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# A multivariate analysis of the partitive genitive in Dutch. Bringing quantitative data into a theoretical discussion

**Abstract:** This article takes a usage-based perspective on the partitive genitive construction in Dutch (*iets moois*, ‘something beautiful’), which has previously drawn scholarly attention from a theoretical perspective, due to the challenges it presents to Dutch nominal morphosyntax. We will argue that a good understanding of the construction at issue cannot circumvent the enormous variation in the expression of the genitive marker. Within the wide variation space, regular patterns can be discerned, which we uncovered by using mixed-effects logistic regression. This approach allows us to assess the precise contribution of internal factors (e.g. length of the adjective, or the type of quantifier) and external factors (e.g. regional variety, or register), as well as their interactions. This article has three objectives then: first, it wants to contribute to the description of Dutch syntax, second it aspires to advance methodological standards in grammatical investigation, and third, it makes a theoretical plea for a usage-based perspective, with full recognition of variation.

**Keywords:** partitive, genitive, Dutch, logistic regression, usage-based, construction morphology

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## 1 Introduction

The history of Dutch morphosyntax is largely one of ‘deflection’, the erosion of inflection, which is causally related to the majority of changes in the past 1500 years (Van der Horst 2004: 53, 2008: 143, 2013). Deflection has been rampaging especially in the nominal domain (Schönfeld 1970: 117; Harbert 2007: 90), and case inflection was one of the chief targets. Aside from the pronouns, the rich Indo-European case inflection was almost completely obliterated. There is one case, however, that proved to be remarkably resilient, and that is the genitive

(Weerman and De Wit 1999; Hinrichs and Szmrecsanyi 2007). Both in Dutch and in its sister language English, an affixal *-s* can be used to mark possession (in the broad sense), as in (1), which is a tenacious remnant of the erstwhile genitive case. Admittedly, it only survives in a ‘deformed’ guise, to use Koptjevskaja-Tamm’s (2003: 628) term – with an affixal *-s* that is indiscriminately used in all genders and numbers – and has been subject to competition by alternative constructions such as the prenominal periphrastic possessive (also called resumptive possessive pronoun, possessor doubling construction or *z’n*-construction) in (2) (see Weerman and De Wit 1999; Van der Horst and Van der Horst 1999: 164–165; Harbert 2007: 158–161; Allen 2008: 186–222).

(1) *Peter-s fiets*  
 Peter-GEN bike  
 ‘Peter’s bike’

(2) *Peter zijn fiets*  
 Peter his bike  
 ‘Peter’s bike’

Another remnant of the genitive case in Dutch is the partitive genitive as in (3)–(7). This construction is constituted by a quantifier followed by an adjective to which an *-s* affix is added. This *-s* affix is likewise historically related to the genitive, and originally appeared in a wider range of partitive constructions in which a genitive noun modified any kind of quantifying expression. Middle Dutch and Early Modern Dutch examples are given in (6)–(7). The latter two partitive genitives do not occur in present-day Dutch and have been replaced by an appositive structure or a postmodifying prepositional phrase (Booij 2010: 223).

(3) *iets leuk-s*  
 something fun-GEN  
 ‘something fun’

(4) *wat nieuw-s*  
 something new-GEN  
 ‘something new’

(5) *veel interessant-s*  
 much interesting-GEN  
 ‘a lot of interesting things’

(6) *een pont speck-s*  
 a pound bacon-GEN

‘a pound of bacon’

(Middle Dutch, Van der Horst 2008: 575)

(7) *een corste broot-s*

a crust bread-GEN

‘a crust of bread’

(Early Modern Dutch 16th century, Van der Horst 2008: 1033)

The syntactic structure of the surviving partitive with an adjective has engendered scholarly interest, mainly from a theoretical perspective (Schultink 1962: 79–80; Kester 1996: 199–224; Broekhuis and Strang 1996; Hoeksema 1998a; Booij 2010: 223–228; Broekhuis 2013: 420–426). In the remainder of this article, we will engage in the ongoing discussion about this construction, and argue that a satisfactory description needs to pay more heed to variationist data. The partitive *-s* is not uniformly expressed in the construction at hand. In southern varieties, the *-s* ending can be dropped (just like the English counterpart construction *something interesting-Ø*). This is acknowledged in some of the publications just mentioned (see e.g. Booij 2010: 224; Broekhuis 2013: 426), but mostly as a side-remark, and *-s* omission is dismissed as a non-standard feature. Such an approach, however, glosses over the fact that the *-s* affix might not be as stable in the standard language (which in itself is a reductive concept) as the literature suggests. As reported by Van der Horst (2008: 1624–1625), there are signs that this *-s* omission is expanding in the North. We will take a ‘usage-based’ perspective, and look in depth at the synchronic variation of this construction, looking at the factors determining the *-s* omission.

Usage-based models of grammar come in various flavours, but they all share some basic insights (Kemmer and Barlow 2000; Bybee 2006, 2010; Bybee and Beckner 2010), such as the ‘emergent’ nature of grammar (see Hopper 1987, 1998), in which syntactic structures have a temporary status only, the importance of variation, including variation along sociolinguistic axes, the importance of frequency in the routinisation or ‘entrenchment’ of linguistic patterns, and the pervasive role of exemplars and analogy in the constant reshaping of the grammar. Methodologically, usage-based approaches stress the need to look at actual attested data, drawn from textual corpora, instead of relying on introspection and grammaticality judgments (see also Geeraerts 2006; Gries and Stefanowitsch 2006).

In line with the basic tenets of a usage-based approach, we hold that syntactic description cannot ignore intralinguistic variation (see Geeraerts and Kristiansen, *forthc.* for extensive arguments). Privileging the analyst’s own linguistic system by drawing on introspective data and categorical grammaticality

judgements does not do full justice to the language-internal (morphological, syntactic, phonological) and language-external (register, style, dialectal) dimensions which co-determine the partitive genitive construction, or indeed any construction. We concur with Bybee's (2010: 6) remark that "it is important not to view the regularities as primary and the gradience and variation as secondary; rather the same factors operate to produce both regular patterns and deviations".

As in other social and medical sciences, a reliable investigation of a linguistic phenomenon requires to go beyond the anecdotal level of individual observations and to avoid idiosyncrasies in the analysis by looking at aggregate data. Applying this approach to the partitive genitive, we will argue that extant analyses (see Section 2) have yielded an oversimplifying picture.

If we assume that the morphosyntactic realisation of the partitive genitive is simultaneously affected by different factors, the best methodology for investigating corpus data is a multivariate technique like regression analysis (see also Tummers et al. 2005 for a plea for multivariate techniques). Regression analysis allows one to disentangle the simultaneous impact of several explanatory variables on a linguistic response variable. If the latter has a binary value, say the presence vs. the absence of the partitive *-s* marker, logistic regression is an appropriate technique, which is currently increasingly being made use of in linguistics (Speelman, *forthc.*, for references to earlier work), though the statistical technicalities involved probably hamper its getting fully embraced by syntacticians. With this article on the partitive genitive, we not only want to come to grips with the construction itself, but we also want to make a case for applying what we feel is an effective technique for linguistic analysis. This is, in effect, the first study to bring to bear large-scale aggregate data on the construction, to assess to what extent the introspection data stand up to scrutiny.

We have two research questions:

- i. What are the factors that determine the *-s* omission in the partitive genitive in Dutch?
- ii. What do these factors reveal on the function of the *-s* suffix and the developments it is currently going through?

With regard to the first question, we start from the following hypotheses, on the basis of the literature. First, we expect *-s* omission to occur mostly in Flanders (Van der Horst 2008: 1624–1625; Booij 2010: 224; Broekhuis 2013: 426). Second, we do expect there to be language-internal factors, namely those described in Van de Velde (2001), which tried to answer the same research question using introspection. The treatment of the second research question will build further on these factors of alternation. If we find linguistic contexts or lects in which *-s* omission is (nearly) non-existent, it can be expected that there, the *-s* performs an important

grammatical function, which shields it from the general deflection tendency in Dutch.<sup>1</sup> However, if we find that *-s* omission is rampant in all contexts and lects, it is unlikely that the suffix performs a grammatical function in the Dutch language system; if it did, it should not be possible to simply drop it. In this case, the partitive genitive *-s* is likely just another remnant of the case-system of Dutch about to be washed away by a wave of deflection.

