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

Xuan Wang
University of Canterbury



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?

Locality: Hohhot

Hohhot

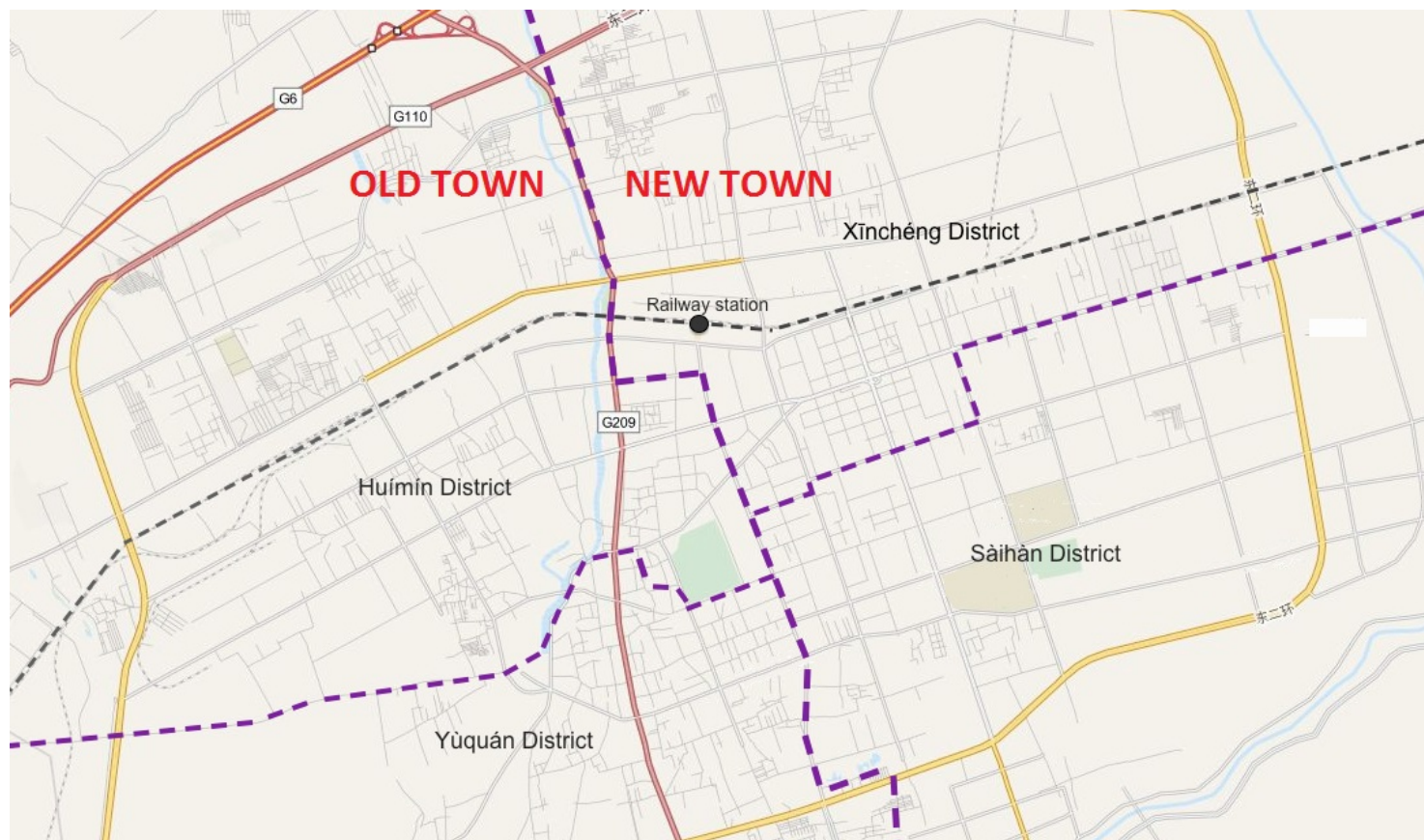
- An immigrant city



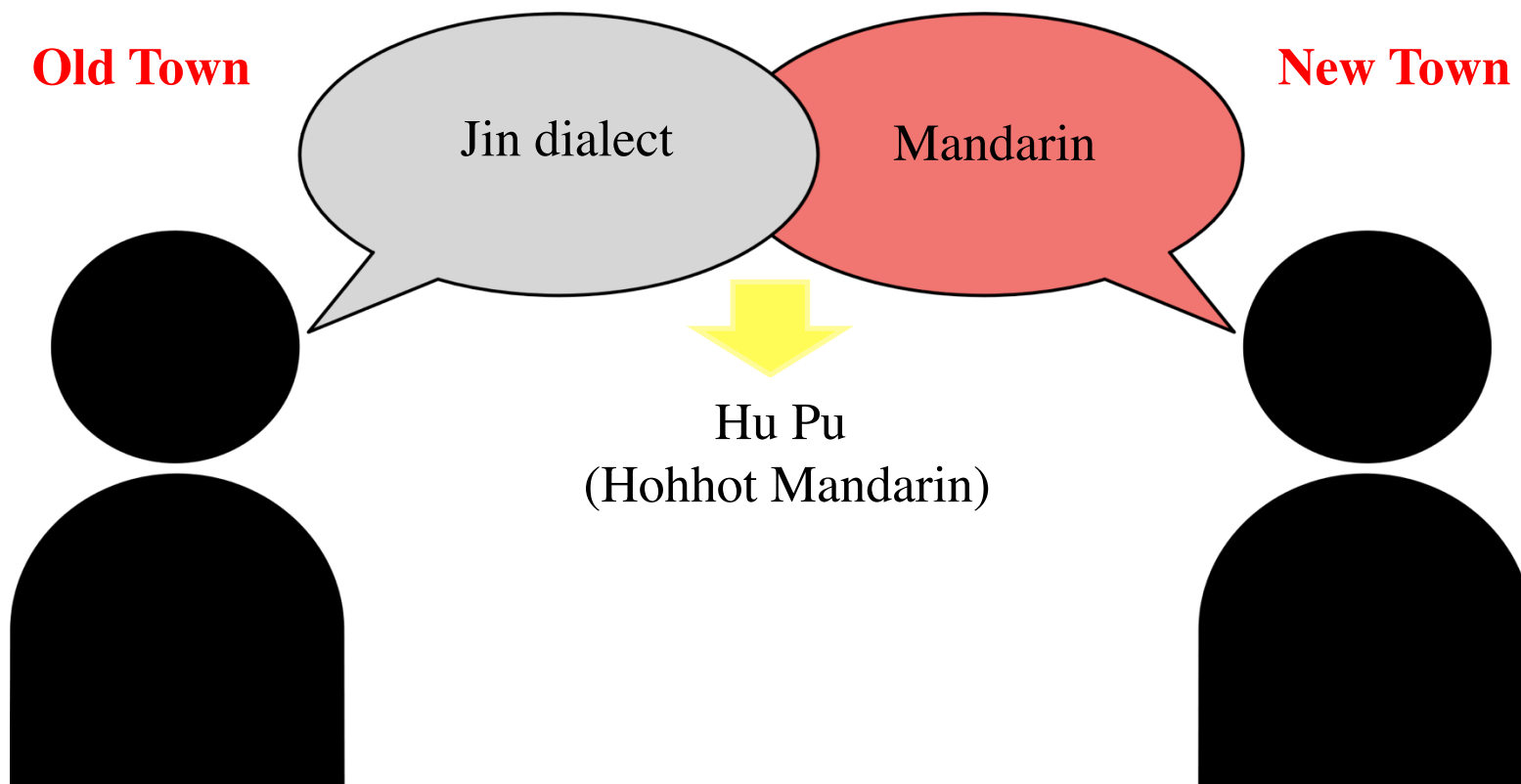
Locality: Hohhot

Hohhot

- An immigrant city



A new urban dialect: Hu Pu



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

residence	New Town						Old Town					
age	Older		Middle		Younger		Older		Middle		Younger	
gender	M	F	M	F	M	F	M	F	M	F	M	F
No.	7	6	4	6	5	7	5	4	5	7	5	6
total	35						32					

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.

W-S	S-W	meaning
/xuə ⁴³ la ⁵¹ /	/xua ³⁵ la/	“scribble”
/tə ⁴³ la ⁵⁵ /	/ta ⁵⁵ la/	“droop, hanging”
/kuə ⁴³ lu ⁵⁵ /	/ku ⁵⁵ lu/	“roll”

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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)

The variable:

[p']	[t']	[k']	[h]
[p'x]	[t'x]	[k'x]	[x]

without /x/

with /x/

“pela”

扒拉

“move horizontally”



“hulu”

葫芦

“calabash”



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”

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

- 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]

