

Acquisition of Exhaustivity: Evidence from Mandarin



Yu'an Yang and Ying Liu

Chinese University of Hong Kong, City University of Hong Kong

yu.an.yang.yay@gmail.com, yliu257-c@my.cityu.edu.hk



Abstract

We present two experiments testing Mandarin-speaking 6 y.o.s understanding of **at-issue/not-at-issue exhaustive constructions**: *Zhiyou* “only”, *Shi... (de)* cleft, Pseudo-cleft, and Plain Focus sentence.

Using a Truth-Value Judgment Task, we found:

- (i) 6 y.o.s are sensitive to non-at-issue exhaustivity;
- (ii) 6 y.o.s are sensitive to the distinction between at-issue and not-at-issue exhaustivity.

Background

At-issue/not-at-issue Exhaustivity

- A meaning component is **at-issue** if it directly addresses the Question Under Discussion (QUD) and is not-at-issue otherwise (e.g. Simons et al. 2010)

When it comes to exhaustivity:

- *Only*: at-issue
- *It*-clefts: not-at-issue

Exhaustivity in Mandarin

- (1) **ZY “only” (at-issue):**
Zhiyou Sunwukong banzou le xiaofangzi.
Only Monkey King move ASP house
“Only Monkey King moved a house.”
- (2) **SD cleft (not-at-issue):**
Shi Sunwukong banzou le xiaofangzi.
SHI Monkey King move ASP house
“It is Monkey King who moved a house.”
- (3) **Pseudo-cleft (not-at-issue):**
Banzou le xiaofangzi de shi Sunwukong.
Move ASP house DE SHI Monkey King
“(The one) who moved a house was Monkey King.”
- (4) **Plain focus sentence (not-at-issue):**
[Sunwukong]_F banzou le xiaofangzi.
Monkey King move ASP house
“MONKEY KING moved a house.”

- **Exhaustive Inference:** Besides Monkey King, no one else moved a house.

Adults Inference Judgment Task

- Liu and Yang (2016) found that adults assign a higher degree of acceptance to an exhaustive inference with ZY “only” than with SD clefts:
- **ZY “only” ≠ SD clefts.**
- **Consistent** with theoretical and empirical studies cross-linguistically (e.g. DeVeaugh-Geiss et al. 2015); **Inconsistent** with the adults study of Zhou and Crain (2010).

Acquisition of Exhaustivity

- Zhou and Crain (2010) tested Mandarin speakers’ interpretation of ZY “only” and SD clefts, TVJ Task;
- 5 y.o.s are sensitive to exhaustivity (contra Paterson et al. 2003, 2006);
- For both children and adults,
- **ZY “only” = SD clefts.**

Questions of Current Study

- Do native speakers interpret ZY “only” and SD cleft in the same way w.r.t. exhaustivity?
- ✓ Exp. 1 (No!)
- Do children have trouble interpreting (not-)at-issue exhaustivity?
- ✓ Exp. 2 (No!)

Experimental Design: Truth-Value Judgment Task

Exp. 1: ZY “Only” vs. SD clefts

Question:

