Timing differences in the acquisition of *geen* in Afrikaans and Dutch: an exploratory corpus-based study*

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Abstract

This paper highlights a previously unnoted timing discrepancy in the first-language (L1) acquisition of *geen* ('no') in Afrikaans and Dutch. Building on White, Southwood & Huddlestone (2022) and van der Wal (1996), we report on a comparative Afrikaans-Dutch corpus study focusing on child(-directed) language that suggests that Afrikaans *geen* is acquired significantly later than Dutch *geen*. At the same time, it also highlights a striking difference in the use of NEGATOR+INDEFINITE ARTICLE-containing structures in the two languages. To further probe this discrepancy, we conducted an exploratory investigation of two suitable corpora of adult Dutch and Afrikaans. This reveals various collocational shifts and a reverse in the default negation pattern with indefinite count nouns: where Dutch employs *geen*, Afrikaans uses *nie 'n* ('not a'). Considering the importance of object-denoting count nouns in early L1 acquisition, this would be expected to affect the timing of the acquisition of *geen*. The paper concludes with a discussion considering the likely origins of the shift in default pattern. The innovation of the *moenie*-imperative is argued to be key, given the acquisitional significance of imperatives and the fact that somewhat similar changes are attested in the history of English, which also innovated a prohibitive-marked negative imperative.

Keywords: acquisition, Afrikaans, collocation, corpus data, Dutch, grammatical reorganisation, imperative, language contact, negative indefinite, negation.

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Opsomming

*Tydsverskille in die aanleer van **geen** in Afrikaans en Nederlands: 'n verkennende korpusgebaseerde studie*

Hierdie artikel fokus op 'n voorheen ongemerkte tydsverskil in die eerstetaal (L1)-verwerwing van *geen* in Afrikaans en Nederlands. Ons beskryf 'n vergelykende Afrikaans-Nederlandse korpusstudie wat n.a.v. White, Southwood & Huddlestone (2022) en van der Wal (1996) op kinder(gerigte)taal onderneem is. Hierdie studie bring aan die lig dat die Afrikaanse *geen* skynbaar aansienlik later as die Nederlandse *geen* verwerf word. Terselfdertyd lig die studie ook 'n opvallende verskil tussen die twee tale uit wat betref die gebruik van strukture wat 'n NEGEERDER+ONBEPAALDE ARTIKEL bevat. Om hierdie verskille verder te ondersoek, het ons 'n verkennende ondersoek van twee geskikte korpusse van volwassenes se Nederlands en Afrikaans gedoen. Hierdie studie toon verskeie kollokasieverskuiwings en 'n ommekeer in die verstek-ontkenningspatroon by onbepaalde telnaamwoorde: waar Nederlands *geen* gebruik, gebruik Afrikaans *nie 'n*. Gegewe die belangrike rol, in die konteks van L1-verwerwing, van selfstandige naamwoorde wat objekte aandui, is dit goed moontlik dat hierdie ommekeer die verwerwing van *geen* kan beïnvloed. Die artikel sluit af met 'n bespreking van die moontlike redes vir die verskuiwing van bg. verstekpatroon. Daar word aangevoer dat die innovasie van die *moenie*-imperatief 'n sleutelfaktor sou gewees het, gegewe die belangrike rol wat imperatiewe in L1-verwerwing speel en ook die feit dat ietwat soortgelyke veranderinge in die geskiedenis van Engels identifiseerbaar is – Engels se *don't*-imperatief is ook 'n innovasie wat 'n ouer Wes-Germaanse imperatiefvom vervang.

Sleutelwoorde: Afrikaans, grammatikale herorganisering, imperatief, kollokasie, korpusdata, Nederlands, negatiewe onbepaalde element (voornaamwoord of lidwoord), ontkenning, taalkontak, taalverwerwing.

1 Introduction

In both Afrikaans and Dutch, the combination of a negator *nie/niet* ('not') and the unmarked indefinite article *'n/een* ('a') can, and sometimes must, be replaced by the negative indefinite (NI) determiner *geen* ('no'). The examples in (1-2) illustrate.[1]

[1] Abbreviations used in this paper are: DIM – diminutive; NEG – negator; INDEF ART – indefinite article; NF – non-finite; NI – negative indefinite; NPIs – negative polarity items; PL – plural; POL – polarity (= the negative-concord marker); SG – singular; SN – sentential negation; 3SG – third person singular.

1 a. Afr *Ek het 'n tennisraket.*
I have a tennis-racquet
'I have a tennis racquet.'

b. Afr *Ek het **nie** **'n/ geen** tennisraket nie.*
I have not a/ no tennis-racquet POL
'I don't have a tennis racquet.'

2 a. Du *Ik heb **een** tennisracket.*
I have a tennis-racquet
'I have a tennis racquet.'

b. Du *Ik heb ***niet** **een/** **geen** tennisracket.*
I have not a no tennis racquet.
'I don't have a tennis racquet.'

Here we see that both *nie 'n* and *geen* are possible in Afrikaans (without a necessary difference in meaning), whereas only *geen* is possible in Dutch (Donaldson 2017, 377). *Niet een* is possible in other contexts, however, as we will see in more detail below (see section 3.2.3).

The purpose of this paper is, firstly, to highlight an intriguing timing discrepancy in the first language (L1) acquisition of *geen* in Afrikaans and Dutch; secondly, to propose an empirically substantiated reason for this newly registered difference; and finally, to offer a suggestion as to the likely source of the differences between Afrikaans and Dutch. The paper is structured as follows: Section 2 sets out the acquisitional timing discrepancy, previously unnoticed in the literature. Section 3 then introduces the two-part corpus study we undertook to preliminarily probe the difference between Afrikaans and Dutch *geen*: the first (section 3.1) investigates both L1 acquisition and child-directed Afrikaans and Dutch data; the second (section 3.2) focuses on non-child-directed adult output. Section 4 discusses the results, offering an explanation for the acquisition asymmetry between Afrikaans and Dutch and also considering its likely source.

