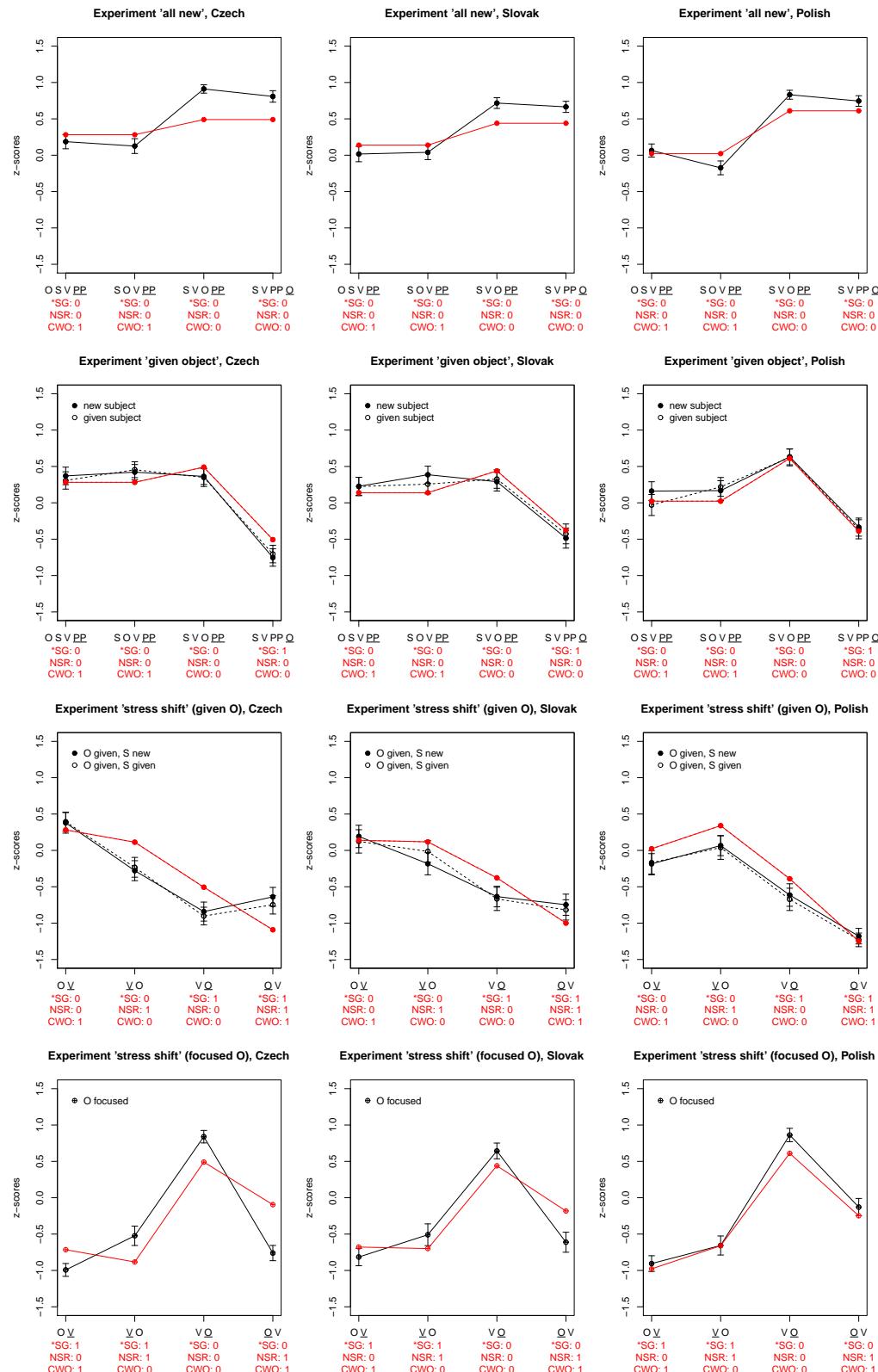