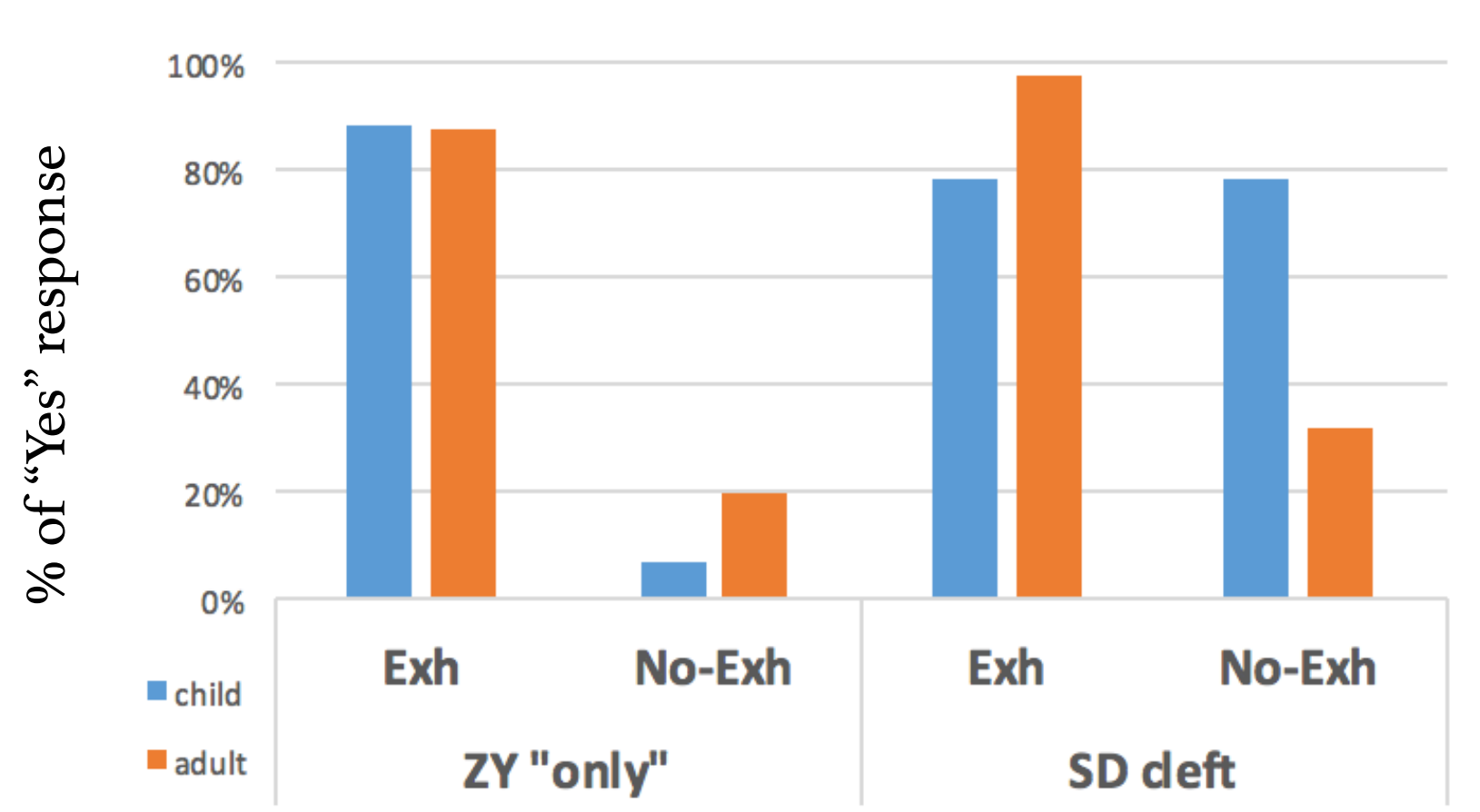
- Do adults/children interpret the exhaustivity of SD clefts and ZY “only” in the same way?

Testing sentences:

Pipi (the puppet):
{Zhiyou/ Shi} Xiaohui chidiao le xiangjiao.
{Only/ SHI} Little Grey eat ASP banana
“Only Little Grey ate a banana./ It is Little Grey who ate a banana.”

