

# Perception of Lexical Tones by Swedish Learners of Mandarin

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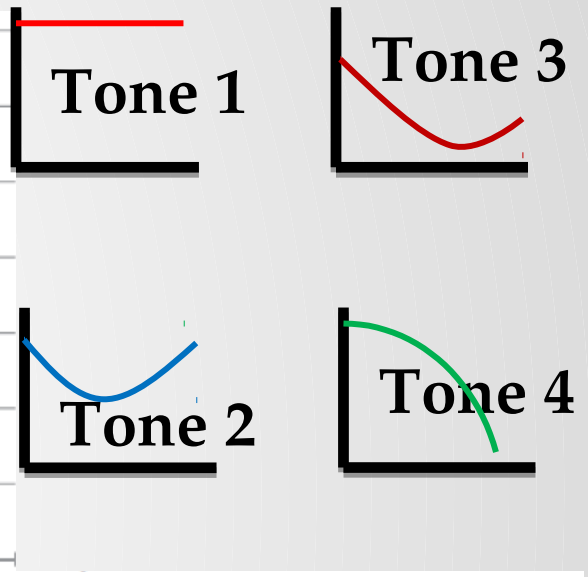
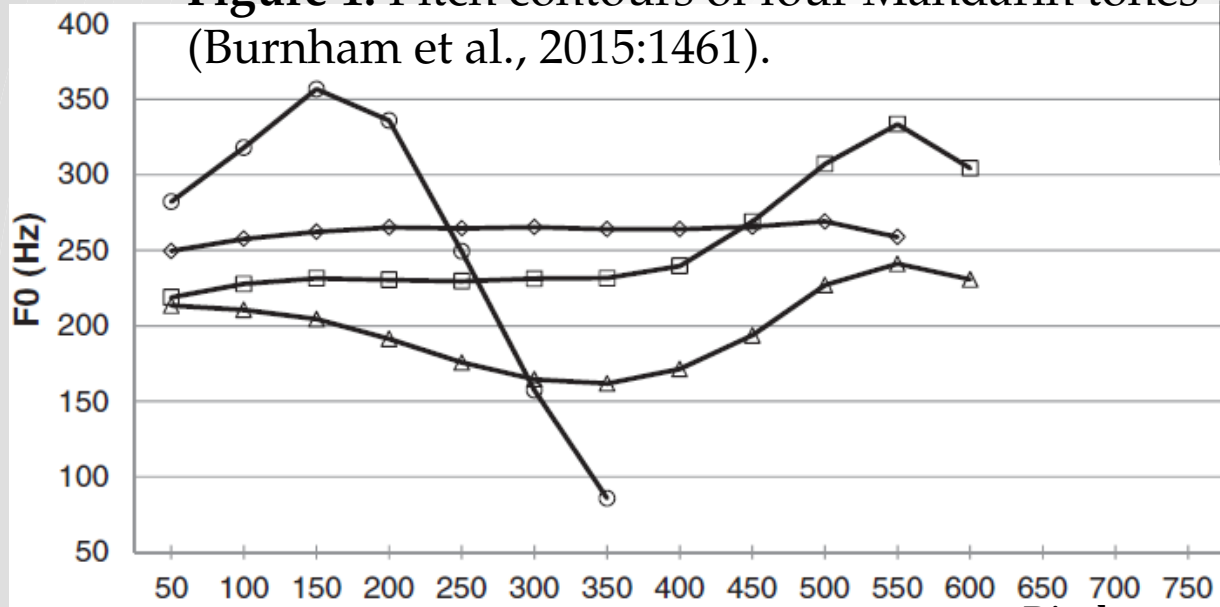


# Introduction

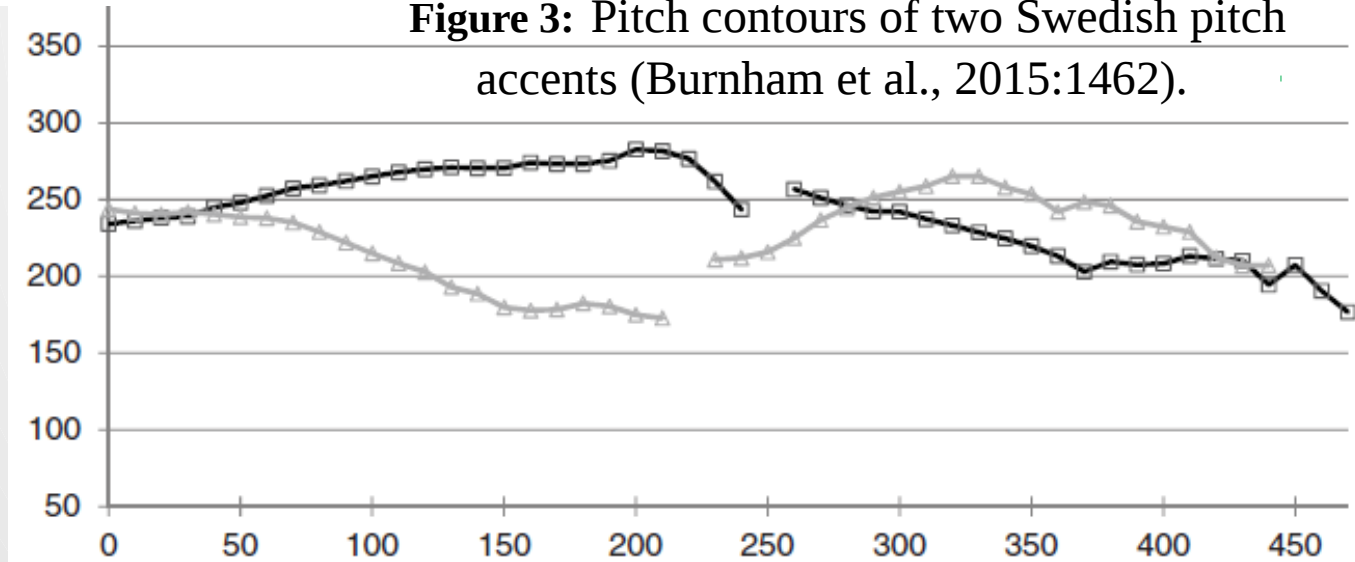
- One major challenge for Swedish learners of Mandarin of Chinese: four lexical tones
- Factors identified in cross-language speech perception
- Relevant theoretical models
  - Perceptual Assimilation Model (PAM) (Best, 1995)
  - Speech Learning Model (SLM) (Flege, 1995)
- Aim of this study: Possible influence of Swedish pitch accent on perceiving Mandarin tones

