

# Univerbation in Afrikaans verbal diminutives

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## Abstract

This paper concerns the verbal diminutive suffixes *-el* and *-er* in Afrikaans. In previous work (Authors To appear), these suffixes have been analyzed on par with their Dutch counterparts. In this paper we present the results of a nonsense word experiment on these suffixes in Afrikaans (94 participants) and Dutch (242 participants). The results show that the Afrikaans participants significantly underperform in guessing the meaning of these suffixes compared to the Dutch participants. We take this to mean that the underlying structure of verbs containing these suffixes is different in the two languages. Based on the three-way division of affix types of Creemers et al. (2018), we follow Authors (To appear)’s analysis of the Dutch *-el* and *-er* suffixes as being level Ia suffixes, i.e. suffixes that appear right above the stem they attach to. For Afrikaans, however, we propose that *-el* and *-er* have lost their suffixal status, and have undergone univerbation with the stem.

**Keywords:** verbal diminutive suffixes, roots, univerbation, Afrikaans

## 1 Introduction

This paper concerns the verbal diminutive suffixes *-el* and *-er* in Afrikaans – two suffixes that are present in Germanic more generally. The *-el* suffix has been studied for German (Weidhaas and Schmid 2015) and Dutch (Audring and Jackendoff 2017), and recently also comparatively for Dutch and Afrikaans in parallel with the *-er* suffix (Authors To appear). According to these studies, the *-el/-er* suffixes indicate iteration and/or attenuation, and the verbs containing these suffixes have hence been referred to as ‘verbal diminutives’. In (1)-(4) examples are given for Afrikaans and Dutch, respectively. In (1) and (2), the events of bumping up and down and flickering can be interpreted as being repetitive (i.e. iterative) events, while the events in (3) and (4) can be considered to be of low intensity (i.e. attenuated).

- (1) *hobbel<sup>1</sup>/hobbelen* ‘to bump up and down’
- (2) *blikker/flikkeren* ‘to flicker’
- (3) *doesel/doezelen* ‘to sleep lightly’
- (4) *knapper/knapperen* ‘to crackle’

In previous work (Authors To appear), we have claimed that the Afrikaans and Dutch *-el* and *-er* suffixes are level Ia suffixes, based on the typology of Germanic affixes of Creemers et al. (2018). According to their analysis, which will be discussed in section 2, level Ia affixes are roots that are positioned closest to the morphological stem. As a response to our previous work, in this paper, we present the results of a nonsense word experiment, which we used to test speakers’ awareness of the meaning

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<sup>1</sup>In Afrikaans, there is no infinitive marker *-en*, meaning that the infinite form of the verb is similar to the indicative.

of the *-el* and *-er* suffixes. The results indicate that, in contrast to Dutch speakers, Afrikaans speakers do not seem to recognize the *-el* and *-er* suffixes in Afrikaans as real suffixes any more.

The goal of this paper is twofold. First, we present experimental results that confirm the intuition that the *-el* and *-er* suffixes have lost their suffixal status in Afrikaans. Second, we discuss the theoretical implications of this claim, where we state that these suffixes in Afrikaans have undergone univerbation with the lexical stem they attach to, that is, with the lexical root. The paper is structured as follows. In section 2 we provide an overview of Creemers et al. (2018)’s typology of Germanic affixes on which we based our previous claim that Afrikaans and Dutch *-el/-er* suffixes are level Ia suffixes. In section 3 we present the methodology of the nonsense word experiment we conducted, as well as the results of this experiment. We present our theoretical analysis of the data in section 4, and in section 5, we discuss the implications of our results and theoretical analysis from a broader perspective, and conclude.

## 2 Typology of Germanic affixes

The typology of Germanic affixes of Creemers et al. (2018) extends the traditional two-way classification of level I and level II affixes (Siegel 1974, Kiparsky 1982, Selkirk 1982) to include a subdivision of level I affixes. They propose this extra subdivision because of categorial flexibility, that is, the observation that some affixes are output flexible and can therefore create more than one category (e.g. both verbs and nouns). The properties associated with each affix level are given in Table 1.

