

# Linguistic representations of constructional alternations: A case study from Estonian

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The present paper addresses the first and second level of Marr's (1982) tri-level system of understanding – computation and algorithm/representation – and focuses on the linguistic representations of constructional alternations. At the representational level, I am interested in how native speakers of Estonian solve the problem of choosing between two competing morpho-syntactic constructions, i.e. what (linguistic) representations and processes do they use to manipulate the representations of these constructions. The constructional alternation in question is the parallel use of the adessive case construction and the postpositional construction with *peal* 'on'.

I model native speaker behaviour as attested in two experiments – a forced choice task (96 participants) and an acceptability rating task (98 participants). I hypothesise that there is a difference between the knowledge representations participants draw on in the two tasks – the problem that the native speakers need to solve at the level of computation is different in the two tasks. The stimuli for both experiments comprise 30 corpus sentences randomly sampled from five equal probability bins defined by a binary logistic regression model in the 900-observation corpus dataset (see Klavan 2012 for details). The sampled stimuli represent the full probability scale and ranges from sentences where one construction was very probable to sentences where both constructions were equally probable. The data are analysed using mixed-effect regression (the *lme4* package in R).

The results of the study show that the forced choice data correlates better than the rating data with the results of a corpus-based model (Klavan & Veismann 2017). For example, the forced choice task confirms that length, complexity, mobility, word class play a role in the choice between the two competing constructions with length being the strongest predictor. The same set of predictors were found to be significant based on a mixed-effects logistic regression model fitted to the corpus data. The acceptability rating task, however, does not confirm this finding – only complexity and mobility are predictive when speakers rate the two alternative constructions. This result points towards the conclusion that the two tasks tap into different type of linguistic knowledge. Another important finding of the study is that individual differences – both at the level of words and speakers – account for a large amount of variation in the data (see also Baayen et al. 2013, Bresnan and Ford 2010, Theijssen et al. 2013). By employing a rigorous experimental design that compares the results of two experiments using the same set of stimuli and rigorous data analysis methods, the paper contributes to the discussion on gaining deeper insights into central epistemological questions regarding the nature and representation of linguistic knowledge, more specifically construal and constructional alternations.

## References

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