

Proposal for a Master's thesis

Quantitative typology of valency classes

Siyu Tao

Draft as of November 8, 2022

Abstract

1 Introduction

Argument structure is widely studied and debated in linguistics. The nature of the relationship between verbs and their arguments as well as the syntactic expression of underlying lexical semantics.

2 Background and Motivation

2.1 Argument Structure: Generative and Construction Grammar Approaches

Generative approach:

Levin (1993)'s verb classes

Levin and Rappaport Hovav (2005) identifies five major questions that are necessary for a complete theory of argument realization.

copy from hand notes

Croft (2012) inter alia

Construction grammar approach: CxG would consider valency frame as a level of construction. Whether or not this construction is autonomous will depend on whether the unpredictability condition is satisfied - in so far that the properties of valency frame cannot be predicted from other grammatical units.

The relevance of a typological study

2.2 Valency and Verb Classes

Linguistics borrowed the term of **valency** from chemistry, as the capacity of a verb to combine with its arguments are reminiscent of the combining capacity of an atom of a given element.

Typological interest in valency is primarily focused on cross-linguistic mismatches, termed *metataxis* by Tesnière (1959).

One of the key question is also whether this valency frame are syntactically defined or semantically so. Since in the study of argument structure, we're dealing with the syntactic expression of lexical and non-lexical semantics, this question is particularly murky to answer.

Tsunoda (1981, 1985) proposes an hierarchy of verbs

2.3 Dependency Grammars

In fact, modern developments in valency theory and dependency grammar can both trace their roots to the work of the French linguist Lucien Tesnière, posthumously published in *Éléments de syntaxe structurale* (1959; English translation 2015).

Universal Dependencies

3 Data and methodology

3.1 Data sources

UD Treebanks Zeman et al., 2022 is something I will be using.

ValPaL (Hartmann et al., 2013) is a database

3.2 Methodology

Clustering non trivial problem to distinguish between complement vs adjuncts

Alignment

Information Theory

4 Work plan

5 Conclusion

Bibliography

- Hartmann, Iren, Martin Haspelmath, and Bradley Taylor (2013). *The Valency Patterns Leipzig Online Database*. Leipzig: Max Planck Institute for Evolutionary Anthropology. URL: <https://valpal.info/>.
- Tesnière, Lucien (1959). *Éléments de syntaxe structurale*. Paris: C. Klincksieck.
- (2015). *Elements of Structural Syntax*. John Benjamins Publishing Company. ISBN: 978-90-272-1212-2. DOI: 10.1075/z.185. URL: <https://library.oapen.org/handle/20.500.12657/30722> (visited on 08/22/2022).
- Tsunoda, Tasaku (Jan. 1, 1981). “Split Case-Marking Patterns in Verb-Types and Tense/Aspect/Mood”. In: 19.5-6, pp. 389–438. ISSN: 1613-396X. DOI: 10.1515/ling.1981.19.5-6.389. URL: <https://www.degruyter.com/document/doi/10.1515/ling.1981.19.5-6.389/html?lang=en> (visited on 09/25/2022).
- (1985). “Remarks on Transitivity”. In: *Journal of Linguistics* 21.2, pp. 385–396. ISSN: 0022-2267. JSTOR: 4175793.
- Zeman, Daniel et al. (2022). *Universal Dependencies 2.10*. URL: <http://hdl.handle.net/11234/1-4758>.