This article is structured as follows. In Section 2, we first give a very brief overview of the existing accounts of the partitive genitive. Next, the corpora which we have used and the composition of our dataset are described (Section 3). In Section 4, this dataset is analysed and the results of this analysis are discussed. Section 5 relates the findings to the above research questions. Section 6 rounds off with the conclusions.

## 2 Possible analyses

In this section, we will shortly sketch the four major proposals concerning the nature of the partitive genitive construction. We will not sum up all arguments already given in the literature in favour of and against these proposals, as this would constitute an article in its own right, but see Kester (1996: 199–208), Booij (2010: 223–228) and Broekhuis (2013: 420–461). Related to each analysis is the question which word – the quantifier or the adjective – is the syntactic head of the construction. Though historically, the quantifier is clearly the head, there are some reasons to assume this is changing (Van Marle 1996: 73, 80). For one, there is a tendency in Dutch to generalize the modifier-head sequence (Van der Horst 2008: 1946–1961; Van de Velde 2009: Ch. 3). Moreover, the genitive *-s* is also used as a suffix to turn adjectives into mass nouns, as in (8) and (10), some of which have a specialized meaning, as the translations in (8) to (11) show (Broekhuis 2013: 420–421).<sup>2</sup>

- (8) *Hij luistert naar het nieuw-s*  
 he listens to the new-GEN  
 ‘He’s listening to the news’

<sup>1</sup> By ‘lect’, we mean any subsystem of the language system, e.g. dialects, sociolects. In the same way, the term ‘lectal’ is used here as a cover term for all sociocultural dimensions along which language varieties may vary: dialectal, register, style etc. (see Geeraerts 2005).

<sup>2</sup> We gloss the *-s* as *-GEN* in these examples, though words like *nieuws* and *lekkers* are currently fully lexicalised, and not segmentable anymore. The English word *news*, though seemingly of similar origin, probably followed another historical route (see OED, s.v. *news*, n. (pl.)).

(9) *Ik heb veel goed nieuw-s te vertellen.*

I have much good new-GEN to tell  
‘I have a lot of good news to tell.’

(10) *Waar is al het lekker-s?*

where is all the tasty-GEN  
‘Where is all the candy?’

(11) *Hij heeft altijd veel lekker-s in huis.*

he has always much tasty-GEN in house  
‘He always keeps a lot of candy at home.’

Nothing seems to prevent the language user to interpret the constructions in (9) and (11) as simple modifier-noun combinations and thus consider *nieuws* and *lekkers* as their head. However, in our corpus, we have also found hits of *veel nieuw* and *veel lekker*, without *-s*, where *nieuw* and *lekker* cannot be interpreted as nouns. This means there is no clear-cut boundary between the partitive genitive construction and modifier-noun combinations, and this may have consequences for the description of the construction (see Section 5).

## 2.1 Nominalisation

Because of the lack of a clear-cut boundary, some consider all adjectives with an *-s* suffix to be mass nouns, not just *nieuws* and *lekkers* as in (9) and (11), but also in (12) and (13), as well as *leuks* and *interessants* as in (14) and (15).

(12) *Ik heb weer iets nieuw-s uitgevonden.*

I have again something new-GEN invented  
‘I’ve invented something new again.’

(13) *Barkeeper geeft Selina nog iets lekker-s te drinken.*

Barkeeper gives Selina again something tasty-GEN to drink  
‘Barkeeper gives Selina something nice to drink.’

(14) *Kies iets leuk-s uit: wandelen, raften, parachutespringen, ...*

pick something fun-GEN out: walk, raft, parachute\_jump  
‘Pick out something fun: walking, rafting, parachuting, ...’

(15) *Ik zoek geen tv-werk, maar als iets interessant-s*

I search no tv-work, but if something interesting-GEN  
*zich aanbiedt, ...*  
itself presents

‘I’m not looking for TV work, but if something interesting presents itself, ...’

This means there is no such thing as a separate partitive genitive construction. This position is held by Haeseryn et al. (1997) and Van Marle (1996). Arguments against such a proposal can be found in Broekhuis and Strang (1996: 224–225), Hoeksema (1998a: 52–56) and Broekhuis (2013: 420–421). For one, the account works well with quantifiers like *veel*, which can premodify a noun, but it is less clear how constructions with *iets* and *niets* are to be analysed, as these cannot normally premodify a noun (*\*iets rijst*, ‘something rice’) (Booij 2010: 225).

## 2.2 N-movement and empty noun

The N-movement and empty noun analyses have in common that they assume a nominal element behind the adjective. The N-movement account states that this nominal element is the quantifier which is later moved in front of the adjective. The empty noun analysis holds that this nominal element is empty and the *-s* indicates its presence. Both analyses thus share with the nominalisation analysis that they reduce the partitive genitive construction to a ‘normal’ modifier-noun construction. The N-movement proposal is defended in Abney (1987), the empty noun proposal in Kester (1996) and Hoeksema (1998a). Problems concerning N-movement are discussed in Hoeksema (1998a: 56–60) and Broekhuis (2013: 425–426), and problems concerning the empty noun analysis are discussed in Broekhuis and Strang (1996: 225–227) and Broekhuis (2013: 423–424).

## 2.3 Predicative analysis

The predicative analysis considers the *-s* to indicate a predicative relation between the quantifier and the adjective. The internal structure of the partitive genitive construction is thus crucially different from the three earlier analyses. This proposal can be found in Broekhuis and Strang (1996) and Broekhuis (2013). A number of arguments against the predicative analysis are presented in Hoeksema (1998a: 66–69).

## 2.4 Construction marker

The analysis of the *-s* as a construction marker is like the predicative analysis in that it takes the *-s* to mark a syntactic relation. However, this relation is not so much a predicative relation, as a relation specific to the partitive genitive. The partitive genitive construction thus cannot be reduced to any other kind of structure,

but must be considered a construction in its own right. This analysis is due to Booij (2010: 223–228), though Schultink (1962: 62) also mentions something similar, without further developing it.

The predicative analysis and the analysis as a construction marker seem to be the most successful, in the sense that they have been met with the least opposition in the form of counterarguments. However, nearly all proposals appear to suffer from three major shortcomings. Firstly, none of the analyses are based on quantitative data, only on introspection and theoretical considerations. Secondly, variation in the realization of partitive genitive is largely overlooked; especially the situation in the south of the Dutch language area has received little attention. Thirdly, all analyses, except for Booij's, employ a predominantly synchronic perspective.<sup>3</sup> However, as a remnant of the genitive case, it is unlikely that the partitive genitive finds itself in a diachronically stable situation. Because of these shortcomings, extant syntactic analyses of the partitive construction in Dutch are bound to underestimate the multifactorial nature of its syntactic behaviour. In what follows, we will adduce corpus evidence to arrive at a more accurate, though necessarily more complex description of the construction at issue. We will not, however, probe into diachrony of the construction at issue, but on the assumption that synchronic variation is related to diachronic change, we avoid assuming a clear-cut 'stative' view on the -s realisation.

## 3 Description of the corpus and data

### 3.1 Corpus

We have made use of the CONDIV corpus of written Dutch, which has a broad lectal coverage (Grondelaers et al. 2000). It comprises material from chat conversations, e-mails and several newspapers from the Netherlands and Flanders from 1998. We have not made use of the diachronic material from CONDIV, which is composed of newspapers of 1958 and 1978, for three reasons: (i) the diachronic material yielded too few hits to be truly useful, (ii) the diachronic material does not have the same register balance as the synchronic material, and (iii) the time depth is too shallow to say anything sensible about the changes that occurred in this construction, as documented by Van der Horst (2008). The synchronic part is

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<sup>3</sup> Booij stresses that in his proposal, the language user has reanalysed the -s from a partitive genitive -s to a construction marker.



well-suited for our current study, but there is one major drawback; CONDIV is not syntactically annotated. This means we could not simply extract all hits in which an indefinite pronoun or numeral followed by an adjective formed a noun phrase, and the entire dataset had to be manually checked to exclude all spurious hits.<sup>4</sup> Unless explicitly stated otherwise, all example sentences used further in this article stem from this corpus.

