Investigating the Relationship between Hesitation Phenomena and L2 Accentedness

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Overview

- Background
- Cross-linguistic Corpus of Hesitation Phenomena
- Results
- Discussion

Hesitation Phenomena

- Delay in message transfer (Mahl 1956; Maclay and Osgood 1959; Rochester 1973; Ragsdale 1976; Griffiths 1991)
- Silent pauses (>100-500ms)
- Filled pauses (uh, um)
- Corrections
- Repeats
- Prolongations/Lengthenings

HP and L2 Development

- Not much explicit work on how learners develop L2 hesitation patterns.
- Depend on fluency development literature (Trofimovich and Baker 2006; Kormos and Dénes 2004; Riazantseva 2001; Pinget 2011)
- Dominant fluency characteristics: speech rate, length of runs, phonation time, syllable duration, pause duration

L2 Accent Development

- Kang 2010 – accentedness and comprehensibility
- Munro and Derwing 1998, 2001 – accentedness and speech rate
- Prominent features
  - Pitch range
  - Speech rate

L2 Accent and L2 Fluency

- Difficult for raters to distinguish (Freed 1995)
- Accentedness ratings influenced by fluency features (Munro and Derwing 2001)
- Listeners can distinguish (Bond et al 2008)
- Objectively distinct (Pinget 2011)

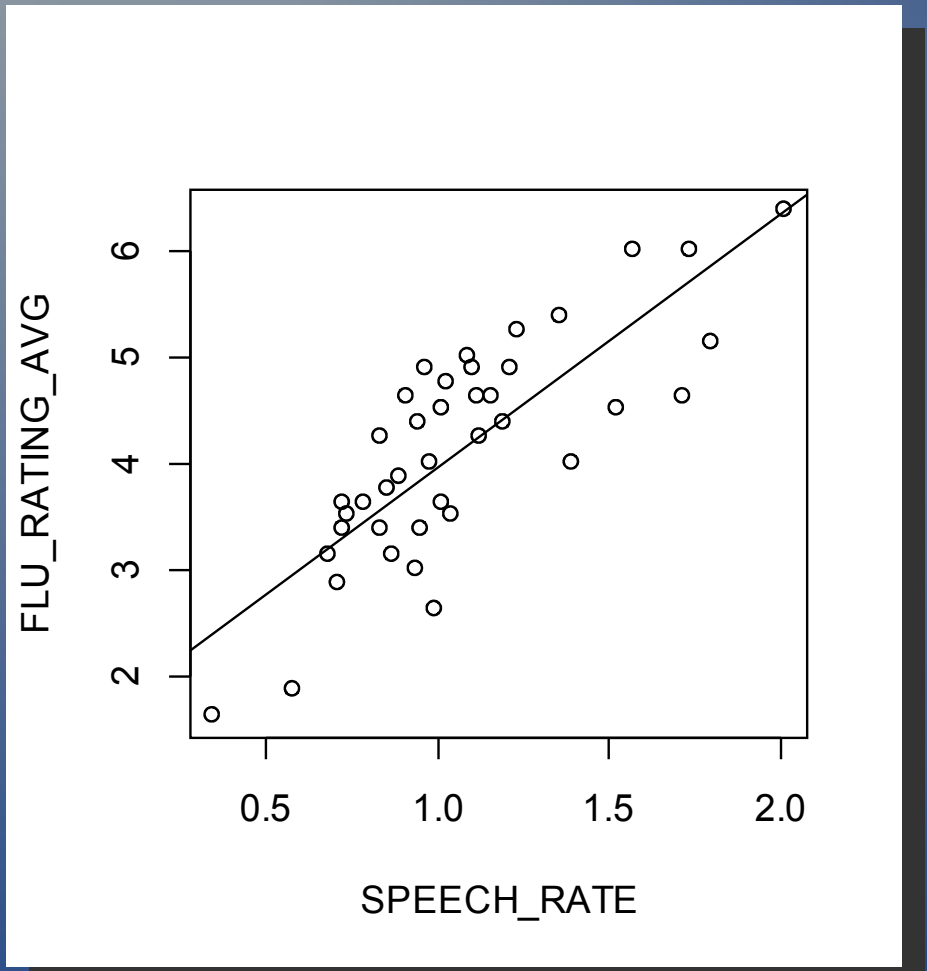
Fundamental Research Questions

- What is the developmental trajectory of L2 learners' hesitation patterns?
- How are accent and fluency related in L2 development?

