





Crosslinguistic influence for an abstract constraint: evidence from French/Chinese bilinguals

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Cross-linguistic influence in bilinguals

• Bilinguals are known to exhibit crosslinguistic influence (CLI) effects

- (i) in domains related to the syntax-pragmatics interface, such as the C-domain,
- (ii) when the syntactic construction in Language A is compatible with more than one analysis, and language B only supports one analysis.

Hulk & Müller 2000

• Can these effects exist in domains that are as abstract as island constraints, and there is hardly any positive evidence for ?

Island constraints in Chinese and in French

• French: wh ex situ. Both arguments and adjuncts are subject to islands

Argument: island sensitivity

(a) *Quel cours tu as rencontré hier le professeur qui fera [e]?
 Which course you have met yesterday the professor who teach.fut
 '*Which class have you met the teacher who will teach?'

Adjunct: island sensitivity

(b) *Quand est-ce que tu as rencontré hier le professeur qui fera cours --?
 When Q you have met yesterday the professor who will teach (a) course
 '*When have you met yesterday the professor that will teach a class [e]?'

Island constraints in Chinese and in French

• Chinese: wh in situ. Only adjuncts are subject to islands

Argument: no island sensitivity

(a) Bótōng xǐhuān [**shéi** xǐe de shū]?Botong loves who write DE book

'For what x, x a person, Botong loves the book that x wrote?'

Adjunct: island sensitivity

(b) *Qiáofēng xǐhuān [Bótōng wèishénme xǐe de shū]?Qiaofeng love Botong why write DE book

Intended: * For what reason x, Qiaofong loves the book that Botong wrote for x x?'

Huang 1982

Research questions

- What happens with French Chinese bilinguals?
- Do they exhibit crosslinguistic influence on sensitivity to islands, a phenomenon where the two languages
 - partially overlap and
 - concerns the C domain,
 - but is largely asbtract and based on negative evidence.
- In what direction?
- Does language dominance play a role?

outline

•1. Testing experimentally the validity of theoretical descriptions in monolinguals

a. reporting the results of a previous study on Chinese monolinguals
 b. presenting the results of a replication of the study on french monolinguals

2. Testing experimentally sensititivity to islands in French Chinese bilinguals

a. French dominant: Chinese heritage speakers in Paris

b. Chinese dominant: French L2 Chinese students in Paris

3. Discuss the results

Experiment 1A: locality in Chinese monolinguals: Tian et al. (2022)

Chinese in situ wh- questions with a 2 x 2 x 2 factorial design

a) dependency length (long vs short)

- b) structure (non-island vs island)
- c) wh-category (adjunct vs argument).

Results:

- a significant interaction in Structure ×Length × Wh-category (β = 2.74, SE = 0.24, t = 11.59, p < 0.001).

- wh-adjunct (β = -2.99, SE = 0.17, t = -17.99, p < 0.001***)
- wh-argument (β = -0.25, SE = 0.16, t = -1.62, p = 0.11)





Experiment 1B: locality in French monolinguals

French wh-movement questions with a 2 x 2 x 2 factorial design

- a) dependency length (long vs short)
- b) structure (non-island vs island)
- c) wh-category (adjunct vs argument).
- 24 items, each with 8 conditions, for a total of 192 sentences, divided into 8 lists using Latin Square.

Each participant was instructed to rate their naturality on a seven-point Likert scale

• 31 French monolinguals with no knowledge of Chinese (27 women, mean age: 43y)

condition	Item	
sh+nonisl+arg	1	Qui est-ce qui dit que cette fille a acheté une voiture ?
lo+nonisl+arg	1	Qu'est-ce que tu dis que cette fille a acheté ?
sh+nonisl+adj	1	Quand est-ce que tu diras que cette fille a acheté une voiture hier ?
lo+nonisl+adj	1	Quand est-ce que tu dis que cette fille a acheté une voiture ?
sh+isl+arg	1	Qui est-ce qui dit que la fille qui a acheté une voiture va se promener ?
lo+isl+arg	1	Qu'est-ce que tu dis que la fille qui a acheté va se promener ?
sh+isl+adj	1	Quand est-ce que tu diras que cette fille qui a acheté une voiture hier va se promener ?
lo+isl+adj	1	Quand est-ce que tu dis que la fille qui a acheté une voiture va se promener ?

Experiment 1B: locality in French monolinguals

No significant interaction in Structure \times Wh-Category \times Length (β = - 0.39583, SE = 0.49410, t = 0.801, p = 0.4233).

- Significant superadditive interaction between structure and length for arguments: (β = -0.4896, SE = 0.3059, t = -1.600, p = 0.1)
- Significant superadditive interaction between structure and length for adjuncts: (β = -0.09375, SE = 0.37252, t = -0.252, p = 0.8014)

→Confirmed island sensitivity of arguments and adjuncts



Experiment 1B: locality in French monolinguals

A problem:

Weak effect of island condition for adjuncts, due to the way our items were constructed.

The conditions ('long+adjunct') are actually ambiguous.