### 3.2 Extraction of the data

All hits in which one of the following indefinite pronouns and numerals preceded one of the following adjectives, with or without -s suffix, were extracted from the CONDIV corpus, with the aid of the AntConc software (Anthony 2011).<sup>5</sup>

- Quantifiers: *iets* ('something'), *niets* ('nothing'), *wat* ('something'), *veel* ('a lot'), *weinig* ('few'), *zoveel* ('so much')
- Adjectives: *aardig* ('nice'), *apart* ('apart'), *belangrijk* ('important'), *beter* ('better'), *bijzonder* ('particular'), *blauw* ('blue'), *concreet* ('concrete'), *deftig* ('decent'), *dergelijk* ('similar'), *erg* ('awful'), *geel* ('yellow'), *gek* ('crazy'), *goed* ('good'), *groen* ('green'), *interessant* ('interesting'), *klein* ('small'), *lekker* ('tasty'), *leuk* ('fun'), *mooi* ('beautiful'), *nieuw* ('new'), *nuttig* ('useful'), *oranje* ('orange'), *positief* ('positive'), *purper* ('purple'), *raar* ('weird'), *rood* ('red'), *spannend* ('exciting'), *speciaal* ('special'), *verkeerd* ('wrong'), *verschrikkelijk* ('horrible'), *vreemd* ('weird'), *warm* ('warm'), *wit* ('white'), *zinnig* ('sensible'), *zwart* ('black')

These words were selected in the following way. All indefinite pronouns and numerals were taken up which are rubricated as such in Haeseryn et al (1997: 356, 432), and yield at least 14 hits in the Corpus of Spoken Dutch or CGN, in which they are followed by a postnominal adjective with or without -s suffix, thus composing a partitive genitive.<sup>6</sup> *Iemand* ('someone') and *niemand* ('no one') were still

<sup>4</sup> The only quantifiers with which it is still possible to build partitive genitives in present-day Dutch, are the indefinite pronouns and the indefinite numerals, as they are called in the Dutch grammar description tradition.

<sup>5</sup> The division between indefinite pronouns and numerals is anything but clear-cut and linguistically rather ill-motivated (Haeseryn et al. 1997: 432; Van de Velde 2001: 161).

<sup>6</sup> The CGN was used for his purpose, because as opposed to CONDIV, it is POS-tagged (Van Eerten 2007). This method of selection also means that (substandard) form variants of *iets*, *niets*, *wat*, *veel*, *weinig* and *zoveel*, such as *iet* ('something'), *ietekes* ('something'), *niks* ('nothing'), *nikske* ('nothing'), *wa* ('something'), *veul* ('a lot') etc. were excluded.

excluded though, as they are not original partitive genitives (see WNT, s.v. *ander*). For the adjectives, all were selected which met the following criteria.

- The adjective appears at least 7 times in the CGN in postnominal position to *iets*, *niets*, *wat*, *veel*, *weinig* or *zoveel*, regardless of whether it appears with or without -s suffix.
- The adjective does not end on -s or -isch in its base form (as addition or omission of the partitive -s is phonologically indistinguishable): e.g. *anders* ('different'), *Belgisch* ('Belgian')
- The adjective cannot be interpreted as a plural form of a noun: e.g. *ouders* ('older-GEN' or 'parents'), *extra's* ('extra-GEN' or 'bonuses')

To this list, the major colour adjectives as well as the adjective *beter* ('better') were added, since we have a special interest in them (see below and Van de Velde 2001: 150–151).<sup>7</sup> Finally, we have not dropped *dergelijk*, because we do not follow Broekhuis in assuming that instances like *iets dergelijks* ('something similar') should not be considered partitive genitives (Broekhuis 2013: 460–462). Broekhuis supports his claim with grammaticality judgements which often differ from our own.

### 3.3 Deleted hits

The composed dataset was then automatically enriched and manually checked to exclude double and spurious hits. For some hits, like (16) or (17), the automatically added variables had to be adapted. In (16), *erg* is not an adjective, but an adverb modifying the adjective *schadelijk*. In (17), *veel* is not the quantifier of the partitive genitive construction, but *iets* is.

- (16) ... *een mens, die ooit iets ergs, iets erg*  
 a man who ever something awful, something very  
*schadelijk-s bij derden dreigt aan te richten...*  
 harmful-GEN with third\_parties threatens PTC to cause  
 '... a man, who ever threatens to cause something awful, something very  
 harmful to a third party ...'

<sup>7</sup> This procedure included the colour adjectives combined with *licht-* ('light-') of *donker-* ('dark-'). This, however, yielded no additional hits.

- (17) *Geen screensaver, maar iets veel beter:* Millennium  
 no screensaver, but something much better Millennium  
 Countdown Theme.  
 Countdown Theme  
 ‘No screensaver, but something much better: Millennium Countdown  
 Theme.’

Hits which did not compose a noun phrase, like (18) or (19), were also dropped. Then there were a number of hits with more than one possible interpretation. In (20) and (21), *verkeerd* and *goed* can both be interpreted as adjectives and as adverbs. In (22), *mooi* is interpreted as a secondary predicate (or: object complement), not unlike the English construction *to find something beautiful*. In this interpretation, it cannot receive an -s suffix. However, *iets mooi* could also be interpreted as a single noun phrase, in which case the translation would be ‘to find (i.e. discover) something which is beautiful’. Hits like (20) were kept, since the adjectival analysis seemed at least as reasonable as the adverbial analysis and the dataset also contained similar hits with genitive -s. Hits like (21) were excluded, because the adverbial analysis seemed more natural and the corpus contained no hits of this kind with genitive -s. Hits like (22) were also deleted; the dataset contained no hits with the meaning ‘to discover something that is beautiful’.

- (18) *Nou begin ik je veel beter te snappen...*  
 now begin I you much better to understand  
 ‘Now I’m beginning to understand you a lot better...’
- (19) *HP is ook goed, maar Epson net iets beter voor foto’s*  
 HP is also good but Epson just something better for pictures.  
 ‘HP is good as well, but Epson is just a little better for taking pictures.’
- (20) *Heb ik iets verkeerd gedaan?*  
 have I something wrong done  
 ‘Did I do something wrong?’
- (21) *Of heb ik hier iets verkeerd verstaan...*  
 or have I here something wrongly heard  
 ‘Or did I misunderstand something here?’
- (22) *Het is maar zelden dat ik iets mooi vind vanwege  
 het verhaal.*  
 it is only rarely that I something beautiful find because\_of  
 the story  
 ‘Only rarely do I think something to be beautiful because of the story.’

Hits like (20) and (21) show that, just like there is no strict line between the partitive genitive and other constructions which obligatory have an -s suffix, such as *veel lekkers*, there are no clear boundaries between the partitive genitive and constructions which obligatory have no -s suffix.

### 3.4 Explanatory variables

The following list shows the explanatory variables and their levels. If a variable is confirmed to exert a significant influence on the -s alternation, they are called a ‘factor’ of the alternation.

- Variety: *Flanders, Netherlands*
- Register: *chat, e-mail, mass-newspaper, quality-newspaper*
- Quantifier: *iets, niets, veel, wat, weinig, zoveel*
- Type-Adjective: *other, deviant, colour*
- Length-Adjective: *1, 2, 3, 4*
- Number-of-words-AP: *1, 2*
- Frequency: *log-transformed frequency of the phrase*
- Phrase: *iets leuk(s)* (‘something fun’), *niets zinnig(s)* (‘nothing sensible’), *weinig concreet(s)* (‘few concrete things’), . . .

