Experimental investigation of the exhaustivity of structural focus

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- **Research question**
- Background
- Experiment 1 and 2
- Experiment 3
- Conclusion

Research question

Which one of these tasks is the most suitable for testing theories concerning the nature of exhaustivity in the case of structural focus?

- Truth Value Judgment Task
    - binary yes/no answers
    - Likert scale
- Sentence – Picture Matching Task

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Background – Structural focus

structural / pre-verbal / identificational focus

- syntactically and prosodically marked
  (1) *Péter meg-vette   a   ház-at.*   Ø focus
      Peter PRT-bought the house-ACC
      'Peter bought the house.'

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

- express **exhaustive identification** (É. Kiss 1998)

Background – Structural focus

How does sentences containing structural focus express this exhaustive meaning?

1. **Semantic account**

   - [+exh] semantic feature

     (Szabolcsi 1981a, 1981b, É. Kiss 1998, a. o.)

   - presupposition

     (Kenesei 1986, Kálmán & van Leusen1993, Szabolcsi 1994, a. o.)

2. **Pragmatic account**

   - implicature (conversational or conventional)

     (Wedgwood 2005, Onea & Beaver 2011, Gerőcs et al. 2014)

Background – Previous experiments

Experiments with adult native speakers

- Onea & Beaver (2011) – yes, and…/yes, but…/no, …
- Gerőcs, Babarczy & Surányi (2014)
  - Experiment 1 – online truth-value judgment task
  - Experiment 2 – offline, indirect task

Acquisition studies:

- Kas & Lukács (2013) – binary yes/no answers
  - Neither 6-year-olds nor 10-year-olds showed any sign of focus sensitivity as a group.
  - Responses of adults were inconsistent too.
- Balázs & Babarczy (2014) – 3-point-scale

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- Research question
- Background
- **Experiment 1 and 2**
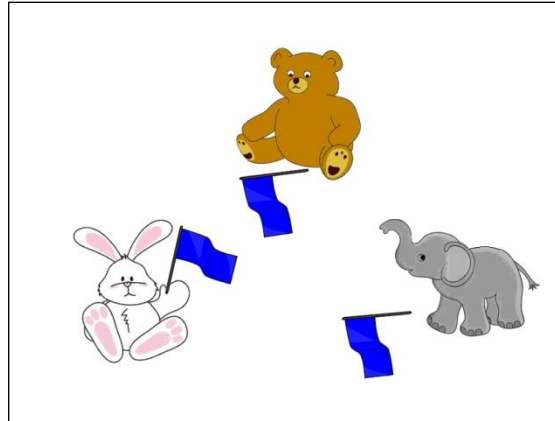- Experiment 3
- Conclusion

In each experiments, all test sentences contained **structural focus**.
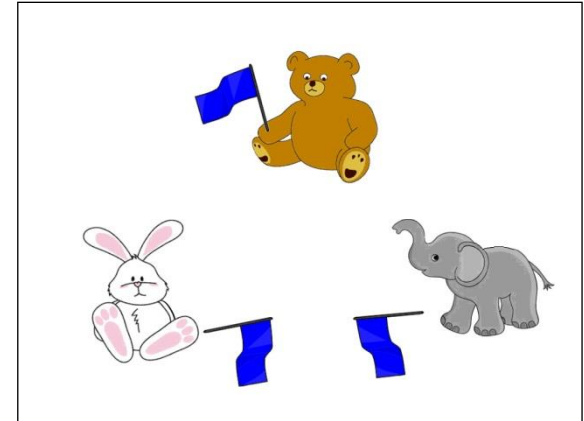
(3) *A   NYUSZI   emelte   fel   a   zászló-t.*
the rabbit   raised   up the flag-ACC
'It is the rabbit who has raised the flag.'
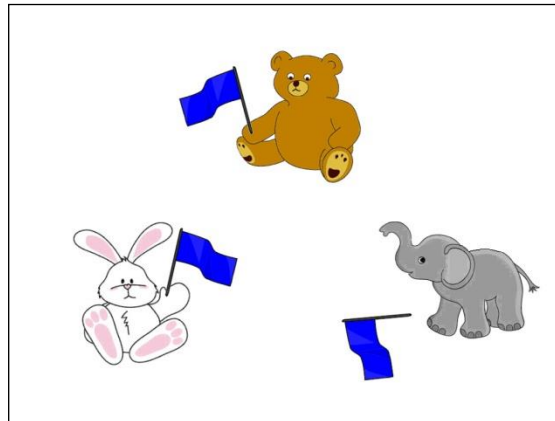
Conditions of Experiment 1 and 2

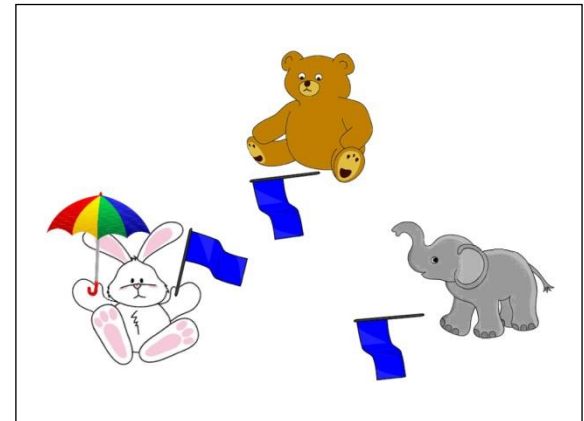Control conditions:

(i) true / exhaustive condition

(ii) false condition
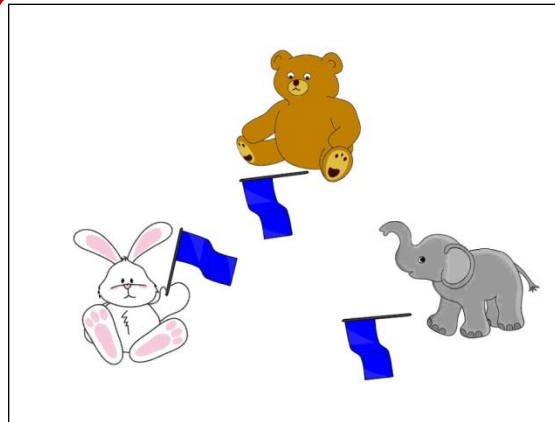
Critical conditions:

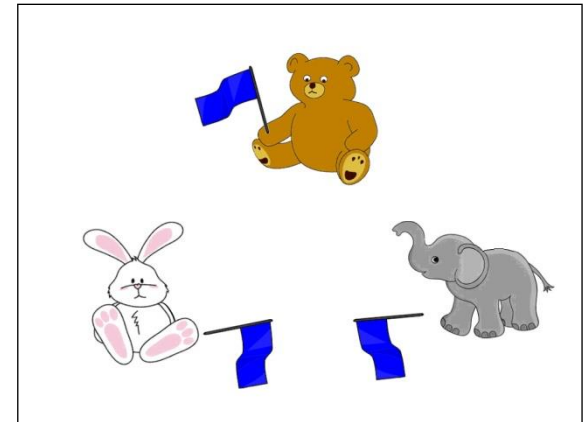(iii) non-exhaustive condition

(iv) condition (i) with a distractor

Conditions of Experiment 1 and 2
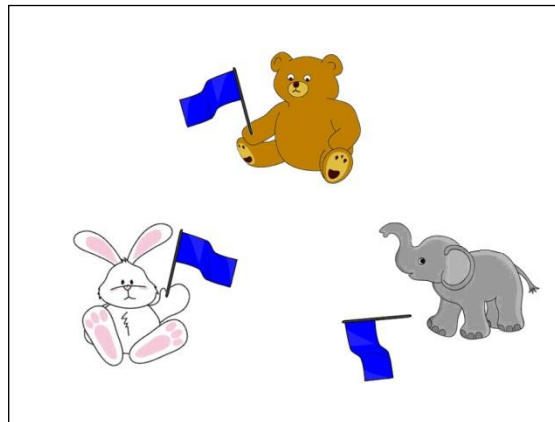
Control conditions:
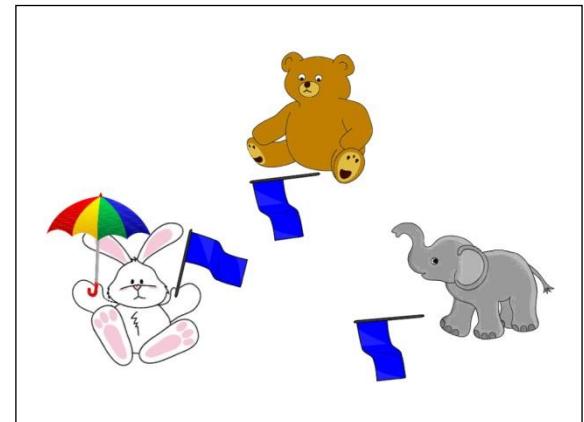

(i) true / exhaustive condition

(ii) false condition

Critical conditions:

(iii) non-exhaustive condition

(iv) condition (i) with a distractor

Procedure

Sentence – picture verification task

Experiment 1 – **yes/no answers**

Experiment 2 – **3-point-scale**

cf. Katsos & Bishop (2011)

Balázs & Babarczy (2014)

4 conditions x 8 items = 32 test sentence-picture pairs

+ 24 filler sentence-picture pairs

• randomized order, SR Research Experiment Builder
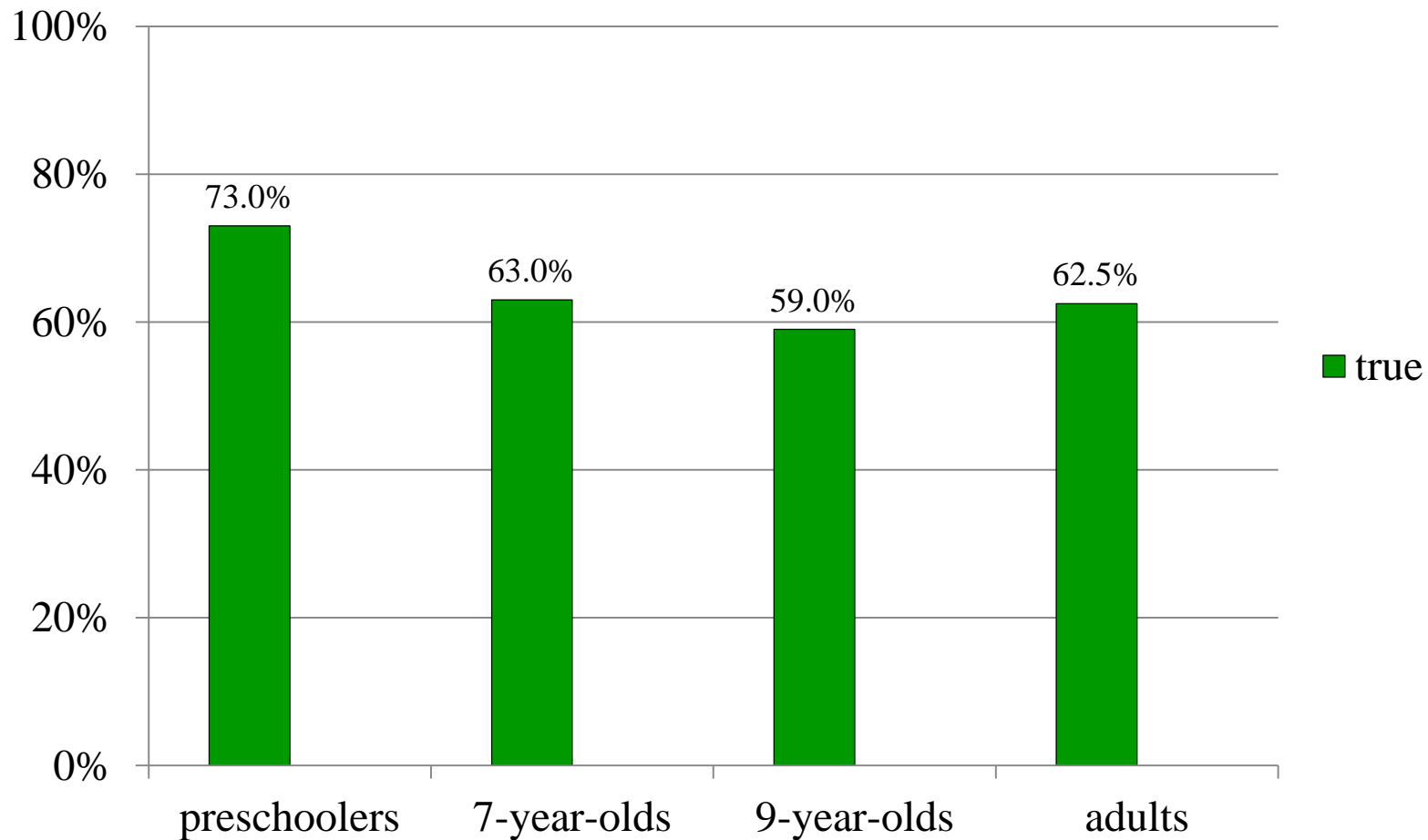
• 2 occasions

