Quantitative investigation of two linguistic variables in Hohhot, China: exploring attitudes-language correlation

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Attitudes in speech convergence
- Communication Accommodation Theory (CAT, Giles & Coupland, 1991)
- Deterministic view of accommodation (Trudgill 2004)

Studies that found attitudes-language correlation
- qualitative: Llamas, 2007; Clark & Watson, 2016
- quantitative: Haddican et al, 2013

Studies that focus on attitudes
- Ladegaard, 2000; Stuart-Smith et al., 2013 – correlation not found
- Kristiansen, 2009 – correlation found only for subconscious attitudes
This study

- **Quantitatively** exploring attitudes-language correlation in language change and variation.

- Will *consciously offered attitudes/overt attitudes* influence language production?

- examined **two** linguistic variables: if attitudes effects are found, will the patterns of the effects be different for the two variables?
**Hohhot**

- An immigrant city
Hohhot

- An immigrant city
A new urban dialect: Hu Pu

Locality: Hohhot

Old Town  Jin dialect  Mandarin  New Town

Hu Pu  (Hohhot Mandarin)
**Fieldwork in Hohhot**

- **Fieldwork**: Aug – Oct, 2014
- 67 speakers across three generations

<table>
<thead>
<tr>
<th>residence</th>
<th>New Town</th>
<th>Old Town</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>Older</td>
<td>Middle</td>
</tr>
<tr>
<td></td>
<td>Older</td>
<td>Middle</td>
</tr>
<tr>
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<td>Older</td>
<td>Middle</td>
</tr>
<tr>
<td>gender</td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>No.</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>total</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>total</td>
<td></td>
<td>32</td>
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Linguistic feature: l-words

l-words: a set of di-syllabic words (Hou, 1999)
- used by both communities
- Variation in different linguistic levels: stress, vowels, tones, consonants

This study: two features of l-words
1. stress pattern variation
2. fricative variation
Stress pattern variation

- weak-strong pattern (W-S) – local Jin dialect
- strong-weak pattern (S-W) – standard Mandarin

- e.g.

<table>
<thead>
<tr>
<th></th>
<th>W-S</th>
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<th>meaning</th>
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<td></td>
<td>/xuəʔ⁴³ la⁵¹/</td>
<td>/xua³⁵la/</td>
<td>“scribble”</td>
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<tr>
<td></td>
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<td>/ta⁵⁵la/</td>
<td>“droop, hanging”</td>
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**Linguistic feature 1: stress pattern**

**Stress pattern variation**

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Linguistic feature 2: fricative variable

Fricative variation: l-words with initials [p’, t’, k’, or h]
- Whether or not a velar fricative [x] is involved?
  ([x] could also be palatal [ç] or uvular [χ] for different places of articulation)

<table>
<thead>
<tr>
<th>The variable:</th>
<th>[p’]</th>
<th>[t’]</th>
<th>[k’]</th>
<th>[h]</th>
</tr>
</thead>
<tbody>
<tr>
<td>[p’x]</td>
<td>[t’x]</td>
<td>[k’x]</td>
<td>[x]</td>
<td></td>
</tr>
</tbody>
</table>

without /x/

“pela”
扒拉
“move horizontally”

with /x/

“hulu”
葫芦
“calabash”
l-words data collection

Word elicitation task

- 1529 tokens with stress pattern variation were analysed in Praat
- 1010 tokens with fricative variation were analysed in Praat

“scribble 划拉”
Attitude data

**Attitudinal questionnaire**

- Magnitude estimation (Redinger, 2010)
- Principal Component Analysis (PCA) revealed 4 attitudinal factors
- 4 attitudinal index scores for each speaker
  - **Score1**: attitudes to Jin dialect
  - **Score2**: stay in Hohhot
  - **Score3**: attitudes to Old Town and Old Town people
  - **Score4**: emphasis of migrant identity

16. 如果我孩子的男/女朋友是旧城人，我会反对他们交往。
If my child is seeing or dating someone from old town area, I would oppose.

同意 I agree  ................................................................. 不同意 I disagree

17. 此地话很幽默。
Jin dialect is humorous.

同意 I agree  ................................................................. 不同意 I disagree
Explores attitudes effects

- Binomial mixed effects model in R (R core team, 2014)
- exploring linguistic and social constraints operating on the two variables.

Dependent variable:
Model 1: the stress pattern – W-S pattern.
Model 2: [p’, t’, k’, h] – produced with a velar fricative [x]

Independent variables:
- social: age, sex, education, attitudinal scores, social interaction scores.
- linguistic: phoneme [p’, t’, k’, h]; following vowel [a, i, ə?, u]

Best model
- Fixed effects: interaction between age group and three attitudinal scores, social interaction score, (phoneme, following vowel)
- Random intercept: Speaker and Word
Stress pattern results

More W-S (local)

Less W-S

Attitudes to Jin

Stay in Hohhot

Attitudes to Old Town

more negative

more positive
Stress pattern results, cont.

Attitudes to Jin

More W-S (local)

Less W-S

* Younger
Middle

* Older

Stay in Hohhot

Attitudes to Old Town

more negative ————> more positive
Stress pattern results, cont.

Attitudes to Jin

Stay in Hohhot

Attitudes to Old Town

more negative → more positive
Younger generation in both Old Town and New Town speak Hu Pu (Hohhot Mandarin).

W-S(Jin) is adopted by Hu Pu speakers to represent a new urban Hohhot identity.

**Interviewer:** Do you use [xua³⁵ la⁵¹](s-w)?

**NYF4:** No, it’s like you’re posturing.

(After hearing the other speaker using [tə⁵⁴ la⁵⁵](w-s) instead of [tə?⁵⁴ la⁵⁵](w-s))

**OYM2:** I despise you ... As a Hohhotian, you don’t say /tə?⁵⁴ la⁵⁵/(w-s)?! You are so not qualified (to be a Hohhotian)!
Stress pattern results, cont.

- Attitudes to Jin: more negative to more positive
- Stay in Hohhot: no significant change
- Attitudes to Old Town: more positive to more negative
Fricative results

- **Attitudes to Jin**
  - Younger: more positive
  - Middle: less [x] (local)
  - Older: less [x]

- **Stay in Hohhot**
  - More [x] (local)
  - More negative

- **Attitudes to Old Town**
  - More negative
  - More positive
A) Attitudes to Jin

B) Stay in Hohhot

C) Attitudes to Old Town

D) Stress pattern

E) Fricative

- Younger
- Middle
- Older
The two linguistic variables

Different level of awareness
- **stress pattern variable**: some explicit awareness
- **fricative variable**: no explicit awareness
Discussion

- Three attitudinal scores were found to have significant effects in Hohhot speakers’ production of the two linguistic variables.

- Overt attitudes collected by attitudinal questionnaires could also predict speakers’ language production.

- The patterns of attitudinal effects found in the two variables are slightly different from each other, this could be partly resulted from the different levels of awareness of the two variables.


THANKS!

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