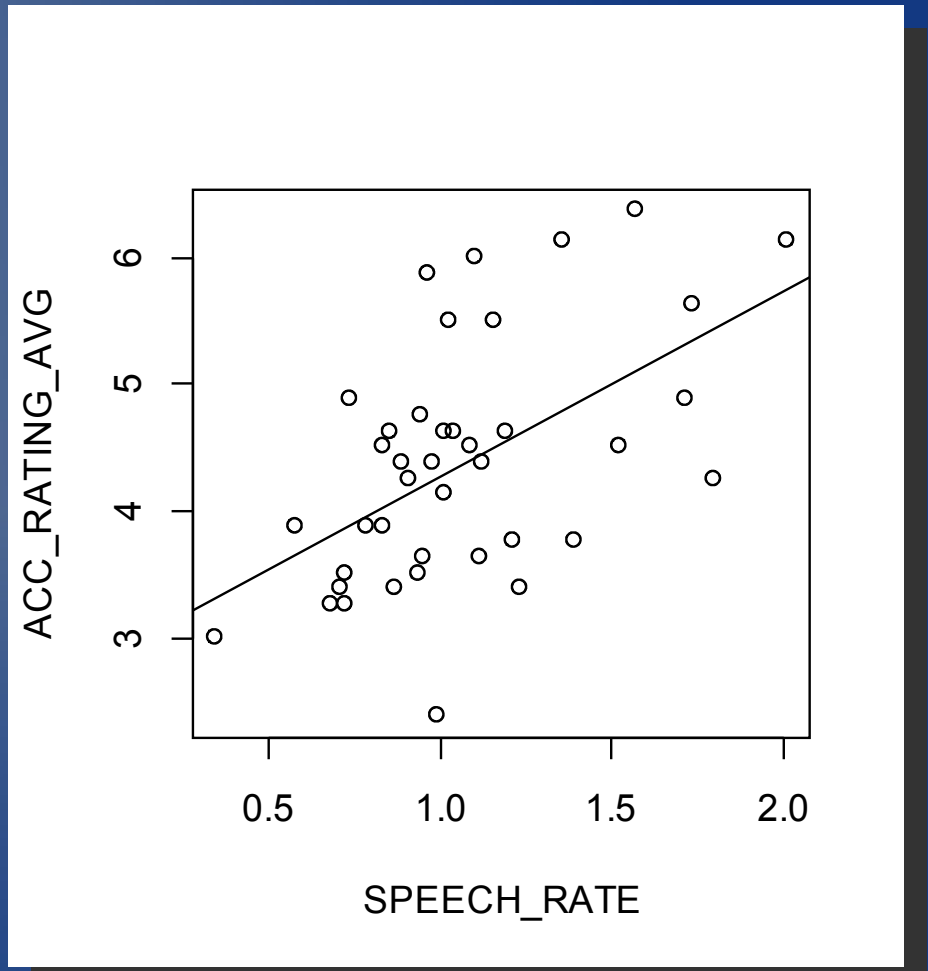
Cross-linguistic Corpus of Hesitation Phenomena (CCHP) – Pilot Phase

- Purpose: gather L1&L2 speech samples
- Participants: 10 Japanese college students
- Elicitation tasks: reading aloud, picture description, topic narrative
- Demographic info: age, gender, L2 proficiency information (TOEIC score)
- Annotation: 2 transcribers (Japanese), 1 checker
- Rating tasks: 16 experienced EFL teachers rated speech samples for accentedness & fluency

