

An Evaluation of Sociolinguistic Elicitation Methods

Zac Boyd, Zuzana Elliott, Josef Fruehwald,
Lauren Hall-Lew, and Daniel Lawrence

Z.C.Boyd@sms.ed.ac.uk

Twitter: @ZacBoyd_ @ze_edinburgh @JoFrhwld @dialect @danielplawrence



THE UNIVERSITY
of EDINBURGH



Sociophonetic Methods

- Our goal:
 - To model phonetic variation in naturalistic speech with respect to both linguistic and social predictors.

Sociophonetic Methods

- Two contradictory challenges:
 1. The Observer's Paradox.
 2. The need to obtain instances of variables that are rarely occurring in naturalistic speech, especially in particular phonological environments.

Sociophonetic Methods

- Ideally we need:
 1. To elicit speech with *as little influence as possible from the researcher* and the research context.
 2. To elicit *exact lexical items* that include the variable of interest, especially in a specific range of phonological contexts.

Sociophonetic Methods

- *Sociolinguistic* methods for eliciting different speech styles:
 - Sociolinguistic interviews:
 - Interviews, reading passages, word lists, minimal pairs
 - Self-recordings
- *Phonetic* methods for eliciting different speech styles:
 - Laboratory tasks e.g. *Map Task*, *Diapix*
 - No empirical studies evaluating the relative efficacy of these methods for sociolinguistics.

Current Study

- One speaker:
 - Female, bilingual English & Shanghai Mandarin, from San Francisco, California (age 29 in 2013)
 - cf. Hall-Lew (2009, *et seq.*)
- Comparison of phonetic variation by method:
 - Interview Speech
 - Lab Tasks
 - Self-recordings
 - Reading Passages

Interview

- Third interview of three (2008, 2012, 2013)
 - Interviewee a personal friend of the interviewer by the time of the interview
 - Perhaps more comfortable/casual style
- Relatively brief (10 minutes)
- Mostly meta-linguistic topics
 - Perhaps more Attention Paid to Speech

Lab Tasks

- An interactive Map Task (Brown, *et al.* 1984)
- An interactive Diapix task (Baker and Hazan 2011)
- A monologic Diapix task with an imagined interlocutor (e.g. Scarborough, *et al.* 2007)
- A narration of a wordless picture book (Varon 2007; as in Troiani *et al.* 2008)
- A silent movie narration (Chafe 1980)
- Semantic Differential questions (Labov 2001)



Reading Passages

- The Rainbow Passage (Fairbanks 1966)
- The North Wind and the Sun (Deterding 2006)
- Please Call Stella (Weinberger and Kunath 2011)
- The Wolf Passage (Deterding 2006)
- Basketball, Dolls, Victoria's Secret (Gordon 2000)

Self-Recordings

- Speaker trained on: Zoom H2 recorder, external lapel microphone, procedure of obtaining ethical consent. (Podesva 2007 *et seq.*; Sharma 2011)

- Three separate sessions within one week:
 - visit with two friends (before interview)
 - lunch with a different friend (after interview)
 - at home with sister (after interview)

Variables: Sound Changes

California Vowel Shift

- **KIT, DRESS, TRAP**
 - Advanced variants are *lower & backer* (F1, F2)
- **GOAT, GOOSE**
 - Advanced variants are *fronted* (F2)
- **BAN (=TRAP before nasals)**
 - Advanced variants are *raised & fronted* (F1, F2)

(see Eckert 2004; Hall-Lew 2009, 2011, 2013; Hinton et al. 1987)



Token Count By Style

Vowel	Interview	Self-Rec	Lab	RdgPssg
KIT	42	297	330	51
DRESS	52	291	487	102
BAN	81	105	319	39
TRAP	55	302	337	78
GOAT	68	312	304	48
GOOSE	17	120	196	86

Analysis

- Recordings orthographically transcribed and time-aligned using *FAVE*.
- Formant values at 20% of vowel duration.
- `lmer` models fit with *method*, *syllable position* and *preceding* and *following* segment as fixed predictors with by-word random intercepts.
- 95% confidence intervals estimated through 1000 parametric bootstrap replicates.

Analysis

Baseline Condition: Interview

Rationale: The Sociolinguistic Interview is the dominant elicitation method in the field.

Comparisons:

Interview vs. Self-Recordings

The least structured elicitation task.