Long+non island+adjunct

Quand est ce que tu dis **[e]** que la fille a acheté une voiture **[e]** ? When do you say **[e]** that the girl has bought a car [**e]** ? Long+island+adjunct

Quand est ce que tu dis **[e]**que la fille qui a acheté une voiture va se promener **[e]** When do you say **[e]**that the girl who bought a car will stroll around **[e]**

For this reason our results concerning adjuncts in French will not be discussed.

Experiments 1: Interim conclusion

The two experiments confirm the classic descriptions:
→ All questions are sensitive to islands in French,
→ Only adjunct questions are sensitive to islands in Chinese.

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2. French bilinguals: heritage speakers

- 19 Chinese heritage speakers (French dominant: Fre-D) predominantly born in France (N=17/19).
- 15 women; mean age: 22 y.
- They all use Chinese at home, and either French (N= 10) or both French and Mandarin (N= 9) with friends.

- Each individual passed the two experiments: one on Chinese (2A), one on French (2B) on the same day.
- They received a compensation of 15 euros (card)
- The two experiments were the same that we used for monolinguals.

Experiment 2A: Locality in Chinese - FreD vs monolinguals

- no significant interaction in Structure ×Length × Wh-category (β = -0.1875, SE = 0.6872, t = -0.273, p = 0.78512).
- Significant superadditive interaction between structure and length for adjuncts: (β = -1.3542, SE = 0.4167, t = -3.250, p = 0.00144**)
- Significant superadditive interaction between structure and length for arguments:(β = -1.5417, SE = 0.4949, t = -3.115, p = 0.002185**)





Monolinguals

Bilinguals (FreD)

Experiment 2B: Locality in French - FreD vs monolinguals

- No significant interaction in Structure ×Length × Wh-category (β = -0.9556, SE = 0.7368, t = 1.297, p = 0.195625).
- No significant superadditive interaction between structure and length for adjuncts: (β = 0.6667, SE = 0.5392, t = 1.236, p = 0.218)
- Significant superadditive interaction between structure and length for arguments: (β = -1.5417, SE = 0.4949, t = -3.115, p = 0.002185**)





Discussion: French dominant bilinguals

Chinese heritage speakers are different from monolinguals

- In Chinese: they display island sensitivity with argument questions
- In French, they display island sensitivity with argument questions
- (but no sensitivity to islands with adjunct questions, probably due to a problems with items + little statistical power)

3. French bilinguals: L2 French

- 20 China-born French L2 learners (ChiD)
- 17 women; mean age: 25 y.o.
- They all use Chinese home and most (N=18) use only Chinese with friends, except 2, who use also French.

- Each individual passed the two experiments: one on Chinese (3A), one on French (3B) on the same day.
- They received a compensation of 15 euros (card)
- The two experiments were the same that we used for monolinguals.

Experiment 3A: Locality in Chinese - ChiD vs monolinguals

- a slightly significant interaction in Structure ×Length × Wh-category (β = -1.4211, SE = 0.6459, t = -2.200, p = 0.0284*).
- No significant superadditive interaction between structure and lenght for **adjuncts** (β = -0.6316, SE = 0.3839, t = -1.645, p = 0.1018)
- Significant superadditive interaction between structure and length for arguments: (β = -2.0526, SE = 0.4671, t = -4.394, p < 0.001***)





Monolinguals

Bilinguals (ChiD)

Experiment 3B: Locality in French - ChiD vs monolinguals

- no significant interaction in Structure ×Length × Wh-category (β = -0.6491, SE = 0.6920, t = -0.938, p = 0.3488).
- No significant superadditive interaction between structure and length for **adjuncts**: (β = -0.2632, SE = 0.4818, t = -0.546, p = 0.586)
- Significant superadditive interaction between structure and length for arguments: (β = -0.9123, SE = 0.4422, t = -2.063, p = 0.0405*)





Monolinguals

Bilinguals (ChiD)

Discussion: Chinese dominant bilinguals

- They are different from monolinguals
 - In Chinese, they display island sensitivity in argument questions, island sensitivity for adjunct questions (but not significantly different from long questions with no island)
 - In French, they display island sensitivity in argument questions but no island sensitivity for adjunct questions (due to the design problem mentioned earlier)

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General discussion

1A **French monolinguals**: both wh-adjuncts and wh-arguments are sensitive to islands.

1B **Chinese monolinguals**: only wh-aduncts are sensitive to islands

We shall focus on arguments, which are the clearest difference, and where items are most reliable.

In Chinese: wh-arguments are sensitive to islands

2 FreD: Heritage Chinese

→ In French: wh arguments are sensitive to islands

In Chinese, wh arguments are sensitive to islands

In French, wh arguments are sensitive to islands

3 ChiD: L2 French

General discussion

- We seem to observe a monodirectional CLI effect, from French to Chinese
- From the more restrictive language to the less restricted language
- Things do not change with dominance

These results suggest that CLI effects are not confined to superificial phenomena for which positive evidence is readily available. Here what seems to be transferred is an abstract constraint.

Problems and openings

- More work is needed to better understand the phenomenon and confirm these preliminary data
- adjunct questions: there was a problem in the French test: retest with non ambiguous items
- Participants took the two experiments the same day, and this might have induced CLI and also fatigue
- Too few participants

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