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Does Standardization Affect the Type of Motivating Factors that Determine Language Variation?

The Case of the Dutch Transitive-Reflexive Alternation

Abstract: The standardization of Belgian Dutch commenced much later than that of Netherlandic Dutch. Grondelaers, Speelman and Geeraerts (2008) proposed that this has affected how language variation functions in both varieties. In Netherlandic Dutch, centuries of standardization would have caused language variation to become straitjacketed in lexical biases or recruited to express semantic differences, while in Belgian Dutch, variation would be governed by factors that are directly related to language processing. The present study investigates whether this effect can also be observed for the transitive-reflexive alternation using corpora. Two hypotheses are formulated: (i) a regression model based on Netherlandic data will reach a higher predictive quality than one fit on Belgian data, and (ii) variables relating to lexical biases and semantic distinctions will yield a greater increase in predictive quality for the Netherlandic model. The second hypothesis is confirmed, the first is not.

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1 Introduction

Standardization affects language variation. This occurs in obvious ways, such as dialectal variation being blotted out by an encroaching standard language, but Grondelaers, Speelman and Geeraerts (2008) argue that it also occurs in more subtle ways. Looking at the Dutch *er*-alternation, as in (1), they propose that there are no underlying functional differences for *er* in the Belgian and Netherlandic varieties of Dutch: in both varieties, *er* functions as an accessibility marker to smooth language processing. However, the long history of standardization of Netherlandic Dutch has caused the alternation to become increasingly straitjacketed in lexical biases. Put concretely, the original processing motivation of the alternation would have caused particular verbs and particular adjuncts to often occur in the *er*-variant, notably vague verbs such as *zijn* 'be' and temporal adjuncts such as *morgen* 'tomorrow'. Standardization would then gradually reinforce these lexical biases, causing them to become more pronounced in the Netherlandic variety than in the less standardized Belgian variety.

   In sum, this effect of standardization shows how societal developments may affect the cognitive motivations that cause language users to opt for one linguistic variant over the other. As such, it sits at the heart of the Cognitive Sociolinguistics enterprise.

(1)   *In   het   redactielokaal staan **(er)**   enkele   flessen wijn*
       en   wat   borrelhapjes
       In   the   editorial.room stand (there)   some   bottles wine
       and   some   snacks.
       'In the editorial room, there are a couple of bottles of wine
       and some snacks.'
       (Taken over from Grondelaers, Speelman and Geeraerts 2008: 158)

The present contribution intends to test whether the same effect can also be observed for the Dutch transitive-reflexive alternation. This alternation can be found for a number of verbs that express a mental state, such as *ergeren* 'annoy' in (2)-(3). Pijpops (2017) shows that this alternation is jointly determined by factors related to lexical biases, language processing and a subtle semantic distinction. That is, the verb *interesseren* 'interest' prefers the transitive variant, while *verbazen* 'amaze', *storen* 'disturb' and *ergeren* 'annoy' prefer the reflexive variant, in increasing order. Meanwhile, the probability of the transitive variant is also higher when either the stimulus argument, e.g. *hij* 'he' in (2) and *al die herrie van de kinderen* 'the children's noise' in (3), or the experiencer argument, e.g. *je* 'you'

in (2) and *veel spelers* 'a lot of players' (3), is more topical. Lastly, it was hypothesized that the transitive variant expresses more of a agentive action from the part of the stimulus than the reflexive variant. This hypothesis was taken to be confirmed, as animate stimuli were also shown to elicit the use of the transitive variant.

(2) *Maar als hij je   zo   ergert,* (transitive variant)
     But   if   he   you   so   annoys
     'But if he annoys you so much, …'
     (Taken from the ConDiv corpus)

(3) *Veel spelers ergeren   zich   aan al die herrie*
     van de   kinderen
     Many players annoyed themselves to   all that noise
     of   the   children
     'The children's noise annoyed a lot of the players.'
     (Taken from the ConDiv corpus)

The next section introduces the historical development of European Dutch. The third section presents the hypotheses, then follow the data and analysis, and finally the conclusions.

2 The Historical Development of European Dutch

The development of Netherlandic and Belgian Dutch started to diverge following the division of the Low Countries in the Eighty Years' War (1568 AD - 1648 AD). Since then, Netherlandic Dutch has followed a steady standardization process (van der Wal & van Bree 2008). Meanwhile in the South, French largely took over the functions of standard language, and the condition of Dutch only really started to improve in the 20th century. These historical developments resulted in a situation of Dutch as a pluricentric language consisting of two different national varieties, with Netherlandic Dutch generally being more internally homogeneous than Belgian Dutch (De Caluwe 2017).

