



More Than Words: Code-Switching Among Chinese Immigrant Parents

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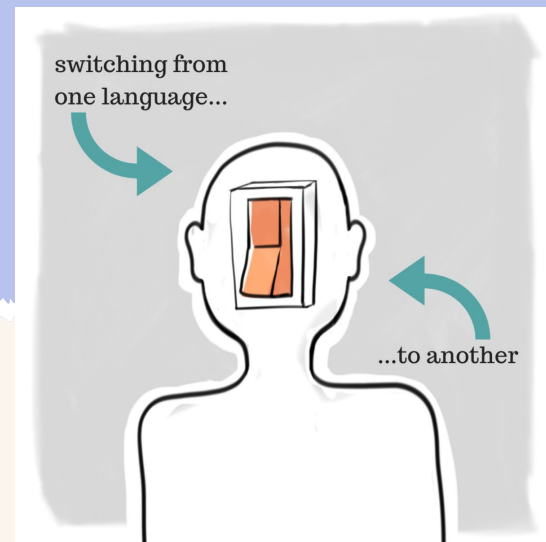
An example



What is Code-Switching?

Switching between languages within a sentence or conversation

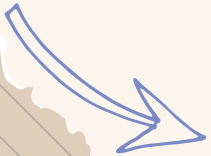
- Common in multilingual, multicultural communities
- **Often reflects more than language fluency!!**
 - identities, emotions, culture...
- Mandarin-English code switching is very common, but **WHY? What can code-switching reveal?**





My Research Question

**When and Why do Chinese Immigrant Parents
code-switch when they talk about race and social
status?**





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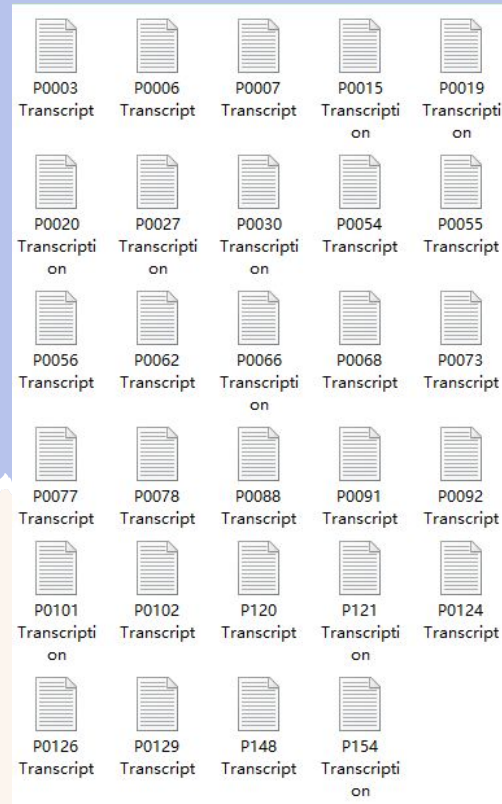


Method



Data

- 30 transcriptions of Mandarin-English mixed language interviews with Chinese immigrant parents regarding race, social mobility, and success.
- All 30 were mandarin-dominant
 - Parent and the interviewer both spoke Mandarin



Analysis

```
def extract_english(content):  
    lines = content.splitlines()  
    english_lines = []  
  
    for line in lines:  
        if line.startswith("I:") or line.startswith("I: ") or line.startswith("I: "):  
            # Skip lines starting with I: or i:  
            continue  
        else:  
            english_part = ''  
            for c in line:  
                if c in 'abcdefghijklmnopqrstuvwxyz0123456789.,:;(){}[]<>\"'':<br>':  
                    english_part += c  
            english_lines.append(english_part)  
  
    return '\n'.join(english_lines)  
  
def process_txt(file_path):  
    with open(file_path, 'r', encoding='utf-8') as f:  
        content = f.read()
```

1. Raw transcript

I: 能不能解释一下您的回答?

P: 就是, 一个是在education这个阶层我们过去的几年也一直在, 还在努力, 虽然已经年纪比较大, 但是还在pursue一些更高的education。这是一方面。另外也因为工作年纪的增长这个家庭收入也得到了很大的提高, 所以在这个number的level, 这个number会有这个提高。

I: 好。现在我想问一下您一些关于种族的问题。呃, 总的来说您认为以下的种族在这个梯子上处于那个位置? 然后再说一遍, 在梯子的最顶端是社会最顶层的家庭, 然后在梯子的最底端是社会最底层的家庭。您觉得大多数美籍黑人在这个梯子第几层?

