



# WHAT DO YOU THINK WE KNOW ABOUT ITALIAN CHILDREN'S LONG-DISTANCE WH-QUESTIONS?

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## Introduction

**Background.** Children asked to form long-distance *wh*-questions (LDQs) often produce *wh*-copying constructions (1), or scope-marking constructions (2), even in languages which do not allow such options (English, Thornton, 1990; French, Oiry and Demirdache, 2006; Spanish, Gutiérrez Mangado, 2006; a.o.).

(1) **Who** do you think **who** is kissing the girl?

(2) **What** do you think **who** is kissing the girl?

### Aims of this study

1. Overcome methodological issues of previous studies

- not provide children with the full LDQ in the experimental phase (cf. Oiry and Demirdache 2006, Jakubowicz and Strik 2008)
- not give them an elided prompt such as 'Ask *what* she thinks' (cf. Thornton 1990, Grolla et al. 2020), which may prime scope-marking constructions

2. Extend investigation of LDQs to Italian, to check whether

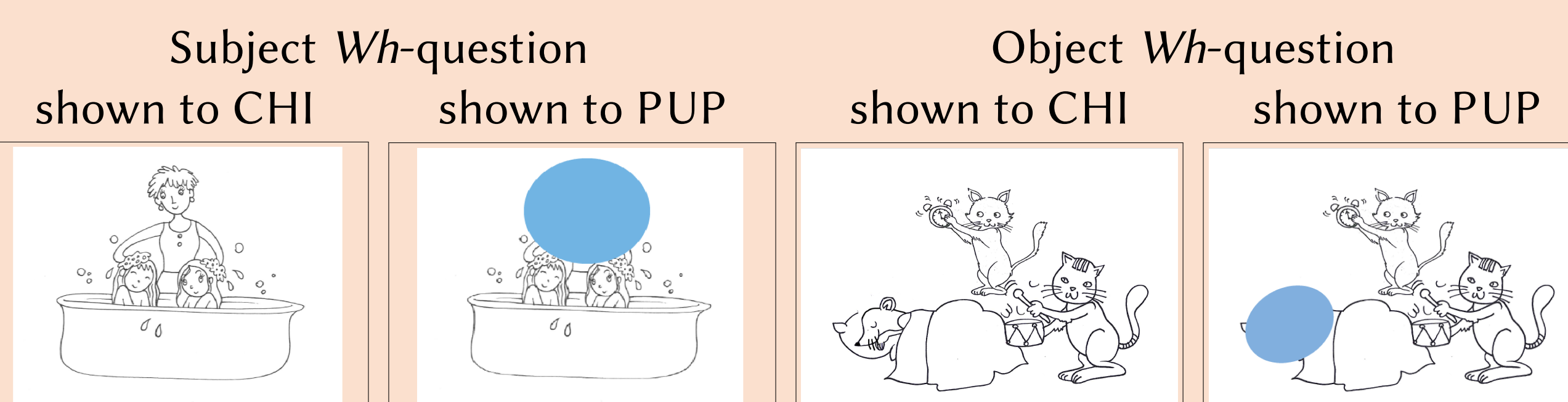
- *wh*-copying and scope-marking are both used, in a language that does not allow them
- *wh*-copying and scope-marking correspond to developmental stages (as claimed in Gutiérrez Mangado 2006)

## Method

• **Participants.** 27 Italian-speaking children (age range: 4;2–6;2, M=5;3) recruited in two kindergartens in the Milan area.

### • Methodology.

Guessing game between the child (CHI) and a puppet (PUP) + an experimenter



Who do you think is washing the girls? Who do you think the cats are waking?

Table 1: Experimental Design

### • Design of the experiment

- 6 training items (4 repetitions + 2 hybrid items)
- 12 experimental items (6 *who* subject questions, 6 *who* object question)
- As only number agreement disambiguates between subject and object questions in Italian, agents mismatched in number with patients on all items
- All verbs were reversible

## Results

• 324 utterances were transcribed and coded → 299 were LDQs and were included in the analysis (Fig. 1)

### • Coding:

- Correct (adult-like production of the expected LDQs) vs. non correct (non adult-like LDQs)
- Alternative constructions and Error types

