# Go small or go big, there is no in between

Mandarin-English Speakers' Code-switching
Grammar Preference

Gaofei Shen
Master Student at RUG

# Roadmap

- Introduction
- Previous Works
- Methodology
- Results
- Discussion
- Conclusion
- References

# Introduction

- Code-switching
  - Alternating languages in the same utterance

- Motivations
  - Grammar for code-switching?
  - Mandarin-English

# Technical terms

- **Matrix Language**
  - The "main" language of the utterance

- **Embedded Language**
  - The "switched-to" language of the utterance

a. 这周的 assignment 是写一篇小故事
b. 'This week's *assignment* is writing a short story.

# Previous Works

- Code-switching (morpho)syntactic frameworks:
    - Poplack (1980)
    - Muysken (1995)
    - Myers-Scotton (1993)

| Myers-Scotton | Muysken | Poplack |
|---|---|---|
| ML + EL constituent | Insertion | (Nonce) borrowing |
| EL-islands | | Constituent insertion |
| ML-shift | Alternation | Flagged switching |
| ML-turnover | | Code-switching under equivalence |
| (Style shifting) | Congruent lexicalization | (Style shifting) |

Table 1.1: Schematic comparison of code-switching and -mixing typologies in three traditions (Muysken, 2000)

# Matrix Language Frame Model

- **The ML Hypothesis:** As an early step in constructing ML+EL constituents, the ML provides the morphosyntactic frame of ML+EL constituents

- **System Morpheme Principle**: In ML+EL constituents, all system morphemes which have grammatical relations external to their head constituent (i.e. which participate in the sentence's thematic role grid) will come from the Matrix Language (Myers-Scotton, 1993, 2002)

# Embedded Language Islands

Code-switching can have segments of various lengths. The MLF model categorizes the CS segment that follows EL grammar as an EL-island.

Internal EL-island can be treated as an *island* contained within the word boundary.
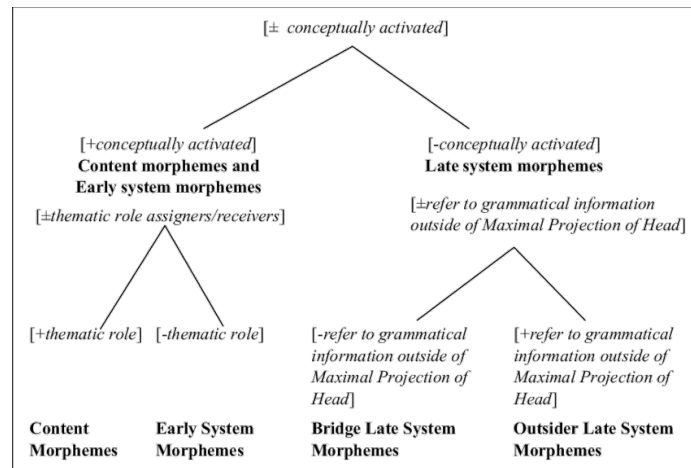
# Related Works (cont.)

- Social attitude towards code-switching
  - The notion of Pure Language

- Text vs. Speech
  - Linguistics in Computer Mediated Communication

# Reasons for code-switching

1. Lack of knowledge of one language in a certain subject
2. Excluding certain persons from a portion of the conversation
3. Identity expression
4. Indicating a change in tone of the conversation
5. Conducting metalinguistic commentary
6. Poetic usage involving puns and jokes

