The influence of spelling conventions on perceived plurality in compounds
A comparison of Afrikaans and Dutch

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Dutch compounds with 'e' or 'en' as linking element between modifier and head were presented to mother tongue speakers of Afrikaans in an experimental setting that explored the possibility that these different spelling formats would suggest a singular or plural meaning of the modifier. The participants appeared to interpret 'en' in the linking element as an indication for singular, and 'e' as signifying plural. This outcome supported the findings in comparable studies on Dutch, which also revealed a tendency to understand the spelling of the linking schwa in relation to conventions for the spelling of the plural suffix. In Afrikaans the spelling of the plural forms is 'e', whereas in Dutch the spelling of plural forms is 'en'. This explains why the results of the Dutch and Afrikaans experiments, while using the same materials, are each other's mirror image.

1. Introduction

One of the most controversial spelling issues in the Netherlands and Belgium is the schwa that in many Dutch compounds links the left-hand part, the modifier, to the head on its right. This linking schwa is most often spelled as en (e.g. studentenbaan 'job for a student', berenvel 'skin of a bear') but in a minority of cases as e (e.g. secretaressebaan 'job for a secretary', beresterk 'strong as a bear, very strong'). The Dutch media never tire of debating the spelling rules that deal with this linking schwa, which many condemn as unclear, too difficult to learn and too hard to apply.

The debate reached a new climax when in August 2006 a number of revised spelling rules officially took effect as they were finally published in a new edition of the official Woordenlijst Nederlandse taal, better known as the Groene Boekje 'Green Booklet' (Woordenlijst Nederlandse Taal 2005). The primary bone of contention became the decision that was taken on an apparently insignificant subrule, the so-called flora-fauna subrule. According to this rule, which had been newly
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introduced in 1995 and was never properly motivated, a linking schwa was spelled e whenever a compound's modifier referred to an animal while both the head on its own and the compound as a whole designated plants, e.g. paardenbloem 'dandelion' and kattekruid 'cat mint'. How plant-designating compounds should be spelled whose modifiers and heads both refer to animals or parts thereof, remained unclear, e.g. leeuwe(n)bekje 'snapdragon', lit. 'lion's mouth' and katte(n)staart 'purple loosestrife', lit. 'cat's tail'.

Because of the confusion it caused, leading even to mistakes outside the group of flora–fauna compounds, the flora–fauna subrule was abandoned in its entirety in 2006. From then on, it would be paardenbloem, kattenkruid, leeuwenbekje and kattenstaart.

1.1 Semantics and morphology

This decision sparked a revival of the fierce debates of 1995, when the long-standing rules for spelling the linking schwa in compounds had been changed radically. According to both the first official Dutch spelling dictionary, issued in 1866, and the revised dictionary of 1954 the writer's choice between e and en depended primarily, but not exclusively, on semantics, specifically the perceived number of the modifier. When the modifier was generally thought of as referring to a singular entity, as in e.g. vlaggestok 'flag-staff' or kersepit 'cherry stone', the linking schwa should be rendered as e, and when the modifier was generally felt to denote a plural, it had to be en, as in compounds like boekenrek 'book rack' and kersenboom 'cherry tree'. With the new spelling law of 1995, however, the Dutch and the Flemish governments abandoned the idea of number as a guiding principle, partly because language users did not always agree on the number properties of particular cases, some spelling a compound with e while others insisted on writing with en.