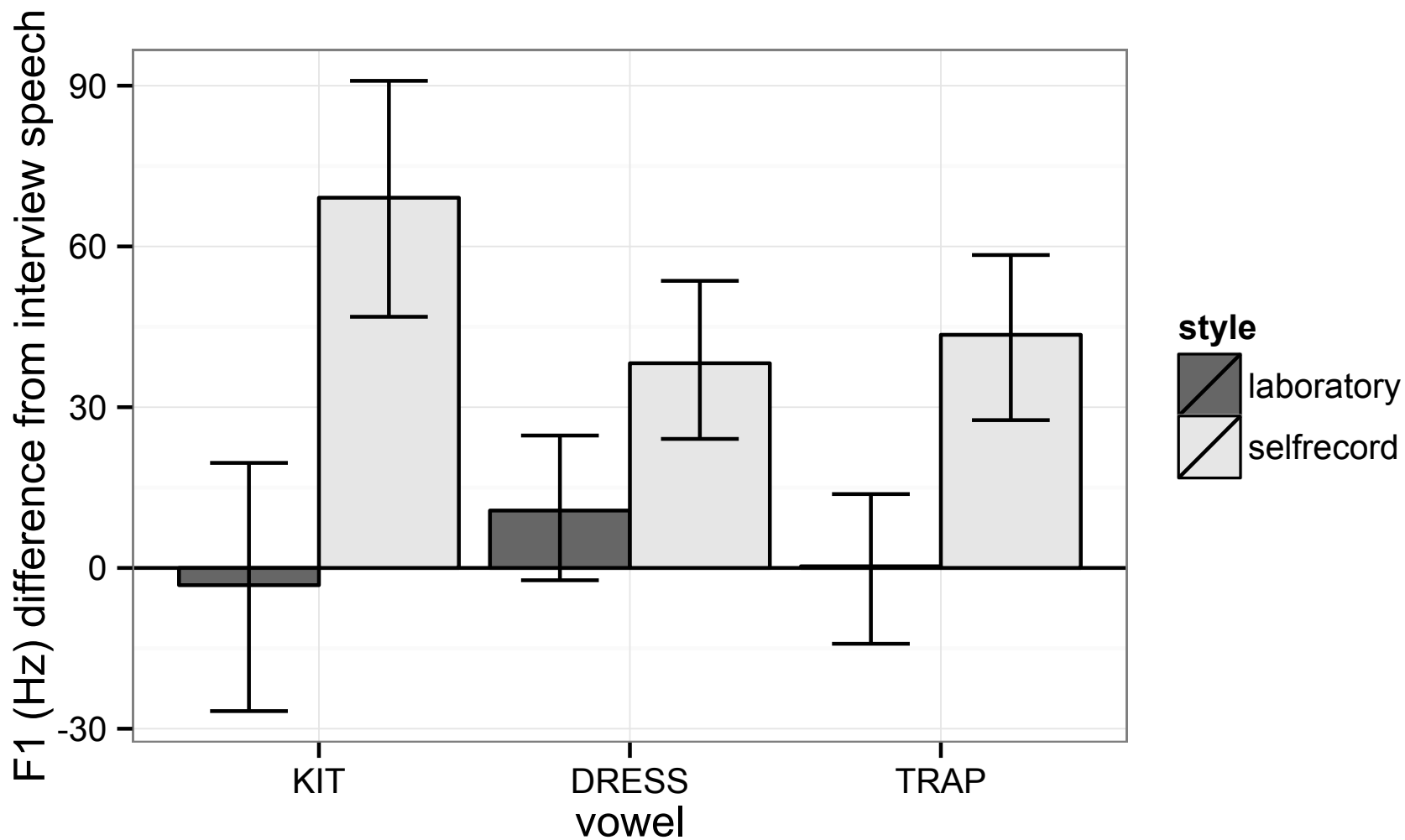
Prediction: Should elicit the **most** advanced variants.