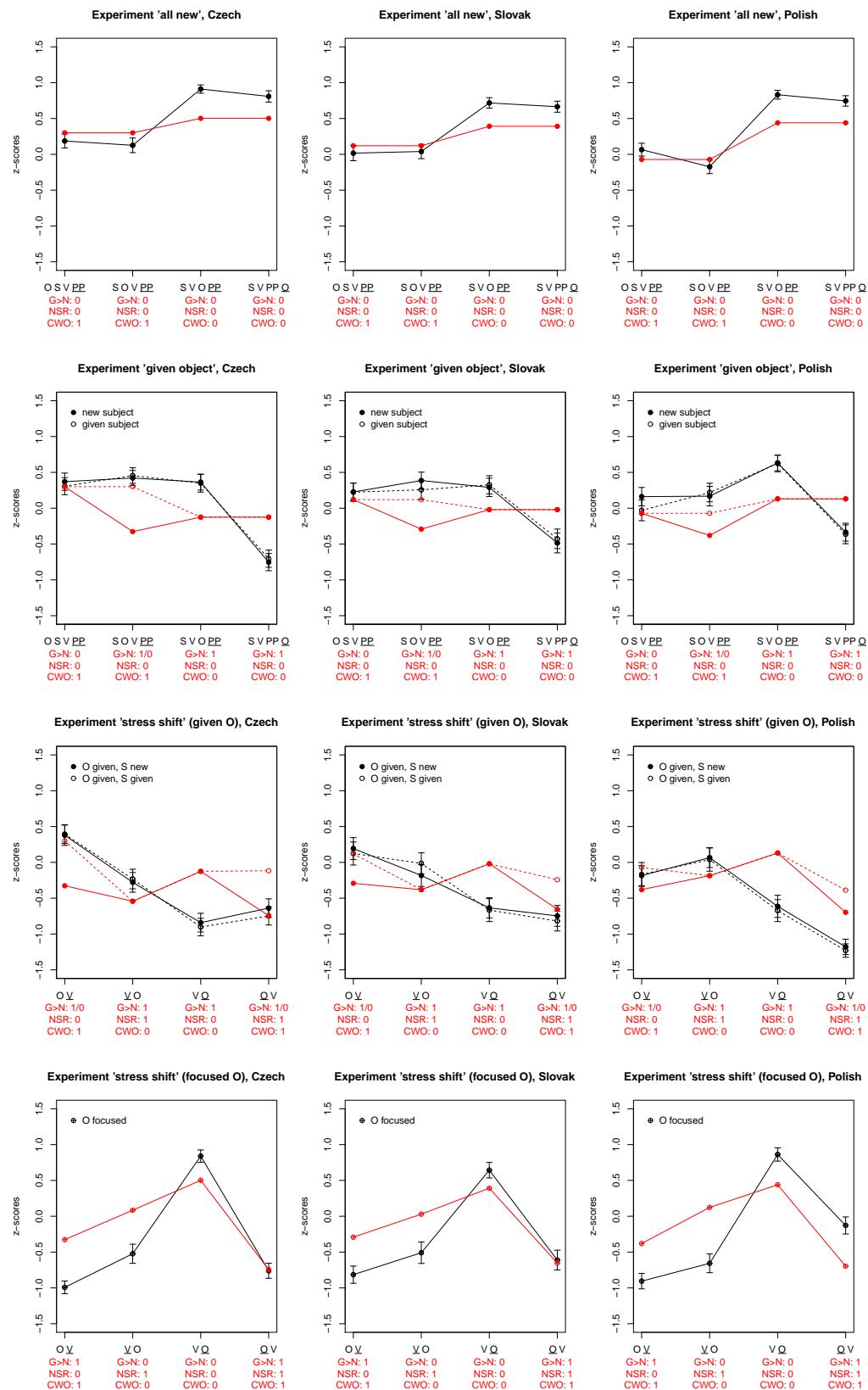


