

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

Ran Yunyun &  
Jeroen van de Weijer



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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

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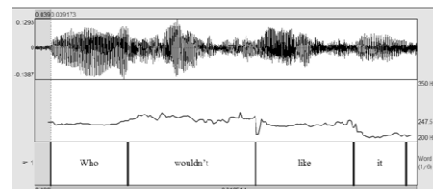
## Chinese vs. English intonation

- 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)

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## 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 吗 in Chinese vs. question intonation in English
- intonation (the “big wave” – Chao 1933) should not interfere with lexical tone (the “little waves”)

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## 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

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## Shanghainese tones

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

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## 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)?

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## 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

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## 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.)

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## 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.

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## 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)

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## 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

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## 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

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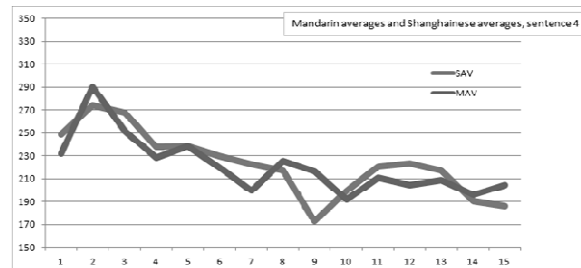
## Results-1

- 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,  $p >> 0.05$

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## Example

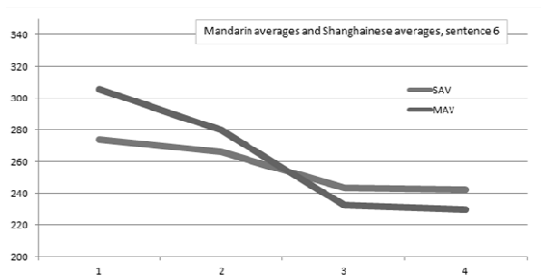
Would you think it awfully rude of me if I asked you to go away?



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## Example-2

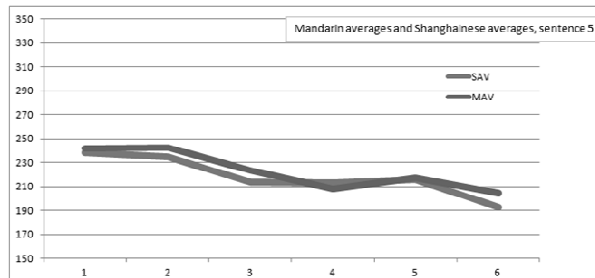
Who wouldn't like it?



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## Example-3

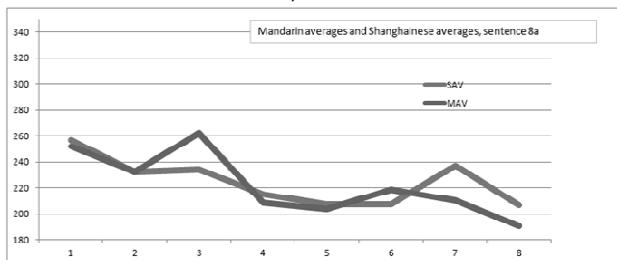
What odd chaps you painters are!



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## Example-4

Live the wonderful life that is in you!



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## 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

M1	M2	M3	M4	S1	S2	S3	S4
36.4	30.7	19.8	33.1	21.5	15.1	21.7	29.4

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

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## 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)

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## 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 Shanghai
- other tone languages

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## Thank you~~

- patience0130@163.com
- jeroen@shisu.edu.cn

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