*Variety* contains the difference between the Flemish and Netherlandic language users.<sup>8</sup>

*Register* expresses the type of language material from which the partitive genitive hit originates. CONDIV also contains the Bulletin of Acts, Orders and Decrees of the Netherlandic and Belgian governments, but these only yielded 5 hits in total, which were excluded from the dataset.

The variable *Quantifier* contains the different quantifiers as levels. They are kept as individual levels because we do not yet have a clear view about how they may influence the -s omission on the adjective. Therefore, we will not impose a more general classification, but first look at the data and only then attempt to interpret a possible tendency.

*Type-Adjective* distinguishes two groups of adjectives which we suspect to have a strong preference for -s omission: the ‘deviant’ adjectives and the colour adjectives. The ‘deviant’ adjectives are the adjectives *beter* (‘better’), *goed* (‘good’),

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<sup>8</sup> To avoid misunderstandings, we will use *Dutch* to refer to the Dutch language and *Netherlandic* to refer to the country of the Netherlands, as others have done before us (cf. Geeraerts 2010).

*fout* ('incorrect') and *verkeerd* ('wrong'). The partitive genitives in which these adjectives appear, bear a superficial resemblance to adverbial constructions such as in (21). Because these adverbial constructions always appear without -s suffix, the language user might be more inclined to drop the -s in appearances which superficially resemble them (see Joseph 1992, Enger 2013, and Van de Velde and Weerman 2014, among others, for the effects of 'local generalisations'). The same holds for the colour adjectives (e.g. *geel*, 'yellow'). Because of superficial resemblance to the colour nouns (*het geel*, literally 'the yellow'), which always appear without -s suffix (*\*het geels*), partitive genitives with colour adjectives (*iets geel(s)*, 'something yellow') might have a preference for the -s-less variant (Van de Velde 2001: 150). In short, both the 'deviant' adjectives and the colour adjectives may be affected by a sort of cross-constructural priming.

The variable *Length-Adjective* displays the number of syllables the adjective has. A special case is the adjective *interessant* ('interesting'), in which the second syllable is only present in the spelling; in speech, the first *e* is usually not pronounced. *Interessant* is therefore counted amongst the adjectives with three syllables.

*Number-of-words-AP* contains the number of words of the adjectival part of the construction. It only has value 2 for hits like (16) and (17), which were manually adjusted.

These last three variables test three hypotheses from Van de Velde (2001). The hypotheses hold that the genitive -s is more often dropped with colour adjectives, short adjectives, and partitive genitives with an adjectival part of more than one word.

*Frequency* contains the logarithmically transformed frequency of the entire phrase. By 'phrase', we mean the combination of the quantifier and the adjectival part. This means *iets concreet(s)* ('something concrete') is considered a single phrase, which may appear in two variants: with -s suffix, *iets concreets*, and without -s suffix, *iets concreet*. Other examples of phrases are *iets veel beter(s)* ('something a lot better') and *veel interessant(s)* ('a lot of interesting things'). The frequency of each of these phrases in the dataset was logarithmically transformed in order to reduce the influence of the few extremely frequent phrases, like *iets nieuw(s)* ('something new') with 205 hits and *iets leuk(s)* ('something fun') with 197 hits. By using the Box-Cox procedure for optimal transformation, the base of the logarithm was set to 7.

Lastly, the variable *Phrase* has all the distinct phrases, i.e. *iets concreet(s)*, *iets veel beter(s)*, *iets interessant(s)*, etc., as individual levels. This is because, following the basic tenets of usage-based approaches, we expect lexical diffusion to be at play in the presence or absence of the partitive -s in the construction under investigation. That is, in much the same way as sound changes first affect

particular lexemes and only gradually spread to the entire lexicon, we expect -s omission or -s retention to have advanced further in some ‘phrases’ than others. Because of this lexical diffusion, it could be useful to include the variable *Phrase* as a random factor in our regression model. Including *Phrase* as a random factor means that, though we expect the influence of the predictors to be more or less the same for all phrases, the precise proportion of hits with genitive -s and without genitive -s of each individual phrase may vary. However, *Phrase* is not a typical random factor. Firstly, we expect the proportion of each phrase to be anything but random. In fact, all of our language-internal variables are essentially based on a classification of the phrases. Secondly, the number of hits a single phrase has, varies widely. The most frequent phrase, *iets nieuw(s)*, has 205 hits, whereas 29 other phrases only have 1 hit. Therefore, we will present two regression models below, one excluding and one including the variable *Phrase* as a random factor.

This begs the question as to why these last two variables are based on the phrases as a unit and not on the individual adjectives, i.e. why don’t we measure the frequency of the adjective and, instead of *Phrase*, include a variable *Adjective* as a random factor? The main reason for this is that the appearance of the -s suffix is a property of the entire unit, i.e. the construction, not of the adjective. If the adjective is used in any other construction, it cannot receive the -s suffix. Furthermore, both the quantifier and the adjective are indispensable to build a partitive genitive construction, with both attributing to the meaning and use of the whole (hence the discussion about which is the syntactic head of the construction). By making use of the variable *Phrase*, we can take both into account. Lastly, in the theoretical background of cognitive linguistics and especially construction grammar, there is no need to strictly differentiate between individual lexical elements and multi-word units.

## 4 Analysis and results

In this section, the dataset is analysed and the results of this analysis are presented.<sup>9</sup> The most important statistical technique will be mixed-effects logistic regression. This multivariate technique models the probability of a binary response variable as a function of one or more predictors. In our case, this response variable is the presence or absence of the genitive -s, while the predictors can take the form of one of the explanatory variables described above, or an interaction

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<sup>9</sup> Statistical tests have been carried out with the aid of the open source package R (R Core Team. 2012. *R: A language and environment for statistical computing*. Vienna. <http://www.R-project.org>). For the analysis and visualisation, we made use of the *MASS*, *rms*, *lme4* and *effects* packages.

between two of the explanatory variables. In essence, a logistic regression model uses these predictors to attempt to predict which form the language user will use: with or without *-s*.

The most important advantage a multivariate technique like logistic regression has over more basic bivariate analyses is that it can calculate and take into account the effect of different variables at the same time. This means that if a significant effect of one variable is actually caused by another variable, this will be shown in the model. Also, if the influence of one variable is dependent on another variable, for example, *Type-Adjective* only matters in Flanders, this will be shown by an interaction between those variables, i.e. *Type-Adjective* and *Variety*. Logistic regression thus allows us to maintain an overview of the different variables which may influence *-s* omission, as well as their interplays.<sup>10</sup>

## 4.1 Building regression models

Probably the most important step in a logistic regression analysis is deciding which predictors should or should not be taken up in the model. For this, we have made use of a bidirectional stepwise variable selection procedure. What this procedure does, is try out different models with different sets of predictors to try and find the most appropriate model, i.e. the model with the lowest AIC-value.<sup>11</sup> The AIC (shorthand for *Akaike Information Criterion*) is an indication of the extent to which the model is able to explain the variation in the dataset. It compares the fitted model with the intercept-only model, and gives an increased value when the model performs worse. The categorical variables *Variety*, *Register*, *Quantifier* and *Type-Adjective*, as well as the numeric variables *Length-Adjective*, *Number-of-words-AP* and *Frequency* and all possible two-way interactions between these variables were entered in this variable selection procedure.

The model returned by the stepwise regression procedure, was tested for the following criteria. First, each of the predictors taken up in the model had to significantly decrease the deviance, lest they be dropped. Second, a Hosmer-Lemeshow-Cessie goodness of fit test had to yield an insignificant p-value, indicating no lack of fit. Third, without the interactions, the Variance Inflation Factors or VIF's were lower than four, which signifies there was no problem of multicollinearity between the predictors. Lastly, the residual deviance wasn't much higher than the

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<sup>10</sup> For earlier use of logistic regression in linguistics, see for instance Grondelaers and Speelman (2007) and Speelman and Geeraerts (2009), or the VARBRUL suite of tools (Rousseau and Sankoff 1978).