# Mandarin tones vs. Swedish pitch accents

**Figure 1:** Pitch contours of four Mandarin tones (Burnham et al., 2015:1461).



**Figure 3:** Pitch contours of two Swedish pitch accents (Burnham et al., 2015:1462).



# Method

- **Participants**

- 16 high school students (10 M, 6 F)
  - Native speakers of Swedish
  - Studied Chinese for 3-4 school terms
  - Two different schools

- **Material**

- 10 different monosyllables with four lexical tones
  - Produced by a native Mandarin speaker
  - Presented in random order

- **Task**

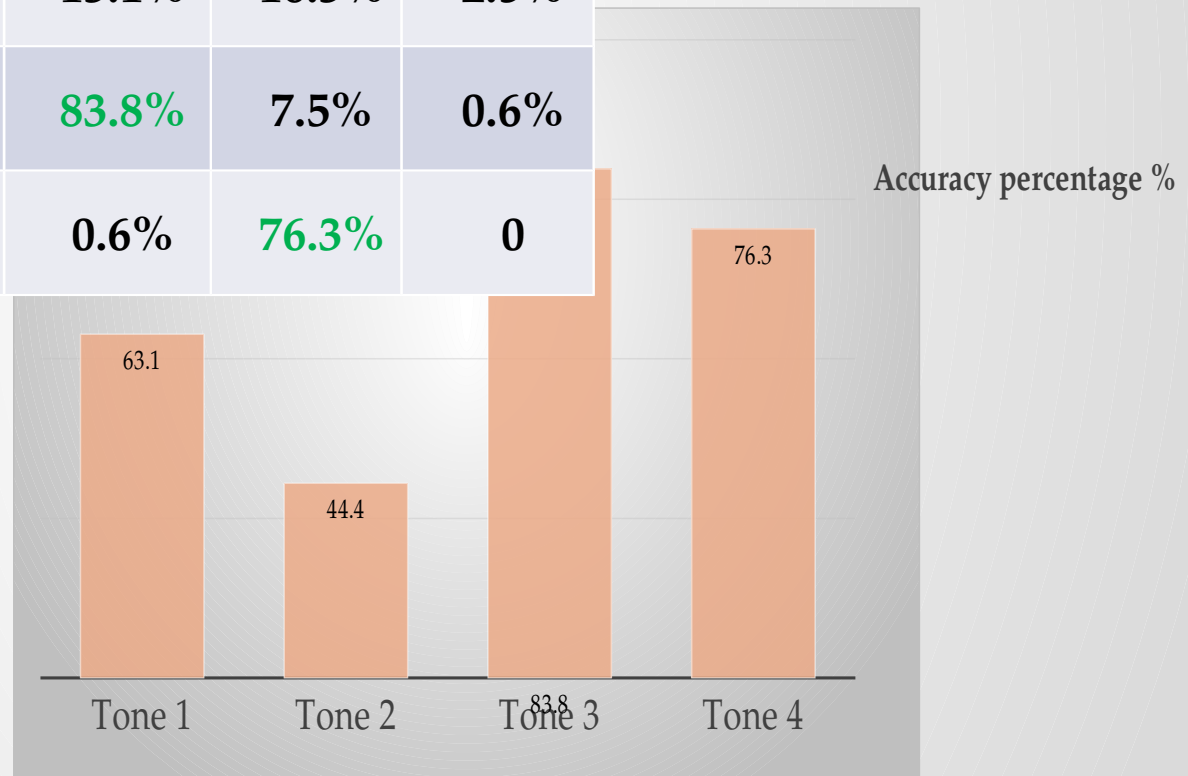
- Four-alternative identification task

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# Results

Response Target	Tone 1	Tone 2	Tone 3	Tone 4	Unidentifiable
Tone 1	63.1%	27.5%	0.6%	8.1%	0.6%
Tone 2	23.8%	44.4%	13.1%	16.3%	2.5%
Tone 3	3.8%	4.4%	83.8%	7.5%	0.6%
Tone 4	3.8%	19.4%	0.6%	76.3%	0



# Discussion & Conclusion

- ▶ Swedish students assimilate Tone 3 and Tone 4 in Mandarin to Swedish Accent 1 and 2
  - ▶ Mandarin Tone 3 and 4, and Swedish Accent 1 and 2 all display falling pitch contour
  - ▶ High accuracy percentage of Mandarin Tone 3 and 4 by Swedish learners
  - ▶ Tone 1 and Tone 2 are most problematic: most confusing tone pair to Swedes
  - ▶ Such pattern is not observed among English-speaking learners
- ▶ Students performed differently in each school, may be affected by length of study time and teacher's teaching style.

*Thank you!*