# Research Question

1. Test the System Morpheme Principle in the Matrix Language-Frame model (Myers-Scotton, 1993) and,

2. Find factors that influence the speakers' code-switching grammar preferences.
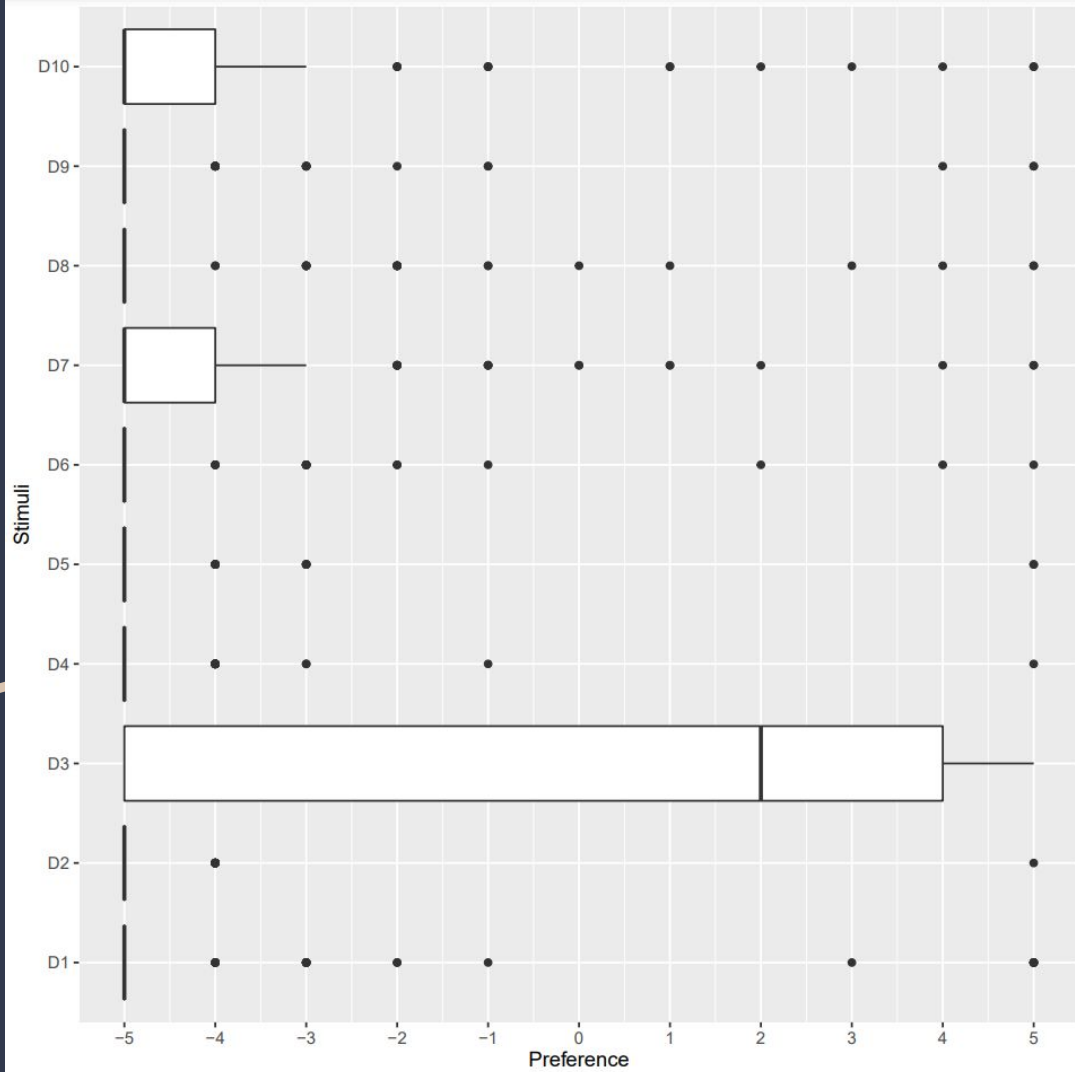
# Methodology

- Participants
- Stimuli
  - Inspiration from daily conversations
  - Experience from earlier pilot study
  - Total of 20 sentences
- Questionnaire
  - Bilingual Language Profile (Birdsong et al. 2012)
  - Acceptability Judgement Task
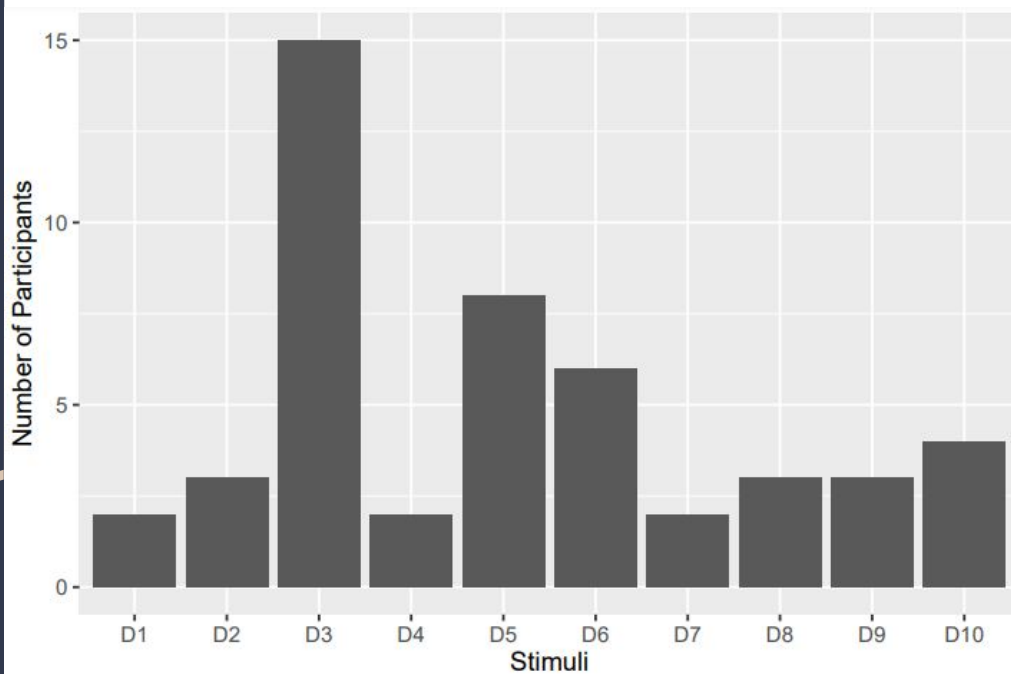  - Open-ended response questions

