# A simple template for gdoc

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#### Abstract

This is the abstract! This is the abstract of the paper. An abstract summarizes, usually in one paragraph of 300 words or less, the major aspects of the entire paper in a prescribed sequence that includes: 1) the overall purpose of the study and the research problem(s) you investigated; 2) the basic design of the study; 3) major findings or trends found as a result of your analysis; and, 4) a brief summary of your interpretations and conclusions.

### 1 Introduction

This is an introduction (Kemmerer 2012).

- (1) Expectation-based facilitation in German
  - a. Er hat das Buch, [das Lisa gestern gekauft hatte], hingelegt. he has the book that Lisa yesterday bought had laid.down
  - b. Er hat das Buch hingelegt, [das Lisa gestern gekauft hatte]. he has the book laid.down that Lisa yesterday bought had 'He has laid down the book that Lisa had bought yesterday.'

In self-paced reading, the verb is read faster in such examples when it follows the semantically rich and complex noun phrase in 1a ("the book that Lisa bought yesterday") than when it follows the short object noun phrase "the book" in 1b, where the relative clause is extraposed. Since these facilitation effects matter most for long and information-rich dependents, one would expect less variation in placement with longer dependencies (long—head-final—less variable).

### 2 Data and Methods

This is the section for data and methods. The information of these treebanks is summarized in Table 1.

Europe Sentences Word token Language Family Language Family Europe Sentences Word token Afrikaans Indo-European F 1 934 49,276 Irish Indo-European Т 4.910 115 969 F Akkadian Afro-Asiatic 1,804 21,962 Italian Indo-European Т 14,167 298,343 213,999 Japanese Japanese Ancient Greek Indo-European Т 17,080 F 57.028 1.250,875 F 738,889 Korean F Arabic Afro-Asiatic 19.738 Korean 27.363 350.090 Armenian Indo-European Т 2,502 52,630 Latin Indo-European T 26,977 450,515 Bambara Т Mande F 13,823 Latvian Indo-European 13,643 219,955

Table 1: Overview of 71 dependency treebanks from UD v2.7.

We predict the direction and variation of each word order in a model assuming a Beta-Binomial likelihood function. The Beta-Binomial distribution is a mixture of a Binomial and a Beta distribution. It generalizes the Binomial distribution, and can capture overdispersion. With the Beta-Binomial model, the Binomial probability is randomly drawn from a Beta distribution  $\mathbf{B}\left(\alpha,\beta\right)$  with hyperparameters  $\alpha>0$  and  $\beta>0$ .

$$\operatorname{Beta2}\left(\mu,\phi\right)=\operatorname{Beta}\left(\alpha=\frac{\mu}{\phi},\beta=\frac{(1-\mu)}{\phi}\right)$$

#### 3 Results

You can put some fancy results here! Figure 1 visualizes the relationship.

## 4 Conclusion

Here is the conclusion.

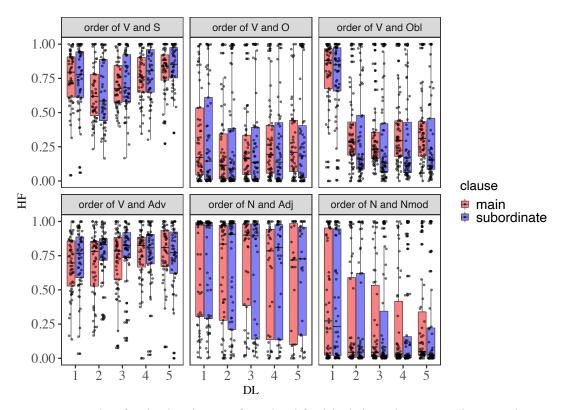


Figure 1: Boxplots for the distribution of raw head-final (HF) dependencies in relation to dependency length (DL) across main and subordinate clauses

## References

Kemmerer, David. 2012. The Cross-Linguistic Prevalence of Sov and Svo Word Orders Reflects the Sequential and Hierarchical Representation of Action in Broca's area. *Language and Linguistics Compass* 6. 50–66.