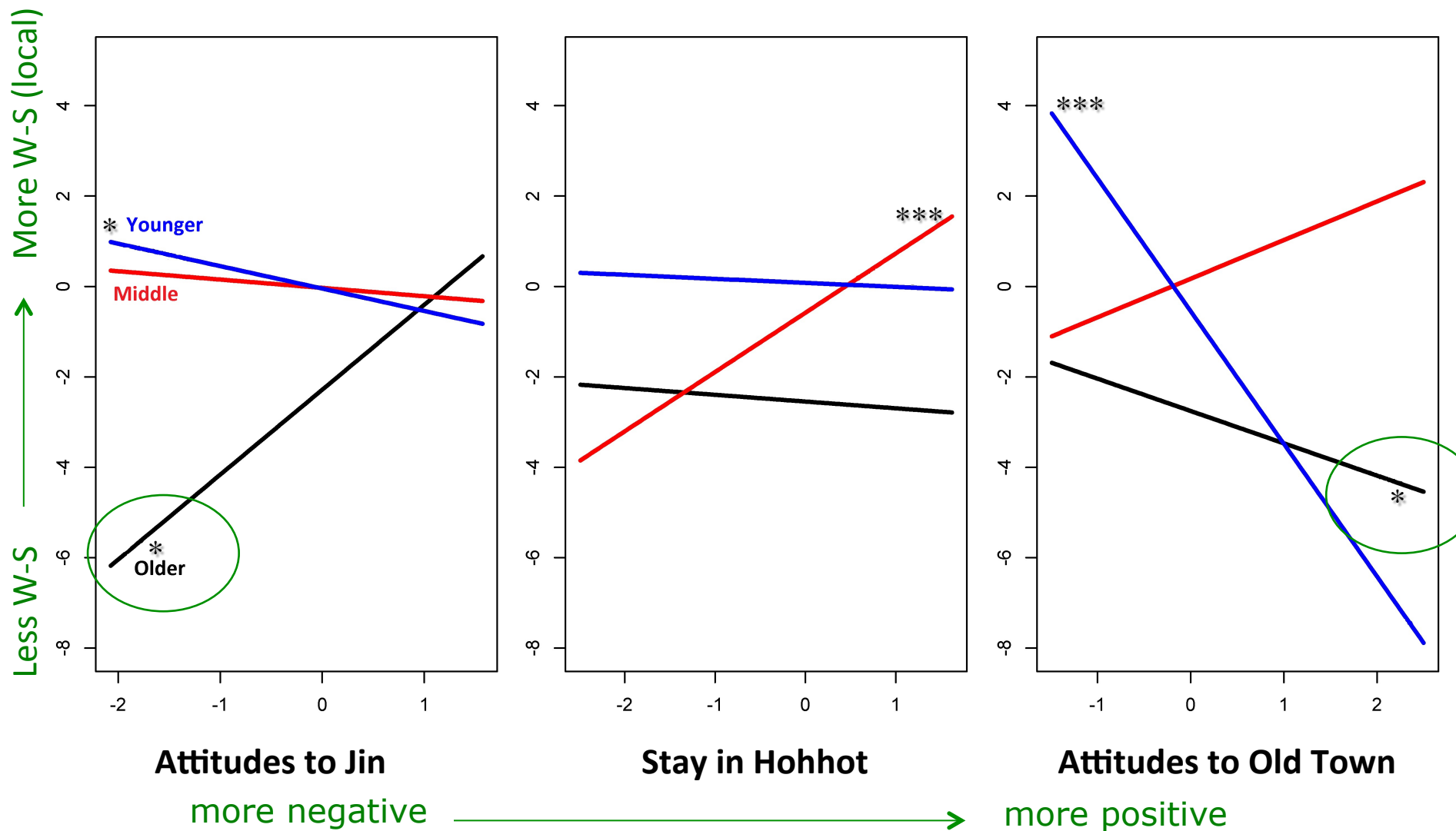
Independent variables:

