

Theses of doctoral (PhD) dissertation

LILLA PINTÉR

**THE ACQUISITION OF
DIFFERENT KINDS OF EXHAUSTIVITY**

Pázmány Péter Catholic University
Faculty of Humanities and Social Sciences
Graduate School of Linguistics

Theoretical Linguistics Studies

Supervisor:

Prof. Katalin É. Kiss

university professor,

member of the Hungarian Academy of Sciences

Budapest

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1. Aims

The main aim of the thesis was to experimentally investigate the acquisition of the exhaustive interpretation of the most frequently used focus constructions in Hungarian. The results obtained not only reveal the developmental trajectory of the adult-like understanding of sentences containing the focus particle *csak* ‘only’ and structural focus constructions, but also contribute to the semantic discussion concerning the source and the status of their exhaustive meaning component.

2. Research method

The thesis contains five experiments, in which the total number of 302 participants provided data that could be included in the analyses based on the subjects’ overall accuracy rate. The following four age groups of Hungarian native speakers were tested: preschoolers, seven-year-olds, nine-year-olds, and adults.

The experimental tasks were also varied from a methodological point of view. Out of the five experiments, three contained a sentence–picture verification task in which participants evaluated the matching of the pairs of stimuli with a three-point rating scale. Crucially, instead of numbers, I used sad, straight and happy smiley faces to differentiate between the options of ‘false’, ‘in-between’ and ‘true’, since young children participated in the experiments, too. The idea of creating a Likert scale that can also be used by preschoolers

was put forth by Katsos and Bishop (2011), whose scale consisted of three differently sized strawberries. In order to validate this method, in the first experiment testing the interpretation of structural focus constructions, participants were divided into two groups: while in the first group only binary ('true' or 'false') judgments were collected, in the second one all of the previously mentioned three options were available. As it was indeed the case that even preschoolers could correctly use the rating scale, I also used it in the fourth experiment, although there the test sentences had to be judged with respect to situations played with dolls. Finally, the fifth experiment was a forced-choice picture selection task where children were presented with one sentence (containing the particle *csak* 'only') and four pictures simultaneously, and they were asked to sort out those for which the sentence is true and those for which it is false.

Importantly, when testing adult participants, I also collected reaction time data by measuring the duration between the end of the test sentence and the responding button press in each trial, as these results could show the extent to which native speakers found the use of certain construction types problematic if the requirement of exhaustivity was not fulfilled.

3. The structure and the main theses of the dissertation

The thesis is divided into four chapters. Chapter 1 introduces the notion of exhaustivity and outlines the various construction types conveying an exhaustive interpretation. From this point on, only the case of structural focus and the particle *csak* ‘only’ is under discussion, whereas the processing of utterances with neutral intonation and SVO word order was analyzed as a baseline.

Chapter 2 is dedicated to the exhaustive reading expressed by the construction type called structural focus (also referred to as preverbal, *ex situ* or identificational focus). When summarizing its main properties, especially its semantic characteristics, I present the three competing hypotheses concerning the source of its exhaustive meaning component, claiming that it is asserted, presupposed or implied, respectively. The following subsection contains a detailed description of all the related experiments carried out previously, emphasizing not only their claims of theoretical significance, but also the conclusions that can be drawn from an empirical point of view. The next step is to present the experiments investigating how native speakers from different age groups evaluate structural focus constructions in various test conditions. In the first experiment, I found that children under the age of seven do not associate an exhaustive reading with the constituent occurring in the structural focus position of the sentence, and there is a continuous increase of exhaustive interpretations with age. The second experiment also showed that this holds regardless of the amount of contextual

support. In a third experimental task, I tested whether sentences with neutral intonation and SVO word order are interpreted exhaustively in an isolated context such as that of the first experiment, and I managed to rule out the possibility that the effect found in the case of structural focus is merely due to pragmatic factors.

Chapter 3 presents the investigation of exhaustivity expressed by utterances containing the particle *csak* ‘only’. The structure of this section is similar to that of Chapter 2, although in this case only two experiments were conducted. The first one was the equivalent of the first experiment testing structural focus using a sentence-picture verification task, while the second one contained a picture selection task. In both cases, even the youngest participants consistently judged the scenarios violating the requirement of exhaustivity as unacceptable, indicating that they have already acquired the exclusive meaning of the particle *csak* by the age of five. Although there were a few exceptional cases of incorrect association of the exhaustive reading, their ratio was considerably lower than was found in the previous studies testing children acquiring English, German or Mandarin Chinese. This difference could be, however, explained based on the syntactic properties of sentences with *csak*.