In 1995 it was decided that no longer semantics, but morphology would be the base for the spelling of the linking schwa. The linking schwa should virtually invariably be spelled en, yielding vlaggenstok and kersenspit as well as the familiar boekenrek and kersenboom. However, certain subrules were added, some of which once more drew on semantics and sprouted exceptions which many language users found hard to understand and apply. Thus, people were supposed to write maneschijn 'moon shine' and Koninginnedag 'Queen's day' on grounds of there being only one moon and only one (Dutch) queen. Hazewind 'whippet', lit. 'hare-wind', was deemed exceptional because of difficulties in determining the precise meanings of the constituent parts. Futhermore, beresterk 'strong as a bear, very strong' remained with just e because its modifier has an intensifying meaning and the word as a whole is an adjective, aspergesoep 'asparagus soup' was excepted because the plural of asperge ends in s, and secretaressebaan 'job for a
secretary' because both secretaresse and secretaressen may be used as the plural form of secretresse. At the same time, however, studentenbaan 'job for a student' and studentenzwangerschap 'student's pregnancy' were not considered exceptions, in spite of the existence of both the plural forms studentes for female students, and studenten for male students as well as students in general, irrespective of gender.

Given this array of exceptions, it is no great wonder that many felt confused by the new rules and still do so. The fact that the rules of 1995 reversed certain changes that had been made in 1954, did nothing to mitigate this. For instance, until 1954 'doghouse' was spelled hondenhok and 'gibberish', literally 'fools talk', was spelled zotteklap. As of 1954, however, the correct forms were hondehok and zottenklap, respectively, only to revert to hondenhok and zotteklap once more in 1995 (see Neijt 2001: 216–218; Neijt, Schreuder and Baayen 2004: 134).

In 2006, it wasn't only individuals that aired their dissatisfaction with the new rules. A number of newspapers and other media institutions decided to oppose the official rules in the 2005 version of the Green Booklet. As a result, by the end of 2006, they supported the publication of their own standard, which they called the Witte Boekje 'White Booklet' (Genootschap Onze Taal & Daniëls, 2006). Among other things it recommends that writers not try and strictly follow the official rules for choosing between e and en in compounds. Rather, they should obey their own intuitions as to what would be most appropriate in a given case.

Reasonable as the freedom that the White Booklet offers may seem, its true consequences still need to be assessed through research. One important question that goes as yet unanswered, is how the use of e or en in a compound affects the reader's interpretation. Should readers identify the correct meanings of the parts of compounds more easily whenever a linking schwa is spelled en, then this would argue in favour of the official basic spelling rule (use en unless ...). If, on the other hand, the presence or absence of n proved to have no effect on readers, then that would bolster the case for freedom of choice.

1.2 Dutch and Afrikaans

This study tries to shed some light on the matter, focusing on differences between the orthography of the linking element schwa and its interpretation in two closely related languages, Dutch and Afrikaans. Afrikaans, one of the eleven official languages in present day South Africa, can be considered a daughter language of Dutch. It developed out of 17th century urban dialects of Dutch, under the influence of indigenous African languages, Malay-Portuguese and English, as well as a Dutch-based pidgin spoken by the non-white inhabitants of the early Cape (about the origins of Afrikaans see, for instance, Donaldson (1993), Booij (1995), and Hinskens (2002)).
As in Dutch, *schwa* functions in Afrikaans both as plural suffix and as a linking element in compounds, although the latter occurs less frequently. In Afrikaans both *schwa* as plural suffix and *schwa* as linking element are invariably spelled *e*. As discussed above, in Dutch the plural suffix *schwa* is always spelled *en*, and the linking *schwa* is spelled *en* in the majority of cases. Thus, Afrikaans always uses *e* in the relevant spelling domain and Dutch almost always, but not quite, *en*.

To give some examples, Dutch and Afrikaans respectively write *vrouwen* and *vroue* 'women', *vrouwendag* and *vrouedag* 'women's day', *gasten* and *gaste* 'guests', *gastenboek* 'hotel register' and *gastehuis* 'guest house', *zonnen* and *sonne* 'suns', but *zonnestelsel* and *sonnestelsel* 'solar system'.

The *e* versus *en* contrast between Afrikaans and Dutch affords us with a way of investigating to what extent the spelling system that readers are familiar with (Afrikaans or Dutch) influences readers' inclination to link the presence or absence of *n* in the linking element in compounds (rightly or wrongly) to a plural or singular interpretation of the modifier. Answering this question was the primary goal of the present study.

