

The RAINBO Connection: Vocal construction of nonbinary gender identities

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Methods

Participants *(recruitment ongoing)*

- Dialect: New Zealand English
- Gender: Nonbinary (6); Binary (6)
- Age: 18-20 (9); 44-52 (3)

“In the Wild” Recordings

- Recorded by participants⁵
- Conversational partner(s) & topics of their own choosing
- Emphasis on breadth of contexts over quantity of recordings

Interview Recordings

- Discussion of each recording
- Reflections on language use
- Responses to questions about gender, history, family, and presentation

Introduction

Nonbinary: An umbrella term encompassing genders outside of the individual binary categories of “man” and “woman.”

“**Gender**... is not something residing inside the human, but a relational concept, just like ‘big’ cannot be ‘big’ unless there is something other than ‘big’, that makes it so.”¹

Stereotypes and descriptions about features of the “gendered voice” abound, both acoustic^{2,3} and social⁴.

Research Question:

Given their gender identity exists outside of expected vocal norms, how do nonbinary speakers negotiate vocal production and interlocutor assumption to present gender identity?

The RAINBO Corpus

Recorded Audiovisual Interviews with Nonbinary and Binary Orators

- ❑ Digital corpus of audio recordings and selfies
- ❑ Fully transcribed⁶
- ❑ Time-aligned^{7,8}
- ❑ Designed for accessibility and future expansion
- ❑ Suitable for analyses on
 - Pitch
 - Phoneme Variation
 - Discourse Analysis
 - Comparative Statistics
 - Ethnography