<sup>11</sup> This procedure was run automatically in R.

degrees of freedom and the number of observations of the least frequent level of the response variable, i.e. -s omission, was greater than twenty times the number of parameters, which are common rules-of-thumb for running a logistic regression analysis (Baayen 2008: 221; Speelman, forthc.). Finally, the variable *Phrase* was added as a random effect to this model, and each predictor which did no longer yield a significant contribution to the reduction of the deviance, was removed.

## 4.2 Regression models

The tables below present the models with and without the random factor. The AIC-value was used to select the model, and the C-value is an indication of its predictive quality.<sup>12</sup> The first column contains the estimates for the effect the variable has on the response variable. For the categorical variables, these estimates show how strong and in which direction each level deviates from the reference level. A positive estimate indicates a preference for -s omission, whereas a negative estimate indicates a preference for -s retention. For the numeric variables, a positive estimate indicates an increasing preference for -s omission as the value of the variable rises, while a negative estimate indicates the opposite. In the next columns, the 95% confidence intervals of these estimates can be found. Lastly, the p-values display which of these effects are significant. The stepwise regression procedure ordered the predictors from most important to least important, and this order is sustained in the tables presenting the models.

A comparison of the models shows that including the random factor *Phrase* slightly improves the model, yielding both a lower AIC and higher C-value. As one would expect, the random factor *Phrase* is thus capable of explaining variation in the dataset that was left unexplained in the first model. This indicates that, even if we account for other variables such as *Type-Adjective*, *Variety*, *Quantifier* etc., there still seems to be an individual preference for -s omission or -s retention per phrase. As the decrease of the AIC and the increase in the C-value are not spectacular, one could argue that adding a random factor is not really needed. What is interesting, though, is that adding the random factor not only impacts on the model diagnostics, but on the variable selection as well: The interaction between *Register* and *Frequency* is not retained anymore in the mixed model. The mixed model is thus more parsimonious when it comes to the number of variables it relies on, though at the expense of adding a random factor.

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<sup>12</sup> Models with C-values of 0.8 or higher are considered of reasonable quality (Speelman, forthc.). We have not made use of  $R^2$ .



Table 1: model without random factor

<b>MODEL 1: WITHOUT PHRASE AS A RANDOM FACTOR</b>					
– AIC: 2255		– Total number of hits: 3018			
– C-value: 0.853		– Hits with -s: 2388			
		– Hits without -s: 630			
Predictors	Levels of categorical predictors	Estimates	Confidence intervals 2,5% 97,5%		P-values
	<b>intercept</b>	–0.1	–0.79	0.58	0.7814
Type-Adjective	<i>other</i>	Reference level			
	<i>deviant</i>	2.04	1.80	2.29	< 0.0001
	<i>colour</i>	5.49	4.55	6.64	< 0.0001
Variety	<i>Flanders</i>	Reference level			
	<i>Netherlands</i>	–1.68	–1.99	–1.39	< 0.0001
Register	<i>chat</i>	Reference level			
	<i>e-mail</i>	0.26	–0.81	1.30	0.6324
	<i>mass-newspaper</i>	0.57	–0.58	1.70	0.3261
	<i>quality-newspaper</i>	–1.20	–3.18	0.55	0.2068
Quantifier	<i>iets</i>	Reference level			
	<i>niets</i>	–0.26	–0.65	0.12	0.1796
	<i>veel</i>	–1.64	–2.26	–1.05	< 0.0001
	<i>wat</i>	–2.55	–3.53	–1.71	< 0.0001
	<i>weinig</i>	–2.86	–4.51	–1.65	< 0.0001
	<i>zoveel</i>	–2.83	–5.13	–1.15	0.0046
Frequency		–0.28	–0.58	0.01	0.0596
Interaction Variety	<i>Flanders &amp; iets</i>	Reference level			
– Quantifier	<i>Netherlands – niets</i>	–0.32	–1.00	0.34	0.3572
	<i>Netherlands – veel</i>	1.02	0.10	1.91	0.0268
	<i>Netherlands – wat</i>	1.56	0.58	2.64	0.0029
	<i>Netherlands – weinig</i>	2.35	0.80	4.17	0.0050
	<i>Netherlands – zoveel</i>	2.16	–1.25	5.17	0.1564
Interaction Register – Frequency	<i>chat</i>	Reference level			
	<i>e-mail</i>	–0.39	–0.86	0.09	0.1058
	<i>mass-newspaper</i>	–0.78	–1.32	–0.23	0.0051
	<i>quality-newspaper</i>	–0.23	–1.08	0.70	0.6172

Table 2: model with random factor

<b>MODEL 2: WITH PHRASE AS A RANDOM FACTOR</b>					
–	AIC:	2216			
–	C-value:	0.872			
–	Number of phrases:	140			
Predictors	Levels of categorical predictors	Estimates	Confidence intervals		P-values
			2,5%	97,5%	
	<b>intercept</b>	0.07	–0.67	0.82	0.8482
Type-Adjective	<i>other</i>	Reference level			
	<i>deviant</i>	1.96	1.45	2.46	< 0.0001
	<i>colour</i>	5.09	3.88	6.30	< 0.0001
Variety	<i>Flanders</i>	Reference level			
	<i>Netherlands</i>	–1.69	–2.01	–1.37	< 0.0001
Register	<i>chat</i>	Reference level			
	<i>e-mail</i>	–0.48	–0.77	–0.19	0.0013
	<i>mass-newspaper</i>	–1.08	–1.42	–0.74	< 0.0001
	<i>quality-newspaper</i>	–1.65	–2.22	–1.08	< 0.0001
Quantifier	<i>iets</i>	Reference level			
	<i>niets</i>	–0.05	–0.66	0.56	0.8809
	<i>veel</i>	–1.14	–1.98	–0.29	0.0083
	<i>wat</i>	–2.00	–2.99	–1.00	< 0.0001
	<i>weinig</i>	–2.50	–4.12	–0.89	0.0023
	<i>zoveel</i>	–2.35	–4.37	–0.34	0.0221
Frequency		–0.45	–0.79	–0.10	0.0109
Interaction	<i>Flanders &amp; iets</i>	Reference level			
Variety –	<i>Netherlands – niets</i>	–0.33	–1.03	0.38	0.3635
Quantifier	<i>Netherlands – veel</i>	0.98	0.02	1.94	0.0443
	<i>Netherlands – wat</i>	1.22	0.19	2.25	0.0208
	<i>Netherlands – weinig</i>	2.33	0.66	4.00	0.0062
	<i>Netherlands – zoveel</i>	2.10	–0.94	5.13	0.1755

We will now proceed to a discussion of the predictors, occasionally drawing on the visualisation by means of ‘effect plots’ (see Gries 2013: Ch. 5) in Figure 1. For this analysis we will stick to the mixed model.

*Type-Adjective* and *Variety* are our most important factors of alternation. *Type-Adjective* clearly reveals that the deviant and colour adjectives have a strong preference for -s omission (see the top left panel in Figure 1), while *Variety* confirms that -s omission is particularly abundant in Flanders, but there is also an interaction effect with the factor *Quantifier* (see below).