Properties	Level I		Level II
	Level Ia	Level Ib	
Can affect stress pattern?	YES	YES	NO
Categorially flexible?	YES	NO	NO
Can attach to a root?	YES	YES	NO
Relative position wrt stem	1	2	3

Table 1: Properties of affixes (Creemers et al. 2018:50)

As an illustration, let us now consider an example for each affix type.<sup>2</sup> The Dutch affixes *-iek*, *-(e)lijk*, and *-heid* represent affixes from each of these levels, respectively. Firstly, the suffix *-iek* is classed as a level Ia suffix by Creemers et al. (2018). This can be seen in that this suffix can affect the stress pattern as illustrated in example (5). In this example, the stress of the noun *canon* ‘canon’ falls on the first syllable, while after suffixation with *-iek* the stress shifts to the suffix itself. Secondly, as noted in Table 1, level Ia suffixes are categorially flexible, which can be seen by the fact that the suffix *-iek* can derive a noun, an adjective, or a word that could be both a noun or an adjective. This second property is illustrated by the examples in (6). The third property about being able to attach to roots is also illustrated (6a) and (6c): both *pan-* and *ant-* are non-lexical roots.

(5) *cánon* ‘canon’ - *canoníék* ‘canonical’

(6) a. *pan-iek* ‘panic’ (noun)

b. *canon-iek* ‘canonical’ (adjective)

c. *ant-iek* ‘antique’ (noun or adjective)

<sup>2</sup>The Dutch examples in this section, except for 8c, are all taken from Creemers et al. (2018).

The level Ib suffix *-(e)lijk* behaves similarly to level Ia suffixes in being stress-shifting. This is illustrated by example (7) in which the stress of the verb *aanhoud* ‘continue’ falls on the first syllable, and after suffixation with *-(e)lijk*, the stress shifts to the second syllable. The category that distinguishes level Ib suffixes from level Ia suffixes – being categorially rigid – can be seen in (8) where suffixation with *-(e)lijk* always leads to the creation of an adjective. Level Ib suffixes can also attach to non-lexical roots, as is illustrated by *-(e)lijk* attaching to the non-lexical root *vro-* in (8c).

(7) *áánhoud* ‘continue’ - *aanhóúdelijk* ‘continuously’

- (8) a. *aanhoud-elijk* ‘continuously’ (adjective)  
 b. *vijand-elijk* ‘hostile’ (adjective)  
 c. *vro-lijk* ‘merry’ (adjective)

Lastly, the level II suffix *-heid* illustrates that affixes of this type are not stress-shifting. In example (9), the stress is on the second syllable of the adjective *beleefd* ‘polite’, and suffixation of *-heid* does not affect the position of the stress. Secondly, the fact that level II suffixes are categorially rigid is shown in (10): all the output forms are nouns. These examples also illustrate the third property of level II suffixes (i.e. not being able to attach to roots) as all the stems are lexical items on their own.

(9) *belééfd* ‘polite’ - *belééfdheid* ‘politeness’

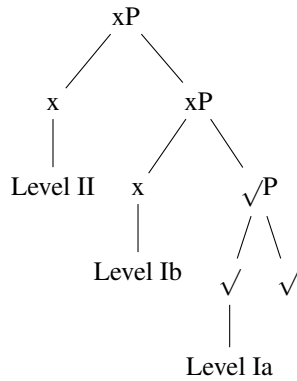
- (10) a. *schoon-heid* ‘beauty’ (noun)  
 b. *scheef-heid* ‘flexure’ (noun)  
 c. *beleefd-heid* ‘politeness’ (noun)

The fourth property of these different suffix types is concerned with their position with regard to the stem. As seen in Table 1, level Ia affixes (e.g. *-iek*) fill the first position after the stem, level Ib affixes (e.g. *-(e)lijk*), the second position, and level II affixes (e.g. *-heid*) the third, or most peripheral position. This is illustrated in (11) below, where the above-mentioned order of suffixes leads to a grammatical result, while any other ordering of these suffixes is ungrammatical.