In an earlier study (Neijt et al. 2004) a similar question was addressed, but then only for readers of Dutch. There, the way Dutch language users interpreted modifiers of compounds with respect to number in 1996, one year after morphology had replaced semantics as the leading principle for spelling linking *schwa*, was compared to their performance in 2003, when the Dutch supposedly had become more familiar with the rules of 1995. As the present study is more or less directly modelled on these earlier experiments, we discuss their design and results in some detail below.

### 2. Earlier studies on Dutch

In both the 1996 and 2003 experiments Neijt et al. presented participants with the same 77 compounds. In 48 of these compounds the modifier had a clear singular meaning. Examples are *slange(n)beet* 'snakebite' and *spelde(n)knop* 'pin's head'. In 29 cases the modifier had a clear plural meaning, as in *boeke(n)rek* 'book rack' and *kleure(n)foto* 'colour photograph'. A complete list can be found in Neijt et al. (2004: 144–145). Each compound was presented in two forms: with and without *n*. Each participant saw 24 compounds of the type *slange(n)beet* with *n* and 24 compounds without *n*. Similarly, each participant saw 14 or 15 compounds of the type *boeke(n)rek* with *n* and 14 or 15 compounds of this type without *n*. Participants were never exposed to both variants of the same compound. Participants were asked to give plurality ratings for the modifiers on a seven point scale; they were explicitly instructed to ignore possible spelling errors and to concentrate solely on
the meaning of the first part of the word. In 1996, 33 undergraduate students of Dutch linguistics and literature at the Radboud University Nijmegen participated; in 2003 a new group of 38 students in this undergraduate program took part. All were native speakers of Dutch (Neijt et al. 2004: 137–138). Table 1 shows what transpired.

Table 1. Mean plurality ratings on a 7-point scale (from 1: "certainly singular" to 7: "certainly plural") by Dutch participants in 1996 and 2003 (after Neijt et al. 2004: 138).

<table>
<thead>
<tr>
<th>Year</th>
<th>Plurality rating</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- modifier with plural meaning, formerly spelled with ( n )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>presented as boekenrek</td>
<td>5.72</td>
<td></td>
</tr>
<tr>
<td>presented as boekerek</td>
<td>4.60</td>
<td>1.12</td>
</tr>
<tr>
<td>- modifier with singular meaning, formerly spelled without ( n )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>presented as slangenbeet</td>
<td>3.92</td>
<td></td>
</tr>
<tr>
<td>presented as slangebeet</td>
<td>2.35</td>
<td>1.57</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- modifier with plural meaning, formerly spelled with ( n )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>presented as boekenrek</td>
<td>5.63</td>
<td></td>
</tr>
<tr>
<td>presented as boekerek</td>
<td>5.01</td>
<td>0.62</td>
</tr>
<tr>
<td>- modifier with singular meaning, formerly spelled without ( n )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>presented as slangenbeet</td>
<td>3.48</td>
<td></td>
</tr>
<tr>
<td>presented as slangebeet</td>
<td>2.89</td>
<td>0.59</td>
</tr>
</tbody>
</table>

These results suggest that familiarity with the spelling system influences the interpretation of the linking element \( e(n) \) to some extent. On the other hand, whereas seven years after the introduction of the new spelling rules the effect of \( n \) on plurality judgements was still there, it had nonetheless diminished. For words like boeke(n)rek the difference shrank from 1.12 in 1996 to 0.62 in 2003, for the slange(n)beet type from 1.57 to 0.59 (for statistical details see Neijt et al. 2004). Neijt et al. (2004) suggest that if language users do not have the opportunity to express plurality in compounds, they set less store by the presence or absence of \( n \).