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

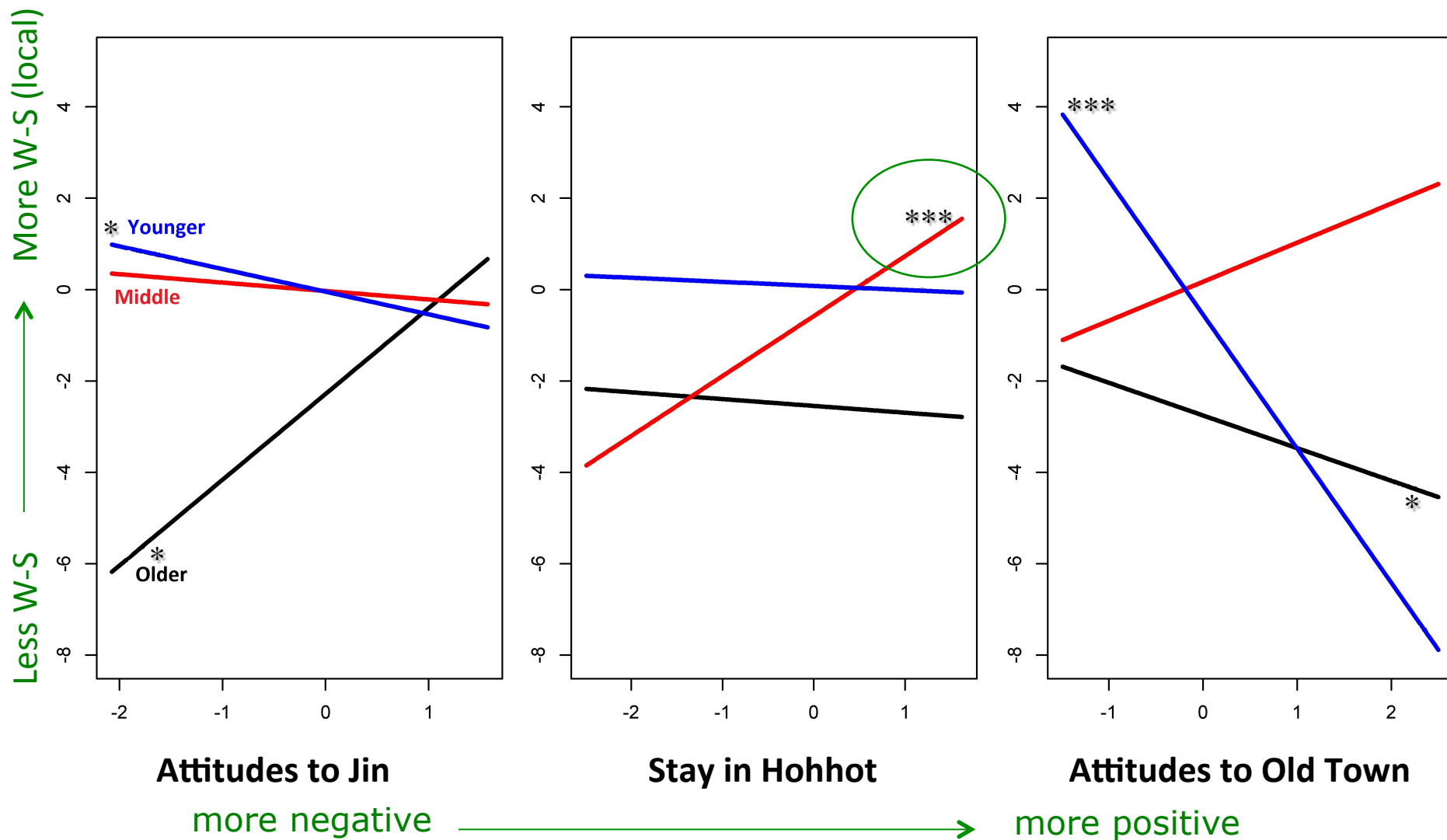
Best model

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

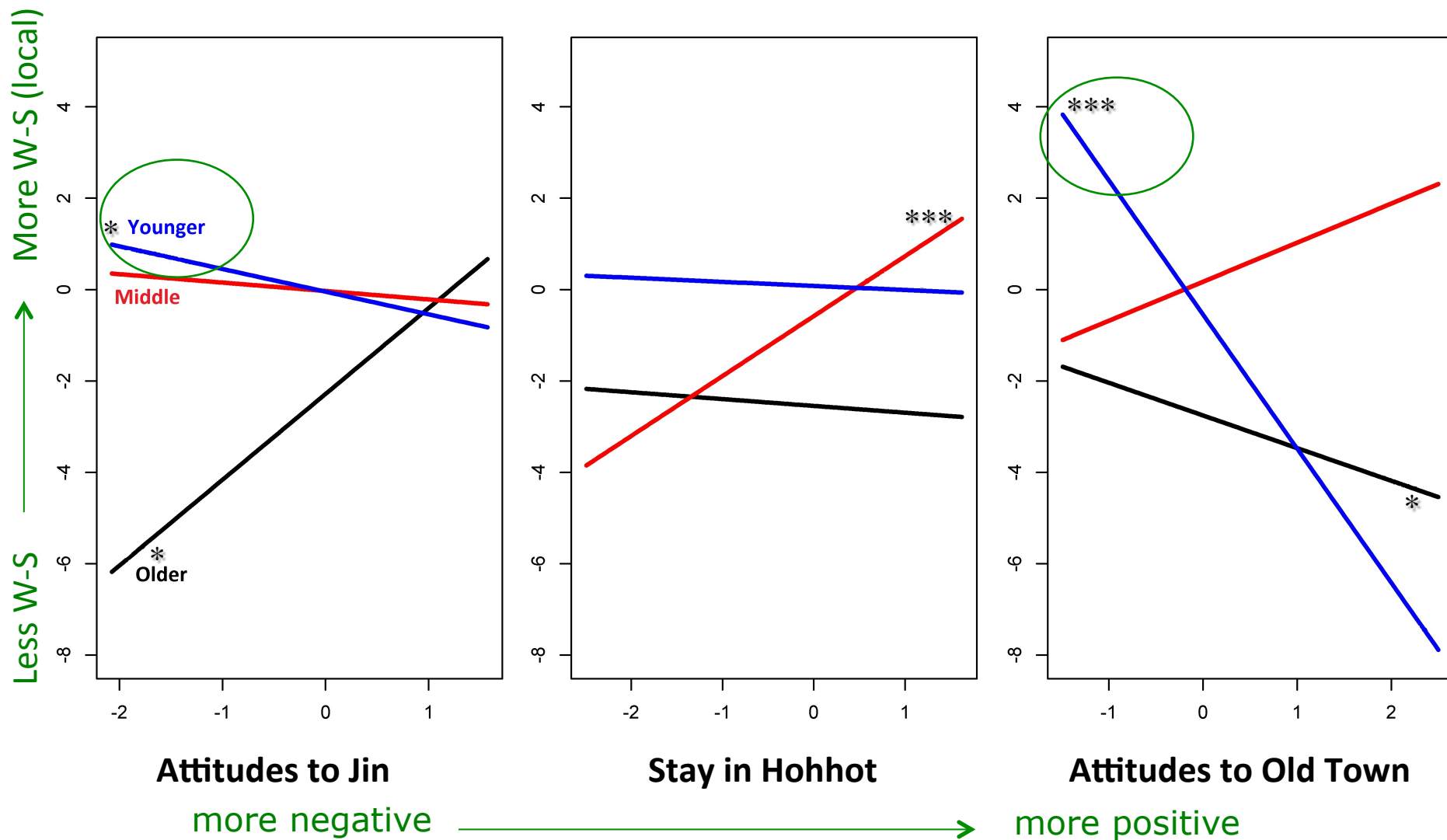
Stress pattern results



Stress pattern results, cont.