- (11) a. *publ-iek-elijk-heid* ‘state of being public’  
 b. \**publ-heid-iek-elijk*  
 c. \**publ-iek-heid-elijk*

(Creemers et al. 2018:68) propose the following structure (12) to account for the facts mentioned above. They argue that level Ia affixes are categorially flexible because they are roots, while level Ib and level II affixes are categorially rigid because they spell out categorial heads. The ordering differences are accounted for by proposing that level Ia affixes are roots and therefore are closest to the stem; level Ib affixes can attach to roots and therefore occur just outside level Ia affixes, while level II affixes can only select categorised material causing them to occur most peripherally.

(12)



For Dutch, Creemers et al. (2018) have argued that there are no verbal suffixes with level Ia status. However, they did not investigate the *-el* and *-er* suffixes in their paper. In Authors (To appear) we have proposed that the Dutch and Afrikaans *-el* and *-er* suffixes fill this typological gap, in that they are of level Ia status. This claim is based on the properties of affixes mentioned above. The first property relating to stress-shifting could not be tested as all of the items in our dataset were monosyllabic and thus, stress-shift could only target the suffix itself. Considering the fact that the vowel in the *-el/-er* suffixes is a schwa, these suffixes cannot bear stress. Secondly, we have shown that suffixation with the *-el/-er* suffixes can lead to the creation of both nouns and verbs, making them categorially flexible. This is a definitive feature of level Ia suffixes. The third property is also clear in our data, as the *-el/-er* suffixes can attach to roots. Lastly, we considered the order of these suffixes with relation to the stem by placing them in a word that contains a level Ib suffix (*-ig* for Dutch and *-(e)(r)ig* for Afrikaans) as well. In these cases, the *-el/-er* suffixes always occurred closest to the stem, with the reverse order being ungrammatical. This property is illustrated in (13) and (14).

(13) *hakk-el-ig* / \**hakk-ig-el* ‘stuttering’ (Dutch)

(14) *hakk-el-rig* / \**hakk-rig-el* ‘stuttering’ (Afrikaans)

Even though these properties suggest the level Ia status of the *-el* and *-er* suffixes in Dutch and Afrikaans, the native speaker intuition of one of the authors was that there was something different about these elements in the two languages and that their meaning of iteration/attenuation was not that clear in Afrikaans as compared to Dutch. This intuition led us to explore the nature of these suffixes even further and conduct a nonsense word experiment, which we will discuss in the next section.

### 3 The experiment

#### 3.1 Methodology

In order to investigate speakers’ awareness of the meaning of the *-el* and *-er* suffixes, we set up a nonsense word experiment. Our main assumption was that if speakers score very poorly in guessing the meaning of the suffixes in comparison to that of more productive affixes, this might indicate that these suffixes have lost their suffixal status in the given language. To test the speakers’ awareness of the suffixes’ meaning, we created two online experiments, one for Dutch and one for Afrikaans, using the software Qualtrics<sup>©</sup>.

For the main suffixes under investigation, *-el* and *-er*, we invented five nonsense verbs containing the suffix. The proposed meaning of the nonsense verbs' bases were all of a type of verbal semantics that would be compatible with the addition of iterative and/or attenuative meaning (e.g. movement/eating/sound-related meanings). As a control group, we invented two nonsense verbs for a set of five verbal prefixes, which at least for Dutch are taken to be productive (De Haas & Trommelen 1993). These verbal prefixes were: *ver-*, *be-*, *ont-*, *her-*, and *mis-*.<sup>3</sup> For each nonsense verb, the participant was asked: 'Imagine X means 'to X'. What do you think *X-suffix* means?' So a concrete test item would be: 'Imagine *nap* means 'to eat'. What do you think *napper* means?' The participants were asked to type down their answer in a white box, and were encouraged to leave a comment about their reply if relevant. Prior to the task, they were instructed on how to execute the task. Upon finishing the task, they filled in a short background questionnaire that controlled for their language background, age, et cetera. The experiment was completed by 242 native speakers of Dutch and 94 native speakers of Afrikaans.<sup>4</sup>

## 3.2 Data preparation

Before we could analyse the results of the experiment, we had to manually annotate the answers that the participants had filled in the white boxes. As each co-author of this paper is a native speaker of either Dutch or Afrikaans, we could do this task ourselves. Two factors were taken into account in the annotation for a given answer as being 'correct' or 'incorrect', namely (i) whether the informant correctly guessed that the nonsense verb containing the affix was still a verb (i.e. that they realized that attaching the affix did not alter the verbal status of the base), and (ii) whether their description of the meaning of the nonsense verb contained the semantics of the given affix. As for this second factor, for the *-el* and *-er* suffixes we worked with meanings related to iteration and/or attenuation. For the verbal prefixes, we based ourselves on the description of the semantics of these prefixes as given in De Haas and Trommelen (1993).