Participants

4 age groups in Experiment 1 and 2:

- 15 **preschoolers** (mean ages: 5;9 and 6;2)

- 15 **7-year-olds** (mean ages: 7;5 and 7;5)

- 15 **9-year olds** (mean ages: 9;7 and 9;7)

- 15 **adults** (mean ages: 22;7 and 42;7)

Results

Acceptance ratings of sentences with structural focus in **non-exhaustive contexts** of **Experiment 1**
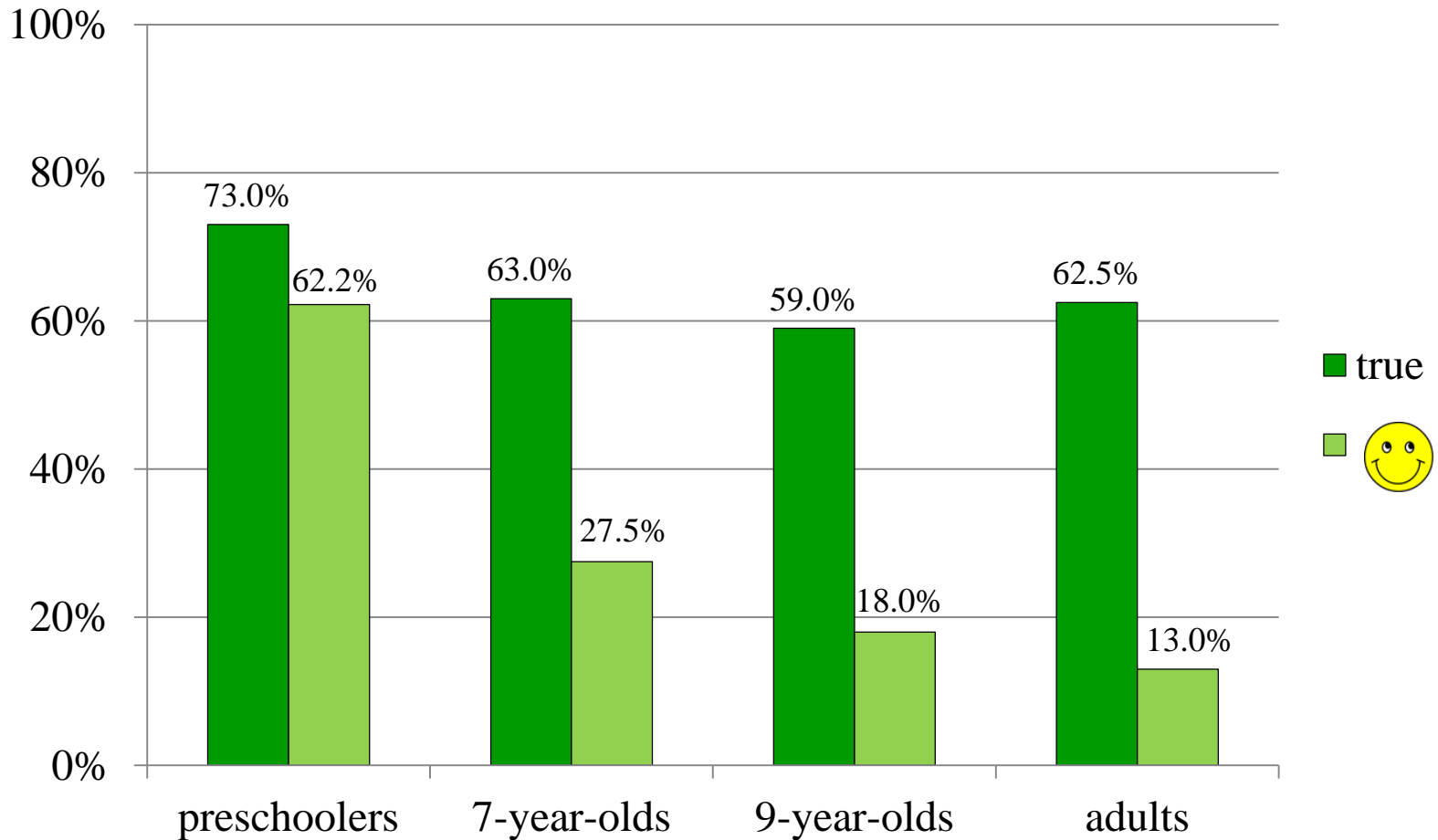
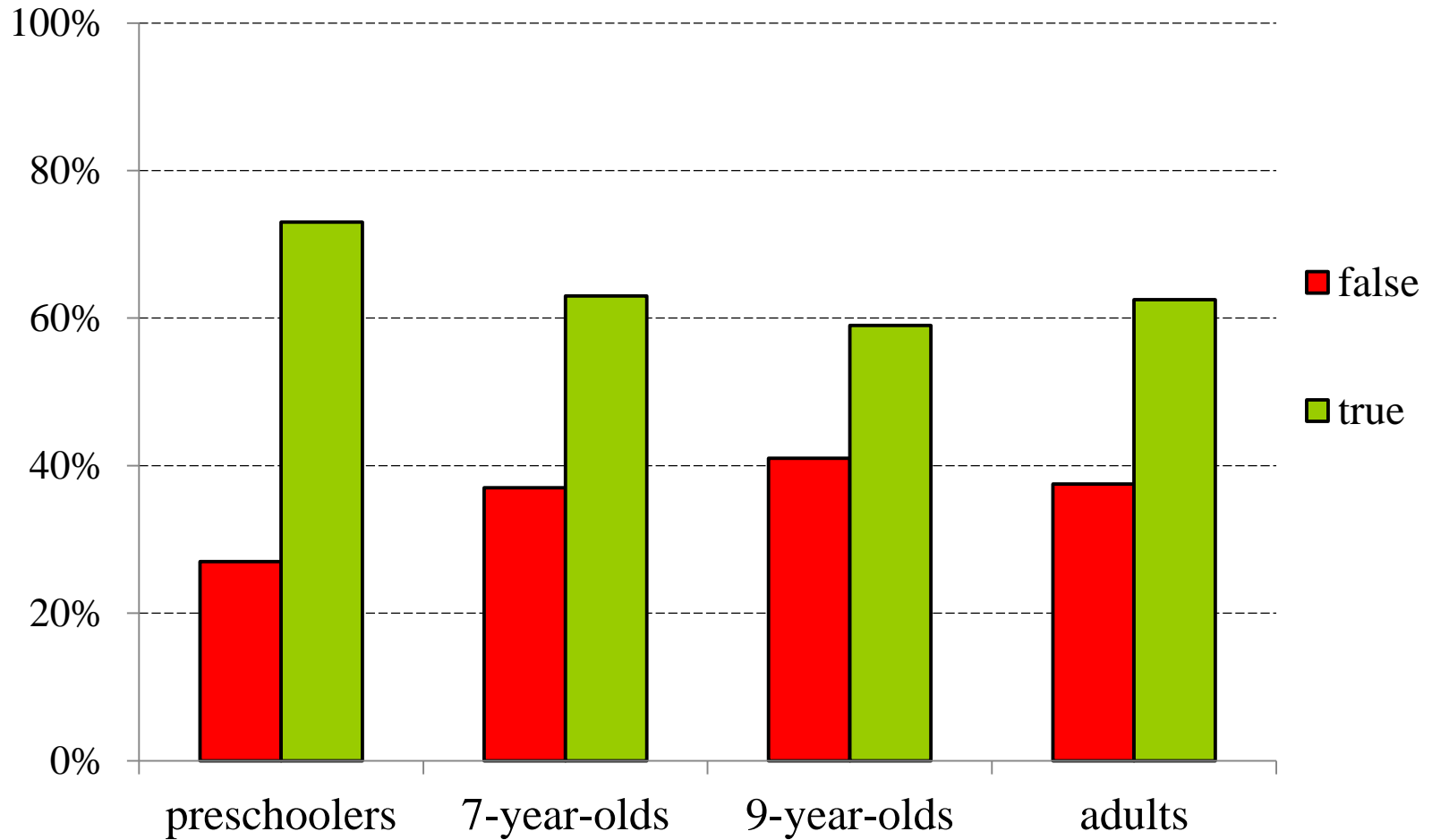# Acceptance ratings of sentences with structural focus in **non-exhaustive contexts** of **Experiment 1**
