Contextualizing Tense/Aspect Features: A Cross-linguistically Informed Approach to Capturing their Meaning

Mark-Matthias Zymla

University of Konstanz

`mark-matthias.zymla@uni-konstanz.de`

Tense and aspect (TA) markers appear in various forms and guises across languages. This talk gives an overview over their form and meaning with a focus on the latter. I will show that even in superficially similar TA systems the meaning associated with certain TA markers can vary, sometimes, considerably. Thus, providing an analysis of TA that is applicable to a typologically diverse set of languages is extremely challenging. I present an attempt to capture cross-linguistic differences in TA in a formal framework that relies on contextualization of TA features. More concretely, I present a way to show how interpreting the meaning of TA features depends on their morphosyntactic, semantic, and pragmatic context.

Tense and aspect has received considerable attention in all strands of linguistic research. The work presented here contributes to the formal exploration of TA, building on the parallel grammar effort (ParGram; Butt et al. 2002) with the goal of providing cross-linguistically comparable and computationally viable morphosyntactic analyses. ParGram provides structural analyses for a typologically diverse set of languages. These are encoded in computational grammars developed in the Xerox Linguistic Environment (XLE; Crouch et al. 2017) which is based on the grammar formalism Lexical Functional Grammar (LFG; Bresnan and Kaplan 1987). While extensive research has lead to several larger scale and smaller scale grammars capturing morphosyntactic commonalities and variation across languages, ParGram has not provided a principled way of capturing their semantics. The Project *Tense and Aspect in Multilingual Semantic Construction* was conceived to expand upon the ParGram project by providing a formal framework for exploring tense and aspect features semantically.

I elaborate on this project by presenting insights from my PhD thesis with the same name and building on previous work (e.g., Zymla 2017, 2019). I mainly focus on the strong contextualization of TA features and the challenges this brings for situating them in LFG's formal architecture and capturing their semantics more generally. I then present a possible solution to this problem based on a description-by-analysis approach to Glue semantics, LFG's semantic formalism (Dalrymple, 1999). This approach analyses TA markers with a set of rules that iteratively interpret them, gradually expanding the context. First, the morphosyntactic context is considered. Then, if necessary, the semantic and pragmatic context are added until all and only the appropriate interpretations are captured. Thus, the present work expands upon the ParGram effort by providing a framework for formally and computationally exploring the interface between meaning, morphosyntax, and pragmatics in a diverse set of languages.

References • Joan Bresnan and Ronald Kaplan. 1987. *Lexical-Functional Grammar*. Stanford University, Linguistic Institute. • Miriam Butt et al. 2002. The Parallel Grammar Project. In *Proceedings of the 2002 Workshop on Grammar Engineering and Evaluation*, volume 15, Pages 1–7. Association for Computational Linguistics. • Dick Crouch et al. 2017. *XLE Documentation*. Palo Alto Research Center. • Mary Dalrymple. 1999. *Semantics and Syntax in Lexical Functional Grammar: The Resource Logic Approach*. MIT Press. • Mark-Matthias Zymla. 2017. Cross-Linguistically Viable Treatment of Tense and Aspect in Parallel Grammar Development. In *Proceedings of the LFG17 Conference*. CSLI Publications. • Mark-Matthias Zymla. 2019. Aspectual reasoning in lfg – a computational approach to grammatical and lexical aspect. In M. Butt, T. H. King, and I. Toivonen, editors., *Proceedings of the LFG'19 Conference, Australian National University*, Pages 353–373. Stanford, CA: CSLI Publications.