2 The L1 acquisition of *geen* in Afrikaans and Dutch

2.1 Afrikaans

White, Southwood and Huddlestone (2022; henceforth *WSH*) investigated the comprehension and production of negation – both basic sentential negation (SN) and negative indefinites (NIs) – by child speakers of Afrikaans aged 3;0-5;0. Their results reveal that while basic sentential negation is early-acquired in Afrikaans, being productive in the speech of their youngest participants, NIs emerge later. The details of their NI-related findings are relevant to the current discussion.

The NI-component of WHS's acquisition study probed the children's comprehension and production of structures containing the NIs *niks* ('nothing') and *geen* (no'). The comprehension data were collected through a picture-selection task, with 20 sentences containing the NIs *niks* (*n* = 10) and *geen* (*n* = 10). The production data were collected through recordings of spontaneous speech during free play.

The comprehension data derives from 70 L1 monolingual acquirers (see footnote 52, p.185) aged 2;7-5;3. Here WHS follow Glennen et al. (2005), who consider a syntactic structure to be acquired when 75% of informants achieve scores of 90% accuracy or more.[2]

WHS conducted a statistical analysis by fitting a Generalised Linear Mixed-effects Regression model with a binomial likelihood function. *Score* (number of correct items) was entered as the dependent variable and *Construction type* (SN, NI:Geen and NI:Niks) was entered as one of the fixed effects. The results revealed that *Construction type* significantly predicted *Score* in that the NI conditions correlated with lower Scores than the SN condition did (p=.004). Specifically, the results revealed that for NI-containing structures, children encountered comprehension problems until after age 5;0. This contrasts with the informants' comprehension of basic sentential negation, which the results indicate is fully acquired by age 3;8 (see WHS, 12).

Crucially, however, the study also revealed an acquisition asymmetry between the children's comprehension of the two NIs investigated, with the NI-*geen* condition emerging as the most difficult. Post hoc pairwise comparisons revealed that the NI-*niks* condition produced significantly higher scores than the NI-*geen* condition (p=.012). In the case of the NI-*niks* condition, 45 of the 70 informants (64%), with the youngest being 3;6, scored 90% or higher. This number increased to 75% (40/53 children) when considering the data of the informants aged 3;11 and older. 3;11 could thus be interpreted as the age by which *niks* is successfully acquired by Afrikaans-acquiring children (see again note 2). For the NI-*geen* condition, a 90% accuracy score again emerged from age 3;7 onwards, but only roughly half (38/70 informants, or 54.2%) achieved the 90% accuracy score. The 75% group-threshold was only reached for the NI-*geen* condition (25/33 children) at age 4;7. 4;7 could therefore be interpreted as the age by which *geen* is successfully acquired by Afrikaans-acquiring children. In comprehension terms, then, there appears to be a discrepancy between *niks* and *geen*.

[2] Here it is worth noting that the 90% accuracy requirement can be interpreted as a measure of when an individual child has successfully acquired a given structure, whereas the 75% threshold, which holds at group-level, gives more of an indication of when children acquiring the language in question have typically acquired the relevant phenomenon.

For the production component of the study, language samples from the Southwood and White corpus (2016) datasets on CHILDES (MacWhinney, 2000; https://childes.talkbank.org/) were analysed. The data of 22 children aged 3;0-5;0 formed the basis of the analysis. The results revealed that all 22 children spontaneously used negation-containing structures. The NI *niks* occurred for the first time at 4;0 in the Southwood and White corpus, with 8/22 children subsequently producing *niks*-containing structures.[3] *Geen*, however, was not produced by any of the informants.

In sum, WHS's results reveal that while basic sentential negation is early-acquired in Afrikaans, NIs emerge later, with a further asymmetry evidenced between the NI *niks* (acquired by age 4;0) and *geen* (not yet present in the speech-data at 5;0).

2.2 Dutch

Acquisition data for the L1 acquisition trajectory of *geen* in Dutch is limited as there is, to our knowledge, no study systematically documenting the acquisition of this lexical item. Van der Wal's (1996) study of the L1 acquisition of negative polarity items (NPIs) in Dutch does, however, point to the early acquisition of *geen*.

Van der Wal (1996) is a corpus-based study analysing the recorded speech of 45 children. Many, but not all of the datasets consulted are publicly available (see van der Wal 1996 for details). All the recordings were made in the children's homes in conversation with one or more adults (parents, family members, or investigators). The children's ages range from 1;05 to 3;10.

Central to van der Wal's (1996) investigation of NPIs in child speech are the lexical items which license NPIs. Since *geen* is one of the typical licensers for the NPI *hoeven* ('have to') in adult speech, its emergence in child speech was considered. Van der Wal's analysis of the corpora indicates that Dutch *geen*

(i) occurs as early as the age of 1;11 in one- and two-word utterances, although these are not always target-consistent ((3) illustrates),
(ii) is used to modify nominals by age 2 (consider (4)); and

[3] Note, however, that an analysis of the Stellenbosch corpus on CHILDES – which consist of longitudinal data from two significantly younger children, Chanel (female) and Jean (male), aged 1;6–2;11 – indicates that *niks* is in fact already productive in the speech of young children. In total there are 13 child-usage hits for *niks* in the Stellenbosch corpus, first emerging at 1;10.

(iii) is fully acquired by Dutch-speaking children by age 3 (see also Lin et al., 2018).[4]

3	*Du Adult:*	*Zullen wij even gaan tekenen?* shall we a.while go draw.INF 'Should we go and draw for a bit?'	
	Du Child:	***Geen.*** no 'No.'	*(unknown: age 1;11)*
4	*Du*	*D'r zat centjes niet in. Zat* ***geen*** *centjes.* there sat cent.DIM.PL not in sat no cent.DIM.PL 'There were no little cents in it. No little cents.'	*(unknown: age 2;04)*

2.3 Summary: The acquisition of GEEN in Afrikaans and Dutch

Our comparison of acquisition studies registering the development of *geen* in Afrikaans and Dutch reveals a striking asymmetry between the two languages: whereas Dutch *geen* appears to be acquired by age 3, its Afrikaans counterpart is not yet present in speech data at age 5.