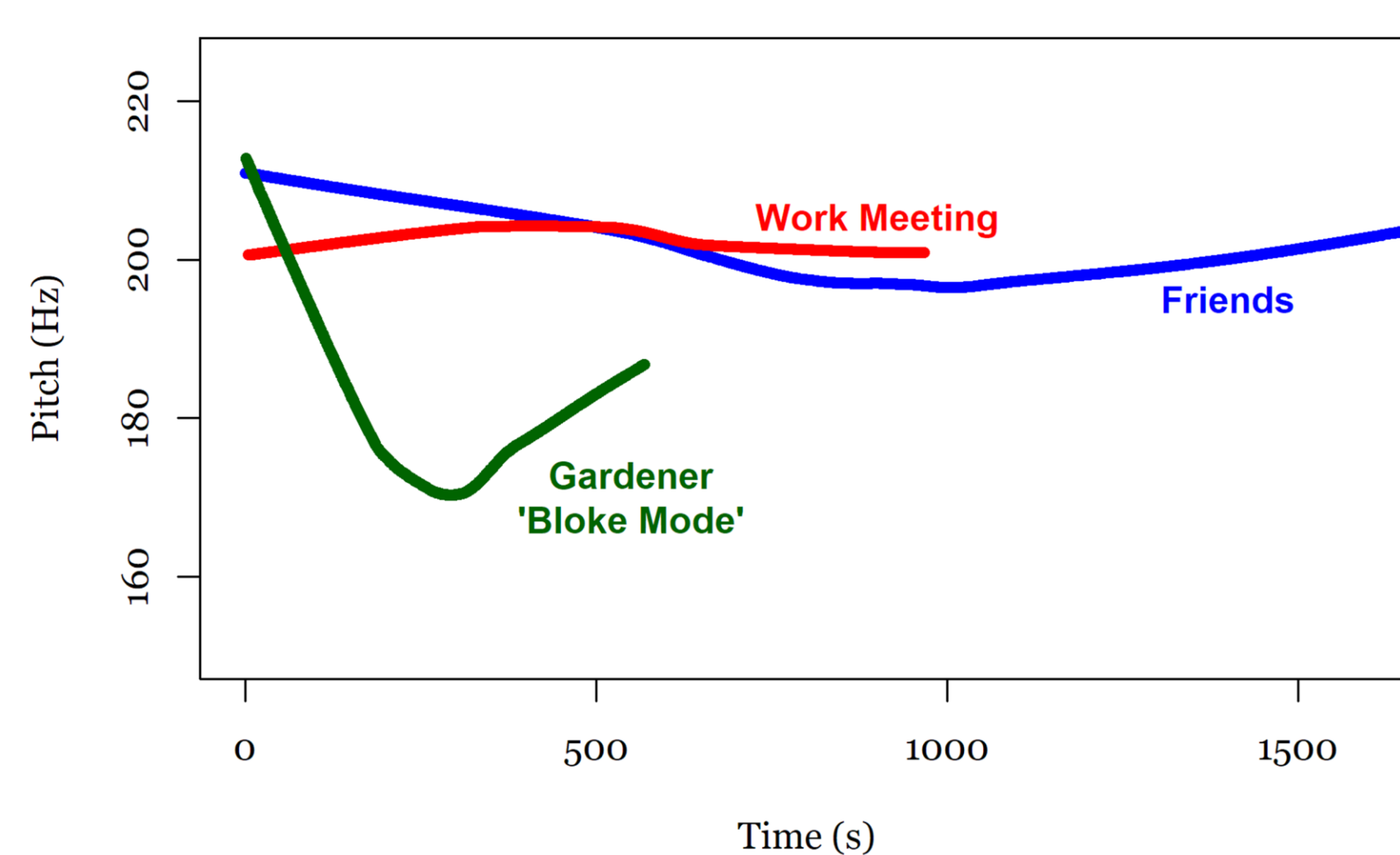
Pitch Analysis: In Their Own Words

1. Persona Projection

NB03: Nonbinary, 47

Red and Blue are interlocutors of equal standing, Green is a hired gardener.

Pitch Changes Over Time, Across Contexts



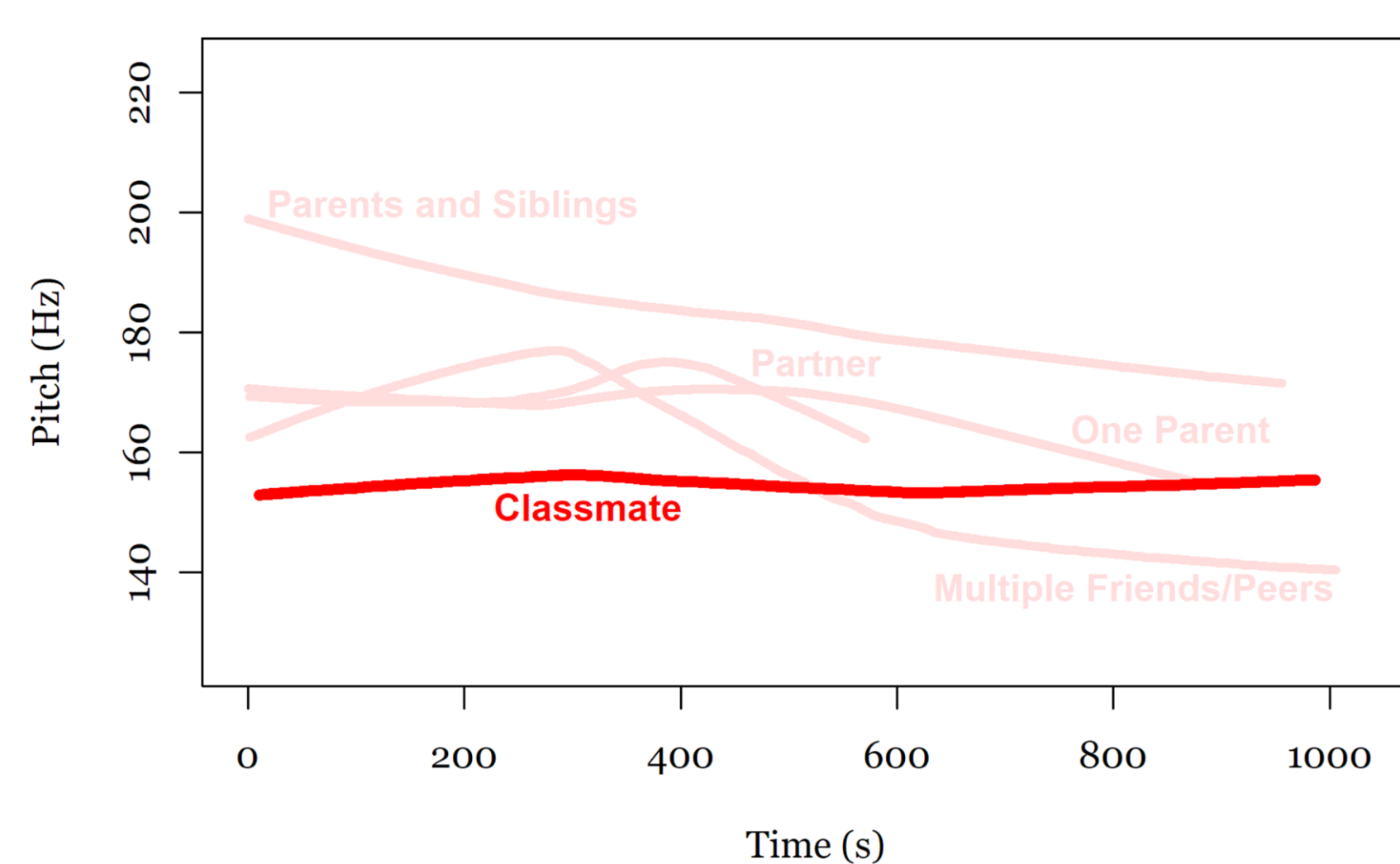
“I’ve always done this thing which I’ve always called bloke mode . Which is like especially you know going into hardware shops and things and you know you just go and t~ yeah r~ yeah right mate I know what you’re talking about yeah yeah”