Speech Rate

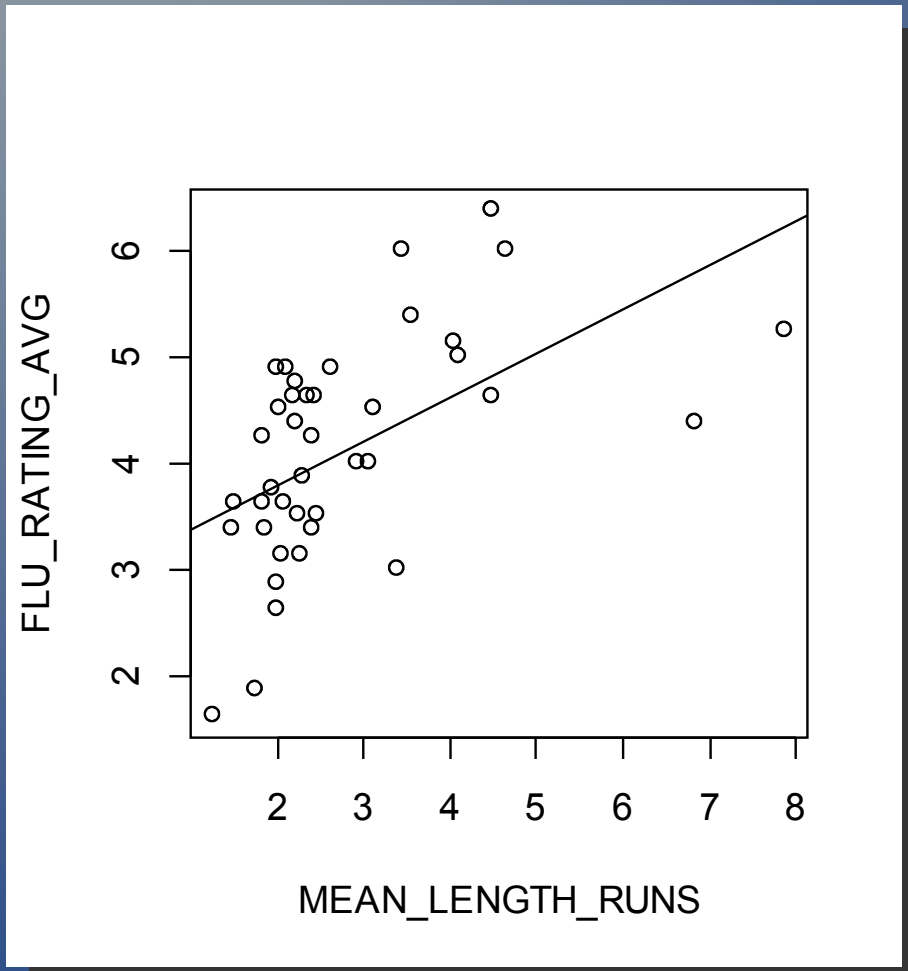


F(1,38) = 70.9, p<0.001

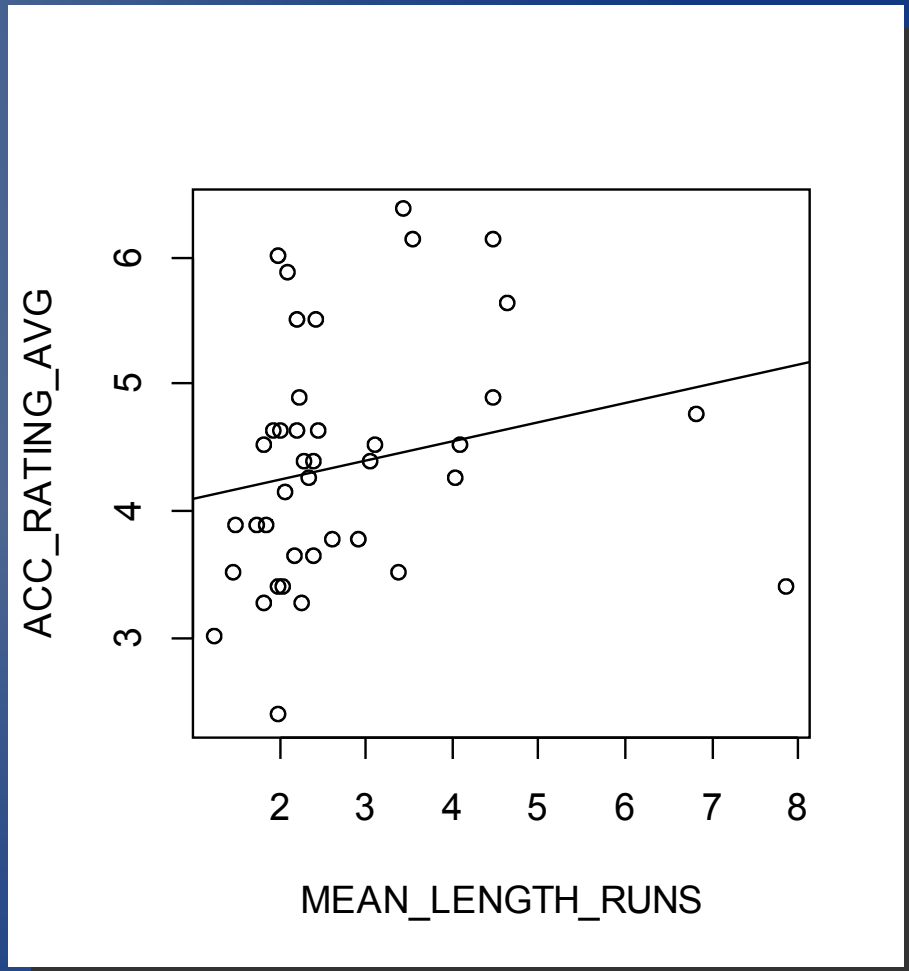


F(1,38) = 15.4, p<0.001