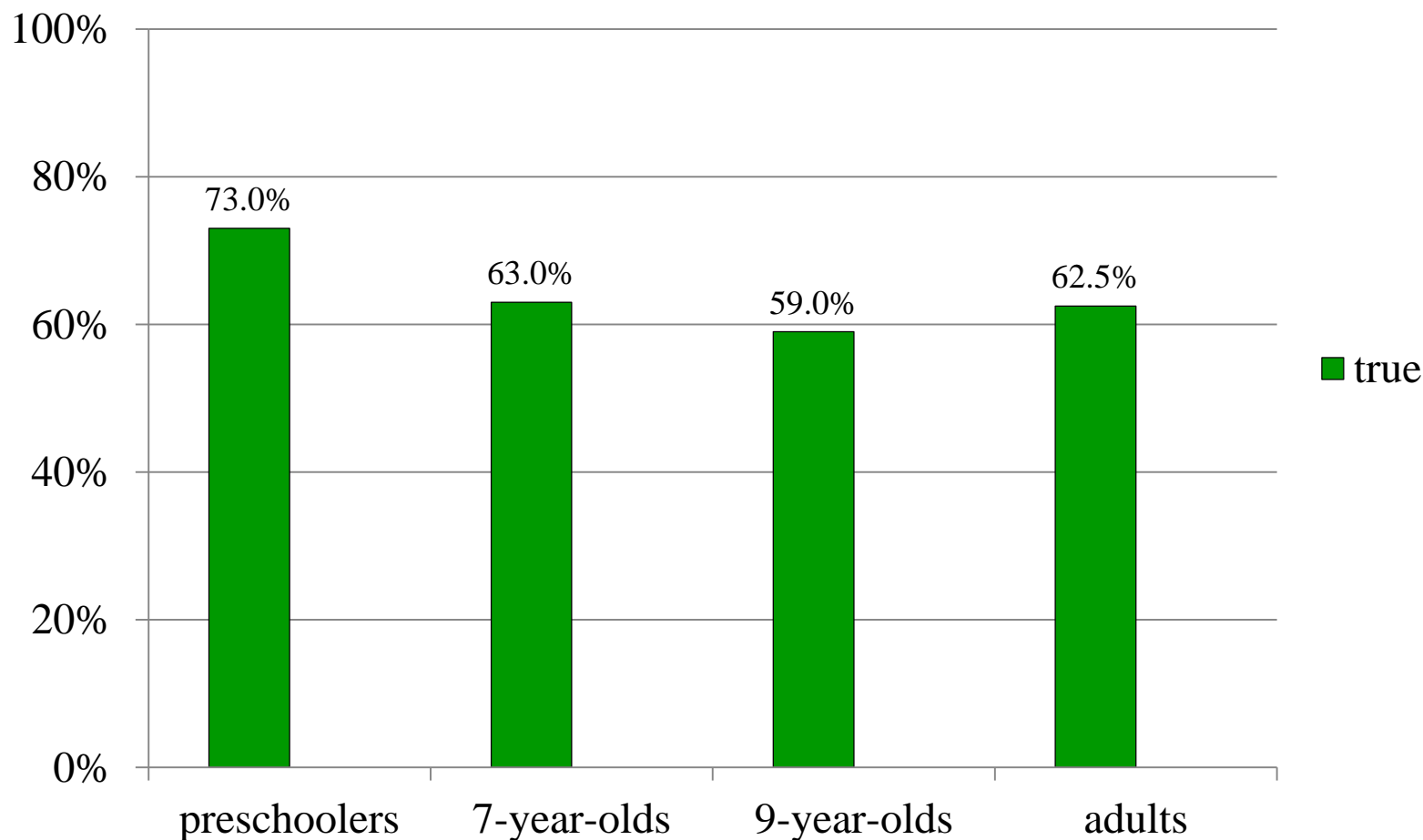
in line with Onea & Beaver (2011), Kas & Lukács (2013)
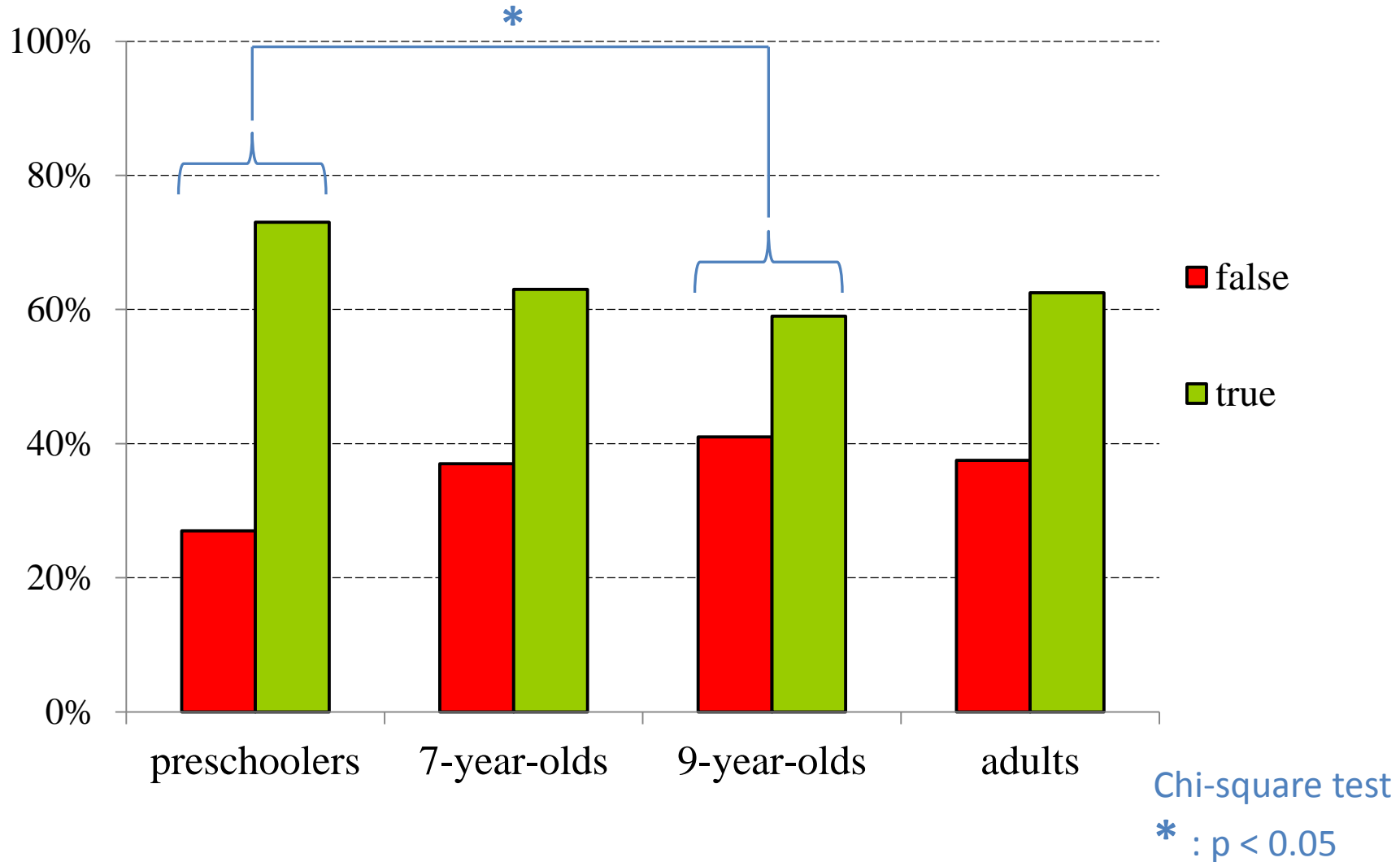
Acceptance ratings of sentences with structural focus in **non-exhaustive contexts** of **Experiment 1 and 2**