At the same time, differences in plurality judgements between boeke(n)rek-type words and the slange(n)beet-type are consistent over the years, whether or not an \( n \) is spelled. Apparently the effect of semantics is robust: both in the 1996 and in the 2003 experiment the plurality judgements derived in important measure from the meaning of the modifier-head combination. Readers know that a bite
comes from one snake, and that a case is meant for many books, independently of spelling.

3. A new study involving Afrikaans

Given that Neijt et al. (2004) revealed a dependency between familiarity with spelling rules in Dutch and plurality judgements of compounds spelled with and without n, we decided to investigate what the effects on such judgements might be in people familiar with completely different spelling conventions, specifically those of Afrikaans. One possibility would be that speakers of Afrikaans, who are not familiar with n in compounds and for whom n does not indicate a plural form of the noun, would simply ignore a linking element spelled as en. They might, however, equally well regard the presence of n as a sign of a singular meaning of the modifier, given that the few nouns in Afrikaans that end in n, like teken 'sign' and deken 'blanket' are invariably singular.

3.1 Participants

Fifty-two undergraduate students of Afrikaans linguistics and literature at the Stellenbosch University participated. All were native speakers of Afrikaans, none among them were trained in Dutch. The data from nine participants were excluded from the analysis. These participants had not rated a large number of the compounds they were presented with.

3.2 Materials

Sixty-seven compounds were selected, a subset of the 77 compounds used in the two experiments discussed in Neijt et al. (2004). It was decided to present the South African participants only with Dutch compounds that have clear equivalents in Afrikaans, such as boeke(n)rek (Afrikaans: boekrak) and slange(n)beet (Afrikaans slangbyt). Dutch compounds without close equivalents, such as banane(n) schil 'banana peel' (Afrikaans: pisangskil, not bananeskil), were excluded. In 40 compounds the modifier had a clear singular meaning, as in slange(n)beet 'snake-bite' and spelde(n)knop 'pin's head'. There were also 27 unequivocal plurals, such as boeke(n)rek 'book case' and kleure(n)foto 'colour photograph'. All words to be rated were spelled exactly as in the earlier experiments. Each compound was presented with and without n. No participant was ever exposed to both varieties of the same compound.
3.3 Procedure

In a written instruction in Afrikaans, participants were told that they would be presented with a number of compounds, written in Dutch. They were explicitly instructed to ignore spelling and to concentrate on meaning alone. After being presented with four examples, participants were asked to give plurality ratings for the modifiers of the Dutch compounds on a seven point scale. It took the participants about ten minutes to complete their questionnaires.

3.4 Results

Table 2 presents the findings from this experiment with Afrikaans speaking participants.

Table 2 shows that Afrikaans speaking readers do assign meaning to the presence or absence of $n$ in the spelling of the linking element. When $n$ is present, as in *boekenrek* and *slangenbeet*, modifiers are generally rated less plural ($m = 3.34$) than when $n$ is absent, as in *boekerek* and *slangebeet* ($m = 3.59$). The difference is significant by items $t(66) = 2.5, p < .015$ (two-sided t-test), and marginally significant by participants $t(43) = 1.8, p < .08$ (two-sided t-test).

At the same time, Table 2 shows a difference, albeit a less distinctive one than in the experiments with Dutch readers, in plurality judgements between the *boeke(n)rek*-type of words ($m = 3.66$) and the *slange(n)beet*-type ($m = 3.33$) (the difference is significant by items $t(132) = 2.77, p < .02$, two-sided, and by participants $t(33) = 3.65, p < .002$, two-sided), whether or not an $n$ is spelled.

Table 2. Mean plurality ratings on a 7-point scale (from 1: "certainly singular" to 7: "certainly plural") by Afrikaans speaking participants.

