The Wildcat Corpus of Native- and Foreign-Accented English

Phase 1: Pilot Corpus

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I. Background and Overview

- Many, perhaps even most, conversations across the globe today are between interlocutors who differ in terms of their relationships to the target language (i.e. either one or both may be non-native speakers).
- Overarching hypothesis: Variability in linguistic alignment between native and non-native talkers underlies variability in speech intelligibility, and provides an impetus for bidirectional, context-induced change.
- Two important predictions that follow from this hypothesis:
  1. Variability in overall speech intelligibility is related to talker-listener alignment rather than just to talker and/or listener proficiency in the target language.
  2. Both native and non-native speakers exhibit speech perception and production changes in response to exposure to native and non-native speech.

II. Scripted Materials

Material Set | N | Notes
--- | --- | ---
DVU words | 15 | Substitute /p/ for /b/ if necessary, e.g. /pup/ put, /pof/ pool
Multisyllabic words | 12 | From various ESL textbooks, includes words with known stress placement problems for non-native speakers
Initial and final cluster words | 15 | A variety of CC and CVC clusters in initial and final position, known to present difficulties for non-native speakers
Connecting words | 20 | Words that occur in both scripted and unscripted (Diapix) materials within the corpus
Context-controlled sentences | 60 | From Bradlow & Alexander (JASA, 2007). Following Chun Liang Chan for the development of the speech database “toolbox”
Stella passage | 1 | From The Speech Accent Archive at George Mason Univ. Includes many difficult words for non-natives
Second mention reduction passage (SMR) | 1 | From Baker & Bradlow (under review). Designed to examine word reduction as a function of status in the discourse (1st versus 2nd occurrence in the dialogue) under controlled phonetic conditions.
Standard passage | 1 | The North Wind and the Sun. From the IPA handbook, a commonly used paragraph.

II. Unscripted Materials: The Diapix Task (dialogue-based picture matching)

- A “spot-the-difference” game involving 2 pictures and 2 participants.
- Participants cannot see each other’s picture.
- Participants work together to find 10 differences (3 missing from each version & 4 changed items).
- Elicits a wide range of utterance types (questions, declarations, exclamations etc.).
- Elicits balanced speech from each participant (no predetermined “Giver” and “Receiver” roles).

III. Processing

- Goal: A fully segmented and phonetically-aligned set of digital recordings (scripted and diapix from all participants).
- Toolkit: A suite of utilities for rapid speech database development using a combination of in-house and off-the-shelf tools.
- Progress to date: All recordings transcribed; phonetic alignment in progress.

IV. Participants

<table>
<thead>
<tr>
<th>Task Language</th>
<th>Pair Type</th>
<th>Talker</th>
<th>Sex</th>
<th>N</th>
</tr>
</thead>
</table>
| Korean (n=4) | L1-L1 | KO | M | 2
| EN (n=5) | L1-L1 | EN | M | 2
| IN (n=2) | L2-L2 | IN | M | 1
| CH (n=20) | L1-L1 | CH | M | 2
| IN (n=2) | CH | M | 2
| KO (n=28) | L1-L1 | KO | M | 2
| IR (n=1) | RU | M | 1
| TH (n=11) | TOTAL | 41 pairs (82 participants) |

V. Current/Ongoing Analyses

- Communicative efficiency in dialogues between native and non-native speakers (Arim Choi):
  - Comparisons across N-N, NN-NN, N-NN pairs in terms of time to complete the diapix task, balance of speech, and word type-token ratios
- Phonetic convergence over the course of brief conversations (Midam Kim):
  - Do people sound more similar after 20-minute conversations? How does this phonetic convergence vary across N-N, NN-NN, N-NN pairs?
- Second mention reduction of words across dialects/languages (Rachel Baker):
  - Do dialects and languages with different prosodic structures (esp. regarding de-accenting of 1st versus 2nd occurrence in the dialogue) under controlled phonetic conditions.
- Speech-in-speech perception for various listeners and languages (Kristin Van Engen):
  - How does speech intelligibility vary in relation to variation in the language of the target, the noise, and the talker’s and listener’s status as native or non-native?
- and many others that are either planned and/or yet-to-be-imagined...

VI. Acknowledgements

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