3 The corpus studies

To deepen our understanding of why Afrikaans *geen* is late-acquired, and whether the alternation between *geen* and Du. *niet een* / Afr. *nie 'n* (see (1-2)) is relevant, we undertook a corpus-based study to probe the occurrence of *geen* relative to *niet een* and *nie 'n* in child and child-directed adult speech in Afrikaans and Dutch. This is presented in section 3.1. Additionally, we undertook a second corpus-based study probing the use of *geen* and Du. *niet een* / Afr. *nie 'n* in adult-directed adult speech in both Afrikaans and Dutch. This is presented in section 3.2.

3.1 L1 Acquisition and Child-Directed Speech

3.1.1 The corpora

For the Afrikaans analysis of *geen* and *nie 'n* in child and child-directed speech, we used the Southwood and White (2016; henceforth *S&W*) and Stellenbosch (1999) datasets on CHILDES (MacWhinney 2000).

[4] Note that all glosses have been adjusted to conform to the Leipzing glossing conventions.

For the S&W corpus, the data from 36 typically developing children, aged 3;00-6;11 was analysed. The data was collected in the period 2004-2006, either at a day-care centre or in the child's home. Speech was elicited through one-on-one free play between the participant and the researcher, who used toys to facilitate imaginary play.

The Stellenbosch corpus includes data from two significantly younger children, Chanel (female) and Jean (male), aged 1;6–2;11. Longitudinal data was gathered between 1998-1999. The data was again collected at either a day-care centre or at home and elicited through free-play situations. The adult speech samples derive from the researcher and parents/grandparents.

For both data sets, the key word-counts were obtained via the CLAN function of CHILDES (MacWhinney 2000; https://dali.talkbank.org/clan/). Table 1 summarises the Afrikaans corpora consulted.

Table 1: Overview of Afrikaans corpus data consulted

Corpus	Total no. of words	No. of children	Age of children	No. of words: child speech	No. of words: adult speech
S&W (2016)	122 857	36[5]	3;00 – 6;11	37 113	85 744
Stellenbosch (1999)	26 058	2	1;6 – 2;11	13 882	13 040

To determine the prevalence of *geen* and *niet een* in child and child-directed speech in Dutch, we analysed the Schlichting and van Kampen (1992; henceforth S&V) corpus on CHILDES.

The corpus comprises spontaneous language samples from four L1 Dutch-speaking children. Longitudinal data was gathered over a period of two years (1990-1992), with an age-range of 3;05 to 5;04. The language samples were collected at home by the researcher (Schlichting) and two research assistants. The adult speech samples include speech samples from the researcher and the children's parents. As before, the CLAN function of CHILDES was used to perform word counts. Table 2 summarises.

[5] Note that the S&W (2016) corpus includes data from both typically developing (TD: n=36) children and those diagnosed with developmental language disorder (DLD; n=15). Only the TD children's data samples were included in the analysis.

Table 2: Overview of Dutch corpus data consulted

Corpus	Total no. of words	No. of children	Age of children	No. of words: child speech	No. of words: adult speech
S&V (1992)	176 269	4	3;5 – 5;3	98 102	78 167

3.1.2 Procedures

Lexical searches were conducted for *geen* ('no') and *nie 'n* ('not a') in the S&W and Stellenbosch datasets and for *geen* ('no') and *niet een* ('not a') in the S&V corpus. As Afrikaans *geen* can be realised in reduced form as *g'n* [xən] (see section 3.2.3), we also searched for tokens of *g'n* in the S&W and Stellenbosch datasets. All instances of *geen/g'n* and Afr. *nie 'n /* Du. *niet een* from both datasets were copied into Excel spreadsheets alongside the context of the sentence they occurred in.

The results are presented in section 3.1.3 below.

3.1.3 Results

The overall number of *geen*-tokens produced by the child and adult informants respectively are presented in Table 3.

Table 3: Overall number of geen/g'n *tokens produced by the children and adults respectively in each dataset*

Corpus	No. of *geen* tokens		No. of *g'n* tokens	
	Adult	Child	Adult	Child
Afrikaans				
S&W	2 (23)	2 (54)	1 (12)	0 (0)
Stellenbosch	1 (77)	1 (72)	0 (0)	0 (0)
Dutch				
S&V	107 (1369)	236 (2406)	-	-

(Normalised frequency per 1 million words indicated below each raw figure to compensate for variation in corpus size)

As Table 3 shows, there is robust evidence for Dutch *geen* in child-directed adult speech (107 tokens), and also in the child speech samples (236 tokens). Note that seven *geen*-featuring utterances were disregarded on account of their being incomplete (3), ungrammatical (3), or head-noun/non-determiner uses (1). The remaining 229 *geen*-tokens that were the focus of our study are all constructions in which *geen* co-occurs with a nominal, functioning as a determiner.

In contrast to the Dutch data, Afrikaans *geen* is very rare in both child (3 tokens) and child-directed speech (4 tokens). One of the latter is the single instance of *g'n* attested in these corpora, given in (5):

5	*Afr*	*Ek*	*neem*	*hom*	***g'n***	***niks***	*op*	*nie.*
		I	take	him	no	nothing	up	POL
		'I don't notice him at all.'						

As we will discuss in section 3.2.3, this expressively marked *g'n niks* negative-concord structure is a lexicalised collocation typically associated with colloquial Afrikaans; we leave it aside in the remainder of this discussion, focusing on the remaining 6 Afrikaans *geen* tokens.