Length of Runs

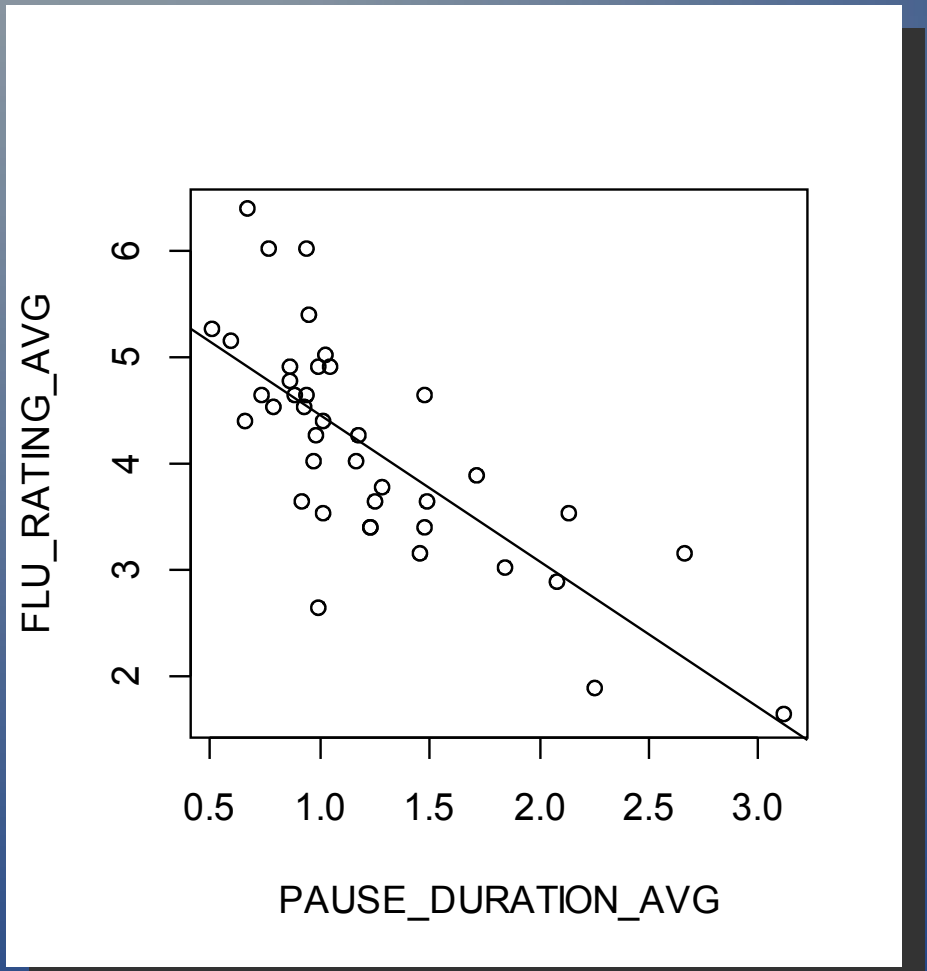


F(1,38) = 15.8, p<0.001

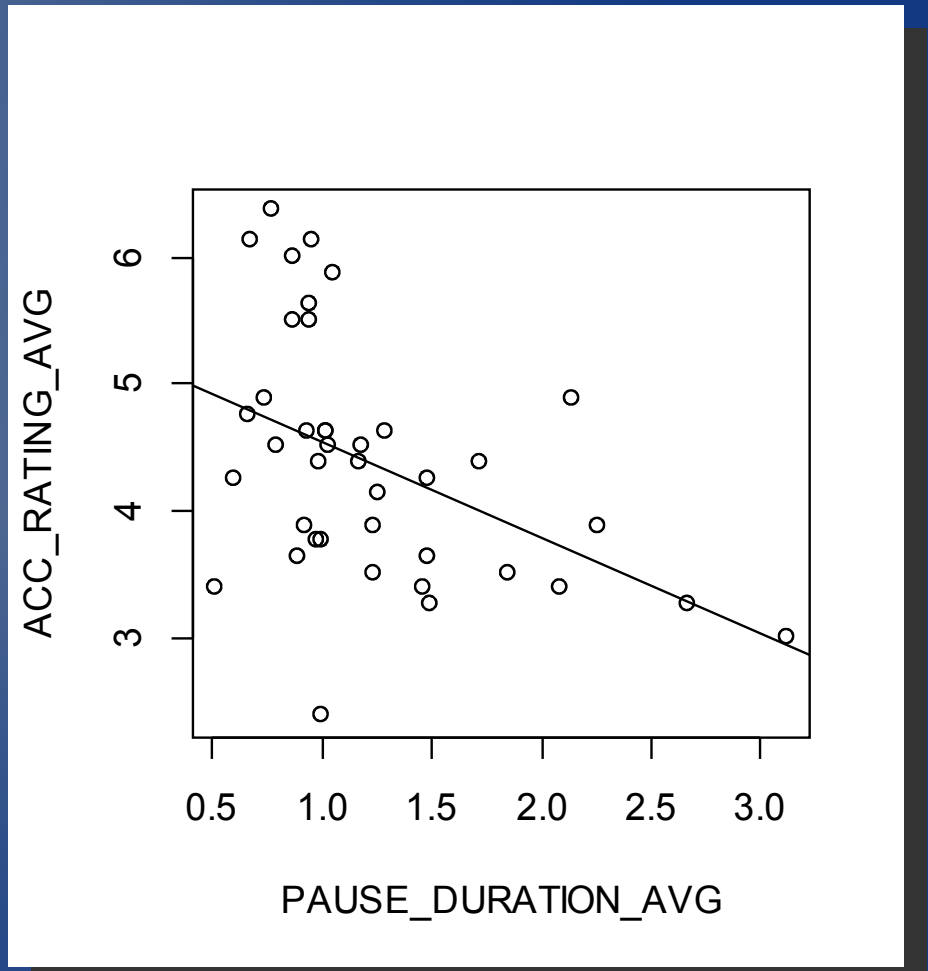


F(1,31) = 1.18, n.s.