## 3.3 Results

Let us start by giving an overview of the averages of correct answers (in percentages) per affix per language. This overview is given in Table 2.

The following observations can be made from this table. First, it is clear that the Dutch participants significantly outperform the Afrikaans participants on guessing the meaning of the *-el* and *-er* nonsense verbs (respectively 63,1% and 67,0 % correct versus 36,8% and 26,6% correct). Second, overall the Afrikaans participants perform worse on the task compared to their Dutch peers, especially when it comes to the answers to the nonsense verbs containing the prefixes *be-* and *ver-*. We will return to this unexpected finding in the discussion and conclusion section. Third, for both languages, the scores on the *-el* and *-er* suffixes are lower than those on the control group prefixes, however, more so in the case of Afrikaans compared to the case of Dutch. That speakers perform less well on the *-el* and *-er* suffixes is not unexpected, as they are much less productive than the control group prefixes, and speakers therefore have less evidence for their semantics in their daily linguistic input.

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<sup>3</sup>At first sight, it would be more logical to take other verbal suffixes as a control group, rather than verbal prefixes. However, there are only two such suffixes in Dutch and Afrikaans, namely *-ig* and *-eer*. *-ig* is also a completely unproductive suffix in both languages, whose meaning is very untransparent, which means it would be a rather bad candidate as a control. As *-eer* was thus the only possible candidate to use in a control group, we decided to just focus on a set of productive verbal prefixes instead.

<sup>4</sup>The fact that fewer Afrikaans speakers completed the questionnaire compared to Dutch is unsurprising as there are also fewer native speakers to begin with (25 million for Dutch versus 7 million for Afrikaans). Furthermore, access to internet to complete an online questionnaire is more limited in South Africa as compared to the Netherlands and Flanders. Finally, speakers of Afrikaans are less used to filling in language questionnaires than Netherlandic and Belgian Dutch speakers.

	Dutch	Afrikaans
	<i>average correct (%)</i>	<i>average correct (%)</i>
<i>-el</i>	63,1	36,8
<i>-er</i>	67,0	26,6
<i>be-</i>	79,8	42,6
<i>ver-</i>	66,9	45,8
<i>ont-</i>	89,3	68,6
<i>her-</i>	77,4	70,8
<i>mis-</i>	78,4	64,4

Table 2: Average of correct answers per affix per language

Most prefixes are furthermore semantically more transparent than the *-el* and *-er* suffixes, which contain a range of meanings connected to iteration and attenuation. For example, the semantics of *her-* (again) and of *mis-* (wrongly) are much more transparent. However, in the case of Afrikaans, speakers perform really poorly on the *-el* and *-er* suffixes, which cannot just be explained by unproductivity and less transparent semantics.<sup>5</sup> In the next section, we will build on this experimental finding to claim that these two suffixes have lost their suffixal status in Afrikaans.

Let us now focus on the percentage of speakers per number of correct answers for the *-el* and *-er* suffixes. Recall that for each suffix, five test items were used. This makes it interesting to see what the spread is of participants over the six logical possibilities, namely 0 correct answers, 1 correct answer, 2 correct answers, 3 correct answers, 4 correct answers, and 5 correct answers - per suffix. The data are given per language, for Dutch in Table 3 and for Afrikaans in Table 4.

