Phonetic Accommodation during Native-Native and Native-Nonnative Dialogues

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Background
• Phonetic accommodation
  • When people talk, they tend to modify their phonetic patterns in the presence of their addressee. (Speaking rate, accent,…)  
• Why/how does this happen? Regarding speech perception-production loop…
  • Automatic alignment (Pickering & Garrod, 2004)
  • Factors might be involved in this process.
  • Speakers’ conscious decision for social distance adjustment
  • Being a middle-accented nonnative speaker

Methods – Accommodation Measurement (continued)
• Independent-samples t-test
  • Late % > 50: Speaker’s phonetic convergence towards the partner
  • Late % = 50: Speaker’s phonetic maintenance
  • Late % < 50: Speaker’s phonetic divergence from the partner

Methods – Accentedness Ratings
• 15 native English listeners rated speech samples taken from the conversations for the accentedness (9 samples per speaker).
  • “How foreign is this speaker’s accent?”: 1-9 scale (native-nonnative)
  • Results are z-transformed for each listener and averaged across the 15 listeners.

Results - Native-Native (in either English or Korean)

Speaker 1 Late % Speaker 2 Late % Accommodation (↑ and arrows: p < 0.00625) Dialects (Speaker 1 – Speaker 2) Type
60* 63* ENF ↑ ENF MN – IL Similar
66* 61* ENM ↔ ENM GA – GA Same
51 56* ENF ↔ ENF CA – NY/FL Different
47 50 ENM ↔ ENM AZ – PA Different
61* 58* KOF ↔ KOF Seoul – Seoul Same
60* 65* KOM ↔ KOM Seoul – Seoul Same
44* 42* KOF ↔ KOF Jeju – Gangwon Different
46 40* KOM ↔ KOM Seoul – Daegu Different

Results - Native-Nonnative (in English)

Native Late % Nonnative Late % Accommodation (↑ and arrows: p < 0.00625) NN - Accentedness
44* 41* ENM CHM 0.50 Heavy
43* 48 ENF KOF 0.39 Mid
51 53 ENM CHF 0.35 Mid
50 59* ENF KOM 0.34 Mid
48 56* ENM KOM 0.31 Mid
51 64* ENF KOF 0.29 Mid
57* 50 ENM CHM -0.53 Light
47 24* ENF CHF -0.58 Light

3. Greater convergence was found for speakers with greater L2 proficiency.

Discussion – Accommodation Patterns
• Phonetic convergence comes from
  • Sharing the same dialect between native speakers
  • Having a very low-accented nonnative partner
  • Generally, closer distance between interlocutors
  • Being a middle-accented nonnative speaker
  • Inverted U-shaped pattern for accentedness
  • No difference between English and Korean as the target language

Methods – Conversations
• English Diapix
  • Native-Native: 4 talker pairs
  • Native-Nonnative: 8 talker pairs
  • 4 Native-Chinese
  • 4 Native-Korean

Korean Diapix
• Native-Native: 4 talker pairs

Methods – Accommodation Measurement
• Speech samples (1.5 - 2 sec)
  • 3 snippets taken from each of the first 1/3 and the last 1/3 of the conversations per each talker
  • Criteria: one IP or at the final position of an IP
  • All snippets were different utterances.

XAB Similarity Perception Test
• 19-20 native listeners for the target language (English or Korean) were told to assume that the second speaker tried to impersonate the model speaker.

Methods – Speech Perception-Production Link
• Social
  • Gender, Race, Culture
  • Psychological
  • Personality, Empathy
  • Discursive
  • Discursive Goal, Talker Role
  • Linguistic
  • Dialect, Nativeness, Proficiency

Future Directions
• More data, more factors
• Measurement on acoustic factors (following holistic measurement of the XAB perception test)
  • Segmental: VOT, vowel space
  • Suprasegmental: Speech rate, pitch range, intonation, phrasing

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