Silent Pause Duration

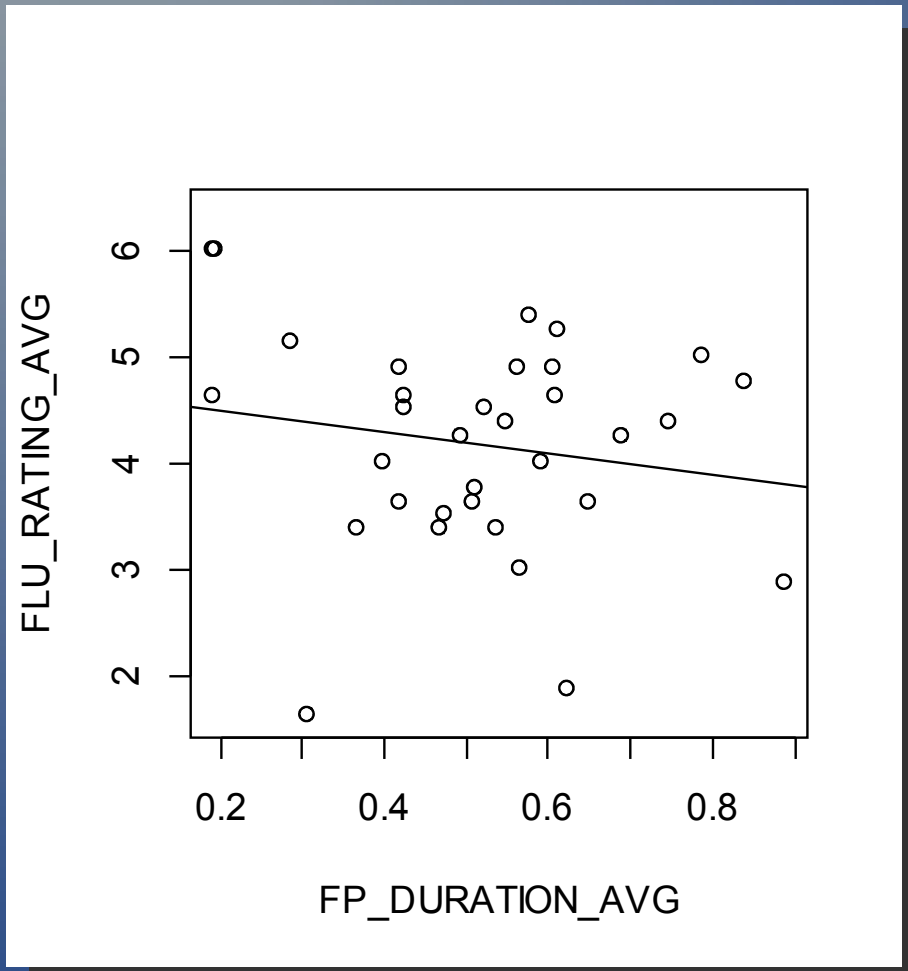


F(1,38) = 48.8, p<0.001

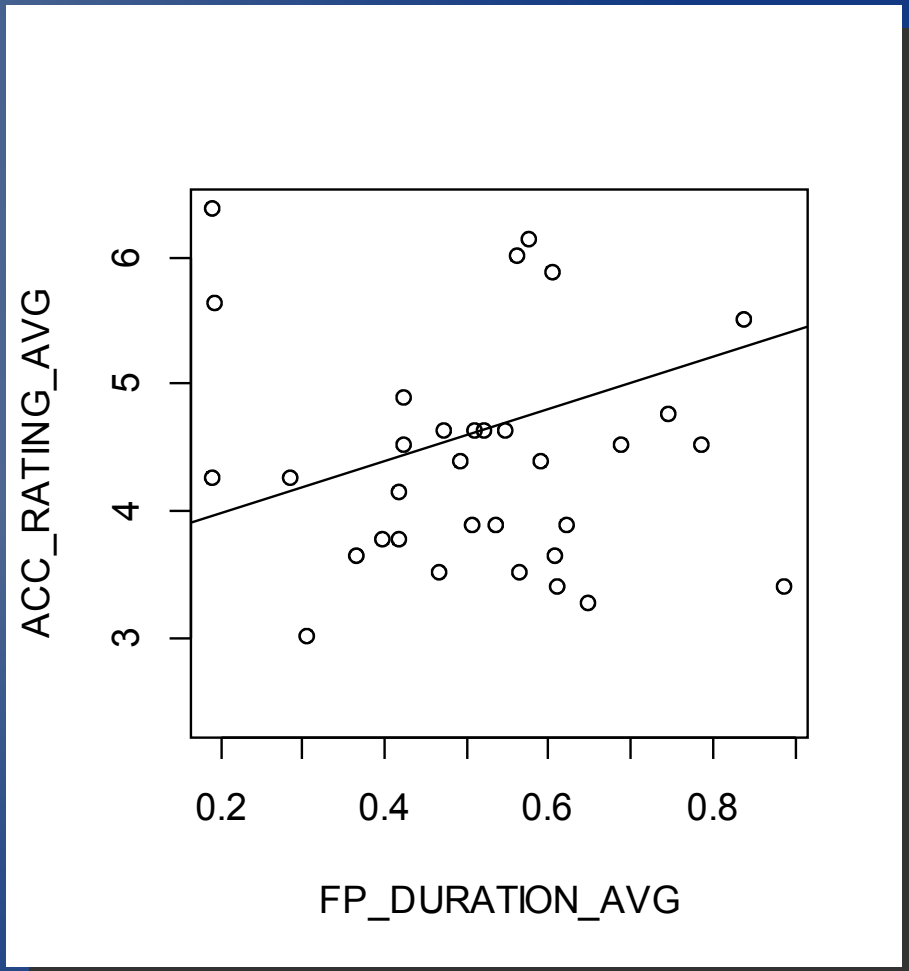


F(1,38) = 9.6, p<0.005

Filled Pause Duration

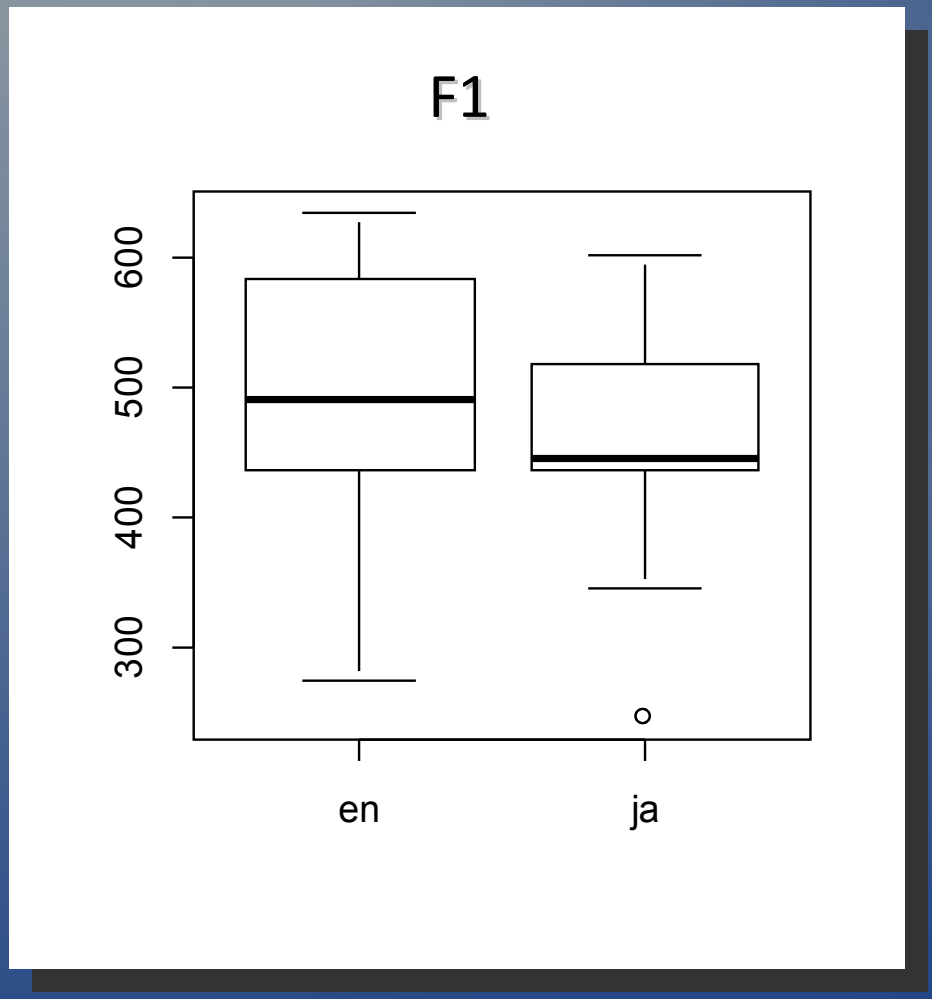


F(1,31) = 1.0, n.s.