Suffix	0	1	2	3	4	5
	<i>pp (%)</i>	<i>pp (%)</i>	<i>pp (%)</i>	<i>pp (%)</i>	<i>pp (%)</i>	<i>pp (%)</i>
<i>-el</i>	6,2	9,5	13,2	21,1	26,4	23,6
<i>-er</i>	6,2	6,2	12,8	23,1	26,4	25,2

Table 3: Percentage of participants (pp) per number of correct answers per suffix for Dutch

Suffix	0	1	2	3	4	5
	<i>pp (%)</i>	<i>pp (%)</i>	<i>pp (%)</i>	<i>pp (%)</i>	<i>pp (%)</i>	<i>pp (%)</i>
<i>-el</i>	28,7	23,4	22,3	13,8	6,4	5,3
<i>-er</i>	47,9	19,1	15,9	9,6	4,3	3,2

Table 4: Percentage of participants (pp) per number of correct answers per suffix for Afrikaans

Comparing these two tables, we can see that Dutch and Afrikaans participants show mirror images of each other. That is, whereas the majority of Dutch speakers are spread over 3, 4, and 5 correct answers, the majority of Afrikaans speakers are spread over 0, 1, and 2 correct answers. We take this as further evidence that these suffixes are not true suffixes in Afrikaans anymore; speakers cannot guess their meaning independently of the stem of the verb.<sup>6</sup>

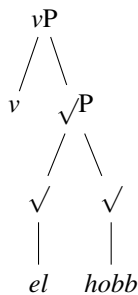
<sup>5</sup>Note that Afrikaans speakers perform even worse on the *-er* suffix (26,6%) than on the *-el* suffix (36,8%). This might be due to the fact that the verbal *-er* suffix is homophonous with the comparative *-er* suffix, which could have made the task harder for *-er* nonsense verbs than for the *-el* ones. Note also that this problem does not arise in Dutch, as Dutch has an infinitive marker, showing explicitly to the participants that the nonsense word is a verb, whereas Afrikaans does not have such a marker. Hence, the *-er* nonsense word could have been misinterpreted as the comparative form of a nonsense adjective.

<sup>6</sup>As for the groups of Afrikaans participants who did guess the meaning of 3, 4 or 5 nonsense *-el* or *-er* verbs correctly, we suspect that these participants have an above average linguistic awareness, possibly due to their type of education and/or profession. Unfortunately, we did not include questions related to

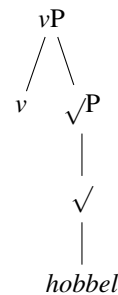
## 4 Theoretical analysis

As already mentioned in the previous section, we take the fact that the Afrikaans speakers perform so poorly in guessing the meaning of the *-el* and *-er* suffixes to mean that they have lost their suffixal status in the language. The Dutch speakers performed well in guessing the meaning of the suffixes, which we take to mean that our previous analysis of these suffixes as level Ia suffixes is the correct one (Authors To appear). Thus, for Dutch we argue that the *-el* and *-er* suffixes are categorially flexible suffixes, which means that these suffixes should be seen as roots rather than the exponence of a functional head (Creemers et al. 2018). For Afrikaans, however, we propose that all instances of *-el* and *-er* verbs are cases of univerbation. That is, we argue that, diachronically, the ‘real’ root (e.g. *hob* in *hobbel* ‘to bump up and down’) and the suffixal root (*-el* or *-er*) have fused, and are now stored as monomorphemic in the lexicon of Afrikaans speakers.<sup>7</sup> The difference in underlying structure between Dutch and Afrikaans *-el* and *-er* verbs is illustrated in the two treelets below: (15) illustrates the structure of the verbal stem *hobbel* in Dutch, and (16) the structure of the same verbal stem in Afrikaans.<sup>8</sup>

(15)



(16)



The phenomenon of univerbation, in which two morphemes get reanalyzed as monomorphemic, has been discussed extensively from a more general diachronic perspective (Himmelmann 2004, Brinton and Traugott 2005), but never from a generative perspective. As we take the latter perspective here, it is interesting to reflect a moment on what our analysis means for a potential generative account for univerbation phenomena. Within the generative framework, it is often assumed that lexical items should be seen as featureless roots in the lexicon, whereas functional items should be seen as a (bundle of) functional feature(s) (Halle and Marantz 1993, Harley and Noyer 1999, Borer 2005). Creemers et al. (2018), building on De Belder (2011) and Lowenstamm (2014), have argued that some derivational affixes should rather be seen as roots than as functional heads, namely the level Ia affixes. If we assume that the univerbation in Afrikaans took place based on the proposed underlying structure for Dutch *-el* and *-er* verbs as given in (15), this means that univerbation has taken place between two roots. Keeping the strict dichotomy between featureless roots and functional features in the lexicon, this also means that we predict univerbation to be only possible between (i) a lexical item (root) and a level Ia affix (i.e. as the case of *-el* and *-er* verbs in Afrikaans), and (ii) between two functional heads (e.g. as in *each other* in English, see Haas (2007) for discussion).