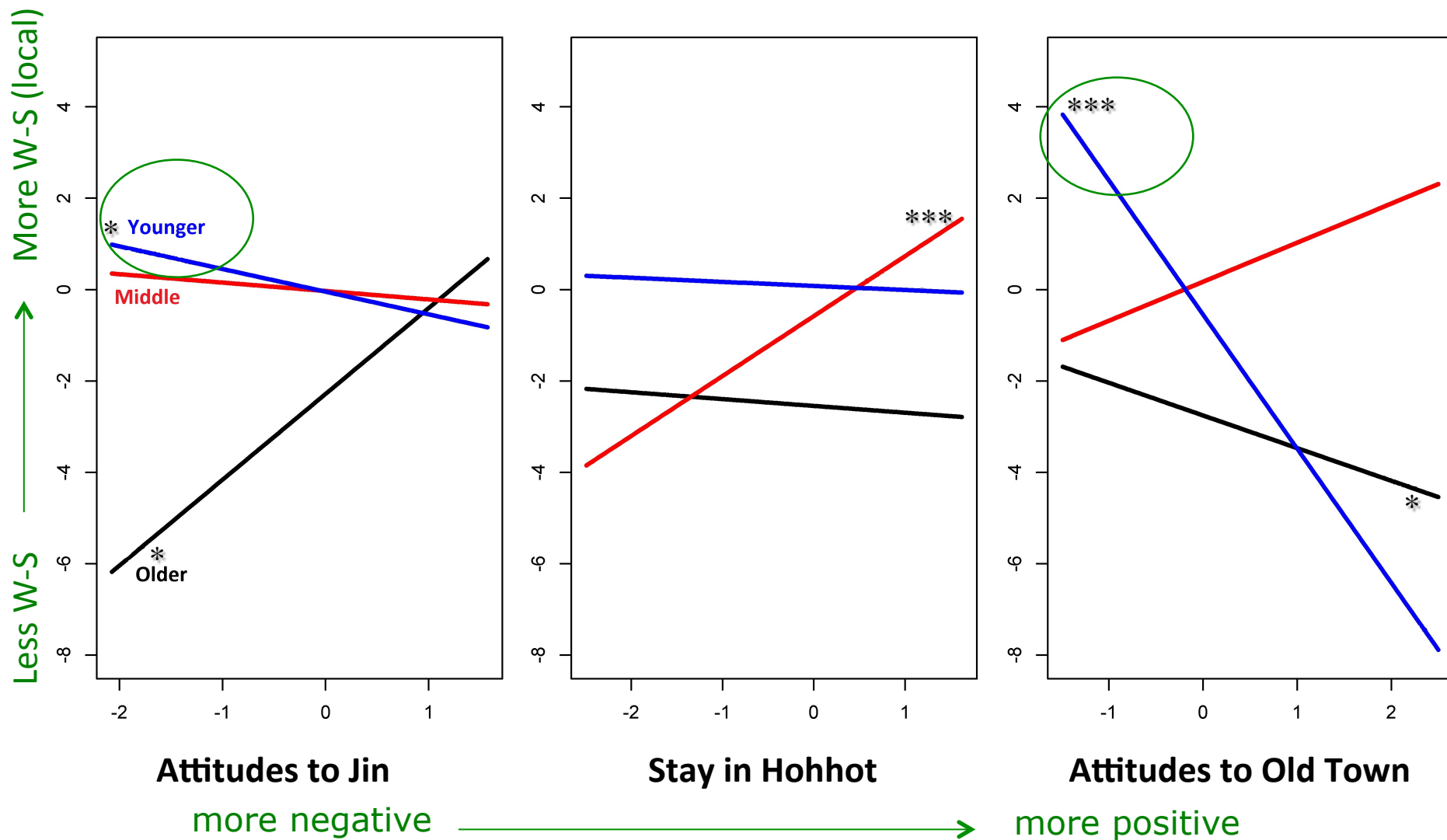


Stress pattern results, cont.