2. Listener Expectation

NB07: Agender, 21

Light Red are known interlocutors (3+ years), Red is a new peer.

Pitch Changes Over Time, Across Interlocutors



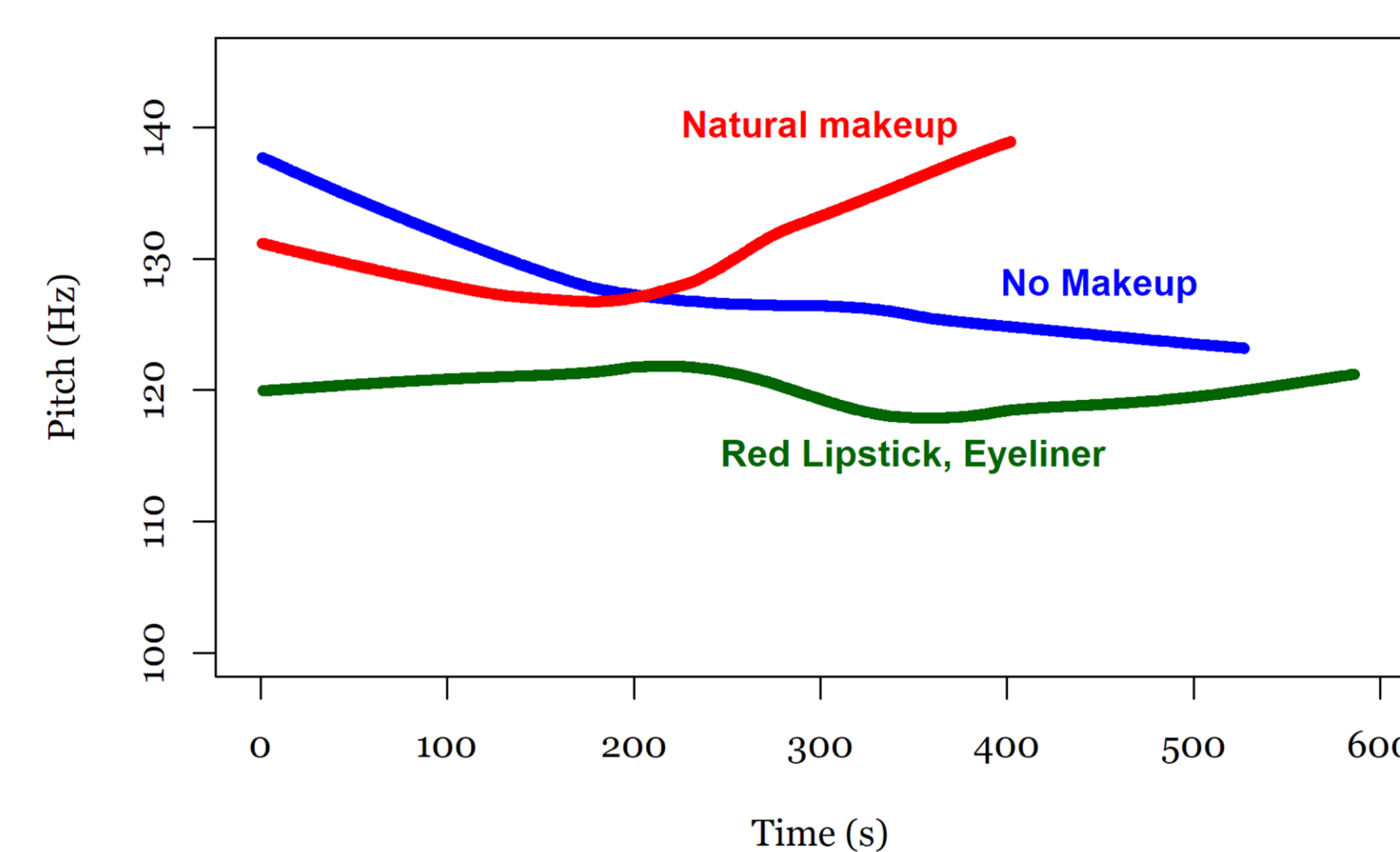
“But when I’m around him it’s always like . I always try to . I always like . self conscious I’m very self conscious about the way I sound and what I say [...] when I first met him I tried to keep my voice very . I don’t know low or whatever”

