On L2 English Intonation Patterns by Mandarin and Shanghainese Speakers: A Pilot Study

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Outline

- Chinese vs. English intonation
- Intonation in tone languages
- Different Chinese tone languages: Mandarin and Shanghainese
- Experiment: L2 English intonation by Mandarin and Shanghainese speakers
- Results
- Conclusion

Chinese vs. English intonation

- Chinese intonation is sometimes described as “flatter” / more “monotonous” compared to English intonation
  - E.g. Gong (1991), who also noted that this had an effect on the intonation in L2 English by Chinese learners, among others
  - though cf. Chen 1974 (JCL), Chen 2015 (CAAC 1)

Transfer

- Chinese learners of English tend to transfer this “flat” intonation into their L2 English
- Example “Who wouldn’t like it?”

Intonation in tone languages

- Tone languages tend to use particles where stress languages tend to use pitch to perform a number of sentence functions
  - question particle 么 in Chinese vs. question intonation in English
- intonation (the “big wave” – Chao 1933) should not interfere with lexical tone (the “little waves”)

Different tone languages

- Mandarin: fully-fledged tone language
- Shanghainese: also has lexical tones (5) but only the phrase-initial one survives and is spread to non-head morphemes (Duanmu 1993, Yip 2002, Chen 2003, Zhu 2006, etc.)
  - sometimes described as a “pitch-accent” language
Shanghainese tones

- Five tones:
  - T1 52
  - T2 34
  - T3 14
  - T4 44
  - T5 24
- + toneless syllables

Research question

- Is the intonation in L2 English of Mandarin speakers ("Mandarin L2 English": ML2E) different from the intonation in English of L2 Shanghainese speakers ("Shanghainese L2 English": SL2E)?

Expectation(s)

- On the one hand, since in Shanghainese lexical tones play less of a lexical role on the phonetic surface than in Mandarin, we might expect Shanghainese L2 English to show more pitch variation (reflected in a wider pitch range) than Mandarin L2 English.
- On the other hand, since Shanghainese has more phonological tones than Mandarin, we might expect Shanghainese speakers to be even more considerate than Mandarin speakers of the pitch variation range, so maybe use a smaller pitch range for intonation.

Methodology

- Recording of English sentences, mostly taken from Picture of Dorian Grey, and see if there were pitch differences between the ML2E speakers and the SL2E speakers.
  - pitch range
  - pitch variation
- different types of sentences (length, questions, etc.)

Target sentences

- Short questions:
  - Don’t you like it?
  - Whose property is it?
  - Who wouldn’t like it?
- Exclamations:
  - What odd chaps you painters are!
  - Live the life that is within you!
- Neutral sentences:
  - The highest as the lowest form of criticism is a mode of autobiography
  - When he saw it he drew back, and his cheeks flushed for a moment with pleasure.

Subjects

- 8 subjects were recorded: 4 L1 Mandarin speakers and 4 L1 Shanghainese speakers.
- All females between 21 and 33 years old.
- All were advanced speakers of L2 English, based on our judgement and based on the number of years they had learnt English (between 8 and 21 years of formal education).
- The subjects were paid for their participation (and received a mooncake as well).
Recording

- Quiet room at Shanghai International Studies University
- Self-paced recording, using Praat, operated by the experimenter
- Sentences that had missing words, displayed errors or major hesitations were repeated until the recording of all data was satisfactory

Procedure

- Sentences were manually divided into words
  - Many words in the sentences were monosyllabic
  - A Praat script measured min, max, mean, std pitch, checked manually (pitch settings: 75 min, 600 max)
  - Scripts kindly provided by Johan Frid, University of Lund

Results-1

- The results (so far) indicate that the intonation patterns of the two groups of speakers (M and S) are not very different
  - next slides have sample pitch trackings
    - x-axis has words, numbered
    - y-axis has mean pitch, for M and S groups
  - not statistically significant; t-test, two-tailed, p >> 0.05

Example

Would you think it awfully rude of me if I asked you to go away?

Example-2

Who wouldn’t like it?

Example-3

What odd chaps you painters are!
Example-4

Live the wonderful life that is in you!

Results-2

- Although the average pitch was very similar, M speakers showed more variation than the S speakers in the cases analysed so far.
- Measured SD in pitch, per speaker:

<table>
<thead>
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<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>S1</th>
<th>S2</th>
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<td>30.7</td>
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<td>21.5</td>
<td>15.1</td>
<td>21.7</td>
<td>29.4</td>
</tr>
</tbody>
</table>

- M average SD: 30.0
- S average SD: 21.9
- t-test, two-tailed, significant p=0.045

Discussion and conclusion

- Little difference in intonational patterns between M and S speakers in their L2 English.
- Slight but significant difference in speaker pitch variation: M speakers vary more than S speakers. Why?
- Phonological systems not that different (4 vs. 5 tones), in spite of surface tone erasure in S.
- Perhaps the speakers were too well educated in English (minimum 8 years, maximum 21 years).

Outlook

- Finish the statistics.
- Less advanced speakers.
- Include male students.
- Extend to Chinese dialects with significantly higher (8! Taizhou) or lower (3! Yantai) numbers of tones.
- Further examine intonation in L1 Mandarin and Shanghainese.
- Other tone languages.

References (incomplete)


Thank you~~

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