

## GUEST EDITOR'S NOTE

This special issue of *Acta Linguistica Academica* is a collection of selected contributions providing new theoretical and psycholinguistic insights into number, quantification, and eventualities in a broad sense. Most of the papers in this volume were presented at the international conference “Psycholinguistic Investigations into Number and Quantification in Natural Language” organized at the University of Wrocław in August 2016 as part of the research project on the same subject, funded by the National Science Centre, Poland (grant no. 2013/09/B/HS2/02763). The remaining contributions were selected externally.

Expressing quantity has long been a subject of interest for logicians (dating back to Aristotle) and linguists interested in the formal means by which natural language allows the user to talk about and interpret number and quantification in the nominal and verbal domain. For the last couple of decades, the processing of language has been studied by psycholinguists, who have started to use techniques previously reserved for psychology and neurocognitive studies to understand how linguistic knowledge is organized in the brain and how it interacts with other cognitive modules, such as vision and numerical perception/computation. The collected papers in this volume extend the recent trend of investigating linguistic questions inspired by theoretical research using experimental techniques, an approach that offers a more direct access to the mental representation of language. The papers address a wide array of topics and, while they overlap with regard to the problems investigated, they offer contrasting perspectives and analyses. Similarly varied are also the experimental methods employed in the studies reported in this volume, e.g., judgment tasks, self-paced reading, eye-tracking, ERP (event related potentials), and speech production tasks. While the focus in the majority of the collected papers lies on language processing (Gulgowski & Błaszczak; Klimek-Janowska, Czypionka, Witkowski & Błaszczak; Tomaszewicz; Weiland-Breckle & Schumacher) or production (Surányi & Turi), there are also papers focusing on language acquisition (É. Kiss & Zétényi; Pintér), natural language semantics (Wellwood, Hespos & Rips), and philosophy of language (Gennari). At a general level, the ultimate goal of the presented research is to contribute to a better understanding of natural language and the human brain and,

at a more concrete level, what is investigated in individual papers challenges present assumptions, mainly from four languages: Hungarian, Polish, English, and German. The collected papers are introduced below in the order of their appearance in the volume.

**Katalin É. Kiss and Tamás Zétényi** in their contribution entitled “Linguistic pathway to multiplication” argue that grammatically encoded mathematical operations in the form of quantified expressions pave the way for abstract mathematics. More specifically, they provide experimental evidence of intuitive multiplication in 5-to-7-year-old Hungarian children with no training in arithmetic operations, based on children’s interpretation of sentences with two numerical quantifiers and a distributivity marker in Hungarian.

**Silvia Gennari**’s contribution “Indexical time references and attitude reports” discusses temporal content-report mismatches involving indexical tenses within intensional contexts. It is argued that an analysis based on a *de re* interpretation of the embedded tense, where embedded indexical tenses are represented by a logical existential quantifier outside the intensional domain and denote a state or interval in the utterance context, is not satisfactory as it does not capture multiple instances of belief attributions with indexical tenses. An alternative and more flexible account is proposed in which indexical tenses need not be analyzed *de re* if the belief report is considered as an attribution of an implicit belief, rather than an explicit one.

**Piotr Gulowski and Joanna Blaszczak** in their contribution “Stroop-like interference of grammatical and visual number: Experimental evidence from Polish speakers” investigate the interaction between the grammatical number and visual numerosity of Polish nouns in a word-counting task. The study focuses particularly on the effect of morphological markedness, providing some evidence suggesting that marked singulars produce a bigger congruency effect than unmarked singulars.

**Dorota Klimek-Jankowska, Anna Cypionka, Wojciech Witkowski and Joanna Blaszczak**’s contribution “The time course of processing perfective and imperfective aspect in Polish – evidence from self-paced reading and eye-tracking experiments” focuses on the impact of the degree of semantic specificity and morphological complexity on the time course of processing perfective (prefixed and semelfactive) and imperfective (simple and iterative) verbs in Polish. One of the tested hypotheses was that the interpretation of semantically underspecified verbs is delayed to post-verbal regions (possibly to the end of a sentence).

**Lilla Pintér** in her paper “The acquisition of asserted, presupposed, and pragmatically implied exhaustivity in Hungarian” provides experimental support for the hypothesis according to which exhaustivity is part of the asserted content of sentences with ‘only’, it is context-independently presupposed in the case of structural focus, and in certain contexts it can arise as an implicature in the case of neutral utterances.

**Balázs Surányi and Gergő Turi** in their contribution “Quantifier scope in sentence prosody? A view from production” present a production experiment involving grammatically scope-ambiguous, doubly quantified sentences with varied focus structures in Hungarian. The goal of the experiment was to investigate whether quantifier scope is expressed prosodically if information structure is kept in check. The experimental results seem to support the view that scope interpretation is encoded in prosody only when it is a free rider on information structure.

Scopal properties of quantifiers and focus also play a role in **Barbara Tomaszewicz’s** contribution “Focus effects on quantifier domains in a visual verification task”. More specifically, the study is concerned with how syntactic focus affects the interpretation of quantifiers (‘only’, ‘most’). The presented evidence from Polish shows that syntactic focus can facilitate the verification of the truth of a sentence, by guiding attention towards the more salient information in the picture, i.e., the set of focus alternatives.

In their contribution entitled “A direct comparison of metonymic and metaphoric relations in adjective–noun pairs” **Hanna Weiland-Breckle and Petra Schumacher** address the question of whether metaphor and metonymy engage different mechanisms: mapping across domains vs. mapping within a domain, or whether they rely on the same underlying mechanism as in the underspecification account (see also Klimek-Jankowska et al.’s contribution): an initial activation of an underspecified meaning and the eventual meaning (or specific sense) selection driven by contextual cues. The presented results from ERP recordings of participants silently reading German sentences are compatible with the former assumption.

Finally, **Alexis Wellwood, Susan Hesos and Lance Rips** in their contribution “How similar are objects and events?” argue that natural language ontology reveals properties of language-independent conceptualization. More specifically, they examine how speakers determine whether an entity counts as “atomic” by using count vs. mass and distributive vs. non-distributive descriptions.

**Acknowledgements.** I would like to thank all the authors for their extremely valuable and inspiring contributions and all the involved reviewers for their very helpful and constructive reviews. Special thanks go to Prof. Katalin É. Kiss, the Editor-in-Chief of *Acta Linguistica Academica*, for making this special issue possible and for inviting me to be its guest editor. I would also like to express my gratitude to Zoltán G. Kiss, the associate editor of *Acta Linguistica Academica*, for all his work on this volume. The volume was supported by the OPUS 5 HS2 grant (DEC-2013/09/B/HS2/02763) from the Polish National Science Center (NCN).

**Joanna Błaszczak**