3. Paralinguistic Factors

NB02: Femaleish, 20

Blue and Red are subtle looks, Green is an “evening” look.

Pitch Changes Over Time, Across Presentation



*“it’s not that you know putting on makeup is feminine it’s it’s that you ha~ it’s that **not** putting on makeup is automatically not feminine”*

Guide to Graphs

- Above each plot is the participant’s code, self-identified gender, and age.
- Each plot shows pitch data from a single participant over multiple conversations.
- Recordings contain the participant’s voice only; periods of silence are smoothed.
- Below each plot is a relevant quote from the interview. ~ indicates hesitations . indicates pauses.

Conclusions

Low Pitch *may* be evoked as a marker of stereotypical masculinity...

...But is not *intrinsic* to a masculine presentation.

1. As a shortcut to other masculine stereotypes, such as gardening competence.

2. As a way to meet interlocutor expectation of (low-pitched) voice.

3. Highly gendered paralinguistic factors (such as makeup) may “carry the load” of gender projection and allow for greater flexibility in production.

Bibliography

1 Gherardi, S. (1995). | 2 Davies, S., & Goldberg, J. M. (2006). | 3 Daly, N., & Warren, P. (2001). | 4 Bayard, D., & Krishnayya, S. (2001). | 5 Gnevshva, K. (2015). | 6 Sloetjes, H., & Wittenburg, P. (2008). | 7 Fromont, R., & Hay, J. (2012). | 8 Talkin, D. (2015) | I would like to acknowledge the patience and guidance of my supervisors Jen Hay, Vica Papp, and Erin Harrington, and the support of faculty and my fellow students at the Linguistic Department and NZILBB | I must also acknowledge my research participants, without whom this work would not be possible | A full bibliography and additional resources can be found by scanning the QR card below.



Full Bibliography:

- 1 Gherardi, S. (1995). Gender, symbolism and organizational cultures. Sage.
- 2 Davies, S., & Goldberg, J. M. (2006). Clinical aspects of transgender speech feminization and masculinization. *International Journal of Transgenderism*, 9(3-4), 167-196.
- 3 Daly, N., & Warren, P. (2001). Pitching it differently in New Zealand English: Speaker sex and intonation patterns. *Journal of Sociolinguistics*, 5(1), 85-96.
- 4 Bayard, D., & Krishnayya, S. (2001). Gender, expletive use, and context: Male and female expletive use in structured and unstructured conversation among New Zealand university students. *Women and Language*, 24(1), 1.
- 5 Gnevsheva, K. (2015). Variation in passing for a native speaker: Accentedness in second language speakers of English in production and perception.
- 6 Sloetjes, H., & Wittenburg, P. (2008). Annotation by category-ELAN and ISO DCR. In *6th international Conference on Language Resources and Evaluation (LREC 2008)*.
- 7 Fromont, R., & Hay, J. (2012). LaBB-CAT: An annotation store. In *Proceedings of the Australasian Language Technology Association Workshop 2012* (pp. 113-117).
- 8 Talkin, D. (2015). REAPER: Robust Epoch And Pitch Estimator. *Github*: <https://github.com/google/REAPER>.