P: 大多数来说的话, 应该说比较低一点吧? 可能算挺低的, 2, 1, 2左右吧。

2. Python script to automate extraction of English insertions

- Also filtering out filler words not relevant to the topic

3. Extracted English insertions

P: , education, , , pursue education. , , number level number.

P: , ? , 2, 1, 2.

P: , , , , 2, 3.

P: diversified, , , population, 4, 4, 5. , , , , black and white tricky.

I: 能不能解释一下您的回答?

P: 就是，一个是我们在education这个阶层我们过去的几年也一直在，还在努力，虽然已经年纪算比较大，但是还在pursue一些更高的education。这是一方面。另外也因为工作年纪的增长这个家庭收入也得到了很大的提高，所以在这个number的level，这个number会有这个提高。

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P: 大多数来说的话, 应该说比较低一点吧? 可能算挺低的, 2, 1, 2 左右吧。

```

return '\n'.join(chinese_lines)

def extract_english(content):
    lines = content.splitlines()
    english_lines = []

    for line in lines:
        if line.startswith("I") or line.startswith("i"):
            # Skip lines starting with I: or i:
            continue
        else:
            english_part = ''
            for c in line:
                if c.isalpha():
                    english_part += c
            english_lines.append(english_part)

    return '\n'.join(english_lines)

def process_txt(file_path):
    with open(file_path, 'r', encoding='utf-8') as f:

```

P: , education, , , pursue education. , ,
number level number.

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1. Raw transcript

2. Python script to automate extraction of English insertions

- Also filtering out filler words not relevant to the topic

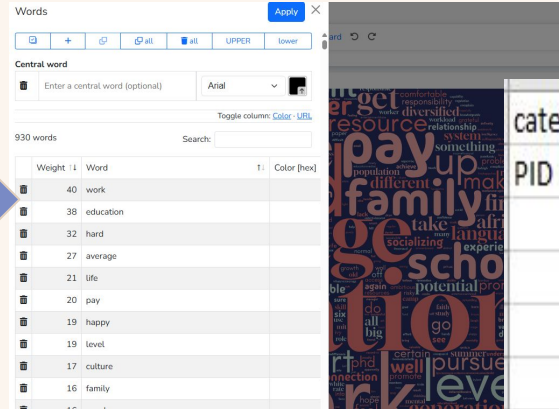
3. Extracted English insertions

Analysis

931 unique English insertions in total

```
for word, freq in word_frequencies.items():
    if word not in headers:
        headers.append(word)
    for pid in data:
        data[pid][word] = 0
    if word not in data[PID]:
        data[PID][word] = 0
    data[PID][word] += freq

# Write updated data back to CSV
with open('word_frequencies.csv', 'w', newline='', encoding='utf-8') as csvfile:
    writer = csv.writer(csvfile)
    writer.writerow(headers)
    for pid, word_freqs in data.items():
        row = [pid] + [word_freqs.get(word, 0) for word in headers]
        writer.writerow(row)
```



category	1	1	2	2
PID	i	you	work	education hard
3	3	1	24	10
6	34	13	5	1
7	0	0	0	0
15	1	0	0	1
19	22	21	1	4

4. Frequency observation
(automated into csv file)
and word cloud display
(wordclouds.com)

5. Manual coding of word
categories based on existing
literature

- Zhong et al. (2024)
- Ritchie & Bhatia (2013)

A blue star is in the top-left corner. A blue map of Australia is in the top-right corner with two white arrows pointing towards the center. The title "Modified Theoretical Framework" is centered at the top in a large, bold, brown font.

Modified Theoretical Framework

<u>5 Categories of Code-Switching</u>	Explanation
<u>Participant Identity</u>	Self presentation, social roles... (asian, mom, immigrant...)
<u>Situational</u>	Topic relevant, setting... (education, work, business...)
<u>Message-Intrinsic</u>	Topic comment, cultural wisdom, quotation... (best, average, hard...)
<u>Sociopsychological</u>	Language dominance, technical terms... (NBA, GRE, MD...)
<u>Convenience</u>	Word more readily available in English than Mandarin due to environment or priming (deadline, paper...)