Proportion of responses of the
non-exhaustive condition of **Experiment 1**

Proportion of responses of the non-exhaustive condition of Experiment 1

preschoolers   7-year-olds   9-year-olds   adults
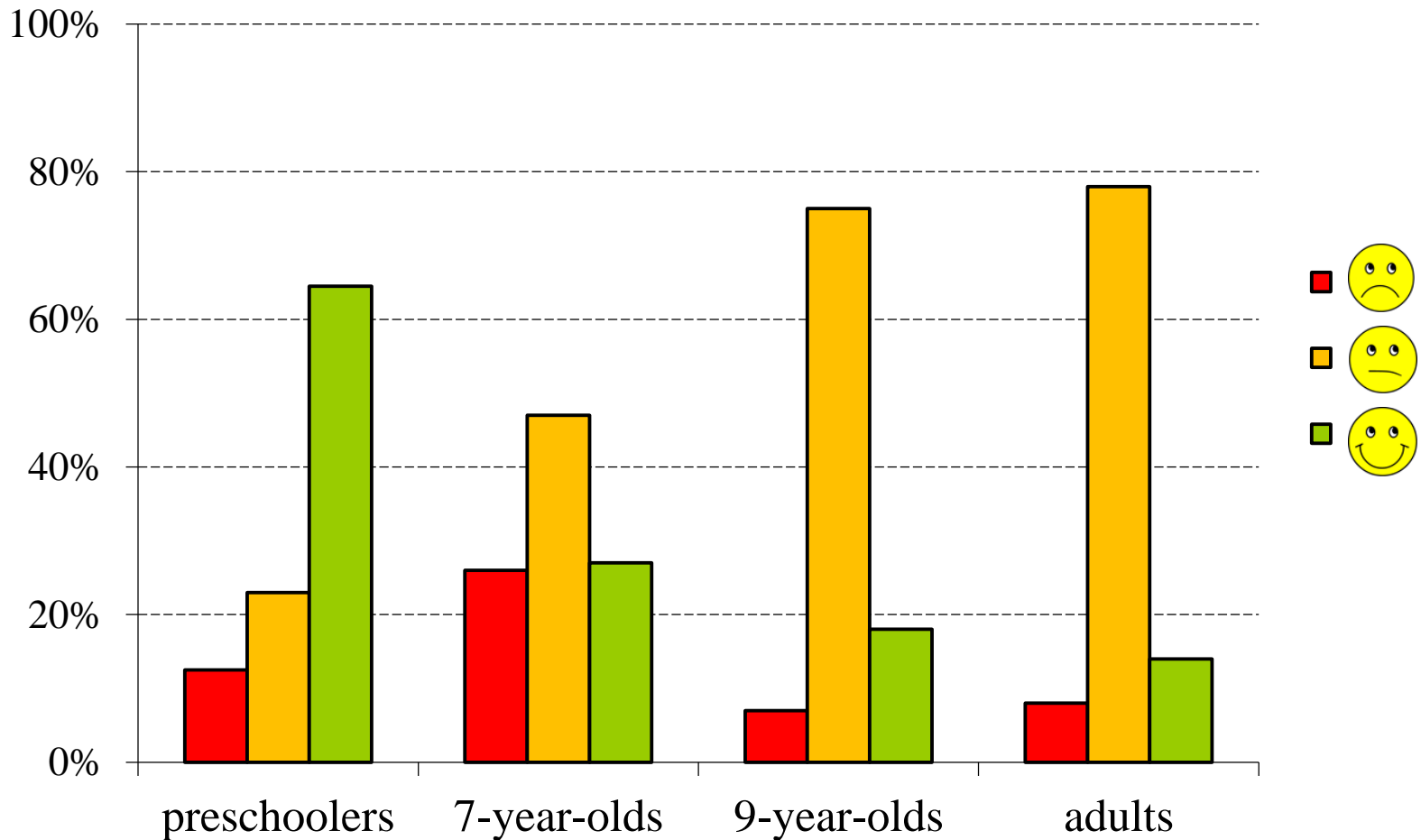
false