The last chapter combines the results of the two series of experiments and gives a brief overview of the remaining questions that are open for future research. The main conclusions can be summarized as follows.

Firstly, I found that if exhaustivity is conveyed by the at-issue content of sentences (as in the case of *csak* ‘only’), even young

children can process it and associate it with the right constituent based on syntactic cues. As predicted, exhaustive inferences with a non-at-issue status are harder for them to recognise and distinguish from one another. While the great majority of preschoolers do not seem to be sensitive to these meaning components and also seven-year-olds tend to be uncertain about them, nine-year-olds are able to detect exhaustivity encoded by the specific syntactic and prosodic properties of sentences containing structural focus. What is more problematic for this age group is to take contextual factors into account, which may trigger unmotivated implicature generation in the case of sentences with neutral intonation and word order in the control experiment.

Secondly, from a methodological point of view, the study confirmed the hypothesis that the use of a three-point scale (consisting of smiley faces in my experiments) is more suitable than that of the binary judgement when measuring the accessibility of the exhaustive reading, as has been presumed by Kas & Lukács (2013) and Babarczy & Balázs (2016).

Finally, the findings are in line with the semantic theory proposed by Kenesei (1986), Szabolcsi (1994) and Bende-Farkas (2009), i.e. exhaustivity is asserted in the case of *csak*, but presupposed in the case of structural focus. Importantly, not only adults' consistent preference for the middle option of the scale supported this latter view, but also their reaction time data, as there was no significant delay in responses given in those cases where structural focus constructions were presented with non-exhaustive pictures.

Additionally, in another experiment containing various contextual cues that could help preschoolers access the exhaustive reading of sentences with structural focus, the results showed that young children not only have problems with processing this construction type in isolation, but they cannot make use of contextual factors either. The fact that such a major change in the experimental setting did not influence children's performance significantly also provides evidence against the hypothesis that exhaustivity expressed by structural focus is a scalar implicature (as proposed by Káldi & Babarczy 2016), the processing of which has been proven to be different in such cases (cf. Guasti et al. 2005, Papafragou & Musolino 2003).

References

- Babarczy Anna – Balázs Andrea 2016. A kognitív kontroll és a preverbális fókusz értelmezése. In: Kas Bence (ed.): „*Szavad ne feledd!*” – *Tanulmányok Bánréti Zoltán tiszteletére*. Budapest: MTA Nyelvtudományi Intézet. 151–63.
- Bende-Farkas Ágnes 2009. Adverbs of quantification, *it*-clefts and Hungarian focus. In: É. Kiss Katalin (ed.): *Adverbs and adverbial adjuncts at the interfaces*. Berlin: Mouton de Gruyter. 317–48.
- Guasti, Maria Teresa – Chierchia, Gennaro – Crain, Stephen – Foppolo, Francesca – Gualmini, Andrea – Meroni, Luisa 2005. Why children and adults sometimes (but not always) compute implicatures. *Language and cognitive processes* 20(5): 667–96.

- Kas Bence – Lukács Ágnes 2013. Focus sensitivity in Hungarian adults and children. *Acta Linguistica Hungarica* 60(2): 217–45.
- Katsos, Napoleon – Bishop, Dorothy V. M. 2011. Pragmatic Tolerance: Implications for the Acquisition of Informativeness and Implicature. *Cognition* 120: 67–81.
- Káldi Tamás – Babarczy Anna 2016. A magyar fókusz és a skaláris implikaturák: Egy szemmozgáskövetéses kutatás eredményei. In: Kas Bence (ed.): „*Szavad ne feledd!*” – *Tanulmányok Bánréti Zoltán tiszteletére*. Budapest: MTA Nyelvtudományi Intézet. 333–46.
- Kenesei István 1986. On the logic of Hungarian word order. In: Werner Abraham – Sjaak de Meij (eds.): *Topic, Focus and Configurationality*. Amsterdam: John Benjamins. 143–59.
- Onea, Edgar – Beaver, David 2011. Hungarian focus is not exhausted. In: Ed Cormany – Satoshi Ito – David Lutz (eds.): *Proceedings of the 19th Semantics and Linguistic Theory Conference*. eLanguage. 342–59.
- Papafragou, Anna – Musolino, Julien 2003. Scalar implicatures: experiments at the semantics–pragmatics interface. *Cognition* 86: 253–82.
- Szabolcsi Anna 1994. All quantifiers are not equal: The case of focus. *Acta Linguistica Hungarica* 42: 171–87.
- Wedgwood, Daniel 2005. *Shifting the Focus. From Static Structures to the Dynamics of Interpretation*. Amsterdam: Elsevier.