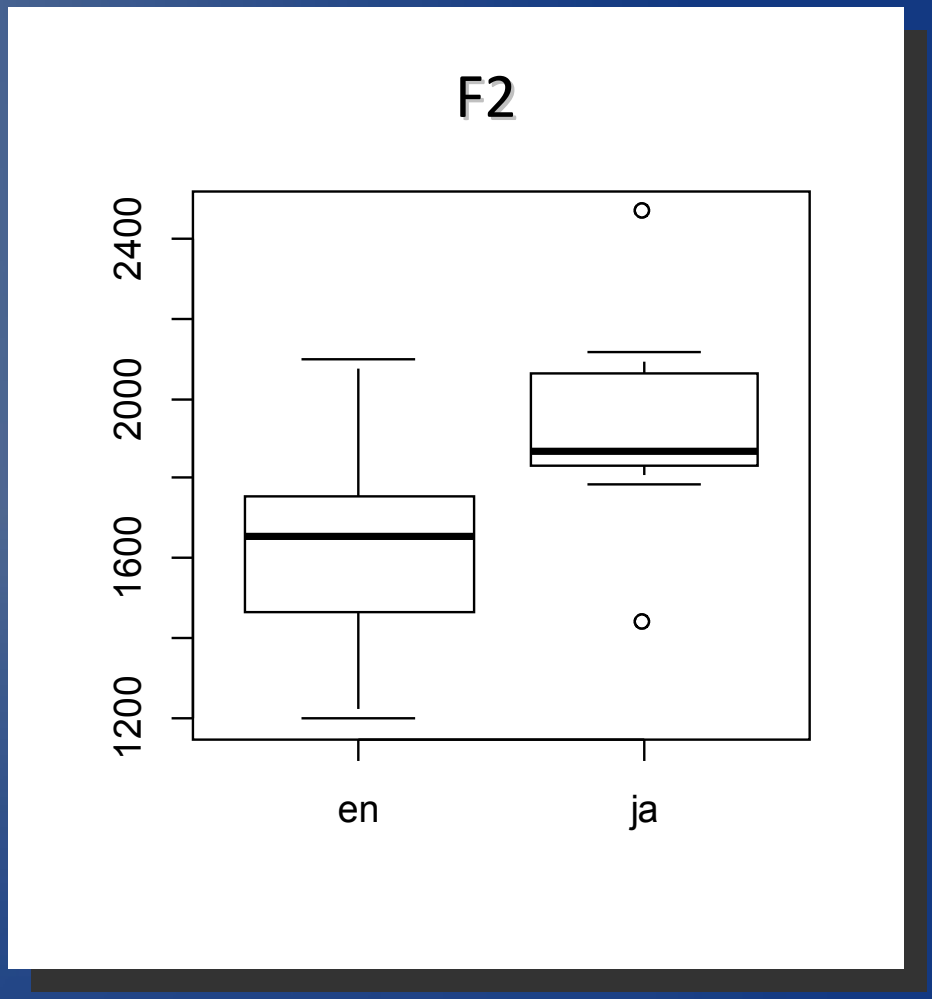


F(1,31) = 0.2, n.s.

Filled Pauses: ɛ (ja) to ə (en)

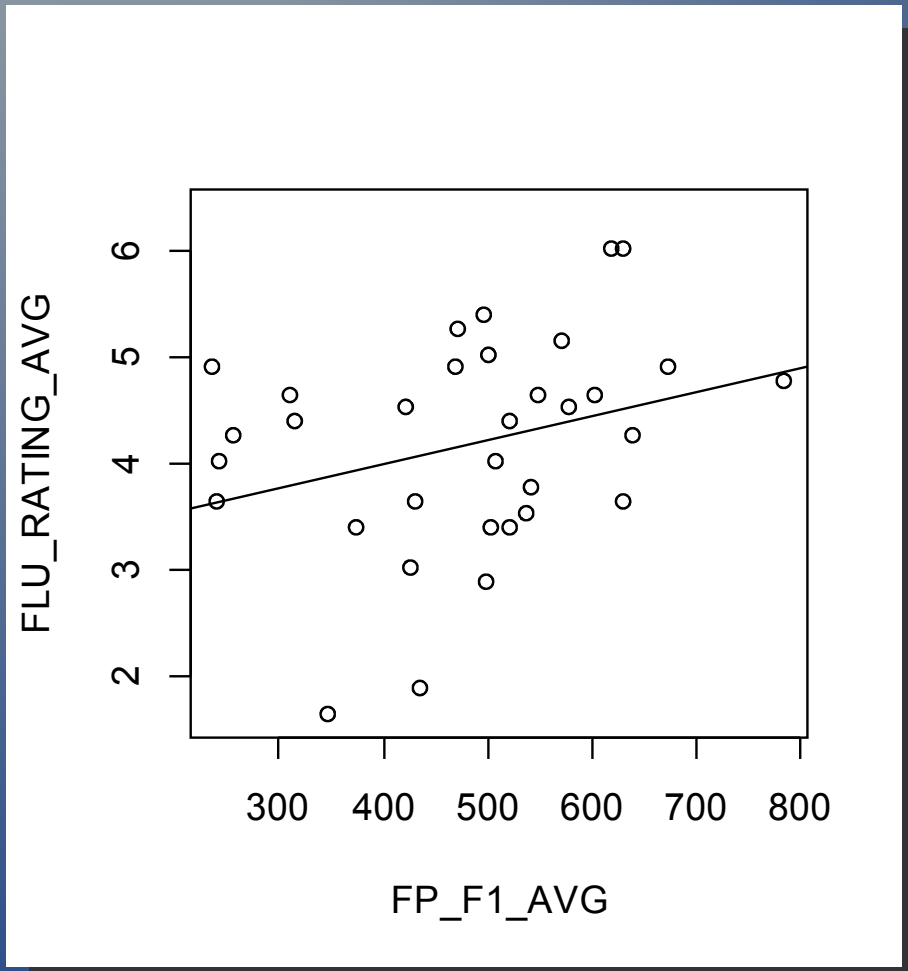


F(1,17) = 0.7, n.s.