Results

30 children (mean age: 6;10), 22 adults



Adult/ Child: ZY “only” ≠ SD clefts
Adult = Child

Exhaustive Condition

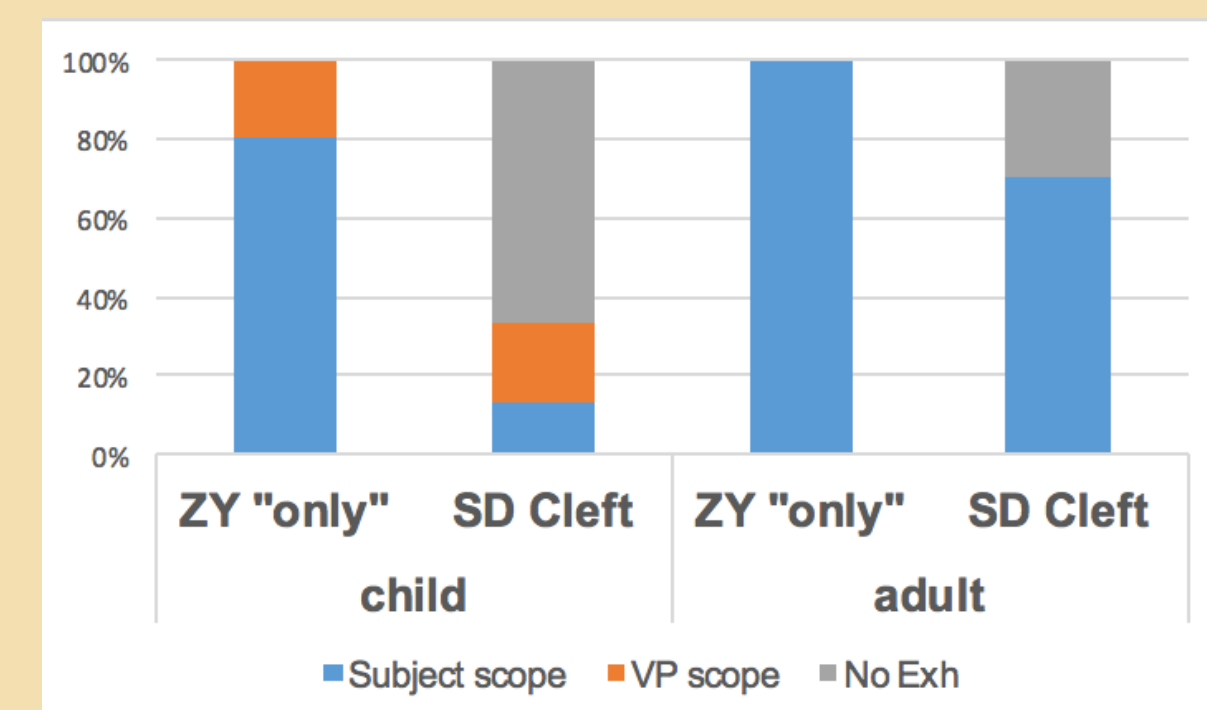


Monkey King moves a boulder and a house.
Mr. Piggy is very lazy. He moves a boulder.

Non-Exhaustive Condition



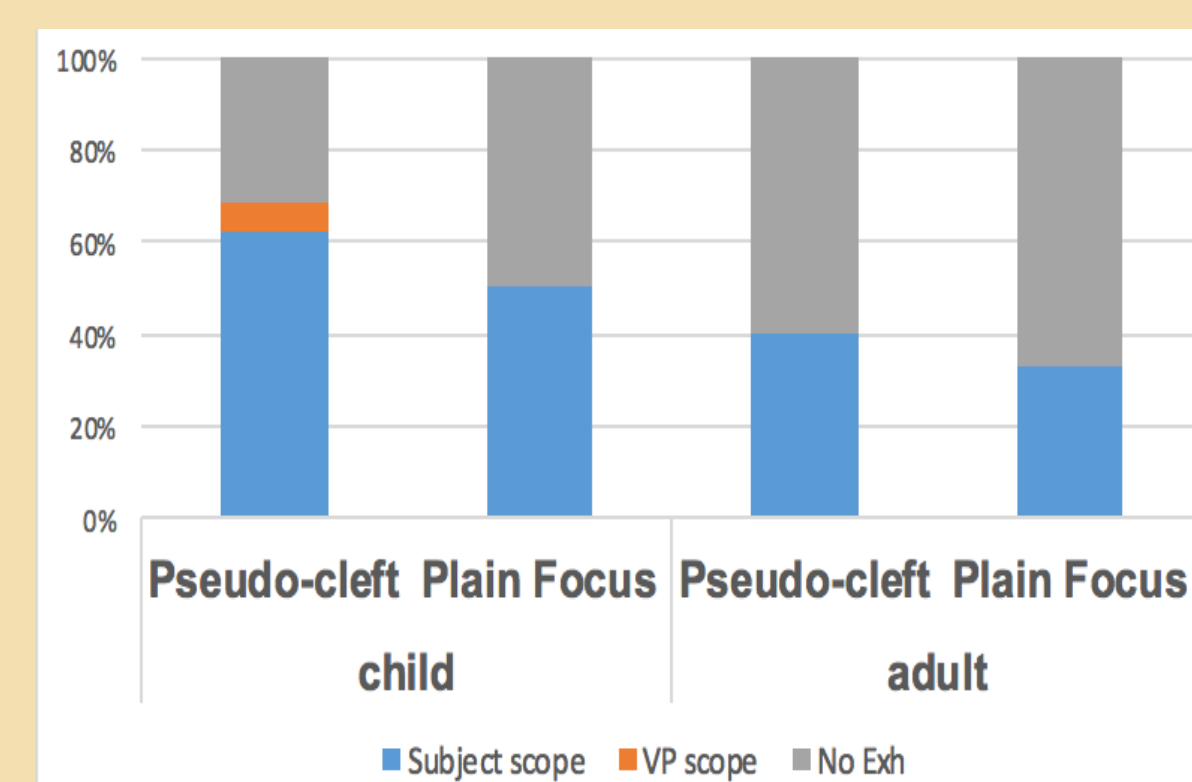
Little Blue picks a banana. Little Grey loves fruit, so he picks banana and apple.