# Results
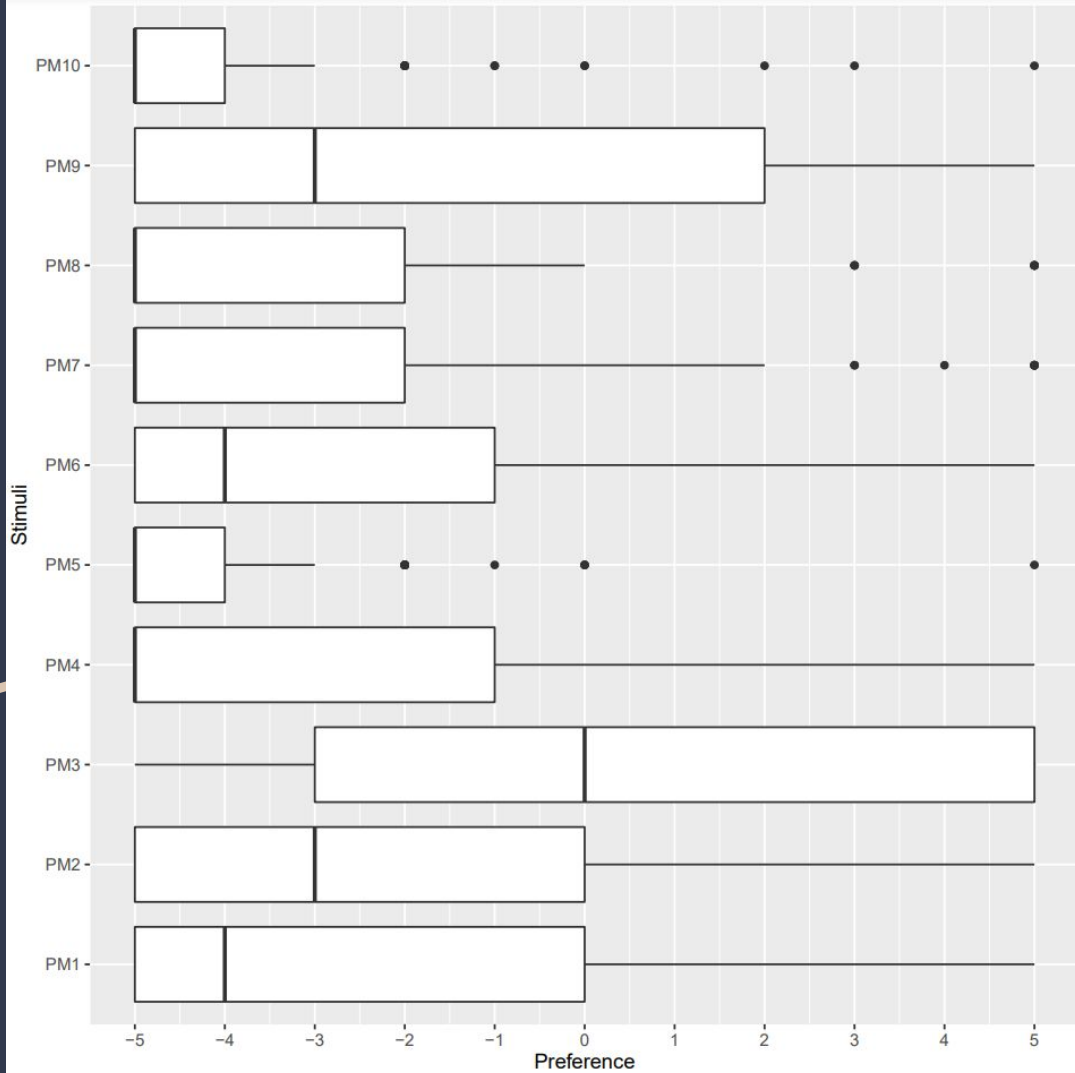
# Results: Determiners

# Determiner Sentence 3

Stimulus D3:

(2) a. 你得去找个 right person 才能解决这个问题。

   b. 'You need to find *(the) right person* to solve this problem.'[1]

(3) a. 你得去找 the right person 才能解决这个问题。

   b. 'You need to find *the right person* to solve this problem'

# Results: Determiners

# Results: Plural Markers

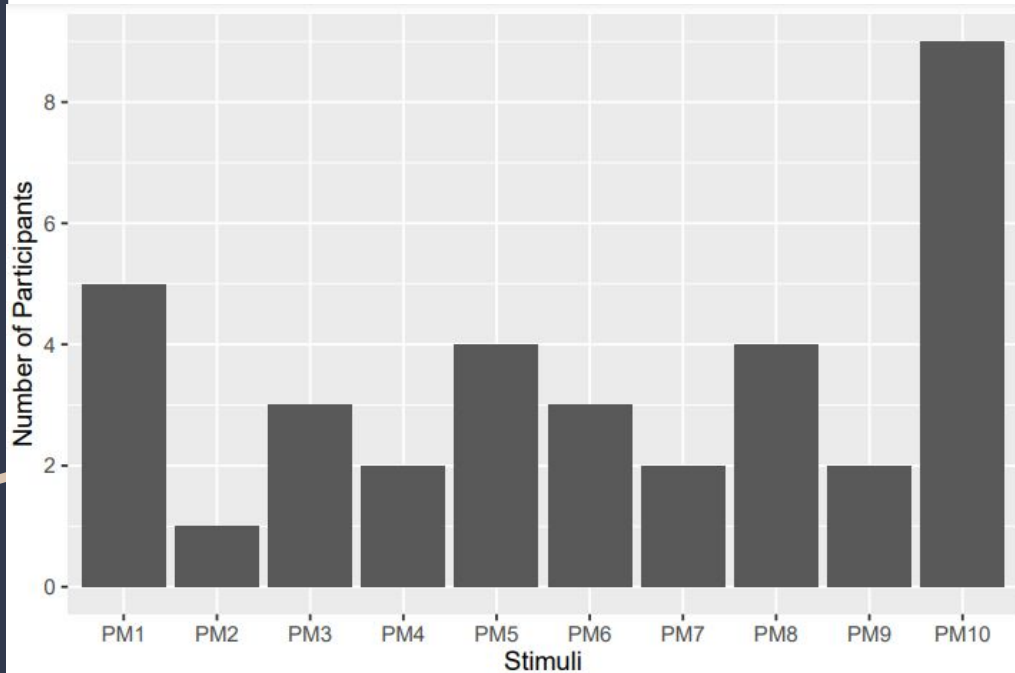# Plural Marker Sentence 3

Stimulus PM3:

(4) a. 教授刚把带 *comment* 的作业发回来。

    b. 'The professor just sent the homework back with comment(-s)'

(5) a. 教授刚把带 *comments* 的作业发回来。

    b. 'The professor just sent the homework back with comments'

# Results:
# Plural Markers

# Results: Cont.

- All participants except 3 hold positive attitudes toward CS

- People preferring sentences with English plural markers are more proficient in English

# Discussion

- The Matrix Language Frame model is robust
  - Mandarin grammar has certain "empty" slots that can be filled by English lexical items

- Participants are very aware of code-switching
  - "I try to avoid mixing (languages) when talking to people who's unfamiliar with English. … As long as both sides can understand the conversations. … I found people have no problem accepting (code-switching) and even prefer it."

# Conclusion

- Code-switching need to follow grammar!

- English plural markers are acceptable (for some people) in their Mandarin sentences
- Determiners are an absolute NO

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# Future Directions

- Replace text based stimuli with audio samples

- Incorporate eye-tracking (visual world paradigm) to evaluate reaction time (RT)

Thank you to everyone who came to my talk!

# Acknowledgment

# References

# Participant profile