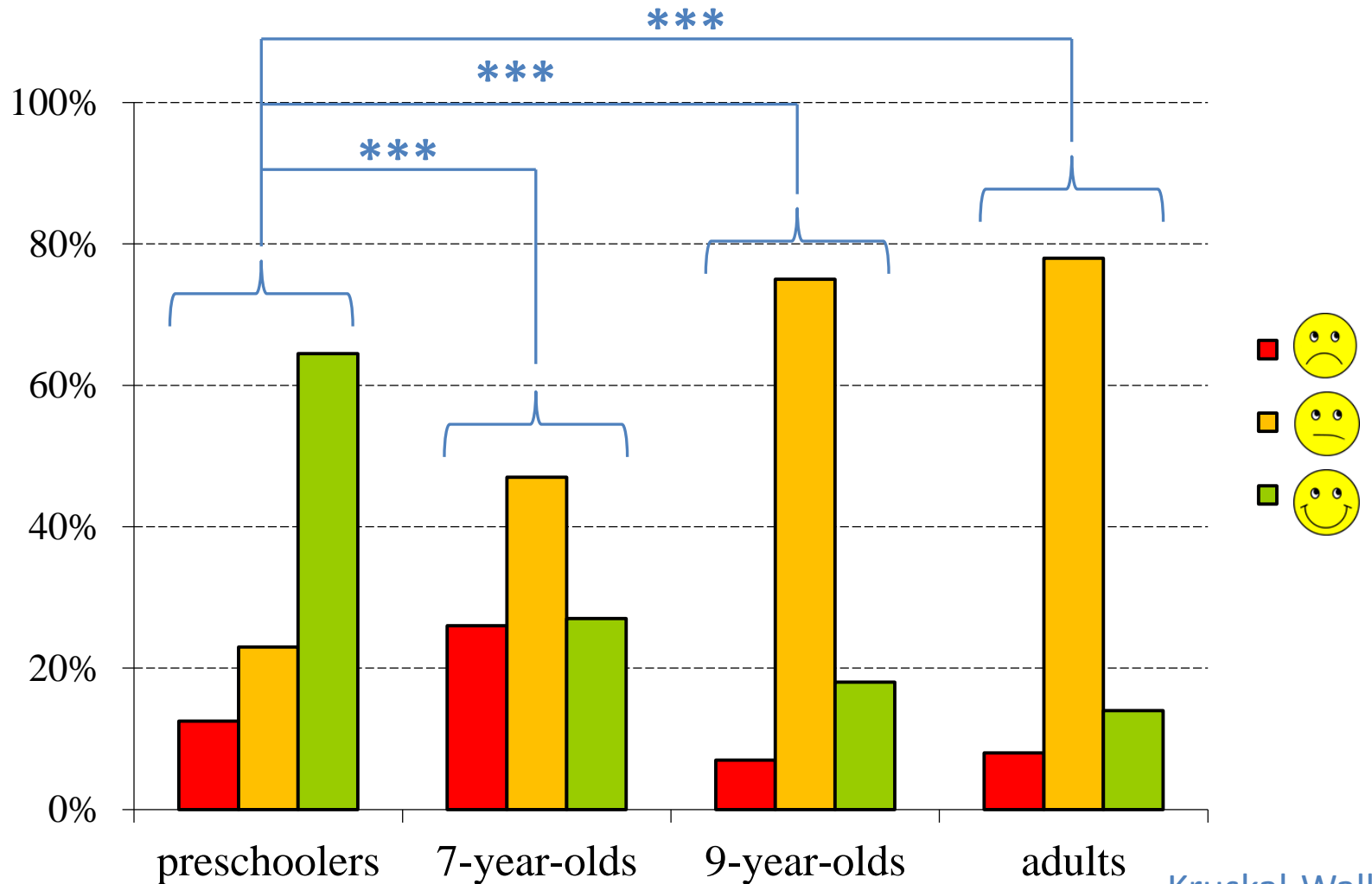true

Chi-square test
* : $p < 0.05$

Proportion of responses of the non-exhaustive condition of Experiment 2

Proportion of responses of the non-exhaustive condition of Experiment 2
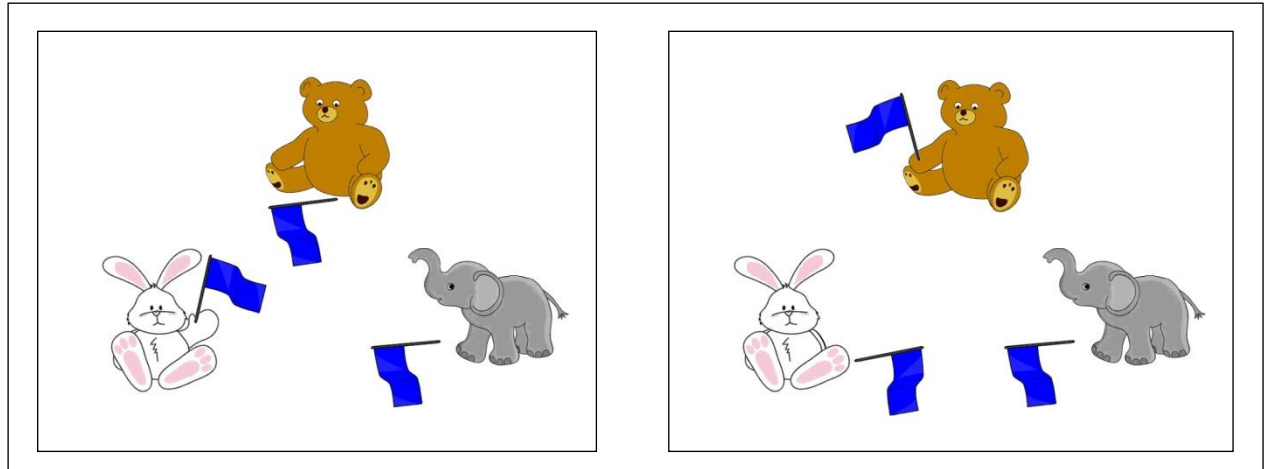
Kruskal-Wallis test
***: $p < 0.001$

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Conditions of Experiment 3

Baseline condition:

exhaustive   vs.   false

Critical condition:
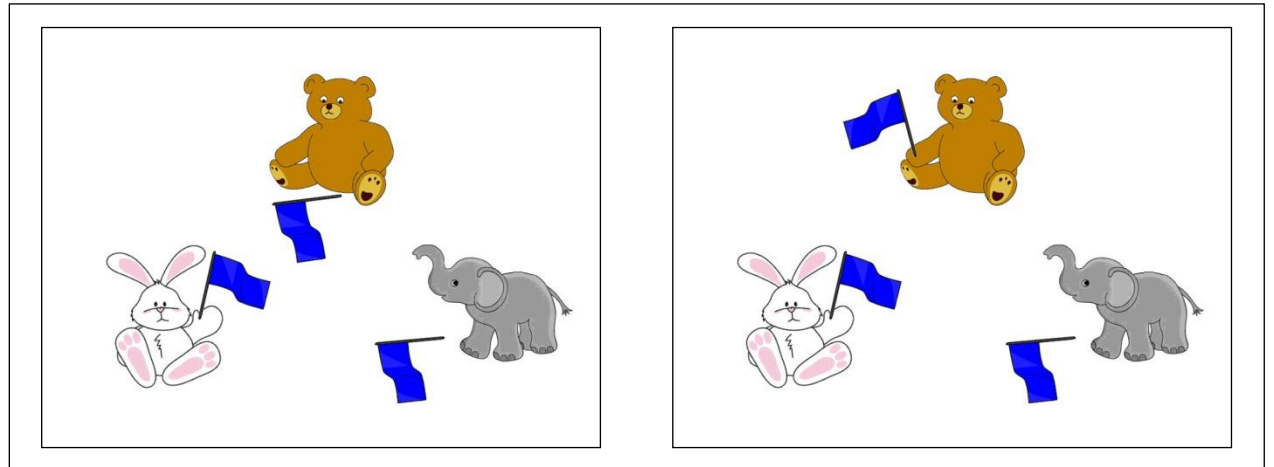
exhaustive   vs.   non-exhaustive

