

Hesitation Phenomena, L2 Proficiency, and Fluency

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Acknowledgments

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Overview

- Hesitation phenomena
 - Overview
 - HP in L2 speech
- Views of Fluency
- Crosslinguistic Corpus of Hesitation Phenomena
 - Description
 - Results
- Implications and Applications
- Accessing the CCHP

Hesitation Phenomena

Well, in my own life I'd break it up in stages, when I had a difficult youth. My father wasn't in the house. I've written about this. You know there were times where I've experimented with drugs, and I drank in my teenage years. And what I trace this to is a certain selfishness on my part. I was so obsessed with me, and the reasons that I might be dissatisfied, that I couldn't focus on other people. And I think the process for me of growing up was to recognize that it's not about me, it's about ...

Absolutely. But look, you know, when I find myself taking the wrong step, I think a lot of the times it's because I'm trying to protect myself, instead of trying to do God's work. And so that I think is my own failure

Hesitation Phenomena

Well, i- i- i- in my own life I'd- I'd break it up in stages, when uh I had a difficult youth. Uh my father wasn't in the house, uh I've written about this, uh there- uh uh you know there were times where uh I've experimented with drugs, and I drank, uh yeah in my teenage years, a-nd wh- what I trace this to is uh a certain selfishness on my part, I- I was so obsessed with me, and you know the- the reasons that I might be dissatisfied, that I- I- w- I couldn't focus on other people. And uh y- you know I think the process for me of growing up was to recognize that it's not about me, it's about ...

it's about- absolutely, so- so- but- but look, you know, th- the uh wh- when I uh wh- when I find myself um taking the wrong step, I think a lot of the times it's because I'm trying to protect myself, instead of trying to do God's work. And- and- an- and so that I think is- is my own failure

Overview of types of HP

- Silent pauses (SP): Long pauses, not articulatory or juncture pauses (longer than 0.3-1.0 sec)
 - what I trace this to is uh a certain selfishness on my part
- Filled pauses (FP): articulations that take some conventionalized form (e.g., *uh/um* in English, *e-to/ano-* in Japanese)
 - I'd break it up in stages, when **uh** I had a difficult youth.
- Lengthenings: prolongation of one or more syllables of a word so that its duration is excessively (?) long in its context
 - **A:nd** uh y- you know I think the process for me of growing up was to recognize that it's not about me

Overview of types of HP

- Repeats/restarts: repetition of a single word or sequence of words
 - I- **I** was so obsessed with me ...
- False starts: beginning of an utterance that is abandoned
 - **th- the** uh wh- when I uh wh- when I find myself um taking the wrong step ...
- Self-corrections: a sequence of words which is to be understood as a substitution of an immediately preceding sequence
 - I- I- w- **I couldn't** focus on other people.
- Lexical fillers: various fixed expressions used as hesitation devices
 - **Well**, i- i- i- in my own life ...

(Goldman-Eisler 1961, Levelt 1989, Maclay and Osgood 1959, Rochester 1973, inter alia)

Characteristics of HP in L2 production

- Speech rate: higher proficiency → faster rate
 - (Cucchiarini et al 2010, Wu 2008, but see Trofimovich and Baker 2006, 2007)
- SP duration and rate: higher proficiency → shorter and fewer silent pauses
 - (Cucchiarini et al 2010, Riazantseva 2001, Tavakoli 2011, Trofimovich and Baker 2007)
- FP rate: higher proficiency → fewer filled pauses
 - (Rieger 2003, but see Wu 2008)
- Distribution: low and high proficiency speakers show different distribution of HP use (Rieger 2003)
- Differences between read and spontaneous speech
 - (Cucchiarini, et al 2010)

Characteristics of HP in L2 production

- As a whole, work has been quite comprehensive.
- However, individual works are limited in that many do not take individual variation into account (cf., de Leeuw 2007).
 - Exception: Derwing et al (2009) observed that both speech rate and pause rate in L1 and L2 production are correlated.
- My current research is a partial attempt to address this issue.

Fluency

- Two extremes of fluency definitions (Lennon, 1990)
 - Broad: indicates general language proficiency (*She's fluent in French.*)
 - Narrow: refers to a small set of performance factors related to timing (*She gave a fluent speech in French.*)
- Segalowitz (2010) taxonomy of fluency types
 - Cognitive fluency (in speech planning)
 - Utterance fluency (in speech production/articulation)
 - Perceived fluency (from listener's perspective)

Research Questions

- What is the developmental trajectory of HP use in L2?
- What is the relationship between hesitation patterns in L1 and L2 speech?
- What relationships are there between utterance fluency (i.e., measures of HP) in L2 speech and perceived fluency ratings or more general proficiency measures?