<table>
<thead>
<tr>
<th>linking element</th>
<th>Plurality rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>$en$</td>
<td>3.34</td>
</tr>
<tr>
<td><em>boekenrek</em></td>
<td>3.53</td>
</tr>
<tr>
<td><em>slangenbeet</em></td>
<td>3.21</td>
</tr>
<tr>
<td>$e$</td>
<td>3.59</td>
</tr>
<tr>
<td><em>boekerek</em></td>
<td>3.79</td>
</tr>
<tr>
<td><em>slangebeet</em></td>
<td>3.45</td>
</tr>
<tr>
<td>modifier with plural meaning</td>
<td>3.66</td>
</tr>
<tr>
<td><em>boekenrek</em></td>
<td>3.53</td>
</tr>
<tr>
<td><em>boekerek</em></td>
<td>3.79</td>
</tr>
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<tr>
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<td>3.21</td>
</tr>
<tr>
<td><em>slangebeet</em></td>
<td>3.45</td>
</tr>
</tbody>
</table>
4. Discussion

For speakers of Afrikaans the presence of \( n \) in the spelling of the linking element \textit{schwa} suggests singularity, its absence suggests a plural interpretation. Just like the Dutch are still influenced, to some extent, by the spelling of the Dutch plural suffix when interpreting \textit{e} or \textit{en} in compounds, even though that choice is nowadays essentially made on morphological instead of semantic grounds, speakers of Afrikaans experience effects from the spelling of their plural suffix too, both groups following the conventions of their own language. This tendency to link the way the linking \textit{schwa} is spelled to the spelling of the plural suffix in one's own language proves to exist even if readers are instructed to ignore the spelling of the linking element, and even if they are raised with a spelling system in which the orthography of the linking element is largely or completely independent of semantics.

At the same time, however, it appears that speakers of Afrikaans too, rely to some extent on their knowledge of the world when interpreting the modifier as singular or plural. Just like speakers of Dutch they realise that a snake bite comes from one snake, and that a book case is meant for many books, regardless of spelling. It seems obvious that readers in both languages tend to make use of this knowledge when interpreting the spelling of the linking \textit{schwa}.

4.1 Recommendation

With the publication in 2006 of both the official new Green Booklet with its complex, rule-driven approach, and its subversive go-as-you-please counterpart, the White Booklet, the matter of the spelling of linking-\textit{schwa} in compounds remains far from settled. We seem to have arrived at a less than desirable stalemate, one that can only be resolved through reasonable discussion based on facts. One such fact is our finding that readers cannot ignore formal similarities: for Dutch readers, a linking element spelled \textit{en} inevitably imparts plural overtones. Our results with readers of Afrikaans show that this connection between the spelling of the linking \textit{schwa} and the plural suffix is not limited to Dutch only.

Given all this, one solution of the problems regarding the spelling of the linking \textit{schwa} in Dutch compounds might be to opt for one simple rule without any exceptions: always spell \textit{e}. Thus, the association with plurality might be eliminated. It remains, however, to investigate what the actual effects of such a rule upon writers, readers and learners would be, and whether such a proposal would meet with the approval of the Dutch language community.
Notes

1. Generally, there is no linking element at all in Dutch compounds. The linking schwa which is the topic of the present article, appears only in a minority of cases. Quite apart from these, there are also compounds in which s serves as the linking element. Examples are slagersmes 'butcher's knife' and liefdesleven 'lovelife'.

2. The following compounds that were used in 1996 and 2003 were excluded from this new experiment: banane(n)schil 'banana peel', geite(n)kaas 'goat's cheese', herte(n)leer 'buckskin', litt. 'deer leather', kippe(n)vel 'goose bumps', litt. 'hen skin', vosse(n)hol 'fox hole', duive(n)til 'dovecot', lade(n)kast 'chest of drawers', lippenstift 'lip stick', rokke(n)jager 'womanizer', litt. 'skirt hunter', and takke(n)bos 'faggot', litt. 'branches bundle'.

References

Green booklet: See Woordenlijst Nederlandse Taal.
White booklet: See Genootschap Onze Taal.

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