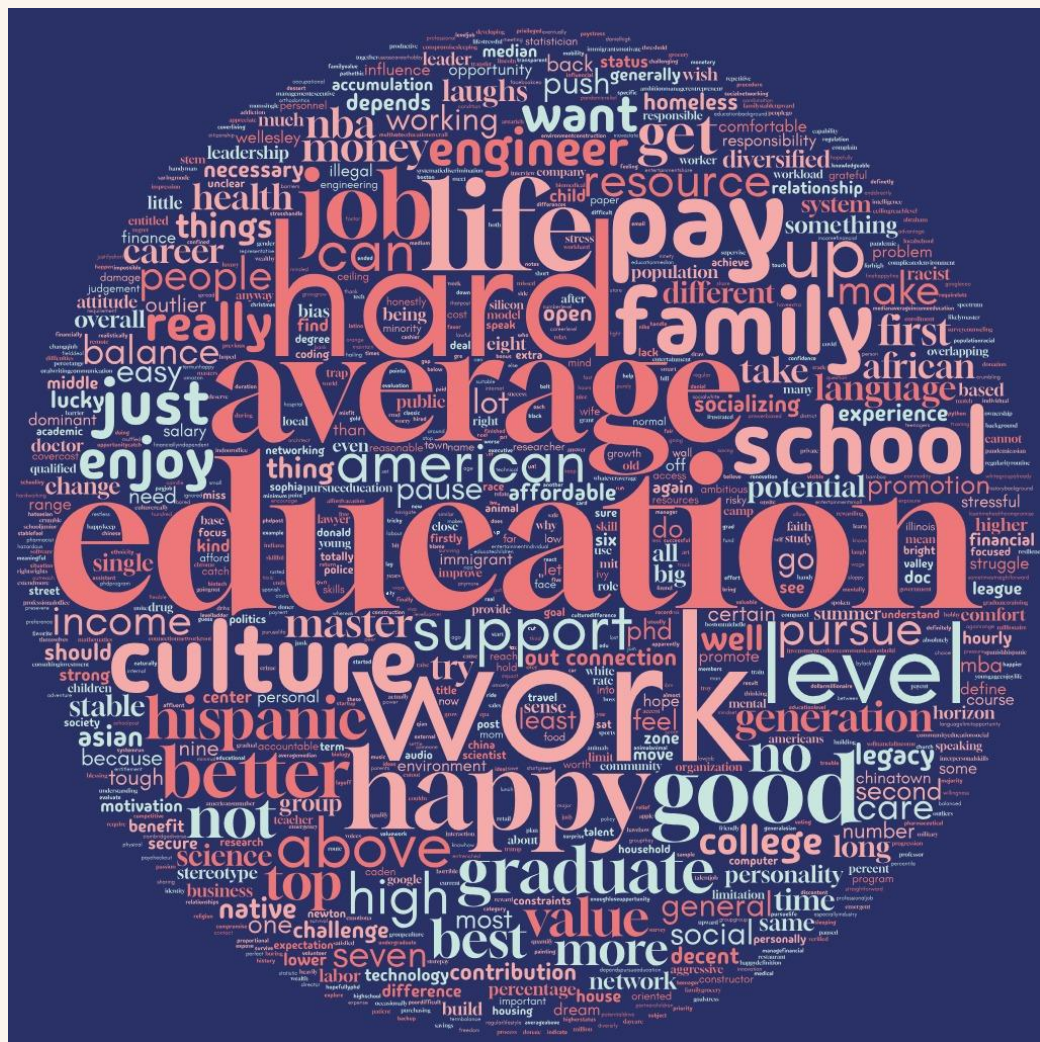


03



Results





When did people switch to English? (Ranked)

● 1. Situational

Work (40), education (38), job (16), school (16), engineer (9)

● 2. Message Intrinsic

Hard (32), average (27), happy (19), good (16)

● 3. Identity

Culture (17), family (16), american (11), asian (5)

● 4. Convenience

Master's [degree] (7), network (4), China(2), startup

● 5. Sociopsychological

NBA (7), PhD (5), MBA (4), Google, Ivy [league]



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Discussion





Why?

Conceptual and lexical accessibility

Some terms are more deeply rooted in / originated from Western cultures; Strong English association

Labeling, alignment, & belonging

Certain uses of English reassures the American identity and positioning within the U.S. social structure

Emotional emphasis

Participant might have stronger feelings toward certain topics in a English context





Limitations

Specific demographic

- Chinese immigrant parents with adolescent children
- Mostly highly educated

Limited scope

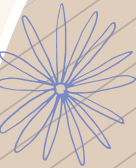
- Topic of the interviews impacted the use of certain words

Ambiguity in coding categories

- Overlaps in categories
- Lack of formal codebook

Causal inference

- Still difficult to draw causal inferences for WHY people choose to code switch
- Can only hypothesize based on pattern observation





Thanks!



Questions?

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