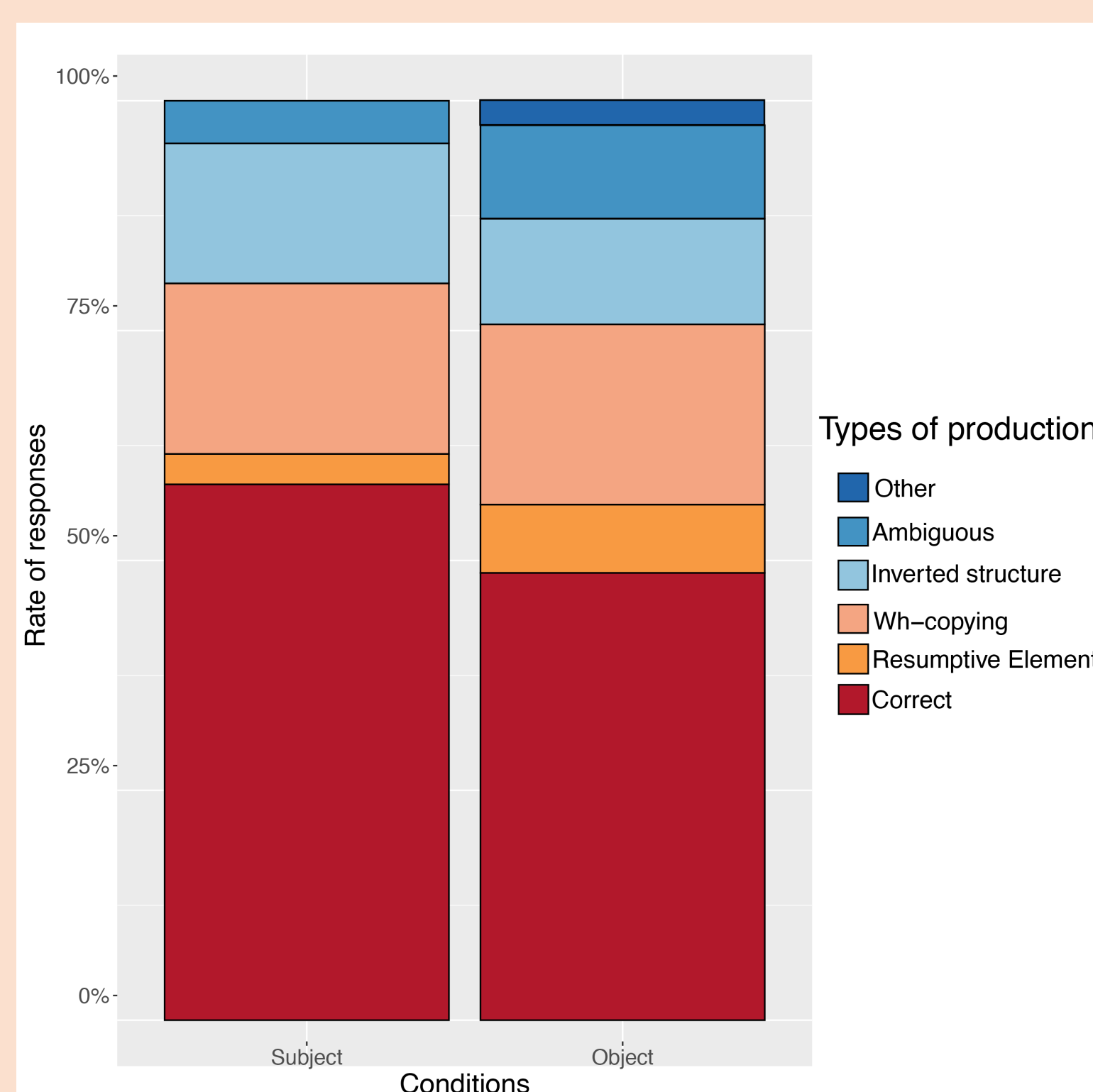


Fig. 1: Production of correct LDQs, alternative structures and error types across conditions

### • **Correct**

- Italian children were able to ask adult-like LDQs: Subject questions (58%) and object questions (48%).
- No significant difference between correct rate in Subject and Object questions ( $p = .074$ )
- No effect of age ( $p = .818$ ) on rate of correct responses

### • **Alternative Constructions**

- LDQs with *wh*-copying (3)
- LDQs with resumptive elements (4, 5)
- No Scope-marking constructions

### • **Error Types**

- Subject questions instead of object questions, and vice versa ( $n = 23$  in subject,  $n = 23$  in object) + inversion of theta-roles ( $n = 22$  in subject,  $n = 20$  in object)
- Ambiguous LDQs between subj and obj (6)
- Other

### Alternative constructions:

- (3) *Chi pensi chi stanno legando le api?* (CHI 4;4)  
who think.2SG who be.3PL tying the bee.PL  
Lit.: 'Who do you think who the bees are tying?'
- (4) *Chi pensi che qualcuno sta lavando le bambine?* (CHI 6;1)  
who think.2SG that someone be.3SG washing the girl.PL  
Lit.: 'Who do you think that someone is washing the girls?'
- (5) *Chi pensi che le cuoche stanno spingendo qualcuno?* (CHI 5;3)  
who think.2SG that the chef.PL be.3PL pushing someone  
Lit.: 'Who do you think that the chefs are pushing someone?'
- (6) *Chi pensi che sta bagnando il gattino?* (CHI 4;10)  
who think.2SG that be.3SG washing the cat.little  
Lit.: 'Who do you think that is washing the cat/the cat is washing?'

## Discussion

- ① Our new design elicited mainly LDQs, both adult and non-adultlike.
- ② Absence of SM constructions, suggesting that
  - SM does not represent a developmental stage in L1 acquisition for Italian children
  - the production of SM reported in other languages (Thornton 1990, a.o.) might be an effect of the prompt used
- ③ Use of *wh*-copying constructions (3) in line with previous studies

### • Assumptions about acquisition:

- Children follow a one-to-one mapping principle (Slobin, 1973, van Hout, 2008, Sauerland and Alexiadou, 2020, Guasti et al., 2022) between form and meaning.
- Children are prone to pronounce all parts of the underlying structure, whereas adults preferably leave some of them unpronounced.
- Questions like (3) suggest that LDQs involve  $\exists$  in intermediate position, which children sometimes realize as a *wh*-word.

(7) Underlying representation of (3):

$\lambda p. \exists x[p = \lambda w. \text{you think } (\exists y y = x \wedge \text{the bees are tying}_w y)]$   
**chi** **chi**

④ New finding: Production of resumptive elements (4, 5).

- Questions like (4) provide additional evidence in favor of an additional  $\exists$  in the embedded clause.

(8) Underlying representation of (4):

$\lambda p. \exists x[p = \lambda w. \text{you think } (\exists y y = x \wedge y \text{ is washing}_w \text{ the girls})]$   
**chi** **qualcuno**

- Reminiscent of errors children make with relative clauses (Guasti and Cardinaletti, 2003; Yatsushiro and Sauerland, 2018).

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