Table 3 registers a quantitative difference in the occurrence of *geen* in Afrikaans and Dutch child and child-directed speech. As already hinted in (1-2), Afrikaans and Dutch also differ in respect of how readily NEGATOR+INDEFINITE ARTICLE sequences (*nie 'n/niet een*) are permitted in the two languages: Afrikaans allows an indefinite nominal to be negated via the *nie 'n*-pattern in circumstances where Dutch does not. Table 4 presents the overall number of Du. *niet een* / Afr. *nie 'n* tokens produced by the child and adult Afrikaans and Dutch informants in our study.

Table 4: Overall number of niet een/nie 'n *tokens produced by the children and adults respectively*

Corpus	**No. of *niet een* / *nie 'n* tokens**	
	Adult	Child
Afrikaans		
S&W[6]	75 (875)	30 (808)
Stellenbosch	18 (1380)	6 (432)
Dutch		
S&V	7 (90)	9 (92)

(Normalised frequency per 1 million words indicated below each raw figure to compensate for variation in corpus size)

As Table 4 shows, there is a clear difference between Afrikaans and Dutch as regards the use of NEGATOR+INDEFINITE ARTICLE sequences: Dutch adults and children use these only rarely in contrast to their Afrikaans counterparts. In relation to the Stellenbosch corpus, it is worth remembering the very young age of the child-subjects (1;6 – 2;11), in addition to the fact that

[6] Note that three of the constructions featuring *nie 'n* in the S&W corpus were incomplete constructions, two produced by children and one adult construction that appears not to have been fully transcribed. These are counted here to capture the total number of *nie 'n*-tokens produced, but will not be included in the presentation of the results and discussion to follow.

this is a much smaller corpus than the S&V and S&W corpora (though the normalised frequencies presented in Table 4 do somewhat compensate for the latter factor). Bearing this in mind, comparison of Tables 3 and 4 suggests a possibility, namely that Afrikaans *geen* may be as weakly represented as it is owing to speakers' preference for the *nie 'n*-pattern in relevant negated indefinite contexts, i.e. those featuring count-nouns. That is, there may be two different negator + count-noun patterns in the Afrikaans and Dutch child-/child-directed speech: while *nie 'n* + count-noun appears to be the default in Afrikaans, *geen* + count-noun appears to be the Dutch default.

To better understand the *geen* and Afr. *nie 'n* / Du. *niet een* distributional patterns that have emerged from the CHILDES data and, in particular, to try to obtain a better picture of the distribution of *geen* and *nie 'n* in modern Afrikaans, given the sparsity of the *geen*-data in CHILDES, a further corpus study involving Afrikaans and Dutch adult-directed adult speech was undertaken. This study is presented in section 3.2.

3.2 Afrikaans and Dutch geen/nie 'n/niet een in adult-directed adult speech

3.2.1 The corpora

For Afrikaans, the properties of the nominals modified by *geen* and *nie 'n* were probed by investigating the *NWU-Kommentaarkorpus* ('North West University Commentary corpus'; henceforth *NWU-Kommentaarkorpus*) (CTexT 2023). This corpus comprises 43 415 430 words of unedited comments posted on two online newspaper websites between 2014 and 2018. Although the data in the *NWU-Kommentaarkorpus* is in written form, online chatting is thought, in some respects, to mimic spoken language (Freiermuth, 2015). Spontaneous online conversations, for example, are thought to exhibit a naturalness that also characterises spoken language. The *NWU-Kommentaarkorpus*, additionally, reflects a mostly informal register.

For Dutch, we consulted the *Corpus Gesproken Nederlands* ('Corpus of Spoken Dutch', or *CGN*, version 2.03, 2014; http://hdl.handle.net/10032/tm-a2-k6). The *CGN* is a collection of approximately nine million words of spoken Standard Dutch collected between 1999 and 2003. We specifically consulted the following six *CGN* collections: broadcast commentaries; non-broadcast discussions, debates and meetings; broadcast interviews and discussions; live broadcast commentaries; spontaneous face-to-face communications; and telephone conversations (Country: Netherlands). These total 4 556 245 words.

As the data in the *NWU-Kommentaarkorpus* is, as noted above, of a kind that may mimic spoken language, *spoken* Dutch data was thought to offer the best comparison. Both datasets therefore represent natural and spontaneous instances of spoken(-like) communication. It is important to note, however, that the *NWU-Kommentaarkorpus* may in fact be representative of more informal language (given the nature of online comments/chats) than some of our CGN data, which, although spoken, may, in part, be more formal.

Importantly, there is also a skewing in play in relation to the amount of data available for comparative investigation: the Afrikaans corpus is roughly 10 times the size of the Dutch one. Table 5 provides an overview of the adult-directed adult speech corpora consulted.

Table 5: Overview of the Afrikaans and Dutch adult-directed adult speech corpora consulted

Corpus	No. of words
Afrikaans	
NWU-Kommentaar	43 415 430
Dutch	
CGN datasets	4 556 245

3.2.2 Procedures

Lexical searches were conducted for *geen* ('no') and Afr. *nie 'n* and Du. *niet een* ('not a') in the *NWU-Kommentaar* and *CGN* corpora. The overall totals for Afr. / Du. *geen*, Afr. *nie 'n* and Du. *niet een* respectively were then tallied. Preliminary data cleaning was undertaken (e.g. removal of duplicate sentence-tokens and of obviously irrelevant tokens, such as cases where *nie 'n/niet een* are accidentally adjacent). As the objective of this study was to form an initial impression of the factors that may underlie the newly registered acquisition discrepancy, only limited quantitative investigation was undertaken. The results are presented in section 3.

