Speech Hesitation Patterns in English by Native Speakers of Japanese

Ralph L. Rose
<rose@waseda.jp>

Center for English Language Education (CELESE)
Waseda University Faculty of Science and Engineering

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Hiroaki Suzuki, Junichi Inagaki, Masayuki Motoori,
Yukikatsu Fukuda, & Tatsuhiro Nomaguchi

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Introduction

Well, in my own life I'd break it up in stages, when I had a difficult youth. Uh 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, yeah 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 ...

It's 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 and and so that I think is my own failure.
Overview

- Hesitation phenomena
  - Overview
  - HP in L2 speech
- Crosslinguistic Corpus of Hesitation Phenomena
  - Description
  - Results
- HP Developmental Trajectory
- Accessing the CCHP
Hesitation Phenomena

Silent pauses
longer than 0.3-1.0sec

Self-corrections (repairs)
Sequence that repairs a preceding sequence
Look at the blue the red one over there.

Filled pauses
uh/um (English)
e-to/ano- (Japanese)

Lengthenings
Prolongation of one or more syllables
I'll take the blue and the red ones.

Repeats/Restarts
Repetition of a sequence of words
I I I I think that's a good idea.

False starts
Beginning of utterance that is abandoned
Do you I disagree with that.

HP in L2 Production

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).
• Gradually, more studies are including L1 observations.
  – Derwing et al (2009) and Cox and Baker-Smemoe (2012) observed that both speech rate and pause rate in L1 and L2 production are correlated.
• The current research is designed to contribute to greater understanding of the influence of L1 hesitation on L2 hesitation.
Research Questions

- What is the relationship between hesitation patterns in L1 and L2 speech?
- What is the developmental trajectory of HP use in L2?
Crosslinguistic Corpus of Hesitation Phenomena (CCHP)

- Participants: L2 learners of varying proficiency levels
- Elicitation tasks
  - Spontaneous speech: picture description, topic narrative
  - Reading aloud
  - Performed in both L1 and L2
Crosslinguistic Corpus of Hesitation Phenomena (CCHP)

- Demographic information: age, gender, L2 proficiency (standardized test scores, experience abroad, self-assessment)
- Annotation
  - Transcripts, HP, word & pause intervals
  - Two annotators, one checker
CCHP Results: Basic Statistics

- Participants: 15 Japanese L1, English L2 speakers
- Full corpus
  - 24,201 words
  - 5 hrs, 4 min
- Spontaneous speech
  - 15,058 words
  - 3 hrs, 56 min
- Read speech
  - 9,143 words
  - 1 hr, 10 min

- 6,947 silent pauses
- 1,277 filled pauses
- 579 self-corrections
- 177 repeats

Sample recordings

<table>
<thead>
<tr>
<th>Speaker 1</th>
<th>Speaker 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>(low L2 proficiency)</td>
<td>(high L2 proficiency)</td>
</tr>
<tr>
<td>Topic Narrative Japanese</td>
<td>Topic Narrative Japanese</td>
</tr>
<tr>
<td>“Explain TV”</td>
<td>“Explain TV”</td>
</tr>
<tr>
<td>Topic Narrative English</td>
<td>Topic Narrative English</td>
</tr>
<tr>
<td>“Explain basketball”</td>
<td>“Explain basketball”</td>
</tr>
</tbody>
</table>
CCHP Results: Analysis

- Used spontaneous speech data only.
- Computed rates of speech, silent pauses, filled pauses, repeats, and self-corrections for each recording.
- Performed repeated measures ANOVA
  - (between) L2 Proficiency as numerical variable, estimated from test scores, experience abroad, self-assessment
  - (within) Language as categorical variable: Japanese, English
- Used $\alpha = 0.05$ for significance testing (marked with ⭐).
CCHP Results: Speech Rate

Consistent with Derwing et al (2009) and Cox and Baker-Smemoe (2012)
CCHP Results: Silent Pauses

Silent Pause Rate

Consistent with Derwing et al (2009) and Cox and Baker-Smemoe (2012)

Silent Pause Duration

CCHP Results: Filled Pauses

Filled Pause Rate

Interaction

L2 Proficiency

FP Rate (per 100 words)

0 11.6 23.2

English
Japanese
CCHP Results: Self-corrections

Self-correction Rate

Self-correction Attempts
CCHP Results: Repeats

Repeats are uncommon in Japanese (Fox et al 1996)
HP Developmental Trajectory

To-do:
- Filled pause duration
- Lengthenings
- Repair type distribution
- Structural distribution
- Syllable counts
Summary

- Recent studies of L2 speech performance are taking L1 speech performance more and more into account.
- The Crosslinguistic Corpus of Hesitation Phenomena allows us to account for L1 factors in the study of L2 hesitation patterns.
- Results show that silent and filled pause features indicate learners' L2 proficiency.
- Results show that speakers at all proficiency levels use more repeats.
- Results suggest that other aspects of L2 hesitation use correlate with that of L1.
Assembling a larger (n=35), 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
References


