
 - boot, think, kid, cook, bun, coat, peg, hook, juice, tag, sat, keg, took, honey, boat, king, hawk, book, gun, and wash [1]
- In a separate phase, different participants listened to people of different gender identities reading the words in random order and rated the words using the same gender scale
 - Voices as rated by author:
 - C10: Masculine Male, C55: Feminine Male, C57: Any gender, C38: Masculine Female, C43: Feminine Female [1]

Participants

- Majority were white, in college, age 18-24yrs
- Printed Words Survey: 14 Women, 15 Men
- Recorded Words Survey: 17 Women, 8 Men, 2 Non-binary
 - Women: 11 Cis Straight, 4 Cis Bisexual, 1 unspecified
 - Men: 5 Cis Straight, 1 Cis Gay, 2 unspecified
 - Non-Binary: 1 genderqueer, 1 non-binary

Does the perceived gender of a speaker’s voice affect the associated gender of the words they say?



Voice-gender affects word-gender very strongly for Cis Straight listeners and not as strongly for LGBTQ+ listeners

Discussion

- LGBTQ+ listeners are better able to ignore the speaker's gender and focus on the word
- LGBTQ+ listeners do not think "book" and "cook" are gendered words compared to cis straight listeners who thought of them as feminine words
- LGBTQ+ listeners rated only 5 words ("honey, think, hook, keg, king") differently when said by feminine voices compared to masculine/gender-neutral voices.
- Cis straight listeners were more influenced by the gender of the speaker but the word itself
- This could be explained if a person's perception of the gender of words relies on their familiarity/experience with a gender spectrum
 - Maybe LGBTQ+ listeners are used to thinking outside of the gender binary

Future Work

- Ask listeners about the gender of the speaker rather than the word
- Include more LGBTQ+ participants in the printed word rating task
- Include a larger sample of participants with an even distribution of gender identity and orientation
- Expand to other ages, regions, levels of education, urbanity, ethnicity, and experience with non-binary and LGBTQ+ culture

1. Becker, Kara; Khan, Sameer ud Dowlah; Zimman, Lal. 2016. "Reed Linguistics Gender and Language Project". <https://doi.org/10.7910/DVN/M1EKER>, Harvard Dataverse, V1, UNF:6dZ/P57YB33mDvstJhd6A= (fileUNF)
2. Merritt, B., & Bent, T. (2022). Revisiting the acoustics of speaker gender perception: A gender expansive perspective. *The Journal of the Acoustical Society of America*, 151(1), 484-499. <https://doi.org/10.1121/1.5000928>
3. Sato, S., & Athanassopoulos, P. (2018). Grammatical gender affects gender perception: Evidence for the structural-feedback hypothesis. *Cognition*, 176, 220-231. <https://doi.org/10.1016/j.cognition.2018.03.014>