Crosslinguistic Corpus of Hesitation Phenomena – pilot (CCHPP)

- Participants: L2 learners of varying proficiency levels
- Elicitation tasks
 - Spontaneous speech: picture description, topic narrative
 - Reading aloud
 - Performed in both L1 and L2
- Demographic information: age, gender, L2 proficiency (self-reported TOEIC score)
- Annotation
 - Transcripts, HP, word & pause intervals
 - Two annotators, one checker
- Native English speaker (N=16) ratings of fluency for L2 speech

CCHPp Results: Basic Statistics

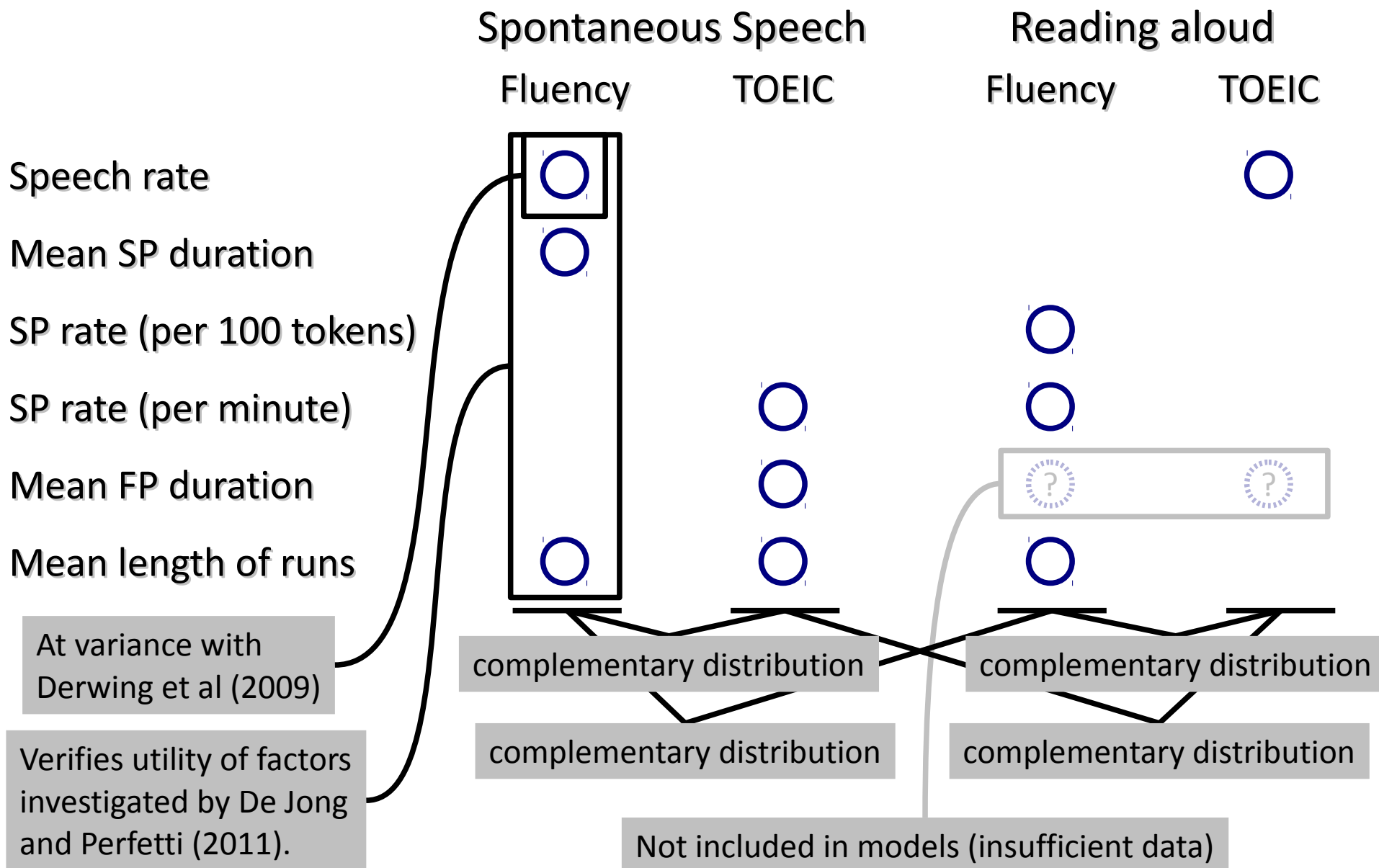
- Participants: 10 Japanese L1, English L2 speakers
- Fully annotated parts of corpus
 - 7,237 tokens (words)
 - 71.7 minutes
- Spontaneous speech
 - 4,191 tokens
 - 47.7 minutes
- Read speech
 - 3,046 tokens
 - 24.0 minutes
- 1,420 silent pauses
- 456 filled pauses
- 203 self-corrections
- 70 repeats
- 8 false starts