Core assumption: if a constraint (*SG = *STRESS GIVEN, NSR = NUCLEAR STRESS RULE, G>N = GIVEN BEFORE NEW, CWO = CANONICAL WORD ORDER) is active, its violation will lead to a decrease in acceptability that is consistent across the whole data set. The **plots** show the results and 95% confidence intervals of the experiments (in black) in comparison to the predictions of a multiple regression model including the constraints as independent variables (in red).

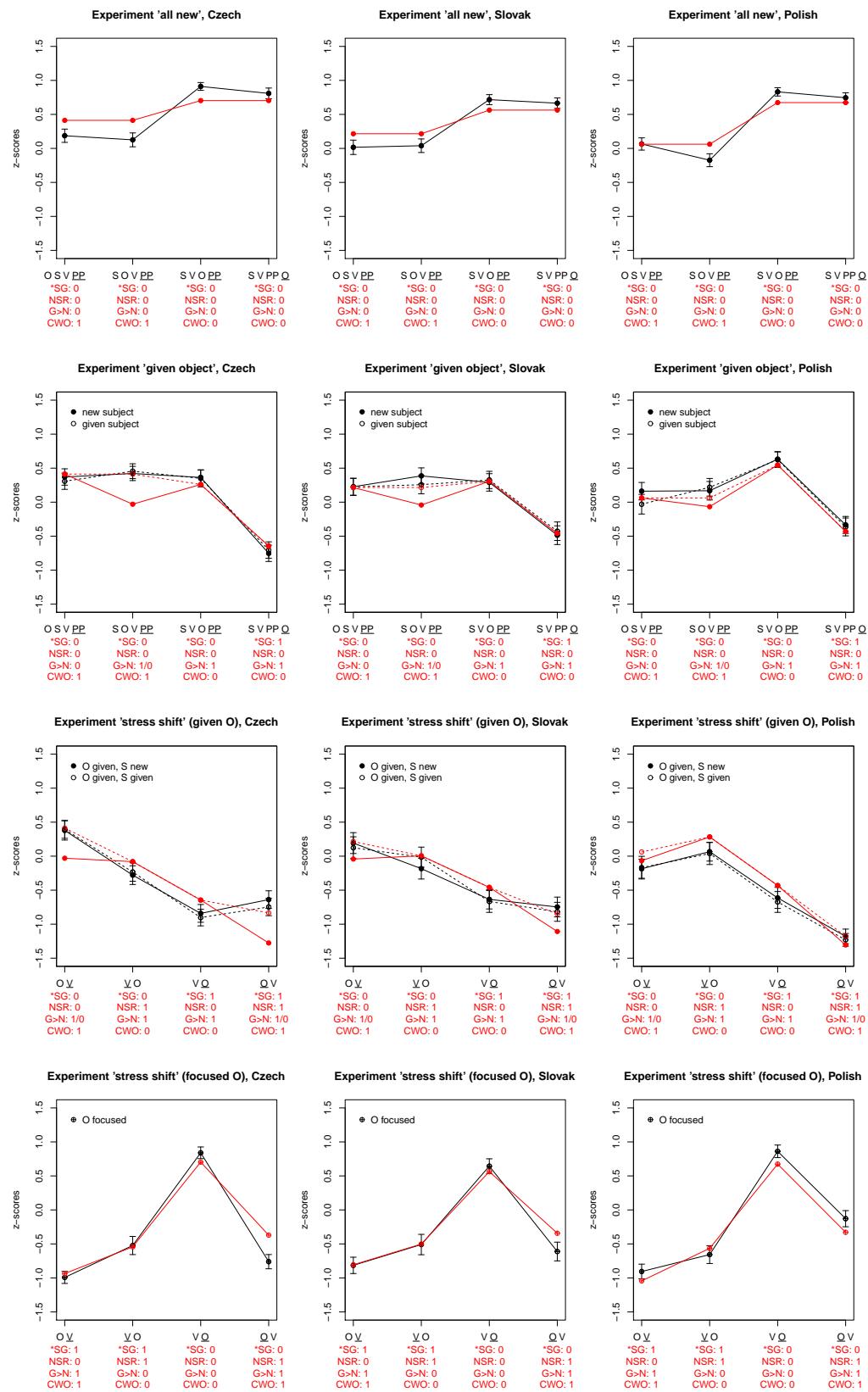
1 Plots for the prosodic model



2 Plots for the word order model



3 Plots for the combined model



4 Model comparison

Prosodic model

	Czech ($R^2 = 0.28$)		Slovak ($R^2 = 0.19$)		Polish ($R^2 = 0.30$)	
	estimate	SE	estimate	SE	estimate	SE
(Intercept)	0.40	0.02	0.29	0.02	0.32	0.02
*SG	-1.00	0.03	-0.82	0.03	-1.00	0.03
NSR	-0.38	0.03	-0.32	0.03	-0.27	0.03
CWO	-0.21	0.02	-0.30	0.03	-0.59	0.02

Word order model

	Czech ($R^2 = 0.16$)		Slovak ($R^2 = 0.09$)		Polish ($R^2 = 0.10$)	
	estimate	SE	estimate	SE	estimate	SE
(Intercept)	0.50	0.03	0.39	0.04	0.44	0.04
G>N	-0.63	0.03	-0.41	0.03	-0.31	0.03
NSR	-0.42	0.04	-0.36	0.04	-0.32	0.04
CWO	-0.20	0.03	-0.27	0.03	-0.51	0.03

Combined model

	Czech ($R^2 = 0.34$)		Slovak ($R^2 = 0.22$)		Polish ($R^2 = 0.31$)	
	estimate	SE	estimate	SE	estimate	SE
(Intercept)	0.40	0.02	0.29	0.02	0.32	0.02
*SG	-0.91	0.03	-0.76	0.03	-0.98	0.03
G>N	-0.44	0.03	-0.26	0.03	-0.13	0.03
NSR	-0.34	0.03	-0.30	0.04	-0.26	0.03
CWO	-0.29	0.02	-0.35	0.03	-0.61	0.02

5 Discussion

Evaluation of the prosodic model:

- No fully consistent estimate can be found for CWO: experiments 2 and 3a, where a given element scrambles, suggest a small/zero weight, experiments 1 and 3b, where new elements scramble, suggest a larger weight.
- The results of the given object experiment are captured successfully by the *SG constraint: only the condition with sentence stress on the given object deviates.
- The observation that Czech and Slovak prefer scrambling, whereas Polish prefers stress shift, can be modeled by language-specific weights for NSR and CWO.