3.2.3 Results

Let us firstly consider the overall comparative picture that emerges from our investigation of the Afrikaans and Dutch corpora. Table 6 summarises:

Table 6: Overall geen/nie 'n/niet een *tokens in the adult Afrikaans and Dutch corpora consulted*

Corpus	***geen/g'n*[7]**		***nie 'n / niet een***	
	n =	% tokens	*n* =	% of tokens
Afrikaans: NWU-Kommentaar	76 344 (of which 1300 = *g'n*) (1758)	0.18%	36 363 (838)	0.08%
Dutch: *CGN* datasets	7 363 (1616)	0.16%	373 (82)	0.008%

(Normalised frequency per 1 million words indicated below each raw figure to compensate for variation in corpus size)

Most strikingly, Table 6 reveals that *geen* is in fact equally frequent in both the Afrikaans and the Dutch adult-directed adult speech corpora consulted. This therefore departs from what was shown for the child-directed speech (see again Table 3). In contrast, however, Afrikaans *nie 'n* emerges as markedly more frequent than Dutch *niet een* in adult-directed adult speech. This mirrors the *nie 'n/niet een* patterns evidenced in the Afrikaans and Dutch CHILDES data consulted.

Taking a closer look at the *geen*-patterns, what becomes apparent is that the superficially near-identical frequency of *geen* in Afrikaans and Dutch conceals important differences in the distributions of these items. In particular, frequently collocating items differ in ways that come into focus if we consider the items collocating with *geen* and with *g'n* in Afrikaans against those commonly combining with Dutch *geen*. Consider Tables 7-8 in this connection (recall that the Afrikaans corpus is much bigger than the Dutch one[8]):[9]

[7] In the NWU-Kommentaarkorpus, *g'n* is realised as both *g'n* and *gn*. Both spelling variants were counted here. As indicated in Table 6, 1300 of the 76 344 *geen/g'n* tokens in this corpus are tokens of g'n, i.e. 1.7% of the *geen*-total.
[8] Here we do not offer normalised frequency information as it is less clear that this can be meaningfully calculated for content items of the kind that are at stake here.

[9] Note that the orthography of the two languages differs in some respects. Where there is a difference between the two here, we present the Afrikaans form below the Dutch form; a single form indicates shared orthography. It is also worth noting that the superficially shared lexical items under discussion here do not always fully overlap in their semantics, meaning that they may not always be translational equivalents. Where *geen zin* ('no sense/purpose/desire') in Dutch covers a large mental and emotional spectrum, for example, Afrikaans *geen sin* covers only the mental component, *lus* ('desire') covering much of what would be *zin* in Dutch.

Table 7: Frequently collocating geen *collocations in the Dutch adult corpora consulted compared to the corresponding* geen/g'n *collocations in the Afrikaans corpus*

Corpus	No. of *geen* tokens	zin sin	idee	tijd tyd	probleem	geld	sprake
Dutch: CGN	7 363	391 5.3%	208 2.8%	139 1.9%	135 1.9%	84 1.1%	37 0.5%
Afrikaans: NWU-Kommentaar	76 344	390 0.5%	1057 1.4%	143 0.2%	890 1.2%	448 0.6%	217 0.3%

Table 8: Frequently collocating geen/g'n *collocations in the Afrikaans adult corpora consulted compared to the corresponding* geen *collocations in the Dutch corpus*

Corpus	No. of *geen* tokens	respek	wonder	simpatie	mens	idee	rede
Afrikaans: NWU-Kommentaar	76 344	2286[10] 3%	1844 2.4%	1352 1.8%	1225 1.6%	1054 1.4%	996 1.3%
Dutch: CGN	7 363	2 0.02%	7 0.09%	0	22 0.3%	208 2.8%	20 0.3%

Table 7 shows that commonly occurring collocates in Dutch are also readily attested in Afrikaans, even if they are not, with exception of *idee*, as commonly occurring in Afrikaans as they are in Dutch. That the same is true *vice versa* is less clear, however, as Table 8 shows. The impression that Afrikaans *geen*-collocations may pattern differently to those in Dutch is reinforced by consideration of *g'n*'s collocation patterns. Consider Table 9:

Table 9: Frequently collocating g'n *collocations in the Afrikaans adult corpora consulted compared to the corresponding* geen *collocations in the Dutch corpus*

Corpus	No. of *g'n* tokens	wonder	mens	niks	simpatie	respek	niemand
Afrikaans: NWU-Kommentaar	1300	501 38.5%	87 6.7%	28 2.2%	15 1.2%	11 0.8%	8 0.6%
Dutch: CGN	7 363 (geen)	7 0.09%	22 0.3%	4 0.05%	0	2 0.02%	0

[10] That *respek* ('respect') should have featured so strongly in our Afrikaans corpus is quite probably an artefact of the topics covered in the *NWU-Kommentaarkorpus*. This observation does, of course, extend to the collocates in all of the corpora. The figures presented here can quite clearly not be interpreted as a reflection of actual collocational strengths in modern Afrikaans (or Dutch), even for the more speech-oriented language we have isolated here. A systematic study in this domain seems a worthwhile future objective.

Here we see that *g'n wonder* ('no wonder') alone accounts for 38.5% (501/1300) of the Afrikaans *g'n*-tally, with *g'n mens* ('no person, no human, no-one') contributing 6.7% (87/1300), i.e. two collocates account for approximately 45% of the occurrences of Afrikaans *g'n* in the corpus under investigation. For *geen/g'n mens*, it is further worth highlighting that it is most commonly used as an NI, often as a more emphatic or otherwise stronger alternative to *niemand* ('no-one'). Consider (6):

6	*Afr*	***G'n mens***	*kan*	*daar*	*skoolgaan*	*nie!*	
		no	person	can	there	school.go	POL
		'No-one can go to school there!'					(*NWU-Kommentaarkorpus*)

This usage is also available in Dutch, but its very common occurrence in Afrikaans very likely relates to a development that has not taken place in Dutch, namely the rise of a generic human impersonal pronoun, (*'n*) *mens* ('(a) person'; see van Olmen et al. 2019), the positive counterpart of *geen/g'n mens*. Consider (7):

7	*Afr*	***('n) Mens***	*moet*	*maar*	*jou*	*bes*	*doen.*	
		a	person	must	but	your	best	do
		'One has to do one's best/You have to do your best.'						

Independent developments, then, seem also to have played into the collocation differences between Afrikaans and Dutch *geen*.