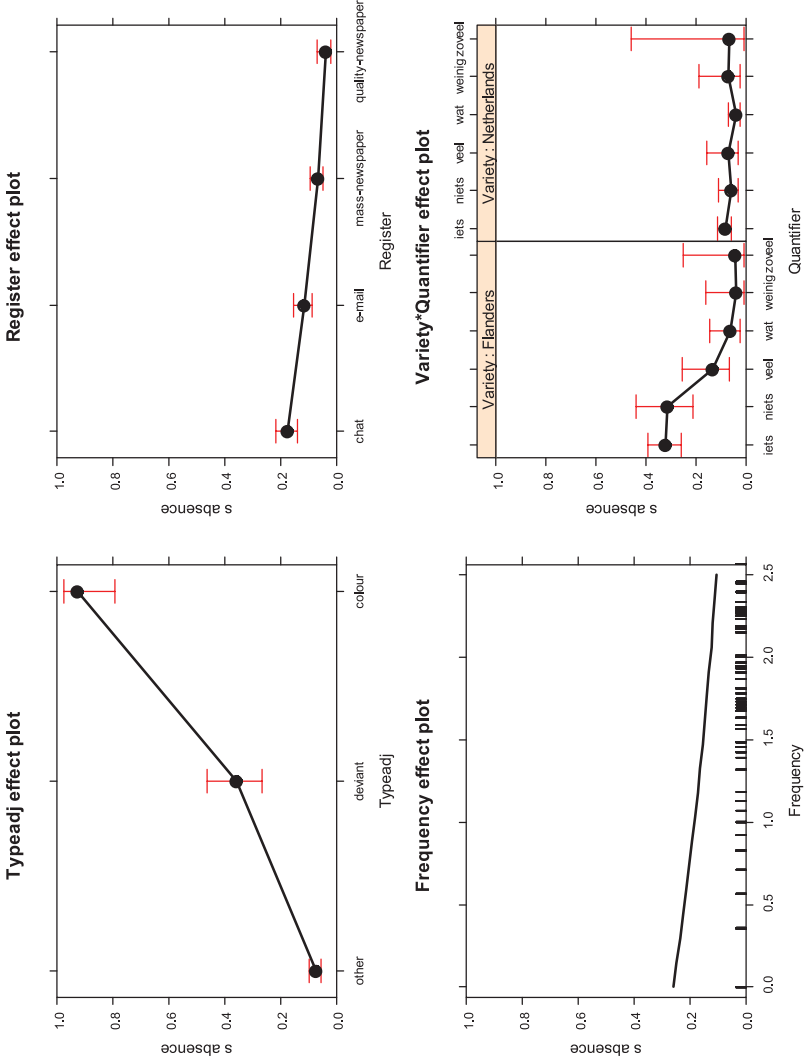


Fig. 1: Effect plots for the predictors in the mixed-model

*Register* shows that the -s is better retained in the more formal registers. This effect is not immediately clear looking only at the first model, yet this is because in this model, *Register* also participates in an interaction with *Frequency*. In the second model, with the random phrase, the picture is clearer: the chance on -s drop becomes smaller if we proceed from informal to formal registers (see top right panel in Figure 1).

*Frequency* shows that -s retention becomes more likely as the phrase becomes more frequent (see bottom left panel in Figure 1). If we assume that the variant without -s is diachronically innovative, we can explain this as a ‘Conserving Effect’ (Bybee 2006; Bybee and Beckner 2010).<sup>13</sup> This means that highly frequent exemplars are likely to be stored as unanalysed wholes (especially when the partitive construction is relatively frequent compared to the token frequency of the base adjective, see Hay 2001), which causes a freezing effect on their form making them “more resistant to reformations based on productive patterns in the language” (Bybee and Beckner 2010: 840).

The factor *Quantifier* is a significant predictor as well, but it enters into interaction with the factor *Variety*. As becomes clear from the effect plot (bottom right panel in Figure 1), the nature of the interaction is such that there is a difference between the various quantifiers in Flanders, and no difference between the various quantifiers in the Netherlands. Zooming in on Flanders, it seems that *wat*, *weinig* and *zoveel*, and to a somewhat lesser extent *veel*, prefer -s retention, as compared to *iets* and *niets*. Interestingly, the quantifiers that end on -s – historically a partitive genitive as well – do not prime -s on the adjective. If anything, those quantifiers seem to block it, at least in Flanders. The difference between *iets* and *niets* on the one hand, and *veel*, *wat*, *weinig* and *zoveel* on the other hand in Flanders, leads us to suspect that the language user more strongly associates instances like *veel interessants* (‘a lot of interesting things’) with *veel water* (‘a lot of water’), rather than with *iets interessants* (‘something interesting’). The language user may connect these instances with modifier-noun combinations, rather than with more typical partitive genitives. This would mean that the -s suffix of hits such as *veel interessants* is often interpreted as a nominalisation suffix, as proposed in Haeseryn et al (1997) and Van Marle (1996). This is easy, since, as explained in Section 2, -s suffixation is also used in other contexts to turn adjectives into mass nouns, e.g. in (8)–(11). If this is the case, it follows that the -s cannot simply be

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**13** The story is more complicated. It seems that the -s variant waxed and waned in the history of Dutch. It may even have been an exogenic construction in Flanders all along. We are focusing here on the more recent changes, where the -s omission seems to be innovative (see Van der Horst 2008).

omitted, as uninflected adjectives without suffix cannot be mass nouns in Dutch.<sup>14</sup> This reinterpretation is further facilitated by the absence of a semantic difference between both interpretations.

Still, we should not discard these hits as not being partitive genitives. Diachronically, they are, and synchronically, a partitive genitive interpretation is always possible, whereas a modifier-noun interpretation is not, as shown by rare hits like (23) and (24).

(23) *Ik ben ook eens gaan kijken, veel speciaal is er inderdaad*  
 I am also once go see much special is there indeed  
*niet te vinden, ...*  
 not to find  
 ‘I have also taken a look myself, you do not find a lot of special things there indeed.’

(24) *Hier wordt wel weer weinig deftig gezegd he?*  
 Here is PTC again few decent said eh?  
 ‘Again, there aren’t a lot of decent things said here, are there?’

This all supports a usage-based perspective on the partitive genitive, with a crucial role for exemplar-based analogy (Bybee 2010). Rather than allocate an utterance like *veel interessant(s)* categorically to a certain syntactic category, a usage-based perspective allows simultaneous analogical links to other constructions, which co-determine the formal realisation. It would be like killer whales exchanging their horizontal tails for vertical tails because they *look* analogous to sharks, but remain mammalian in their other traits. Such multiple inheritance lineages turn out to be wide-spread in language (Van de Velde and Van der Horst 2013; Van de Velde et al. 2013).

We could attempt to make the same reasoning for the quantifier *wat*, since, just as *veel*, *weinig* and *zoveel*, it can also be used as modifier in modifier-noun constructions such as (25) or (26). However, there are some reasons not to do this. To begin with, there is a semantic difference between *wat* used as a modifier, as in (25) and (26), and *wat* used in a partitive genitive construction, as in (27), which stands in the way of an interpretation of (27) as a modifier-noun construction. Whereas *wat* in (25) and (26) indicates a certain amount of water or boys, *wat* in

<sup>14</sup> Except of course for the colour adjectives, which, as mentioned above, are formally identical to the colour nouns.

(27) denotes a single instance of an important thing. For the quantifiers *veel*, *weinig* and *zoveel* on the other hand, such a semantic difference is not present: *veel water* means ‘a large amount of water’, just like *veel interessants* means ‘a large amount of interesting things’.

(25) *In de wijk Konterdam stond her en der nog wat water in de kelders.*  
 in the district Konterdam stood here and there still some water in the basements.  
 ‘In the district Konterdam, there was still some water in the basements here and there.’

(26) *En er zijn nogal wat jongens en meisjes die and there are quite some boys and girls who poverty as tiresome companion have “armoede” als moeilijke metgezel hebben.*  
 poverty as difficult companion have  
 ‘And there are quite some boys and girls which have “poverty” as a tiresome companion.’

(27) *Ja maar toen was er wat belangrijk-s op 2.*  
 yes but then was there something important-GEN on 2  
 ‘Yes, but at the same time, there was something important on channel 2.’

It must be pointed out that the use of the quantifier *wat* is typically Netherlandic, i.e. is typical of the regional lect which shows a strong tendency for -s retention; 84.03% of its hits originate from the Netherlandic material, as compared to a general distribution of 52.62%.<sup>15</sup> Still, this cannot directly explain the preference of *wat* for -s retention, as *Variety* is also taken up in the regression models and *wat* still deviates significantly. Moreover, *wat* also shows a preference for -s retention in the Flemish material. We will therefore argue that even in Flanders, its conspicuous Netherlandic impression triggers the Netherlandic morphological variant, i.e. the variant with -s suffix. Importantly, this even happens across the varieties.