type of education and profession in the background questionnaire, which means we cannot check whether this assumption is correct. Future work might look into the effect of education and profession when it comes to a different performance in morphological decomposition.

<sup>7</sup>Note that an alternative possibility should be mentioned as well, namely that in the Cape Dutch pidgin stage of Afrikaans, Dutch *-el* and *-er* verbs were already reanalysed as monomorphemic, and directly stored as such in the lexicon of those speakers. A detailed diachronic investigation is needed in order to test which of the two analyses is the correct one. We leave this for future research.

<sup>8</sup>Note that in the treelet in (15), we combine the ‘real’ root and affixal root by letting the former project into a root projection. We only do this for ease of exposition, and do not take a stance here on the complex theoretical debate on how two roots are combined in syntax. See among others Zhang (2007), Harley (2009) and De Belder (2017) for relevant discussion.

Even though testing whether this prediction is indeed the case for all univertation phenomena as found in the literature is far beyond the scope of this paper, intuitively it does make sense that a lexical item could only absorb the meaning of an affix whose semantics is neither very transparent (e.g. has a wide range of meanings, or rather opaque semantics, as is the case with level Ia affixes), nor clearly functional. In future work, we hope to address this prediction in a systematic way.

Our analysis of Afrikaans *-el* and *-er* verbs as monomorphemic units containing a single root raises a potential issue when it comes to the complexity of the semantics of the newly formed root (e.g. *hobbel*). Within the generative framework, and in particular within the Distributed Morphology strand (Halle and Marantz 1993, Harley and Noyer 1999), the root is taken to be the barest form of semantics, namely an instantiation of a ‘pure concept’ (Harley (2009), see e.g. Acquaviva (2009) for discussion, and Alexiadou et al. (2014) and chapters therein). However, two remarks are in order here. First, the Afrikaans author of this paper has the intuition that the semantics of iteration and/or attenuation is much less prominent in the Afrikaans *-el* and *-er* verbs as compared to the Dutch ones, and her intuition is shared by other native speakers we have consulted. This means that the root semantics of these verbs would not be too complex in terms of something being a ‘pure concept’. Second, recent work on root semantics by Beavers and Koontz-Garboden (2020) shows that this semantics can be more complex than has been previously assumed. We hope to investigate the potential difference in semantics between the Dutch and Afrikaans *-el* and *-er* verbs and the implications of their differences in terms of root semantics in future work.

## 5 Discussion and conclusion

In this paper, we have presented data from a nonsense word experiment which we used to investigate Dutch and Afrikaans speakers’ awareness of the meaning of the verbal suffixes *-el* and *-er*. In previous work, we argued that in both languages, these verbal suffixes have the status of level Ia suffixes in terms of Creemers et al.’s (2018) three-way division of derivational morphology. However, the results of our experiment showed that the Afrikaans speakers perform very poorly in guessing these suffixes’ meaning, especially so compared to their Dutch peers, which we took to mean that in Afrikaans these suffixes have in fact lost their suffixal status. In the analysis section, we proposed that in Afrikaans, the lexical item in *-el* and *-er* verbs and the suffixes themselves have undergone univertation in an earlier stage of the language, which means that synchronically, these verbs are stored as monomorphemic units in the lexicon. Note that our data also point towards the correctness of Creemers et al. (2018)’s proposal for the existence of a level Ia class of affixes, at least from a generative perspective. Without this level, in which the affix is assumed to be a root, it would have been hard to account for the difference in underlying structure between Dutch and Afrikaans *-el* and *-er* verbs. That is, if we only had the classical two-way division between level I and level II affixes, the *-el* and *-er* would have been level I affixes, which before Creemers et al. have been assumed to be functional material. Functional material, such as functional features, can never fuse with a root, however, as this fusion would lead to a violation of the strict dichotomy between lexical items as featureless roots and functional items as (bundles of) functional features.