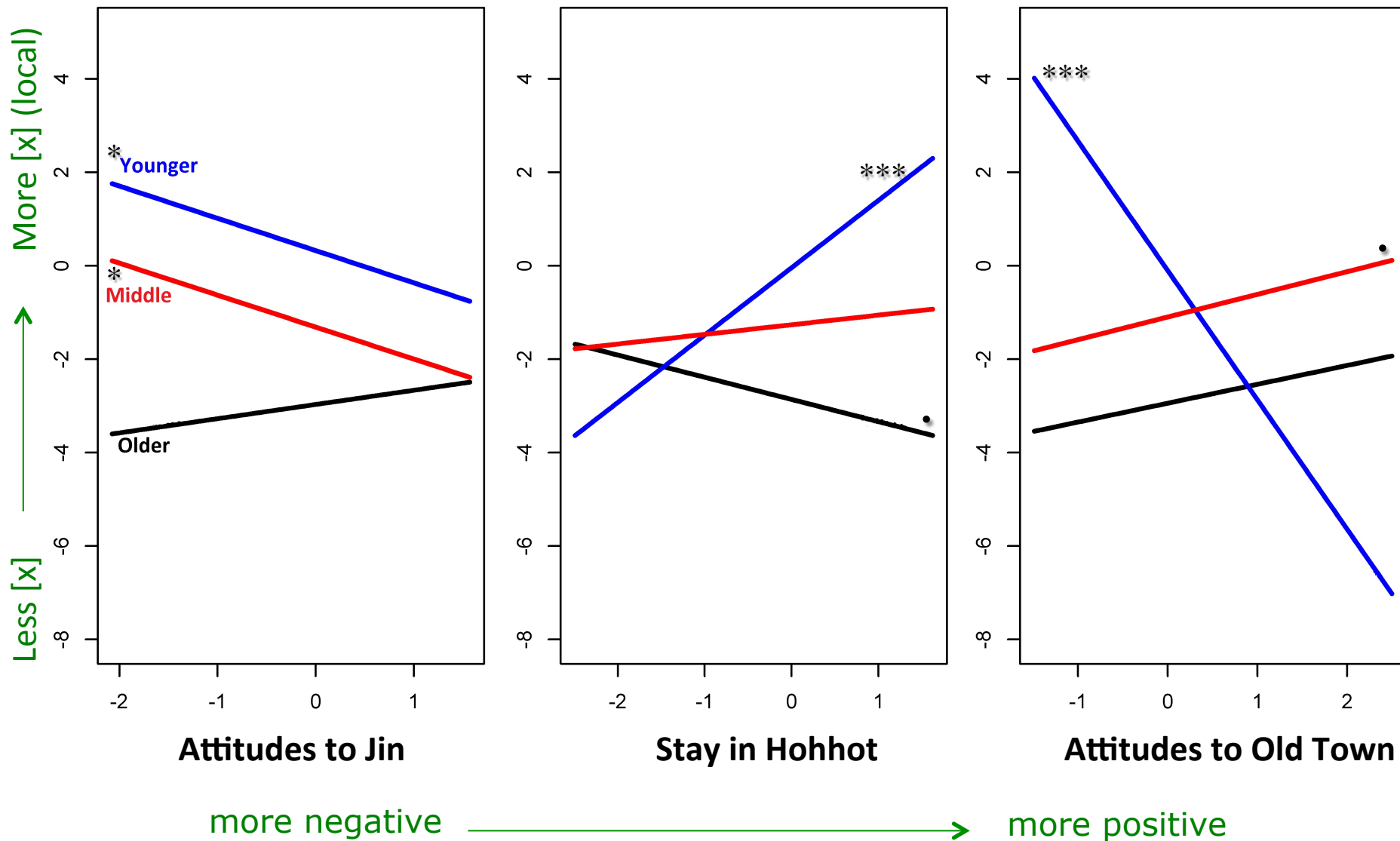


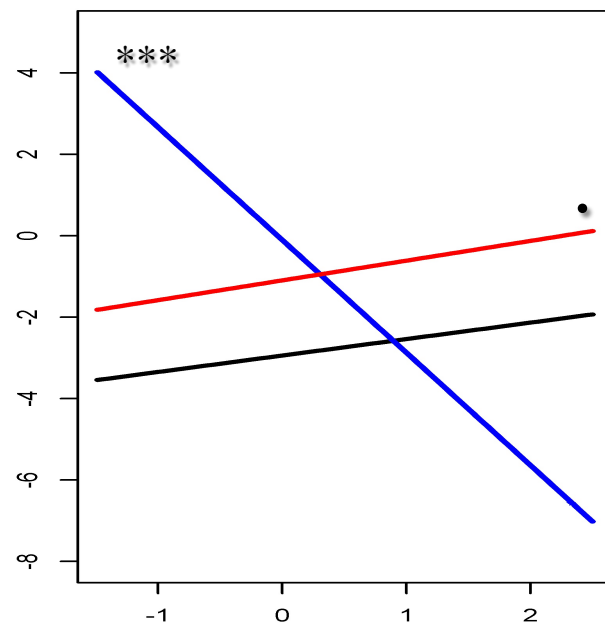
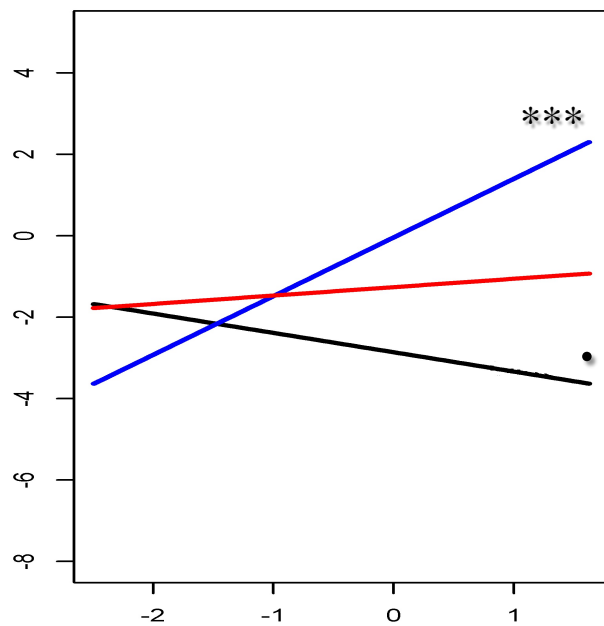
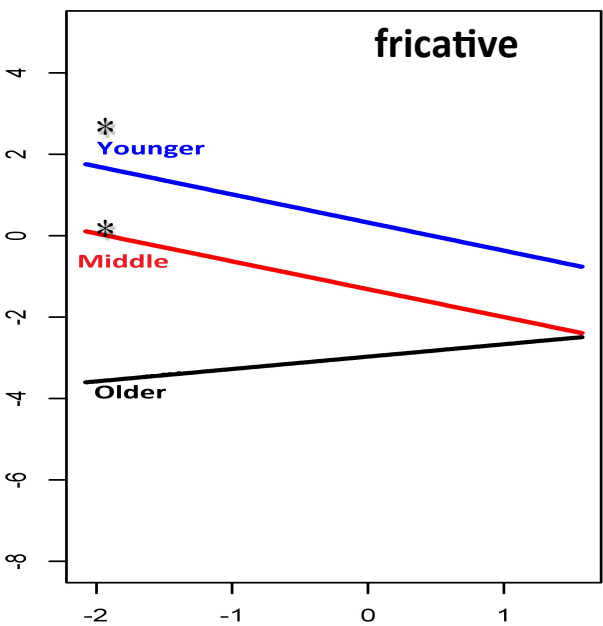
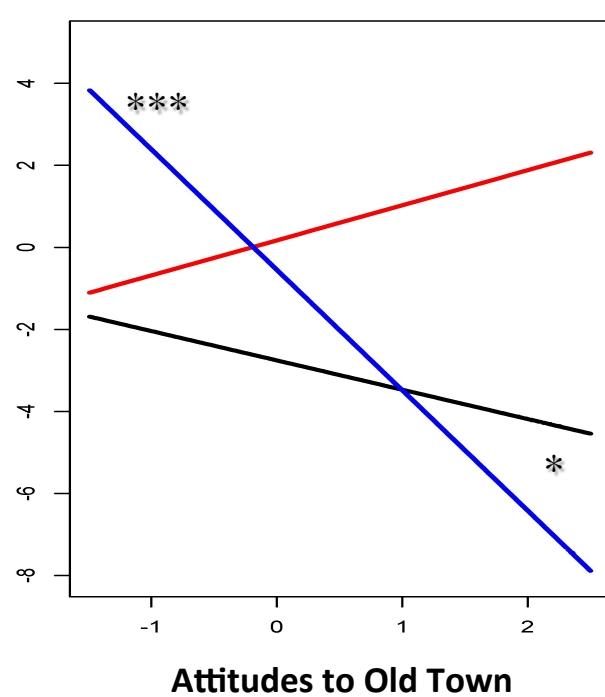
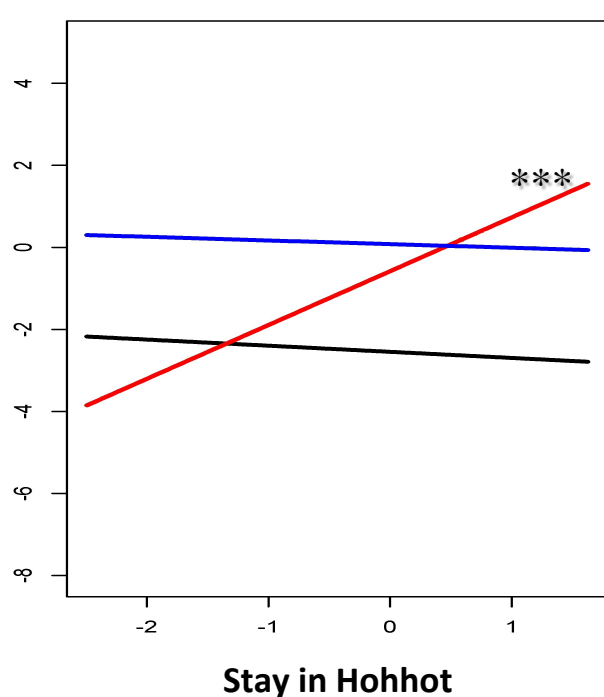
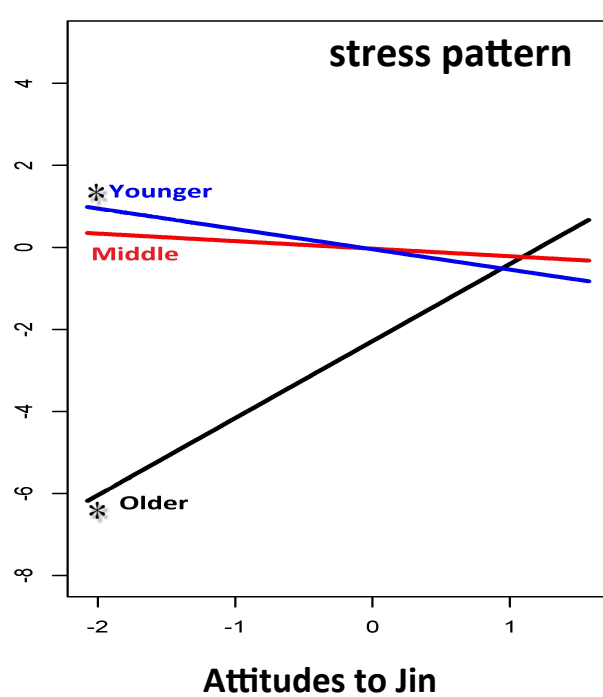
- Younger generation in both Old Town and New Town speak Hu Pu (Hohhot Mandarin).
 - W-S(Jin) is adopted by Hu Pu speakers to represent a new **urban Hohhot identity**.
 - **Interviewer:** Do you use [xua³⁵ la⁵¹](s-w)?
 - **NYF4:** No, it's like you're posturing.
- (After hearing the other speaker using [ta⁵⁵ la] (s-w) instead of [tə⁵⁴ la⁵⁵] (w-s))
- **OYM2:** I despise you ... As a Hohhotian, you don't say /tə⁵⁴ la⁵⁵/(w-s)?! You are so not qualified (to be a Hohhotian)!

Stress pattern results, cont.



Fricative results





The two linguistic variables

Different level of awareness

- **stress pattern variable:** some explicit awareness
- **fricative variable:** no explicit awareness

- 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.

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THANKS!

xuan.wang@pg.canterbury.ac.nz