

The role of centration in Hungarian preschoolers' interpretation of exhaustivity

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Structural focus in Hungarian

Hungarian preverbal focus expresses exhaustive identification.

(1) *JÁNOS felejtette el a születésnapomat.*

John forget.PAST PRT the birthday.POSS
'It is John who forgot my birthday.' (Not Peter, Mary or anyone else.)

(2) *János A SZÜLETÉSNAPOMAT felejtette el.*

John the birthday.POSS forget.PAST PRT
'It is my birthday that John forgot.' (Not my name-day or any other holiday.)
→ The predicate is true only for the focused constituent.

É. Kiss (1998, 2010)

Previous experiments on focus sensitivity in Hungarian

Kas & Lukács (2013)

- picture-sentence verification task
- two groups of children (mean ages 6;3 and 10;8 years) and a group of adults
- results: - adults showed a marked sensitivity for focus as a group
- neither group of children showed any sign of focus sensitivity as a group

Proposal: The bias of centration

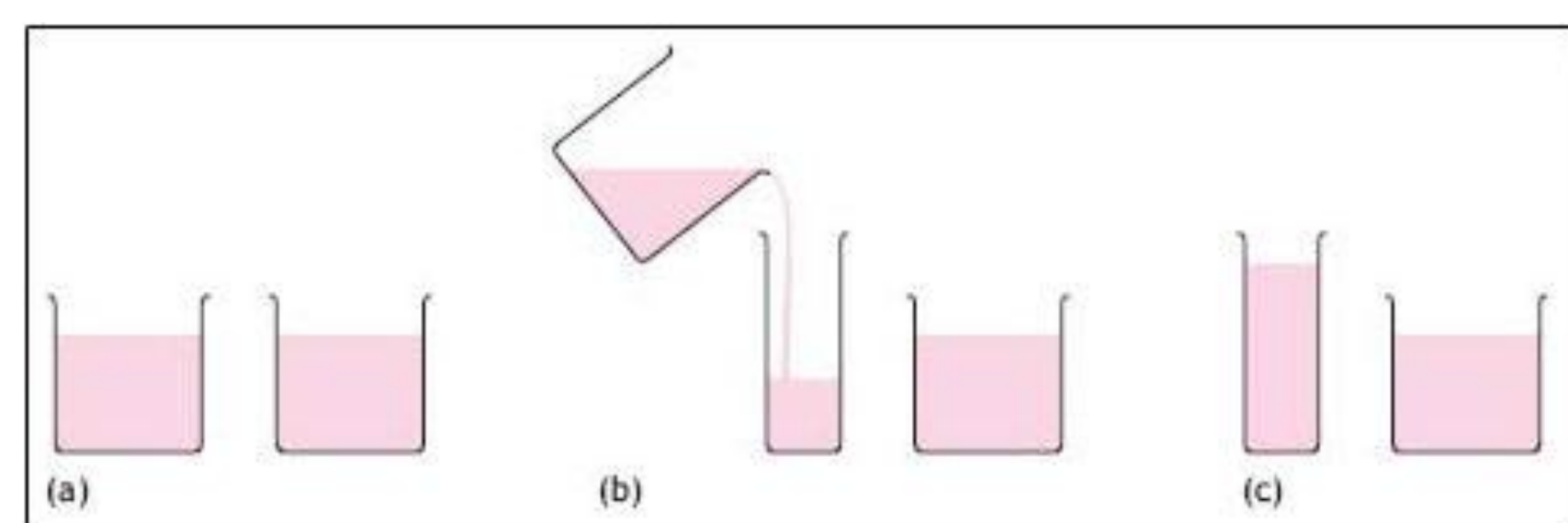
- Children in the pre-operational phase (between the age of 2 and 7) show evidence of centration, which is the tendency to focus on only one salient aspect of a situation, and to neglect any other potentially relevant aspects. Piaget (1952)
- Presumably, children at the age of 6 do not solve the sentence-picture matching tasks in a consistently non-adult like fashion because they have not acquired the exhaustive meaning of the preverbal focus yet, but because they basically ignore all the other relevant subjects and objects.

Experiment 1

Test of centration

Participants: 25 children (11 girls, 14 boys), mean age: 6 years 4 months

Method: (a) put the same amount of water in two short, fat glasses
(b) pour the water from one of the short glasses into a tall, thin one
(c) question: "Does this one have more, does this one have more, or do they have the same amount?"



Experiment 2

Test of exhaustivity associated with structural focus

Participants: 25 children (11 girls, 14 boys), mean age: 6 years 4 months

Method: sentence-picture verification test

Participants had to judge a puppet's utterances in the following scale:



Stimuli: 32 test items and 28 filler items were presented in a random order.