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<sup>15</sup> Distribution of the hits of *wat* in the Netherlandic and Flemish material: p-value < 0.0001 (univariate chi-squared test).

## 5 Interpretation

### 5.1 Factors of alternation

Now that we have a good view on the data, we can proceed to formulating answers to the research questions. The first research question asked which factors determined the *-s* alternation of the partitive genitive. Table 3 lists these factors, with the fixed factors in descending order of importance.

**Table 3:** Factors influencing the partitive genitive alternation

Factor		Influence
Fixed	<i>Type-Adjective</i>	<i>-s</i> omission with the colour adjectives and the adjectives <i>beter</i> , <i>fout</i> , <i>goed</i> and <i>verkeerd</i>
	<i>Variety</i>	<i>-s</i> omission in Flanders, <i>-s</i> retention in the Netherlands
	<i>Register</i>	<i>-s</i> omission in informal language use, <i>-s</i> retention in formal language use
	<i>Quantifier</i>	<i>-s</i> retention with <i>wat</i> , <i>veel</i> , <i>weinig</i> and <i>zoveel</i>
	<i>Frequency</i>	<i>-s</i> retention with more frequent phrases
Random	<i>Phrase</i>	Individual preference for <i>-s</i> omission or <i>-s</i> retention per phrase

Our hypothesis concerning the colour adjectives and the deviant adjectives is clearly confirmed. Because of analogical links to other constructions, respectively constructions with colour nouns and adverbial constructions, these two groups of adjectives have a strong preference for *-s* omission. Our hypothesis concerning the lectal variable *Variety* is confirmed as well: *-s* omission is particularly abundant in Flanders. However, it is not a typical phenomenon of standard Dutch in Flanders, as suggested by Broekhuis (2013: 426). In fact, regarding the distribution of *-s* omission, standard Dutch in Belgian, i.e. the language of Flemish quality newspapers, quite neatly matches with the Netherlandic material. While grand-scale *-s* omission turns out to be a phenomenon of informal Flemish Dutch, *-s* omission is certainly not completely absent in other registers and even occurs in formal Netherlandic Dutch.

For the factor *Quantifier*, we have found that hits with the Netherlandic lexical shibboleth *wat* as quantifier are more likely to exhibit the Netherlandic variant, i.e. retain their genitive *-s*, even in Flanders. *Quantifier* also showed that *-s* omission was nearly non-existent in partitive genitives with *veel*, *weinig* or *zoveel* as

quantifier. We have argued that the reason for this may be sought in another analogical pull of modifier-noun constructions, this time however causing a preference for -s retention.

It seems that instances composed of the quantifiers *veel*, *weinig* and *zoveel* or the colour and deviant adjectives do not form the prototypical core of the partitive genitive construction, but belong to the periphery where there are multiple links to other constructions. Partitive genitives composed with the quantifiers *iets* and *niets* and other adjectives however, appear to form the prototypical core, both formally and semantically. Formally, they do not show strong correspondences with other constructions. Semantically, they are similar in focusing on absolute quantification, whereas *veel*, *weinig* and *zoveel* always indicate a relative quantity. Moreover, partitive genitives with *iets* and *niets* are much more frequent than those with *veel*, *weinig* and *zoveel*, putting the former in the prototypical core. In all these characteristics, *wat* shows greater correspondence with *iets* and *niets* than with *veel*, *weinig* and *zoveel*. Firstly, partitive genitives with *wat* are screened off from modifier-noun constructions through a semantic difference between the two. Secondly, *wat* naturally links up more closely with *iets* and *niets* than with *veel*, *weinig* and *zoveel*, being a synonym of *iets* ('something'). Lastly, *wat* is our second most frequent quantifier, second only to *iets* and closely followed by *niets*. It therefore seems most fitting to consider the instances with the quantifier *wat* as part of the prototypical core of the partitive genitive construction.

The factor *Frequency* showed a minor Conserving Effect, with a greater preference for -s retention as the phrase became more frequent (Bybee 2006; Bybee and Beckner 2010). We call this effect only minor, as *Frequency* is our least important main effect of alternation. *Length-Adjective* was not retained in the models, potentially refuting the hypothesis that the number of syllables of the adjective influenced its appearance with or without -s suffix (though note that absence of evidence is not evidence of absence). The variable *Number-of-words-AP* was not retained either, yet this is probably due to a lack of hits in which an adverb modifies the adjective. On top of the influence of all these factors, each phrase also seems to bear its own individual preference for one of the variants. This confirms our suspicion that there is lexical diffusion at play in this alternation.

## 5.2 Function of the -s suffix

Now that the factors influencing -s omission have been described, we can turn to the question what this means for the synchronic function of the -s suffix and the current developments the partitive genitive is going through. In view of the find-



ing that the appearance of the *-s* suffix is so strongly determined by lectal factors such as *Variety* and *Register*, it cannot be maintained that its function is purely grammatical or language-internal, i.e. that the *-s* only performs a single function within language system of all language users of Dutch. Instead, the *-s* suffix seems deeply multifunctional.

We would like to argue that the function of the *-s* suffix is partly language-internal and partly language-external, with each function having its own regional bias. Flanders witnessed grand-scale *-s* omission. True, the *-s* is still present in the formal standard variety, but there the *-s* retention is influenced by normative pressure: the Flemish standard language is prescriptively modelled after the Netherlandic variety (Geerts 1997), and this makes the standard varieties in both regions linguistically closer to one another than the informal varieties (Geeraerts 2001). This grand-scale omission would not have been possible if the *-s* suffix performed a transparent language-internal morphological function. From a synchronic point of view, its function therefore seems to be situated on a language-external, i.e. lectal, level. By using the variant with *-s* suffix, the language user (subconsciously) indicates that he aspires to use the standard language.

In the Netherlands however, grand-scale *-s* omission, until now, does not seem to occur. This begs the question as to what explains the resilience of this inflectional remnant in Netherlandic Dutch. A possible answer is that the *-s* suffix does bear a language-internal function in this lect. However, this cannot be its original function as marker of the genitive case, since the Dutch case system has long collapsed. This means the *-s* suffix has been reanalysed. There are actually further indications that such a reanalysis of the partitive genitive *-s* is indeed taking place.

There is an observation by Royen (1948: 92–93), picked up by Kester (1996: 313) and Broekhuis (2013: 423). Royen noted that an adverb modifying the adjective can bear the genitive *-s* as well, as in examples as (28).

- (28) *niets specifiek-s christelijk-s*  
*nothing specifically-GEN christian-GEN*  
 ‘nothing specifically christian’

Constructions like these are not possible in the original case system of Dutch. Now Broekhuis notes that “the modifiers *heel/erg* ‘very’ (. . .) never occur with the partitive genitive *-s* ending in examples like [(29)].” (Broekhuis 2013: 423).

- (29) *iets heel-s grappig-s*  
*something very-GEN funny-GEN*  
 ‘something very funny’

This observation is, however, incorrect. Although we have not found examples like (28) or (29) in our corpus, both are in fact quite abundantly present on the internet. Also, instances like (28) or (29) do not seem to be entirely limited to informal language use as Kester holds (Kester 1996: 212–213). For example, *iets heels ergs* was found in an academic book *De wet op de jeugdzorg in de dagelijkse praktijk* ('the law on juvenile care in daily practice', p. 185). It even appears to be possible and quite frequent to use the -s on the adverb while not using it on the adjective. Hits like (30) or (31) can readily be found on the internet.

(30) *iets heel-s vanzelfsprekend*  
 something very-GEN self-explanatory  
 'something very self-explanatory'

(31) *iets heel-s uniek*  
 something very-GEN unique  
 'something very unique'

Furthermore, the partitive genitive would not be the first remnant of the Dutch genitive case to undergo a reanalysis (Hoeksema 1998b; Booij 2010: 211–232). One such reanalysis is described by Hoeksema (1998b): in cases like (32), the genitive -s does not express possession, but only the meaning 'typical for' and in contrast to the historical genitive, it can only be used predicatively.