A final noteworthy aspect of the use of *g'n* in Afrikaans is also NI-related. As already noted in section 3.1.3, *g'n* is part of a lexicalised collocation, *g'n niks* (literally 'no nothing'; 'absolutely nothing'; see (5) above). This emphatic negative-concord structure is typically associated with colloquial Afrikaans (Biberauer 2009, Huddlestone 2010), and it accounts for 28 of the *g'n* hits in the *NWU-Kommentaarkorpus* (over 2%). *G'n* also collocates with *niemand* ('no-one') and *nooit* ('never') in this corpus; and, significantly, *geen* also readily collocates with these NIs. By contrast, the Dutch corpus produced only 5 hits for these items.[11] Table 10 summarises:

[11] Four of these hits were for *geen niks* ('no nothing'), two of which were modified by *helemaal* ('absolutely'). The final hit was *geen nooit* ('no never').

Table 10: Occurrence of g'n *and* geen *with NIs in the Afrikaans and Dutch corpora consulted*

NI collocation	Afrikaans corpora	Dutch corpora
g'n niks	28	-
geen niks	51	4
g'n niemand	7	-
geen niemand	12	-
g'n nooit	2	-
geen nooit	-	1
TOTAL	**100**	**5**

Overall, then, it seems that while *geen* in Afrikaans and Dutch may not differ significantly in respect of the overall frequency with which users employ them, these items do exhibit quite distinct collocation patterns in the datasets analysed. There may, as a reviewer points out to us, be a modality effect in play here as *geen* in actually spoken – as opposed to informally posted (i.e. written) – Afrikaans does seem to compete with very typically colloquial forms other than *nie 'n*, *niks* being a significant case in point. Consider (8):

8 a. *Afr* *Daar is* ***niks*** *water/ geld/ hoop daar (nie).* *[Colloquial]*
there is nothing water/ money hope there POL
'There is no water/money/hope there.'

b. *Afr* *Daar is* ***geen*** *water/geld/hoop daar nie.* *[Standard]*

Here *geen* is thus being "squeezed" in a mass context (with *nie 'n*, it is the count contexts that are under threat. See Biberauer 2009, 2015 for discussion of the reinforcing function that *niks* has taken on in Afrikaans). As Adri Breed pointed out to us at AGWIV, children in particular may prioritise the *niks*-form above its *geen*-counterpart. *Niks'* encroachment on *geen*, particularly in spoken Afrikaans, is clearly a factor that would merit careful investigation in an expanded version of the current study. For the moment, though, we conclude in relation to the present corpus-based investigation that our comparison of Afrikaans versus Dutch *geen* alone does not clarify why Afrikaans children should lag so far behind their Dutch counterparts in starting to use *geen*.

Turning to the *nie 'n/niet een* patterns that emerged from our investigation: recall that we speculated at the end of section 3.1.3 that the large discrepancy in the Afrikaans versus Dutch distribution of NEGATOR+INDEFINITE ARTICLE patterns in the child and child-directed adult data might be indicative of a difference in the default structure that speakers of these languages employ to express the absence of countable entities. That is, where Afrikaans speakers prefer *nie 'n* + count noun, Dutch speakers prefer *geen* + count noun. This would be significant in the

acquisition context as (i) this structure is required to interact about individuatable entities, which are the focus of much early interaction (Gentner & Boroditsky 2001, Ferguson & Waxman 2017) and (ii) different default patterns in this domain would mean that Afrikaans children hear fewer instances of *geen* in this key context than their Dutch counterparts. That the adults in the *NWU-Kommentaarkorpus* should be using *nie 'n* 10 times as frequently as the *CGN*-adults is therefore highly significant.

As was the case with the comparative *geen* investigation, closer consideration of the *nie 'n/niet een* (NEG + INDEF ART) data allows us to begin to form a more articulated picture of what underlies the quantitative facts. Space considerations preclude more than a cursory discussion of some striking skewings, but we highlight 4 here to give a sense of the extent to which Afrikaans *nie 'n* has encroached on the domain of Dutch *geen*. Before enumerating these cases, though, it is worth noting that the domain of Dutch *geen* is limited to begin with: unlike *niet* ('not'), which can negate elements of many categories, including definite nouns, Dutch *geen* only negates indefinites and numerals (Blok et al. 2017); even here, though, *niet* is available, as we will discuss.

To demonstrate how different the distribution of Dutch and Afrikaans NEGATOR+INDEFINITE ARTICLE is, it is useful to consider contexts in which *nie 'n* is particularly frequent in Afrikaans, but only infrequently attested in Dutch. Our corpus investigation revealed copula (9), possessive (10), conditional (11) and imperative (12) structures clearly to fall into this category.[12] The Dutch counterparts in each case reflect the translations of these structures that two native-speaker linguists independently offered as "natural translations", taking into account the context of the target-structure:

9	*a.*	*Afr*	*Ek*	*is*	***nie***	***'n***	*onderwyser*	*nie.*	
			I	is	not	a	teacher	POL	
			'I am not a teacher.'						(*NWU-Kommentaarkorpus*)
	b.	*Du*	*Ik*	*ben*	***geen***	*leraar.*			
			I	am	no	teacher			
			'I am not a teacher.'						
10	*a.*	*Afr*	*Ek*	*het*	***nie***	***'n***	*kans*	*nie.*	
			I	have	not	a	chance	POL	
			'I don't have a chance.'						(*NWU-Kommentaarkorpus*)

[12] The range of details that would need to be controlled to obtain meaningful comparative figures extends beyond what was realistic for this initial exploratory study. We therefore leave these aside here.

b. Du *Ik heb **geen** kans.*
I have no chance
'I have no chance.'

11 a. Afr *As daar **nie** **'n** universiteit naby was waar …*
if there not a university nearby was where
'If there was no nearby university where …' (*NWU-Kommentaarkorpus*)

b. Du *Als er **geen** universiteit in de buurt was …*
if there no university in the neighbourhood was
'If there was no university in the area …'

12 a. Afr ***Moenie** **'n** geregsdienaar word nie*
must.not a bailiff become POL
'Don't become a bailiff!' (NWU-Kommentaarkorpus)

b. Du *Word **geen** **deurwaarder**!*
become no bailiff
'Don't become a bailiff!'