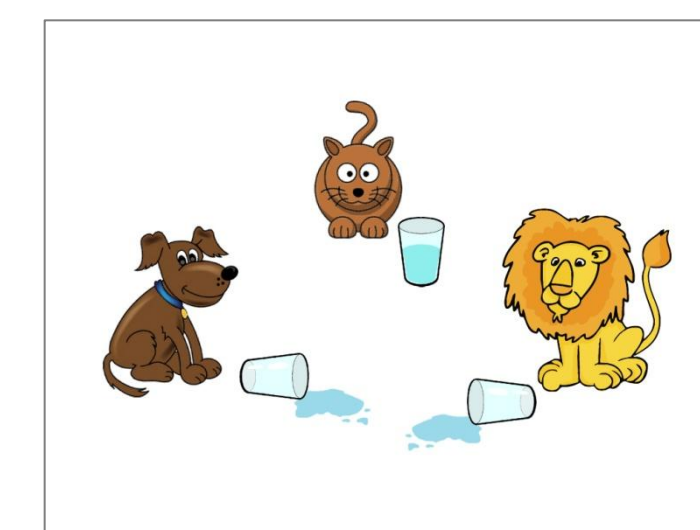
Pictures from the critical exhaustive and non-exhaustive conditions:



A MACI nyitotta ki az ajándékot.

'It is the bear who opened the gift.'

(expected score: 3)



A KUTYA borította ki a vizet.

'It is the dog who tipped out the water.'

(expected score: 1 or 2)

Results of Experiment 1 and Experiment 2

- 92% of the participants responded that there is more liquid in the taller container. → Preschoolers focused on one salient aspect of the task.
- The mean scores of the exhaustive (2,945) and the non-exhaustive (2,49) conditions differed significantly according to Welch's Two Sample t-test, $t(28.99)=6.12, p < .001$. Although these results suggest that the preverbal focus has an effect on the interpretation of the sentences, the scores given were higher than predicted by the theory. There were also remarkable individual differences in the scores.

Experiment 3

Test of exhaustivity associated with 'only'

Participants: 16 children (8 girls, 8 boys), mean age: 5 years 9 months

Method and Stimuli: - the same as in Experiment 2

- the test sentences contained the particle *csak* ('only')

Prediction: In the case of 'only', exhaustivity is part of the lexical meaning.

If preschoolers can solve the previous task with sentences containing 'only' more successfully, than it is reasonable to assume that centration is not the factor that biases their results.

Results:

- The mean scores of the exhaustive (2,933) and the non-exhaustive (1,48) conditions differed significantly according to Welch's Two Sample t-test, $t(14.93)=8.86, p < .001$.
- The majority of the children rejected the sentences in the non-exhaustive condition, arguing that it is not only the dog who tipped out the water.