4. Relevant publications

Publications:

- 2016 A *csak* partikula értelmezése óvodáskorban. In: Gécseg Zsuzsanna (ed.): *LingDok15. Nyelvészdoktoranduszok Dolgozatai*. Szeged, Szegedi Tudományegyetem Nyelvtudományi Doktori Iskola, 133–151.
- 2016 A kísérletes módszertan térnyerése az elméleti nyelvészetben. *Magyar Tudomány* 177(7): 790–797.
- 2016 A kontextuális tényezők szerepe a szerkezeti fókusz óvodáskori értelmezésében. *Nyelvtudományi Közlemények* 112: 365–387.
- 2016 A magyar szerkezeti fókusz kimerítő értelmezésének kísérletes vizsgálata. In: Balázs József – Bojtos Anita – Paár Tamás – Tompa Zsófia – Turi Gergő – Vadász Noémi (eds.): *Studia Varia – Tanulmánykötet*. Budapest, Pázmány Péter Katolikus Egyetem Bölcsész- és Társadalom-tudományi Kar, 191–212.
- 2016 Preschoolers' interpretation of the focus particle *csak* 'only' in Hungarian. In: Bellamy, Kate – Karvovskaya, Elena – Kohlberger, Martin – Saad, George (eds.): *ConSOLE XXIII: Proceedings of the 23rd Conference of the Student Organization of Linguistics in Europe (7–9 January 2015, Paris)*. Leiden, Leiden University Centre for Linguistics, 200–220.

Conference presentations:

- 2014 6. Dubrovnik Conference on Cognitive Science – Language and Conceptual Development (Dubrovnik, 22–24 May, 2014)
Poster: *The role of centration in Hungarian preschoolers' interpretation of exhaustivity*
- 2014 Nyelvészdoktoranduszok 18. Országos Konferenciája (Szeged, 20–21 November, 2014)
Talk: *A csak partikula értelmezése óvodáskorban*

- 2015 23. Conference of the Student Organization of Linguistics in Europe
(Paris, 7–9 January, 2015)
Poster: *Preschoolers' interpretation of the focus particle csak 'only' in Hungarian*
- 2015 12. International Conference on the Structure of Hungarian
(Leiden, 22–23 May, 2015)
Talk: *The acquisition of the exhaustive interpretation of Hungarian focus constructions*
- 2015 5. Central European Conference in Linguistics for Graduate Students
(Olomouc, 4–5 September, 2015)
Talk: *Experimental investigation of the exhaustivity of structural focus*
- 2015 Generative Approaches to Language Acquisition 12.
(Nantes, 10–12 September, 2015)
Talk: *Focus interpretation in Child Hungarian*
- 2015 40. Boston University Conference on Language Development
(Boston, 13–15 November, 2015)
Poster: *Children's interpretation of asserted, presupposed, and pragmatically implied exhaustivity*
- 2016 38. Jahrestagung der Deutschen Gesellschaft für Sprachwissenschaft – AG12: Presuppositions in language acquisition
(Konstanz, 24 February 2016)
Talk: *Exhaustivity of structural focus in Hungarian: presupposition or implicature?*
- 2016 8. International Conference of Language Acquisition
(Palma de Mallorca, 7–9 September, 2016)
Talk: *Preschoolers' Interpretation of Presupposed and Pragmatically Implied Exhaustivity*
- 2017 Theoretical and Experimental Approaches to Presuppositions
(Genoa, 3–5 March, 2017)
Talk: *The Role of Contextual Factors in Preschoolers' Interpretation of Presupposed Exhaustivity*