What (9-12) suggest, then, is that there is indeed justification for the idea that *nie 'n* has encroached on domains where Dutch speakers systematically opt for *geen*. Importantly, *geen* is also possible in all but the imperative contexts given above (see section 4 for further discussion); replacing *nie 'n* with *geen*, however, tends to produce structures that are marked in some way. Consider (13 – 14) below:

13 Afr *Ek is **geen** onderwyser nie.*
I is no teacher POL
'I'm no teacher.'

14 Afr *Ek het **GEEN** kans (nie).* [13]
I have no chance POL
'I have NO chance.'

[13] Final *nie* is often dropped in structures like this, where the final constituent (here: *geen kans*) is negative. Consider (i) - (iii) from the *NWU-Kommentaarkorpus*:

(i) *Die gewone ou het **geen** **kans**.*
the ordinary guy have no chance
'The ordinary guy has no chance.'

(ii) *Het die Afrikaanssprekende dan **geen** **regte**?*
have the Afrikaans-speaking then no rights
'Do Afrikaans speakers have no rights then?'

(iii) *…en dit dien dikwels geen **werklike** **doel**.*
and it serve often no real purpose
'…and often it serves no real purpose.'

The example in (13), for example, cannot be interpreted as a neutral negative statement regarding one's profession; it most naturally leads onto a *maar* ('but')-continuation, just like its English counterpart: *I'm no teacher, but you can't teach syntax that way.* Likewise, the neutrally stressed example in (14) carries primary stress on *geen* and corresponds to emphatic *Ek het nie 'n KANS nie*, meaning 'I don't have any chance at all'.[14]

This is significant as the same markedness effect often seems to be in play for Dutch *niet een* – that is, *niet een*, like Afrikaans *geen,* carries some additional meaning. Parallelling the *geen onderwyser*-observation above, Donaldson (2017, 378), for example, notes that *niet een* readily introduces a contrast-oriented continuation, as in:

15	*Du*	*Ik*	*heb*	***niet***	*in*	***een***	*jeugdherberg*	*gelogeerd*	*maar*	*in*	*een*	*pension.*
		I	have	not	in	a	youth-hostel	stayed	but	in	a	guest-house
		'I didn't stay in a youth-hostel, but in a guest-house.'										

For this same reason, we would expect *niet een* to be impossible in conditional antecedents (**als er niet een Universiteit in de buurt was …*), which consulted native-speakers indicate to be correct.

Niet een and *nie 'n* thus seem to distribute very differently in Dutch and Afrikaans. There are various indications that *nie 'n* has encroached on neutral domains associated with *geen* in Dutch, whereas this does not seem true for *niet een*: the latter seems to have retained its marked functions in the domain of indefinites.

Having set out the findings of our exploratory corpus investigations, we now consider how the patterns that have emerged in the Afrikaans and Dutch data may facilitate insight into the timing asymmetry between the acquisition of Afrikaans *geen* relative to Dutch *geen* reported in section 2, and also where the difference may have originated.

4 Discussion and conclusion

Based on our preliminary investigation of adult speech, then, it seems that there may be very significant differences in the distribution of *geen* and *niet een/nie 'n* in Dutch and Afrikaans. Contrary to what one might have expected, given the findings of our child-(directed) language corpus study, Afrikaans *geen* is strongly attested in adult output. Its distribution is rather

[14] The English translations of possessive (1-2) point to a similar difference: *I don't have a tennis racque*t is neutral, whereas *I have no tennis racquet* is marked. See section 4 for a brief further comment on the significance of the parallel with English.

different to that of Dutch *geen*, however, with some collocations having become much stronger than in Dutch (recall, *geen mens* and the *geen* + NI collocations, for example), and other specialised functions having been lost (*geen* as the specialised negation form for indefinites and numerals[15], for example). The latter development appears to go hand-in-hand with the remarkable rise in the use of the NEGATOR+INDEFINITE ARTICLE structures in count-noun contexts in Afrikaans. Where *geen* is the default/neutral negator with both indefinite count- and mass-nouns in Dutch, *nie 'n* appears to be the unmarked count-noun form in Afrikaans. Furthermore, we have also registered the observation that *geen* may be losing ground to *niks* ('nothing') in mass contexts, particularly in colloquial registers of the kind children may be exposed to. Since our investigation shows that they acquire *niks* early (see again footnote 3 of section 2.1 above), the *niks*+MASS NOUN input may be particularly significant, providing the template for neutral rather than emphatic use of this pattern by child acquirers.

Considering our central count-noun-centred findings from a child-acquisition perspective, the reason for the NEGATOR+INDEFINITE ARTICLE discrepancy between Dutch and Afrikaans seems clear: *niet een* is less commonly used by adults in child-directed communication because this is a marked alternative to default *geen* in indefinite contexts; by contrast, it is common in Afrikaans because *nie 'n* has replaced *geen* as the default negation element in indefinite count contexts. This latter fact, in turn, has implications for Afrikaans children's ability to acquire *geen*: although not uncontroversial (see Waxman et al. 2013 for one review), there is a widespread perspective among acquisitionists that the successful early acquisition of nouns at least partly piggy-backs on child-acquirers' interest in physical objects and their "labels". To the extent that this is true, we expect count nouns to feature prominently in child(-directed) speech. The loss of *geen* as the default negation element in this context in Afrikaans is therefore expected to have consequences for the ease with which acquirers are able to

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[15] (i) illustrates the use of *geen* with numerals in Dutch, and (ii) the corresponding, obligatorily *nie*-requiring structure in Afrikaans:

(i) *Dat zijn **geen** 30 mensen!*
those are no 30 people
'That's not 30 people!'

(ii) *Dit is **nie** 30 mense nie!*
that is not 30 people POL
'That's not 30 people!'