3 Hypotheses and Previous Research

Based on these historical developments, the following two hypotheses are formulated. First, as Dutch spoken in Belgium tends to be more heterogeneous due to its delayed standardization, I expect its variation to be more difficult to model than Netherlandic Dutch. Hence, I predict a lower predictive quality for a regression model based on Belgian data compared to one based on Netherlandic data. Such an effect has already been established for the *er*-alternation (Grondelaers, Speelman and Geeraerts 2002: 344–345; Grondelaers, Speelman and Geeraerts 2008: 189) and the *naar*-alternation as in (4) (Pijpops 2019: 196–197).

(4)   *Zoek   je   **(naar)**   je   paraplu?*
           Search you **(to)**   your umbrella?
           'Are you looking for your umbrella?'
           (Taken over from Haeseryn et al. 1997: 1168)

Second and related to the first point, we expect that the predictors relating to lexical biases and semantic distinctions, which will be introduced in the next section, will play a more important role in the Netherlands than in Belgium. By 'lexical biases', I refer to motivating factors that involve particular words having a preference for one or the other variant. By 'semantic distinctions', I refer to motivating factors whereby one meaning nuance or construal is more often expressed by one variant, while another nuance or construal is more often expressed by the other variant. Such behavior has already been observed for various other alternations, which will now be discussed.

In the Netherlands, the *er*-alternation in (1) was found to be most strongly driven by the choice of verb and a distinction between temporal and locative adjuncts, with other factors playing only a minor role at best. Conversely in Belgium, other factors that more directly relate to cognitive processing needed to be brought into the equation to reach reasonable predictive quality, such as ADJUNCT CONCRETENESS and ADJUNCT TOPICALITY (Grondelaers, Speelman and Geeraerts 2008: 184–185; Speelman et al. 2020).

As for the *doen-laten*-alternation in (5), lexical collocations of the causative verb *laten* 'let' with the verbs *zien* 'see', *horen* 'hear' and *weten* 'know' play a larger role in the Netherlands than in Belgium (Levshina, Geeraerts and Speelman 2013: 45–46). Meanwhile, the *noemen-heten*-alternation in (6) constitutes a straightforward semantic distinction in the Netherlands, with *noemen* meaning 'call', and *heten* 'bear the name' (De Grauwe 2014; Speelman 2014: 519–

530). In Belgium, however, both *noemen* and *heten* can express the meaning 'bear the name, and the choice between both forms is more elusive.

(5)   *De   sergeant   **liet/deed** ons   door   de   modder kruipen.*
       The sergeant **let/did**   us   through the mud   crawl
       'The sergeant had us crawl through the mud.'
       (Taken over from Verhagen and Kemmer 1997: 62)

(6)   Ik   noem/heet Dirk.
       I   name/call   Dirk
       'I'm called Dirk.'
       (Taken over from Speelman 2014: 519)

Finally, Pijpops (2019: 75–76, 247–248) proposes that the lexical biases and semantic distinctions found for the *naar*-alternation in (4) could have their root in the influence of language processing, much like the lexical biases of the *er*-alternation. Put concretely, particular themes, such as *leven* 'life' in (7), would often occur in complex noun phrases that follow the main verb. The influence of language processing would then cause them to often appear in the prepositional variant (on why processing constraints would have this effect, see Pijpops 2018). Meanwhile, other themes, such as *tegenprestatie* in (8), would appear less often in complex noun phrases that follow the main verb. Hence, they would appear less often in the prepositional variant. In sum, there would be ostensible lexical biases in language usage: even though the word *leven* 'life' in itself would not trigger a preference for the prepositional variant, it would occur more often in the prepositional variant, simply due to the influence of language processing.

In the next step, language users may interpret these ostensible lexical biases to indicate a meaning distinction. For instance, they may start to believe that the prepositional variant of the verb *verlangen* 'desire' communicates more of a longing. After all, the prepositional variant often appears in sentences like (7). Conversely, they may also start to believe that the transitive variant expresses more of a demand, since the transitive variant often appears in sentences such as (8). Once language users believe that such a meaning distinction between the variants exists, they act on it, causing the meaning distinction to actually come into being.