More generally, it looks like Afrikaans derivational morphology is less productive and more often univertized with the base, beyond just the *-el* and *-er* suffixes. Recall from subsection 3.3 that also on the verbal prefixes *be-* and *ver-*, the Afrikaans participants scored unexpectedly badly (respectively 42,6% correct and 45,8% correct, compared to Dutch 79,9% and 66,9%). Even though an in-depth analysis of this finding is left for future research, we did check whether these prefixes are possibly less productive in Afrikaans than in Dutch. We checked this by taking a random sample of 150 Dutch verbs containing the



*ver-* prefix, and a same sized sample for those containing *be-*, and we manually checked in the *Woordeboek vir die Afrikaanse Taal* ‘Dictionary for the Afrikaans language’ (online, accessed via Virtuele instituut vir Afrikaans, ViVA) whether these verbs also exist in Afrikaans. We found that out of the 150 Dutch *ver-* verbs, 75 are hardly ever used or sound archaic in Afrikaans, and out of the 150 Dutch *be-* verbs, this is so for 85 of the verbs in this language. These findings are thus an indication for *ver-* and *be-* to be less productive in Afrikaans than in Dutch, and potentially for them to have undergone univerbation with the lexical item they attach to as well. Future work should address the issue of morphological decomposition in Afrikaans complex verbs (and in extension, complex elements of all word classes) in comparison to Dutch in more detail. The fact that modern Afrikaans (partly) developed from pidgin varieties such as Cape Dutch pidgin (den Besten 2012), might have been an important factor in the synchronic possibility of less transparent or simply different derivational morphology compared to the modern variety of its superstrate language, modern Dutch.

Note also that this potential difference between Dutch and Afrikaans derivational morphology and the capacity of their native speakers to morphologically decompose complex elements fit with work that shows cross-linguistic differences in morphological decomposition and awareness. For instance, it has been shown for English (Rastle et al. 2000, Marslen-Wilson et al. 1994) and French (Longtin et al. 2003) that speakers in priming experiments do not show a priming effect with semantically opaque complex words. A priming effect is an effect of e.g. recognizing a semantically opaque complex word containing an affix faster when a semantically transparent complex word with that same affix has been shown right before. In other languages, however, such as Arabic (Boudelaa and Marslen-Wilson 2004), Hebrew (Feldman and Bentin (1994), Frost et al. (2000)), German (Smolka et al. 2009) and Dutch (Creemers 2020), speakers do show priming effects with semantically opaque words. As discussed in Creemers (2020), it has been argued that these cross-linguistic differences can be explained by the overall productivity of the morphological system of a given language (Smolka et al. 2009). In the case of Afrikaans, we know that the morphological system is less productive than that of Dutch, at the very least for the inflectional part of it, as Afrikaans shows hardly any inflection (Combrink 1990). This might in turn mean that Afrikaans language learners have a lower degree of morphological awareness in general, and therefore will not just assume a complex underlying structure for any bi- or multimorphemic word they encounter. Our results furthermore also relate to what has been found for complex latinate words in English, such as ‘successor’, ‘casualty’, et cetera, which have been argued to be stored as units in the lexicon (see Creemers (2020) for experimental evidence and extensive discussion). Just like the latinate words in English that came into the language via language contact and borrowing, the source of the Afrikaans *-el* and *-er* verbs will probably be found in an early stage of the development of Afrikaans, during which these verbs were borrowed from an earlier variety of Dutch. In parallel then to the latinate words in English, these verbs in Afrikaans are most likely stored as a unit.

Concluding, we hope to have shown that a different analysis of Dutch and Afrikaans *-el* and *-er* verbs is required, and that with our analysis of these verbs in the latter language within the generative framework, we have made interesting predictions regarding the phenomenon of univerbation, the semantics of roots, and the potential relation between a language’s morphological productivity and speakers’ awareness of morphological decomposition.

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