Procedure of Experiment 3

Sentence – picture matching task

- two pictures were presented simultaneously
- participants pressed a button under the preferred picture

2 conditions x 8 items = 16 test trials

+ 12 filler trials

- randomized order, SR Research Experiment Builder
- 1 occasion

Participants

1 age group in Experiment 3:

- 15 **preschoolers** (mean age: 5;6)

Results of Experiment 3
Proportion of correct and incorrect responses

Baseline condition

6%

94%

☐ correct response (exhaustive)   ☐ incorrect response (false)

Critical condition

23%

77%

☐ correct response (exhaustive)   ☐ incorrect response (non-exhaustive)

Results of Experiment 3
Proportion of correct and incorrect responses

Baseline condition

6%

94%

■ correct response (exhaustive)   ■ incorrect response (false)

Critical condition

23%

77%
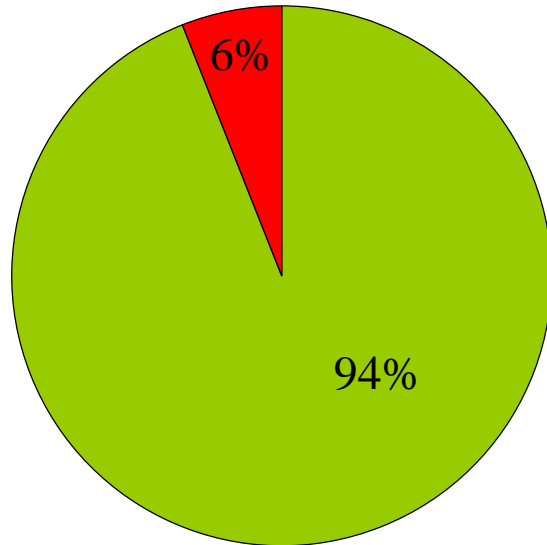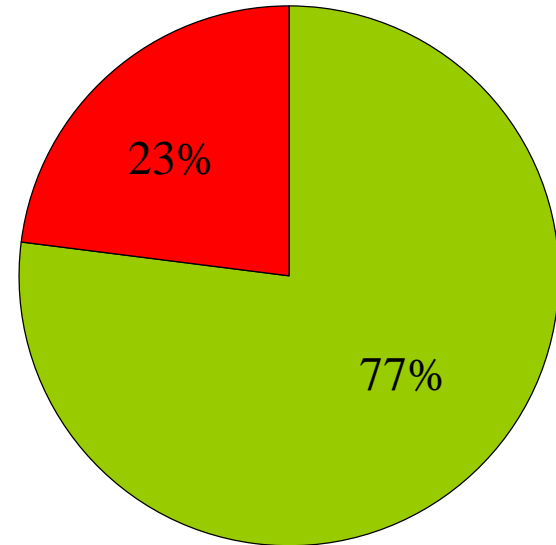
■ correct response (exhaustive)   ■ incorrect response (non-exhaustive)

***

Chi-square test
*** : p < 0.001

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- Research question
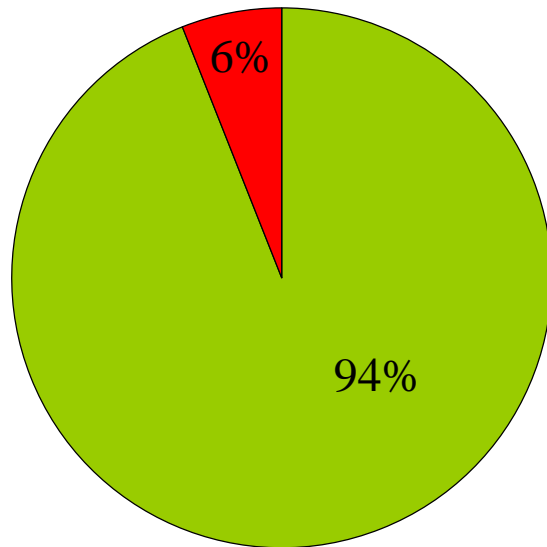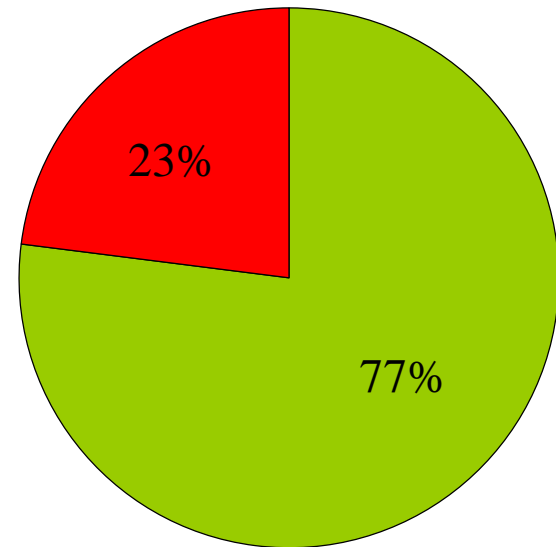- Background
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Conclusion

- Experiments using **binary judgment** are not suitable to point out the exhaustivity of focus.

- Even adults performed at around chance level.

  → Based on these results we cannot exclude the possibility that the exhaustivity of structural focus is a semantic presupposition.

  (cf. Destruel et al. 2015)

Conclusion

- When **exhaustive and non-exhaustive pictures** were presented simultaneously, even preschoolers preferred the exhaustive reading of sentences with structural focus.

  → This also suggests that there is some kind of focus sensitivity in this age group.

  However, this method does not provide any evidence concerning the semantic or pragmatic nature of exhaustivity.

Conclusion

- Experiments using a **Likert scale** could reveal focus sensitivity even in the groups of children.

- The results support the view according to which exhaustivity of structural focus is a **presupposition**.

- It could also show the differences between the age groups: in the case of structural focus, there is an **increase of exhaustive interpretation with age**.

  → In experiments investigating the interpretation of sentences with the particle *csak* 'only' and neutral SVO sentences, I only used the three-point scale.

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Thank you for your attention!