- The observation that focused objects are best in situ is captured, but the full pattern is not modeled perfectly in Czech due to the inconsistent requirements on CWO.

Evaluation of the word order model:

- The word order model predicts an effect of subject givenness, which is absent in the results.
- No consistent estimate can be found for G>N: some structures in which it is violated are perfectly acceptable (e.g., S V O PP in experiment 2), whereas others are completely unacceptable (e.g., S V PP O).
- The model does not provide any means to capture the influence of the position of sentence stress.

Evaluation of the combined model:

- Adding G>N to the prosodic approach comes with benefits and problems. It improves the fit for the stress shift experiments in Czech: it provides a handle on the lower acceptability of the OV conditions in the stress shift (focused O) experiment and the VO conditions in the stress shift (given O) experiment, where the predictions of the prosodic model alone were too high. However, it introduces some of the problems of the word order model, namely the prediction that S givenness should have an effect.
- For Polish, the improvement in comparison to the prosodic model is not so pronounced because the estimated weight of G>N is very low.

Discussion of the model comparison:

- The prosodic hypothesis allows to model the data quite successfully in all three languages. It accounts for 28% of the variance in Czech, 19% in Slovak, and 30% in Polish.
- The word order model is significantly less successful (16% / 9% / 10%), suggesting that *SG is a necessary part of an adequate model for all three languages.
- The combined model is in turn significantly better than the prosodic model in all languages. However, the proportion of variance explained by the combined model increases by only 1% for Polish; in Czech and Slovak, the difference is more pronounced (3% / 6%).