Interview vs. Lab Tasks

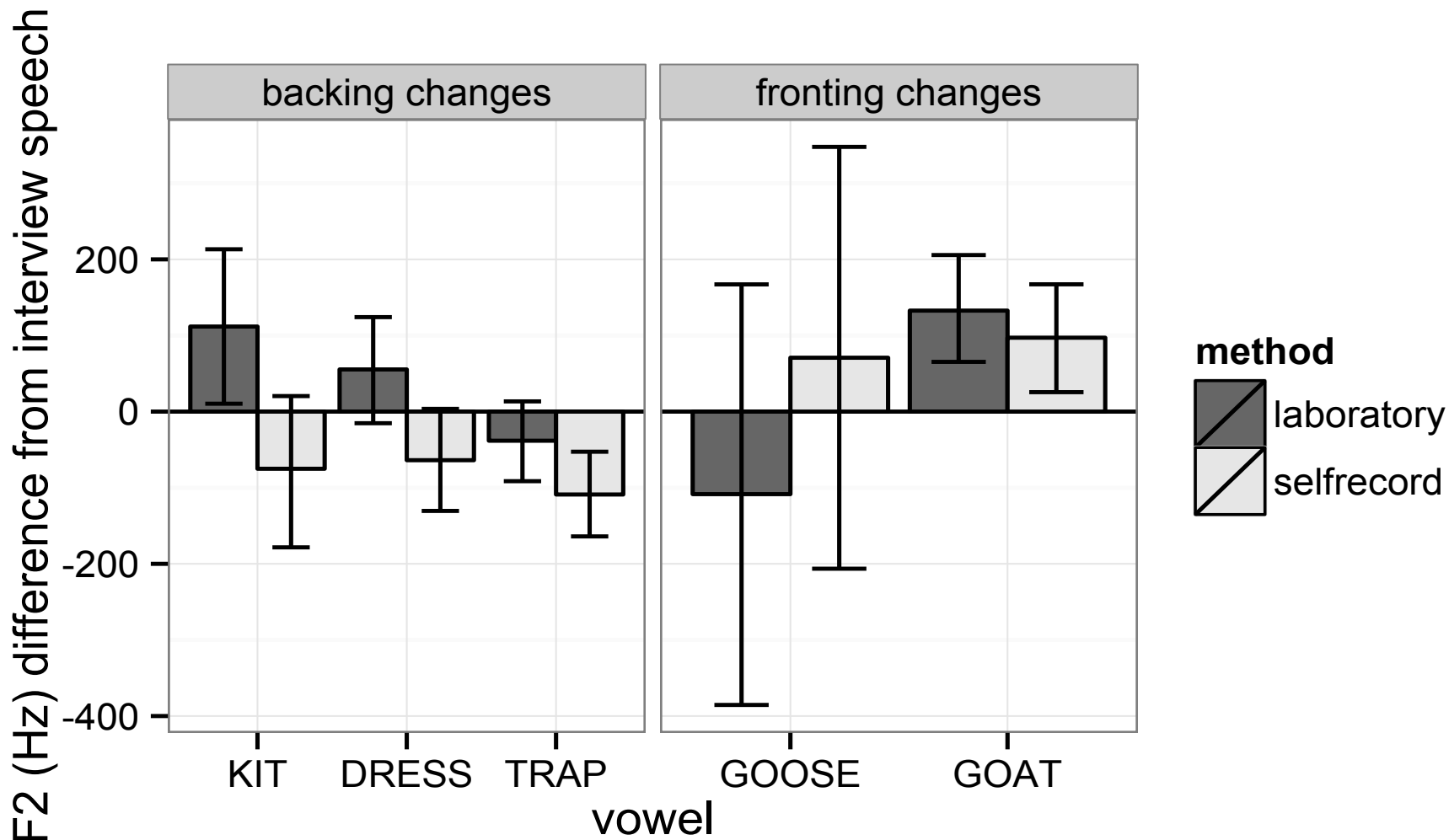
Most structured (non-read) elicitation task(s).

Prediction: Should elicit the **least** advanced variants.

Results: **F1** by Task Type



Results: F2 by Task Type



Summary of Results

1. Interview vs. Lab Tasks
 - Mostly minimal differences
2. Interview vs. Self-recordings
 - Some large differences

Without self-recordings, the actual repertoire of the speaker with respect to sound change-in-progress is underrepresented.

Conclusions

- **Self-recordings** present a methodological and ethical challenge, but the payoff may be substantial.
 - However, high ecological validity means that the elicitation of particular word forms is impossible.
- **'Lab tasks'** usually don't enter into field-based sociolinguistic methods, but we find them ideal for eliciting particular word forms without resulting in major differences vis-à-vis interview speech.



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