Interestingly, *geen* and both a reduced *g'n* and a reinforced *G'N* can combine with numerals. These are all discourse-marked uses, however, which Biberauer (2009, 2015) argues to have arisen as a result of "recycling" of the no-longer-neutral *geen* (see also Huddlestone 2010).

(iii) *Dis **geen/g'n** 30 mense nie!*
that's no 30 people POL
Those aren't 30 people. (I disagree with a prior assessment on this)'

(ii) *Dis **G'N** 30 mense (nie)!*
that's NO 30 people POL
'Those are NO WAY 30 people!'

acquire *geen*. By the same token, the presence of *nie 'n*-structures in this context leads us to expect children to acquire the *nie 'n*-usage early, as is indeed observed to be the case. Similarly, the marked nature of the same structure in Dutch allows us to understand why Dutch acquirers lag behind their Afrikaans counterparts in this respect.

Our investigation, then, allows us – at least partly – to understand the acquisition asymmetry between Dutch and Afrikaans: although *geen* and very similar NEGATOR+INDEFINITE ARTICLE structures are part of the grammars of both languages, the grammatical place of these components in the two languages is not the same. As the Dutch pattern is essentially the same as the German one – with *kein* patterning like *geen* and *nicht ein* being restricted in similar ways to *niet een* [16]– it is reasonable to conclude that the difference between Dutch and Afrikaans is the result of a change that has happened in Afrikaans.[17] The fact that Afrikaans is a contact variety *par excellence* (see i.a. Ponelis 1993, Deumert 2004, and the work of den Besten, collected in van der Wouden 2012) reinforces the plausibility of this conclusion, contact being a known factor in language change (Weinreich 1953). We therefore conclude this paper by speculating on the possible origins of this negation-related difference between Dutch and Afrikaans.

A candidate that suggests itself very strongly is the Afrikaans imperative, in particular the negative imperative. While Dutch imperatives are consistently verb-initial, as in (16), this is only true for the Afrikaans positive imperative (17a); the negative imperative is an innovated structure (likely the result of convergent contact and acquisition factors; Ponelis 1993, van Kampen 2007) introduced by the prohibitive element *moenie* ('don't';17b):

16	*a.*	*Du*	*Eet*	*een*	*appel!*
			eat	an	apple
			'Eat an apple!'		
	b.	*Du*	*Eet*	***geen***	*appel!*

[16] This observation rests on conversations with translators between German and Dutch, with native-speaker linguists of one of these languages who also know the other well, and with German teachers and lecturers. They all confirm that *kein* in German as it is standardly spoken behaves, in respect of the properties at issue in this paper, like Dutch.

[17] As a reviewer points out, it is, in principle, possible that Afrikaans differs from Dutch and German because the latter two underwent a change that did not take place in Afrikaans, possibly as the result of some shared European influence. This is, of course, logically correct. In advance of the comparative diachronic work that would be required to conclusively establish the facts, however, we would like to invite readers to consider the explanatory efficacy of the specifically imperative-centred account we outline here. It rests on a known innovation (the rise of a new negative imperative pattern in Afrikaans and English) which will necessarily affect the distribution of negative articles like *geen/kein*, plausibly producing the kind of distribution we have discussed for Afrikaans in this paper.

eat no apple
'Don't eat an apple!'

17 a. Afr *Eet 'n appel!*
eat an apple
'Eat an apple!'

b. Afr ***Moenie*** *'n appel eet nie!*
must.not an apple eat POL
'Don't eat an apple!'

As the contrast between (16b) and (17b) clearly shows, the requirement that Afrikaans negative imperatives be *moenie*-initial[18] has the consequence that an indefinite object is negated via the *nie 'n*-pattern rather than the *geen*-pattern. *Moenie* ***geen*** *appel eet nie!* is possible, but this would be a double negation structure meaning 'Don't eat no apple!', i.e. 'Do eat an apple (at least one)!'. Given the frequency and salience of (modulated) imperative structures in child-directed speech (see i.a. Newport, Gleitman & Gleitman 1977; Cameron-Faulkner, Lieven & Tomasello 2003; Barbosa, Cardoso-Martins & Echols, 2016) – particularly negative directives – it seems plausible that this difference between Afrikaans and Dutch may have served as the starting point for the change in the relative distribution of *geen* and NEGATOR+INDEFINITE ARTICLE (see Biberauer 2020 for more detailed argumentation).

English, too, may have played a role as a long-term contact language of Afrikaans (see i.a. Donaldson 1988 and van Rooy 2017): negative imperatives in this language also feature a prohibitive element – *don't* or *do not* – which was not present in Old and Middle English (compare Early Modern English *feare ye nott them which kyll the body* 'Don't fear those who destroy the body'; Han 1998, 73). As is partly clear from some of the translations in this paper, English also employs NEGATOR+INDEFINITE ARTICLE in preference to *no* in many cases: consider again (18/19a) vs (18/19b):

18 a. *I'm* ***not*** *a teacher.*
b. *I'm* ***no*** *teacher (but you can't teach syntax that way).*

19 a. *I* ***don't*** *have a chance.*
b. *I have* ***no*** *chance (absolutely none!).*

[18] More precisely, negative imperatives require either *moenie* or the separated modal and negation elements *moet* and *nie*, the latter being obligatory for modulated imperatives like (i), for example:

(i) ***Moet*** *asseblief* ***nie*** *'n appel eet nie!*
must please not an apple eat POL
'Please don't eat an apple!'

That is, there does appear to be a connection between the innovation of a prohibitive marker and the reorganisation of the negative indefinite system. We leave the details to future research.

Here we conclude by commenting on a more general perspective that emerges from this study, namely how important it is when working on (closely) related languages to be alert to the fact that surface similarities and apparently shared elements may be obscuring fascinating and potentially very illuminating variation. Here we have seen another respect in which Afrikaans seems to be rather less similar to Dutch than appearances might initially suggest.

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