(7) *Joost   verlangt naar het   avontuurlijke fantasierijke leven   dat   hij*
     leidde   toen   hij   nog   klein   was.
     Joost   desires   to   the   adventurous imaginative life   that he
     led   when   he   still small   was
     'Joost longs for the adventurous imaginative life when he was still small.'
     (Taken over from Pijpops 2019: 75)

(8) *Dat KPN   op   geen   enkele   manier een tegenprestatie verlangt,*
     wil er   bij   Limper niet   in.
     That KPN   on   no   single   way   a   countereffort   desires
     want there with Limper not   in
     'Limper refuses to understand that KPN does not demand any counteref-
     fort.'
     (Taken from the Sonar-corpus, Oostdijk et al. 2013, id: WR-P-P-H-
     0000174176.p.17.s.1)

Standardization would accelerate this process, with the lexical biases and seman-
tic distinctions becoming ever more strict. Indeed, Pijpops (2019) found that re-
gression models of the *naar*-alternation fitted on Netherlandic data outperform
those fitted on Belgian data, and that predictors relating to lexical biases and se-
mantic distinctions generally make a larger contribution to the predictive quality
of Netherlandic models than that of Belgian models.

There are of course other explanations besides standardization that could
cause a particular language variety to be more prone to lexical biases. One such
alternative explanation is schooling. It appears that language users that have not
received higher education rely on lexical biases to a higher degree than those that
have (Dąbrowska 2012) and that less-experienced writers are more likely to pro-
duce highly formulaic language (Wal and Rutten 2014: 129–172). I currently see
no compelling reason, however, to believe that Netherlandic language users are
on average less educated than Belgian language users.[1]

4 Data and Analysis

The dataset was composed by extracting all instances of the verbs *ergeren* 'an-
noy', *interesseren* 'interest', *storen* 'disturb' and *verbazen* 'amaze' from the

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1 I cordially thank one of the reviewers for pointing out this alternative explanation.

ConDiv corpus (Grondelaers et al. 2000) and the Corpus of Spoken Dutch (Oostdijk et al. 2002), except their participles. The participles were excluded because many of them were lexicalized as adjectives with a specific meaning, such as *gestoord* 'insane'. The ConDiv corpus provides a stratified sample of written Dutch, including chat logs, e-mails, and newspaper material. That material was all used. The corpus also contains a small diachronic component, as well as the Bulletins of Acts, Orders and Decrees from Belgium and the Netherlands, but these were not used. The Corpus of Spoken Dutch provides a cross-cut of spoken Standard Dutch, ranging from spontaneous conversations to prepared lectures.

The extracted instances were manually checked and all non-interchangeable occurrences were excluded, following common practice in alternation studies that define an alternation as a choice point of an individual language user (see Pijpops 2020. and references cited therein; for a more detailed description of the exclusion procedure, see Pijpops 2017). The remaining instances were manually annotated for the variables below. These variables and their levels are taken over from Pijpops (2017).

- VARIANT: transitive, reflexive
- VERB: *interesseren* 'interest', *ergeren* 'annoy', *storen* 'disturb', *verbazen* 'amaze'
- STIMULUS TOPICALITY: first person, second person, third person pronoun, definite noun, indefinite noun, subordinate clause
- EXPERIENCER TOPICALITY: first person, second person, third person pronoun, definite noun, indefinite noun
- STIMULUS ANIMACY: animate, inanimate residual category, concrete, event, abstract, proposition
- REGISTER: formal, informal
- CORPUS: ConDiv, Corpus of Spoken Dutch

The variable STIMULUS ANIMACY distinguishes between animate stimuli, concrete objects, events, abstract entities and propositions. This operationalization was originally adapted by Pijpops (2017) from Levin and Grafmiller (2012). An inanimate residual category was also added for stimuli that were clearly inanimate, but too vague to classify any further, such as *iets* 'something' or *dit soort dingen* 'this kind of stuff'. The variable REGISTER distinguishes between on the one hand the chat material and e-mails from ConDiv, and on the other hand the newspaper material. For the Corpus of Spoken Dutch, we have made use of the distinction proposed in Plevoets (2008: 80), who regards the spontaneous conversations and the telephone dialogues as informal, and all other components as formal.

The dataset is divided into a Netherlandic subset and a Belgian subset, and a regression model is composed for each subset. The response variable of these models is VARIANT, with *reflexive* as the success level. The other variables are added to the models as fixed effects through dummy coding. Based on the two hypotheses in the previous section, the following predictions are made.

– The C-index of the Netherlandic model will be higher than that of the Belgian model.
– The variables VERB and STIMULUS ANIMACY, which relate to lexical biases and a semantic distinction, will yield a greater increase in C-index for the Netherlandic model than for the Belgian model.