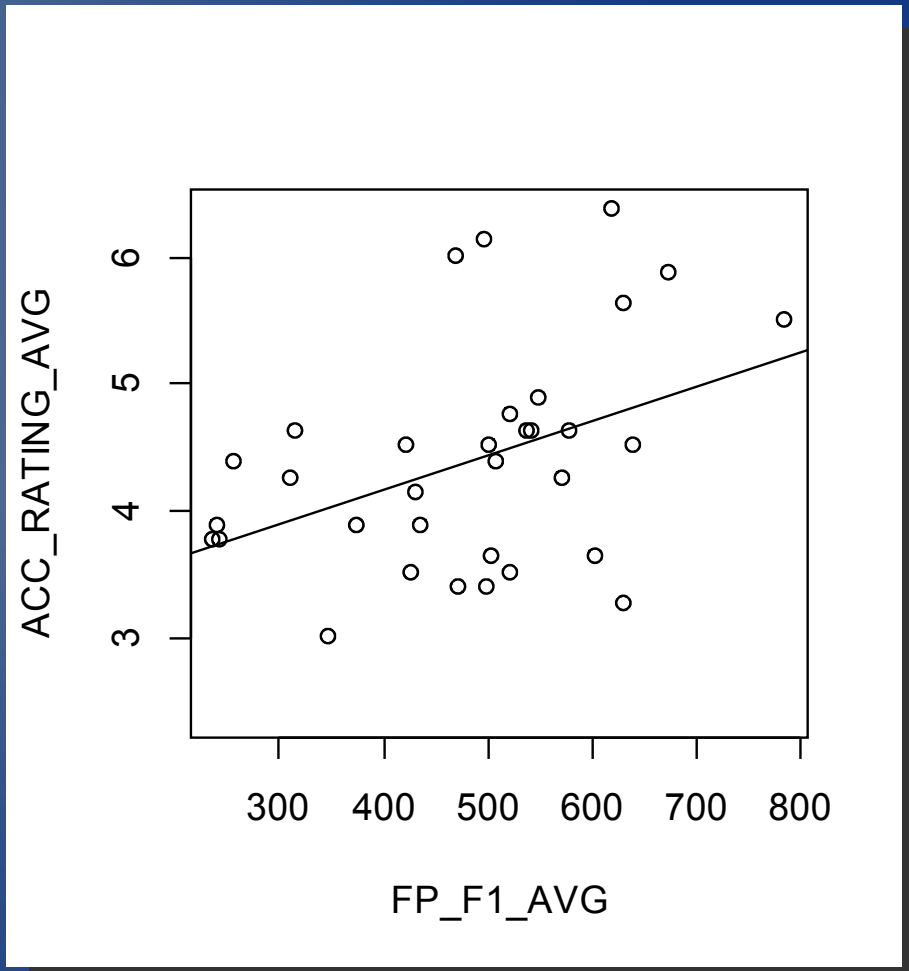


F(1,17) = 5.6, p<0.05

Filled Pause F1

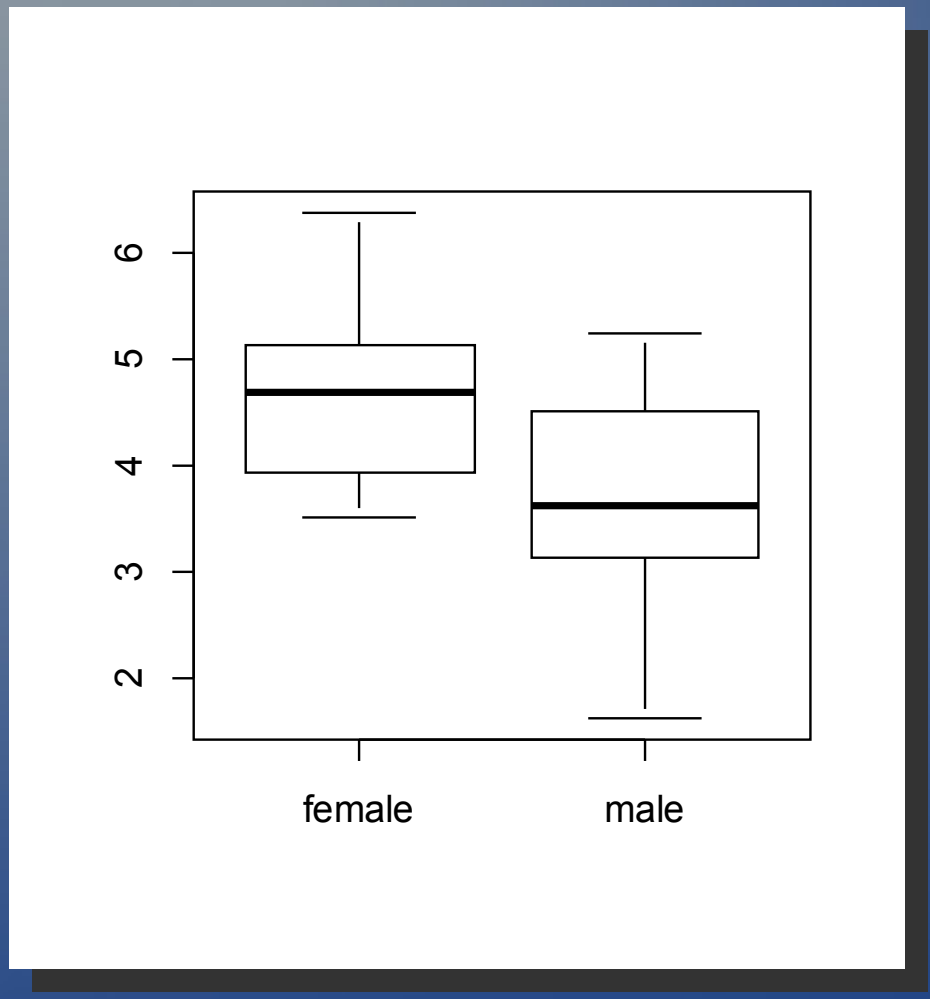


F(1,31) = 2.7, n.s.

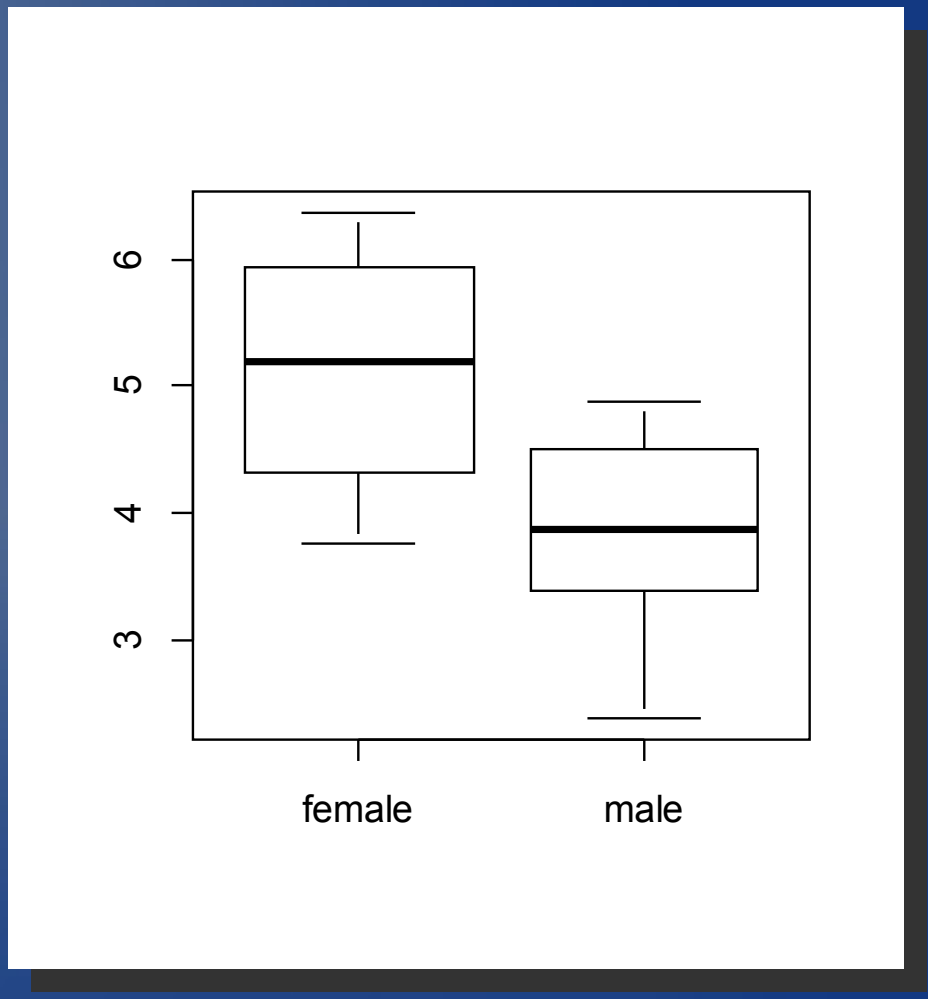


F(1,31) = 5.4, p<0.05

Gender



F(1,38) = 10.4, p<0.005



F(1,38) = 21.3, p<0.001

Summary of Fluency/Accent Findings

	Fluency	Accent
Speech rate	***	***
Length of runs	***	
Silent pause rate		
Silent pause duration	***	**
FP rate		
FP duration		
FP F1		*
FP F2		
Repairs		
Gender	**	***

Fluency vs. Accent in CCHP

- Fluency and accent ratings very highly correlated ($r=0.73$, $p<0.001$)
- Yet, some clear distinctions
  - Fluency
    - Length of runs
    - Silent pause duration
  - Accent
    - Filled pause F1
    - Gender

Hesitation Phenomena and Accent

- Speech rate affects accent ratings (as in Munro and Derwing 2001; contra Pinget 2011)
- Filled Pause
  - FP rate no change
  - F1 increase, F2 no change
- No effect of other hesitation phenomena

Further Work

- Gather more demographic information.
  - Living/study abroad experience
  - More accurate L2 proficiency measure(s)
- Get fluency and accent judgments independently.
- Get a soundproof booth!

Summary

- CCHP shows results parallel to other studies of Fluency: speech rate, pause duration, length of runs, and gender are significant factors
- Fluency and accent ratings are highly correlated but most distinguishable on length of runs and filled pause F1.
- Speakers with higher accent ratings show increased F1, no change for F2.
- CCHP design can provide a useful window on the development of L2 fluency and accent.

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