Results

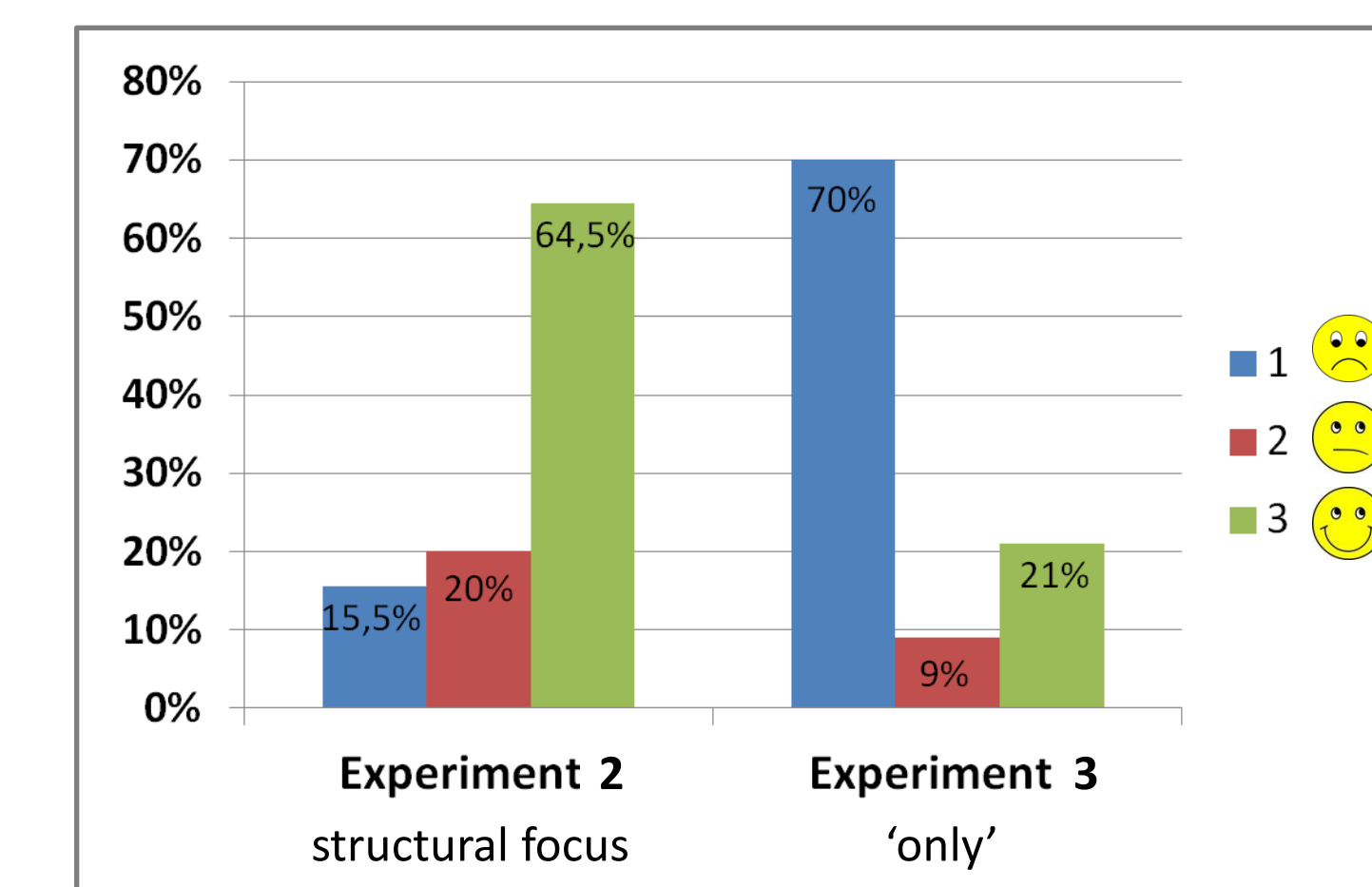


Figure 1

Score rates of non-exhaustive sentence-picture pairs in percentages

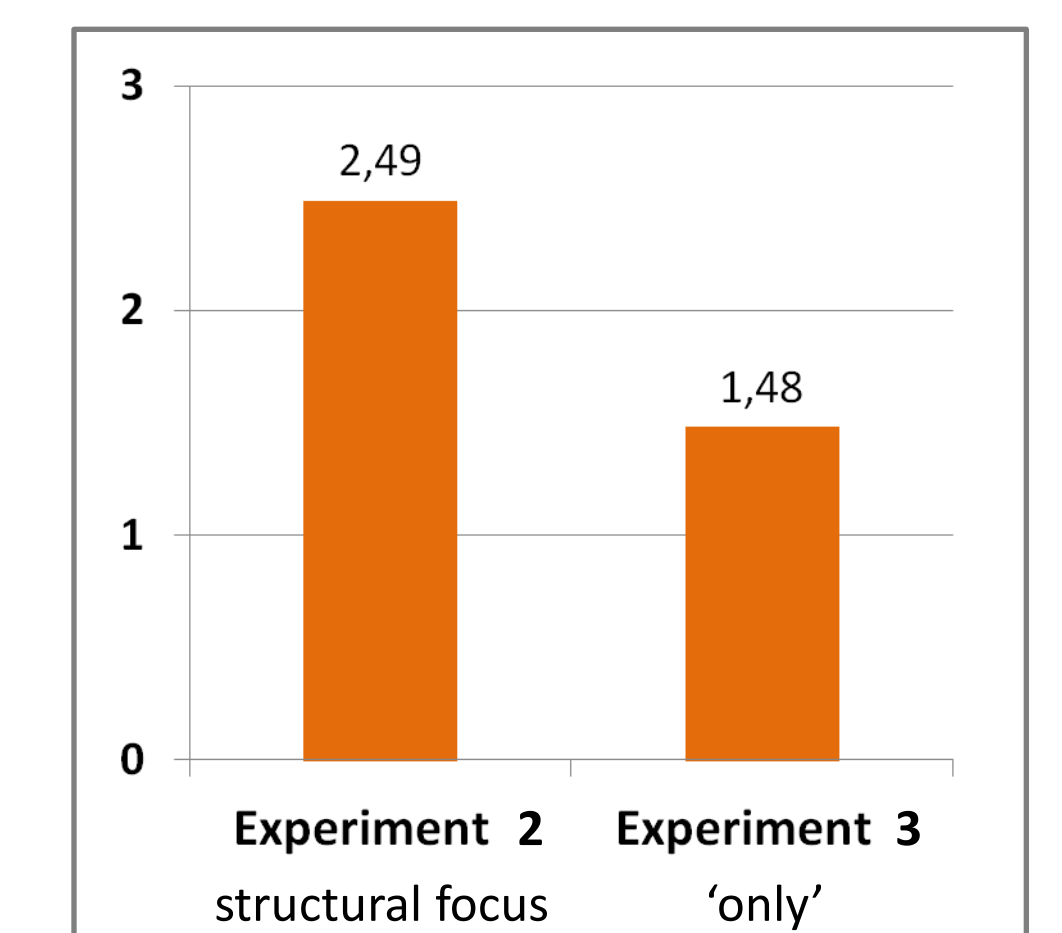


Figure 2

Mean scores of non-exhaustive conditions

Discussion

- In Experiment 1 the majority of the preschoolers failed to solve the task on centration in an adult-like fashion.
- In Experiment 2, children who had difficulties with centration could not access the exhaustive meaning of sentences containing structural focus.
- However, in Experiment 3, where the test sentences also contained the focus particle 'only', they could solve the task in an adult-like fashion.

Conclusion

- It is not the inability of decentration that biases preschoolers' results.
- Children at the age of 6 do not have access to the exhaustive feature of the Hungarian preverbal focus, but they can understand the exhaustive meaning of the particle *csak* ('only').

References

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Acknowledgements

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