SD cleft is not exhaustive? Break down to each child:

- Even considering VP scope responses, still low exhaustivity
- SD clefts elicit “yes, but...” responses
- → Children have trouble with not-at-issue exhaustivity? (Exp. 2)

For Pseudo-cleft and Plain Focus sentence, quite adult-like!



Exp. 2: Pseudo-cleft and Plain Focus Sentence

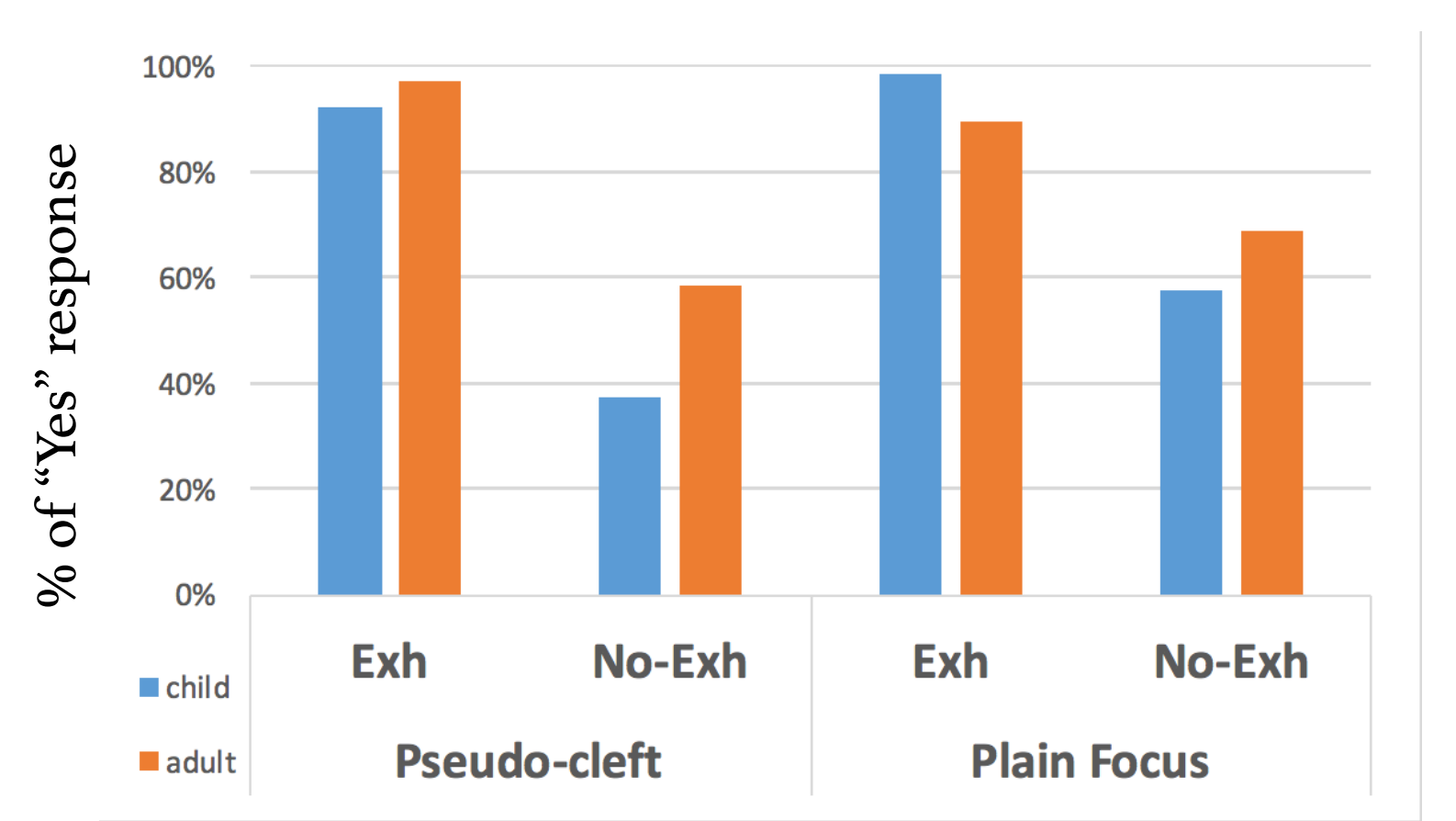
Testing sentences:

PC Banzou le xiaofangzi de shi Sunwukong.
Move ASP house DE SHI Monkey King.
“Who moved a house was Monkey King.”

PF *Who moved a small house?*

[Sunwukong]_F banzou le xiaofangzi.
Monkey King move ASP small house
“MONKEY KING moved a small house.”

Results 32 children (6;10), 22 adults



Adult/ Child: Pseudo-cleft ≠ Plain Focus
Adult = Child

Discussion

- Children are sensitive to **not-at-issue exhaustivity** by age 6:
 - Rejecting non-exhaustive interpretation of pseudo-cleft and plain focus sentence (Exp. 2);
 - Children use “yes, but...” with not-at-issue exhaustivity constructions: SD clefts, pseudo-clefts and plain focus sentences (Exp. 1 & 2);
- Children are **sensitive** to the **distinction** between at-issue and not-at-issue exhaustivity:
 - Children are more sensitive to the exhaustivity of *only* than that of other constructions (shown by their high rejection to non-exhaustive interpretation with *only*, Exp. 1);
 - ZY *only* sentences do NOT elicit “yes, but...” answers (Exp. 1).

Exhaustivity:

Developmental Trajectory

Exp. 1 & 2 extend the developmental trajectory of exhaustivity-triggering constructions depicted in Zhou and Crain (2010), Notley et al. (2009):

•At-issue exhaustivity (ZY “only”)

ZHIYOU John ate an apple.

John ate an apple. **No exhaustivity** (2.5 y.o.)

John only ate an apple. **VP scope exhaustivity** (2.5-5 y.o.)

Only John ate an apple. **Exhaustivity** (6 y.o.)

•Not-at-issue exhaustivity (SD Clefts)

SHI John ate an apple.

John only ate an apple. **VP scope exhaustivity** (2.5-5 y.o.)

John ate an apple. **No Exhaustivity** (6 y.o.)

Remaining Issues and Next Steps

How would 3-5 y.o.s interpret not-at-issue exhaustivity?

- Complete the developmental picture
- Convergence among different tasks?
- TVJ is not ideal to test gappy constructions (Tieu et al. 2016)
- Problem with SD clefts at 6 y.o.:
 - Lack of QUD?
 - Information Structure misalignment?
Information focus: $S V [O]_F$
SD cleft focus: $[S]_F V O$

Selected References

Zhou, Peng, and Stephen Crain. 2010. Focus identification in child Mandarin. Notley, Anna, Peng Zhou, Stephen Crain, and Rosalind Thornton. 2009. Children’s interpretation of focus expressions in English and Mandarin.

Acknowledgements

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