Preschoolers’ Interpretation of Presupposed and Pragmatically Implied Exhaustivity

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Research questions

• Could **contextual factors** help preschoolers accessing the exhaustive interpretation of sentences with structural focus?

• Is the exhaustivity of structural focus indeed a context-dependent **implicature**
  or
  is it context-independently **presupposed**?
• **Background**
• Experiment 1
• Experiment 2
• Conclusion
Background

Structural focus in Hungarian

• **syntactically** and **prosodically** marked

  (1) *Péter meg-vette a ház-at.*
      Peter PRT-bought the house-ACC
      ‘Peter bought the house.’

  (2) *A HÁZ-AT vette meg Péter.*
      the house-ACC bought PRT Peter
      ‘It was the house that Peter bought.’

• express **exhaustive identification** (É. Kiss 1998)
How do sentences containing structural focus express this exhaustive meaning?

1. [+exhaustive] semantic feature

2. presupposition

3. implicature
   - conversational implicature
   - conventional implicature
     Gerőcs, Babarczy & Surányi (2014)
Aims of the present study

• to test the interpretation of sentences with structural focus in four different age groups

• to test the role of contextual manipulations in the group of preschoolers

• to determine the source of exhaustivity (presupposition or implicature)
• Background
• **Experiment 1**
• Experiment 2
• Conclusion
Experiment 1

Testing sentences with structural focus

(3) \([A \text{ NYUSZI}]_{\text{FOC}} \text{ emelte fel a zászló-t.}\)

the rabbit raised up the flag-ACC

‘It is the rabbit who has raised the flag.’
Experiment 1

Control conditions:

(i) true / exhaustive condition
(ii) false condition

Critical conditions:

(iii) non-exhaustive condition
(iv) condition (i) with a distractor
Procedure

• sentence–picture verification task

• three-point-scale 🙁 ☹️ ☺️


• 4 conditions x 8 items = 32 test sentence–picture pairs
  + 24 filler sentence–picture pairs

• randomized order, SR Research Experiment Builder

• 2 occasions
Experiments 1

Participants

• 15 preschoolers (mean age: 6;2)
• 15 7-year-olds (mean age: 7;5)
• 15 9-year olds (mean age: 9;7)
• 15 adults (mean age: 42;7)
Experiment 1
Proportion of responses of the non-exhaustive condition

Kruskal-Wallis test

***: p < 0.001
Discussion

• In the case of structural focus, there is an increase of exhaustive interpretation with age.
• In contrast with other age groups, preschoolers did not interpret sentences with structural focus exhaustively in a sentence–picture matching task. (cf. Kas & Lukács 2013, Babarczy & Balázs 2014)

Open question

• Is it easier for preschoolers to access the exhaustive reading of structural focus constructions if the context strongly supports this interpretation?
• Background
• Experiment 1
• **Experiment 2**
• Conclusion
Playing Hide and Seek in a Dollhouse

Experiment 2
**Experimenter:** Who did the wolf find?

**Hedgehog:** A farkas \( [A \text{ CICÁT}]_{\text{FOC}} \) találta meg. the wolf the cat found PRT

‘It is the cat that the wolf has found.’

**Child:** 😞 😞 😊

**Non-exhaustive scenario:**

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**Experiment 2**
3 conditions:

• exhaustive (e.g. the wolf finds the cat)
• non-exhaustive (e.g. the wolf finds both players)
• false (e.g. the wolf finds the dinosaur)

Filler trials:

• investigating the acquisition of the spatial meaning of előtt ‘in front of’ and mögött ‘behind’
  (see Veronika Harmati-Pap’s poster presentation)
Contextual factors that could support exhaustivity

- **Hide-and-Seek**: the importance of the order of finding the players
- the denotation of the focused object is *animate*
- **alternatives** are explicitly given in the context
  cf. Müller et al. (2011)
- presence of a **preceding question**
  cf. Gerőcs et al. (2014); Tóth and Csatár (2016) – increase of exhaustive answers in the case of adult participants
  cf. Hackl et al. (2015) – role of congruent questions when associating the exhaustivity of *only* with focus
Participants

30 preschoolers
• 18 girls and 12 boys
• age range: 3;6–7;5
• mean age: 5;7
Experiment 2
Proportion of responses given by all 30 participants
Experiment 2
Correlation between age and frequency of response types

There is a weak positive correlation between the age and the frequency of sad faces.

Kendall's rank correlation
\( \tau = 0.2989, p < 0.05 \)
Experiment 2
Results of 6-year-olds (N = 18, 5;6–6;5, mean age: 5;11)
Experiment 2

Discussion

• **acceptance rates** of structural focus constructions in non-exhaustive contexts **slightly decreased** compared to Experiment 1 (64% vs. 50%) in the case of 6-year-olds

• children at around the age of 6 seemed to be able to make use of contextual factors to some extent

• however, their performance is still **far from adult-like**
• Background
• Experiment 1
• Experiment 2
• Conclusion
Conclusion

• exhaustivity of structural focus also arises without any broader context, except in the case of preschoolers

• results of Experiment 1 and 2 did not differ considerably

• the fact that such a major change of the experimental setting did not influence children’s performance is against the hypothesis that exhaustivity expressed by structural focus is a scalar implicature w.r.t. the alternation of the processing of scalar terms like some, cf. Papafragou & Musolino (2003), Guasti et al. (2005)

• Exhaustivity of structural focus is presupposed, and the majority of children is not sensitive to it until the age of 7
References


References


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