CCHPp Results: Statistical Procedure

Factors

- speech rate
 - mean SP duration
 - SP rate (per 100 tokens)
 - SP rate (per minute)
 - mean FP duration
 - FP rate (per 100 tokens)
 - FP rate (per minute)
 - mean length of runs
- Data collapsed by participant and L1-L2 difference was calculated
 - Factors correlated with:
 - L2 Fluency Rating
 - TOEIC score
 - Stepwise linear regression to find optimal combination of factors
 - Data evaluated by
 - spontaneous speech
 - reading aloud

CCHPp Results: Summary



Implications and Applications

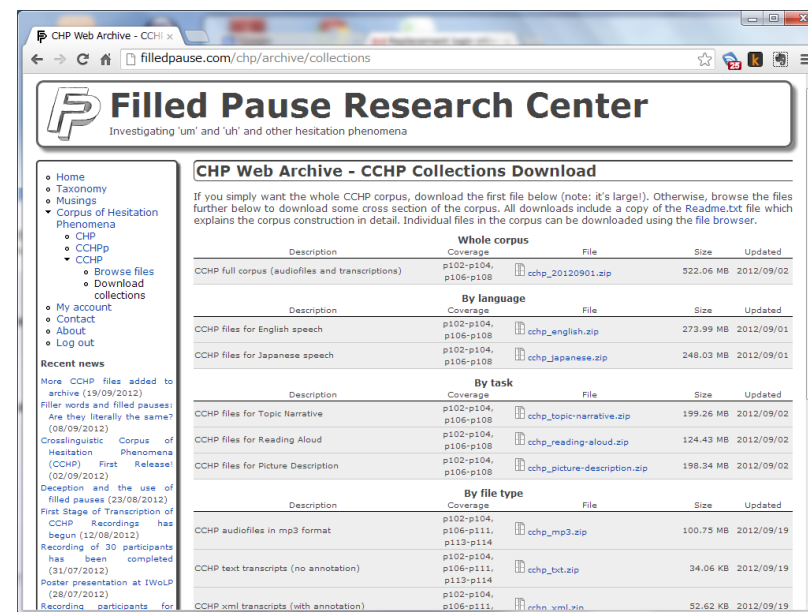
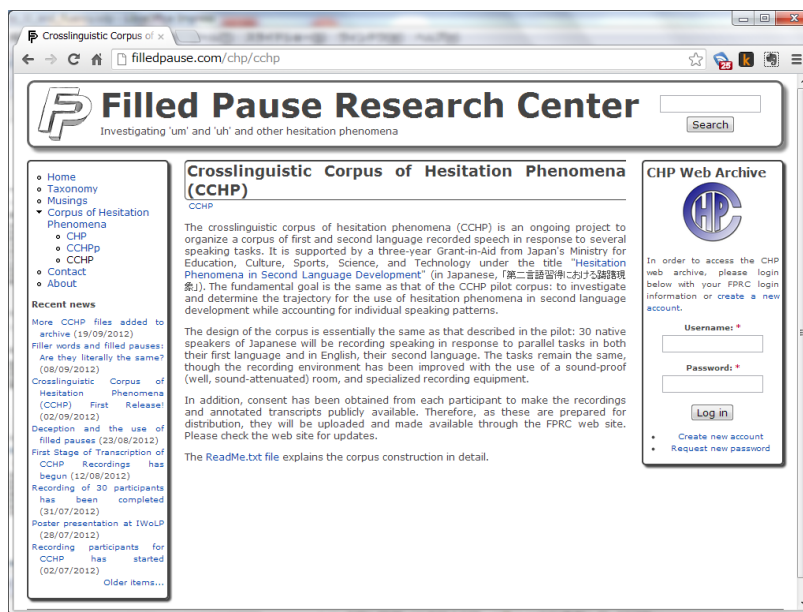
- L2 oral fluency evaluation should focus on speech rate, SP rate and mean length of runs. Other correlating factors may be due to L1 speech characteristics.
- The 4/3/2 procedure (Nation, 1989)—already shown to effect gains in utterance fluency (De Jong and Perfetti, 2011)—may further effect gains in perceived fluency.
- A reading aloud task might be useful to evaluate fluency (focusing on SP rate and mean length of runs). This would be much easier to process than spontaneous speech.

Future Work with CCHP

- Deeper annotation
 - Syntactic structure
 - Part-of-speech information
 - Syllable and phoneme intervals
 - (F1,F2) measurements
- More speakers
- More L1-L2 combinations

CCHP Public Corpus

- Assembling a larger (N=30), public version of the Crosslinguistic Corpus of Hesitation Phenomena is ongoing.
- When complete, audio files and annotated transcripts will be available for free download.
- Some files are already available for download:
<http://www.filledpause.com/chp/cchp>



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