These two predictions correspond to the predictions made by Pijpops (2019: 61–63, 102) for the *naar*-alternation. The Belgian subset contains 1171 instances of the transitive variant versus 386 instances of the reflexive variant. This allows for a regression model with 19 parameters, following the rule of thumb in Speelman (2014: 530), which suffices for our analysis. The Dutch subset contains 740 instances of the transitive variant versus 488 instances of the reflexive variant.

The models are then fitted to the data. All variance inflation factors are below 5 (Levshina 2015: 180). The specifications of the Netherlandic model can be found in Table 1 in the Appendix, and the effect plots of its hypothesis-driven variables VERB, STIMULUS TOPICALITY, EXPERIENCER TOPICALITY and STIMULUS ANIMACY are shown in Figure 1. Meanwhile, the specifications of the Belgian model can be found in Table 2 in the Appendix and its effect plots in Figure 2.

We find that the first hypothesis is not confirmed. The Belgian regression model reaches a higher C-index (0.903) than its Netherlandic counterpart (0.893), if only barely. Meanwhile, the second hypothesis is confirmed. The variables Verb and STIMULUS ANIMACY yield an increase in C-index of 0.11 in the Belgian model, compared to an increase of 0.14 in the Netherlandic model.

The variables generally show the same influence on the alternation as reported in Pijpops (2017). Still, there is an important distinction for VERB: *storen* 'disturb' exhibits a preference for the reflexive variant in the Netherlandic model, in contrast to a preference for the transitive variant in the Belgian model. A similar finding is also reported for the *naar*-alternation in Pijpops (2019: 178–179): individual verbs may exhibit an outspoken preference for one variant in Belgian Dutch, and a radically different preference in Netherlandic Dutch, while other verbs do not show such differences.
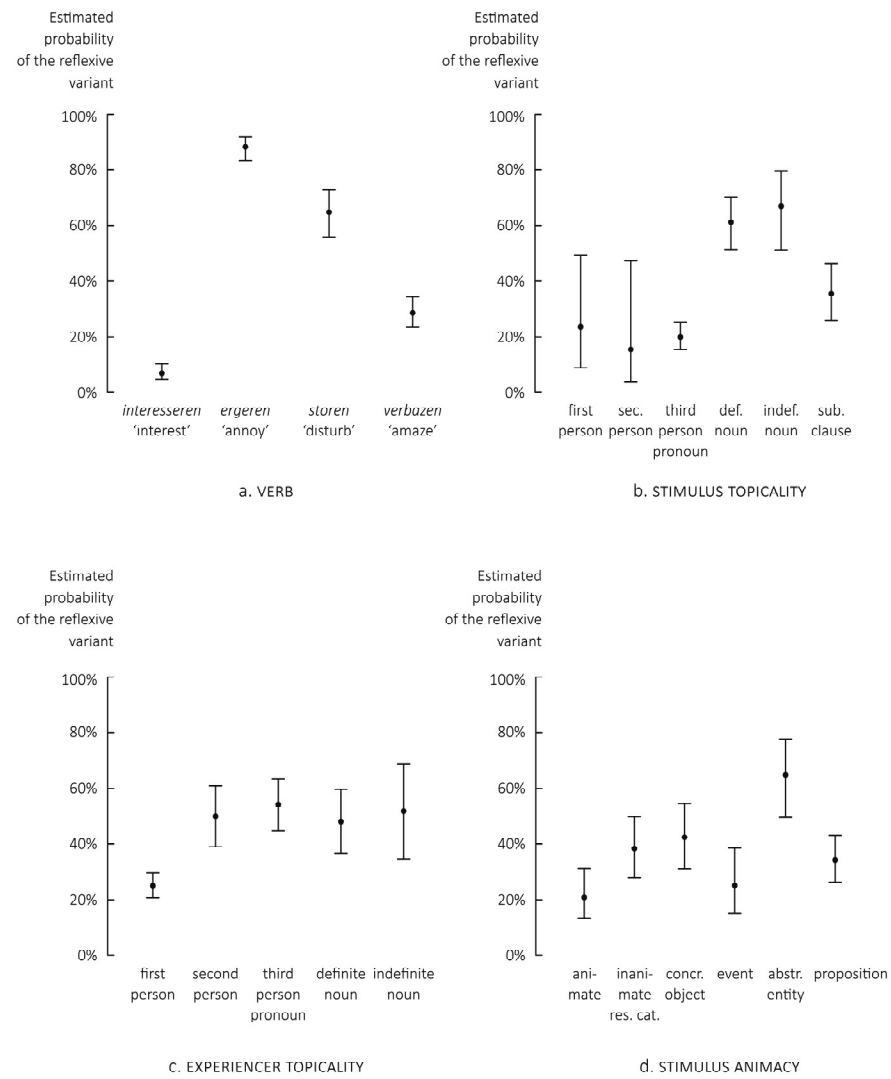
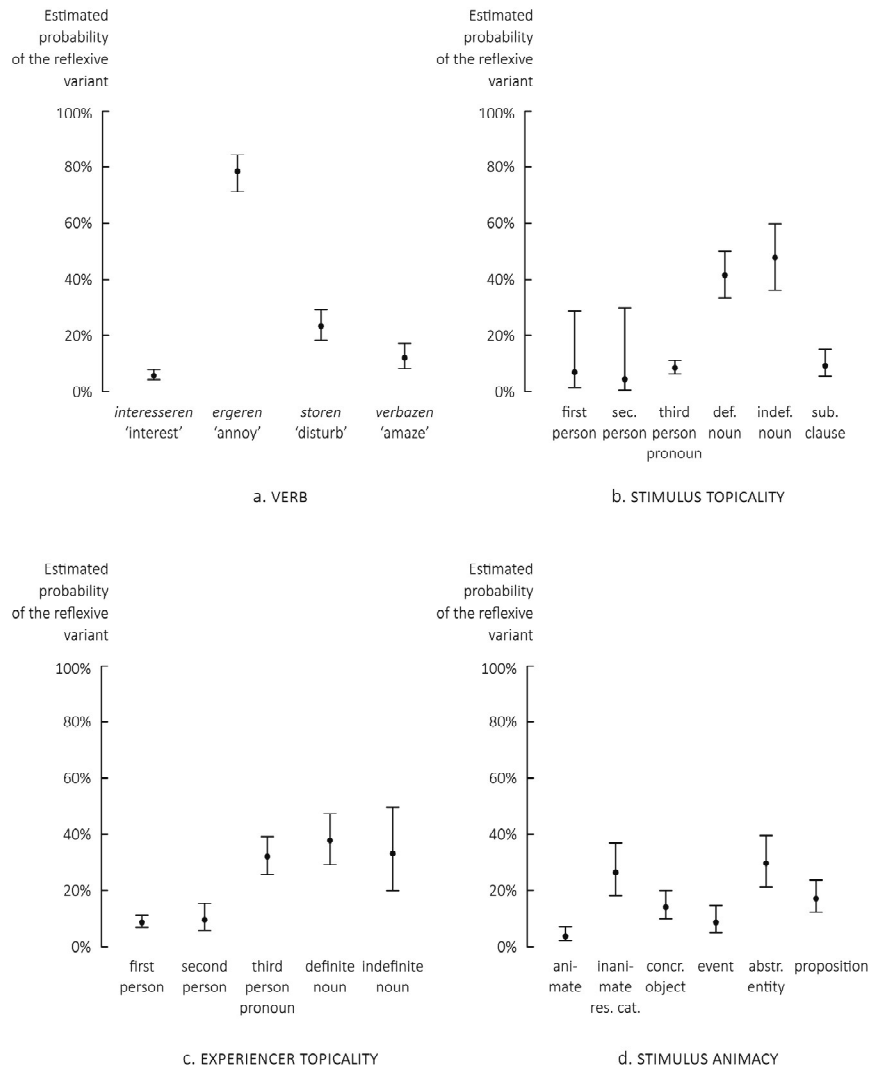**Fig. 1:** Effect plots of the hypothesis-driven variables in the Netherlandic model in Table 1.

Fig. 2: Effect plots of the hypothesis-driven variables of the Belgian model in Table 2.

5 Conclusions and Discussion

This study only confirmed one out of its two hypotheses. It appears that the Dutch transitive-reflexive alternation is not necessarily harder to model in Belgian

Dutch than in Netherlandic Dutch, contrary to expectations. Meanwhile, it does seem that in the Netherlands, the alternation is more strictly determined by lexical biases and a semantic distinction than in Belgium, as expected.