(32) *Dat is eigenlijk niet des Van Gaal-s.*  
 that is actually not the.GEN Van Gaal-GEN  
 'that is actually not typically of Van Gaal.'

If there is indeed a reanalysis of the partitive genitive -s taking place in the Netherlands, how is it reanalysed? This brings us back to the theoretical analyses of the partitive genitive, as described in Section 2.

The nominalisation proposals holds that the partitive genitive -s is reanalysed as a nominalisation suffix. For non-prototypical partitive genitives, composed with *veel*, *weinig* and *zoveel*, this proposal has some merit, as explained in the discussion of the factor *Quantifier* in Sections 4.2 and 5.1. However, concerning more prototypical instances composed with *iets*, *niets* and *wat*, there are reasons to renounce it. For one, these instances do not show any analogical links to modifier-noun constructions. In any case, *heels* as in (29)–(31) can never be analysed as a noun.

The N-movement and empty noun analyses assume that the language user executes movements or posits empty elements – assumptions which are hardly acceptable outside of the framework of generative linguistics. Also, both the N-movement and empty noun analyses have quite a number of other arguments against them (see Broekhuis and Strang 1996: 224–227; Hoeksema 1998a: 52–60; Broekhuis 2013: 420–426, for details).

The predicative proposal, which states that the *-s* expresses a predicative relation between the quantifier and the adjective, does not seem to be ideal either. Especially problematic for this analysis is that the *-s* can also appear only on the adverb and not on the adjective, as in (30) and (31). There is no reason to assume a predicative relation between the quantifier and the adverb. Further counter-arguments are discussed in Hoeksema (1998a: 66–69).

Booij's analysis in which the partitive genitive *-s* is reanalysed as a construction marker, which is also implicitly advocated in Hoeksema (1998b), therefore seems most appropriate to us (Booij 2010: 223–228). Firstly, if the *-s* simply marks the whole construction of the partitive genitive, it is of secondary importance whether it appears on the adverb or the adjective. In fact, this analysis makes the tendency to only mark the adverb, as in (30) and (31) quite understandable. It is the conjunction of the quantifier and the adjectival part which builds the construction, so it would be reasonable to mark the construction immediately at this conjunction, and not entirely at the end of the construction (see Van de Velde and Weerman 2014 for a similar argument concerning another case of reanalysed junk morphology). In addition, we have shown that the partitive genitive construction shades into other constructions, which obligatory appear with or without *-s*. The impact of these adjacent constructions is not surprising in a usage-based perspective (see Bybee 2010), and it can be shown that multiple parental association is not unusual in constructions (Van de Velde et al. 2013). This multiple analogical association does not mean, however, that the prototypical instances of the partitive genitive construction can be fully reduced to any of these other constructions. The construction has idiosyncratic features that warrant its separate status. This is acknowledged in the construction marker analysis.

The synchronic lectal and grammatical functions of the *-s* suffix correspond to two diachronic tendencies. In Flanders, the genitive *-s* is disappearing, as we would expect from a remnant of the case-system whose grammatical function is no longer clear. However, mostly in the Netherlands, the genitive *-s* appears to have undergone a reanalysis, which might partly shield it from the wave of deflection and may even cause an expansion of the use of the *-s*. These two tendencies match two of the three ways, described by Lass (1990), in which language users may handle 'junk' from earlier language stages, like the partitive genitive *-s*. One

is to throw the ‘junk’ away, i.e. drop the *-s*, while another is to reuse this ‘junk’, called exaptation (see also Booij 2010: 211–232).

## 6 Conclusions

This study has shown that the *-s* alternation of the partitive genitive is determined by the combined effects of lectal, semantic and morphosyntactic factors. *-s* omission is more likely with colour adjectives, with certain adjectives that occur in a different construction which bears superficial resemblance to the partitive genitive (viz. *beter* ‘better’, *goed* ‘good’, *fout* ‘incorrect’ and *verkeerd* ‘wrong’), in Flanders, in informal language use, when the quantifier is *iets* (‘something’) or *niets* (‘nothing’), and when the partitive genitive phrase is infrequent. The relative importance of these factors, as well as their interrelationships, can be checked in the regression models. Lastly, on top of the influence of each of these factors, lexical diffusion can be seen to be at play.

The prototypical core of the partitive genitive seems to be formed by the instances composed with the quantifiers *iets*, *niets* and *wat* and the ‘other’ adjectives. This prototypical core of the construction is thus both lexically and semantically anchored and formed by its most frequent exemplars (Bybee 2006: 716, 2010). The more peripheral instances of the partitive genitive, composed of the quantifiers *veel*, *weinig* and *zoveel* and/or the colour and ‘deviant’ adjectives, can be found in the grey zone between the partitive genitive construction and other constructions, like modifier-noun combinations or adverbial constructions, and may not respond to all factors of the alternation.

If we turn our attention to the current function of the partitive genitive *-s* and the developments it is currently going through, we find the following situation. The *-s* suffix appears to be strongly multifunctional, used for both lectal and grammatical functions. The lectal function, with a regional bias in Flanders, originates from a strong penchant for *-s* drop in informal Flemish language use. The grammatical functions, with a regional bias in the Netherlands, are the result of a reanalysis, as the partitive genitive’s original grammatical function as a marker of the genitive case, is long lost. For the non-prototypical partitive genitives composed with the quantifiers *veel*, *weinig* and *zoveel*, a reanalysis as nominalisation suffix, as proposed in Haeseryn et al. (1997) and Van Marle (1996), may be possible. For a reanalysis of more prototypical instances composed with *iets*, *niets* and *wat* however, we have presented a number of arguments in favour of Booij’s analysis as a construction marker.

Importantly, we do not mean to present this distinction between Flanders and the Netherlands as absolute. Our data do not support a categorical distinc-

tion between two separate varieties, each with their own clear-cut system. The actual situation of the partitive genitive in Dutch is thus much more complex and shows far more variation than previously assumed. It would be ill-advised to consider this variation as ‘performance noise’, on a stable ‘competence core’. As argued by Geeraerts and Kristiansen (forthc.), and ample references cited therein, variation is part and parcel of linguistically adequate description of regularities in the lexico-grammatical space in a certain language. It would be a gross oversimplification of the empirical data to assume that speakers of Dutch occasionally ‘forget’ to express the partitive -s on adjectives, which is there in their deep grammar. Under such a reductive assumption, the regularities in the data, which can only be unearthed by looking quantitatively at corpus data, would remain unexplained. The somewhat myopic interest in the generative literature on the formalisation of the internal syntax of the construction (What element is the head of the construction? Is there a covert, ‘empty’ noun?) has led scholars not to bother too much about the extant variation. This variation is, however, regular under an aggregate perspective. We hope to have shown that a quantitative approach like logistic regression can contribute to a good understanding of the ins and outs of constructions, such as the analogical pull of other, superficially resembling constructions, the impact of frequency and exemplars, and the differential contributions of relevant factors in different lects (the interaction effects in the regression models).

While our data enable us to get a grasp on this messy piece of Dutch morpho-syntax, a lot is left unexplored. To begin with, the diachronic dimension requires more attention. Furthermore, the -s suffix of the partitive genitive construction may be influenced by semantic factors. This however, will necessitate further labour-intensive manual coding of the dataset. Also, partitive genitives in which an adverb modifies the adjective definitely deserve more attention. Not only do they seem to have a preference for -s omission on the adjective, but – far more intriguing – the -s suffix may attach to the adverb. Finding out the precise linguistic contexts and lects in which this occurs may shed new light on the partitive genitive construction and on deflection in general. Lastly, we have found that lexical diffusion plays an important role in the appearance of the -s. Still, simply calling this lexical diffusion random is not very satisfactory. It could make for a rewarding journey to look deeper into the causes, mechanisms and trends of this lexical diffusion.

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