Still, one could say that the difference between the increase in predictive quality due to the lexical and semantic factors in the Netherlandic regression model (+ 0.14) versus the Belgian model (+ 0.11) is rather small. This might be due to the nature of the data: the Corpus of Spoken Dutch was designed with the explicit aim of representing a cross-cut of spoken *Standard* Dutch, not spoken Dutch in general, and the ConDiv corpus contains exclusively written data. Spoken Standard Dutch and written Dutch is exactly were the differences between the Belgian and Netherlandic varieties are smallest (Geeraerts 2017). Viewed in that way, the fact that this study did still manage to find a difference between Belgian and Netherlandic Dutch – and in the case of *storen* 'disturb', an outspoken difference – may be considered as encouraging further research.

For one, the alternation could be studied at a different level of schematization, for instance by zooming in on the behavior of individual verbs (cf. Pijpops 2019: 54–56). For another, future studies may propose alternative explanations why alternations in Netherlandic Dutch appear to be more lexically biased. Finally, this research could be expanded with experimental methods (cf. Grondelaers et al. 2009) or further case studies (cf. Grondelaers et al. 2020).

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Appendix

Tab. 1: Specifications of the Netherlandic regression model

Fixed effect	Level	Estimate	St. error	Z-value	P-value
	intercept	-3.76	0.34	-10.92	< 0.0001
VERB	*interesseren* 'interest'	Reference level			
	ergeren 'annoy'	4.60	0.31	14.84	< 0.0001
	storen 'disturb'	3.20	0.29	11.01	< 0.0001
	verbazen 'amaze'	1.68	0.26	6.37	< 0.0001
STIMULUS TOPICALITY	third person pronoun	Reference level			
	first person	0.21	0.60	0.34	0.7313
	second person	-0.31	0.82	-0.38	0.7057
	definite noun	1.84	0.27	6.83	< 0.0001
	indefinite noun	2.09	0.37	5.57	< 0.0001
	subordinate clause	0.79	0.29	2.72	0.0066
EXPERIENCER TOPICALITY	first person	Reference level			
	second person	1.10	0.26	4.26	< 0.0001
	third person pronoun	1.27	0.24	5.31	< 0.0001
	definite noun	1.02	0.27	3.75	0.0002
	indefinite noun	1.17	0.39	3.02	0.0026
STIMULUS ANIMACY	proposition	Reference level			
	animate	-0.68	0.37	-1.82	0.0690
	inanimate res. cat.	0.18	0.32	0.56	0.5768
	concrete	0.35	0.35	0.98	0.3289
	event	-0.44	0.40	-1.11	0.2674
	abstract	1.27	0.42	3.03	0.0024
REGISTER	informal	Reference level			
	formal	-0.54	0.19	-2.84	0.0045
CORPUS	ConDiv	Reference level			
	Corpus of Spoken Dutch	-0.07	0.20	-0.37	0.7133

C-index	0.891
AIC	1032

Tab. 2: Specifications of the Belgian regression model

Fixed effect	Level	Estimate	St. error	Z-value	P-value
	intercept	-3.97	0.30	-13.14	< 0.0001
VERB	*interesseren* 'interest'	Reference level			
	ergeren 'annoy'	4.08	0.27	14.99	< 0.0001
	storen 'disturb'	1.60	0.22	7.25	< 0.0001
	verbazen 'amaze'	0.80	0.28	2.89	0.0039
STIMULUS TOPICALITY	third person pronoun	Reference level			
	first person	-0.21	0.88	-0.24	0.8090
	second persn	-0.67	1.14	-0.59	0.5552
	definite noun	2.04	0.25	8.05	< 0.0001
	indefinite noun	2.29	0.31	7.48	< 0.0001
	subordinate clause	0.10	0.31	0.32	0.7519
EXPERIENCER TOPICALITY	first person	Reference level			
	second person	0.09	0.31	0.30	0.7629
	third person pronoun	1.60	0.21	7.62	< 0.0001
	definite noun	1.85	0.25	7.49	< 0.0001
	indefinite noun	1.64	0.38	4.36	< 0.0001
STIMULUS ANIMACY	proposition	Reference level			
	animate	-1.65	0.40	-4.11	< 0.0001
	inanimate res. cat.	0.55	0.32	1.71	0.0865
	concrete	-0.23	0.32	-0.72	0.4689
	event	-0.78	0.38	-2.05	0.0408
	abstract	0.70	0.33	2.10	0.0357
REGISTER	informal	Reference level			
	formal	-0.26	0.19	-1.40	0.1613
CORPUS	ConDiv	Reference level			
	Corpus of Spoken Dutch	0.64	0.22	2.92	0.0035

C-index	0.903
AIC	1077