

# Rounding schwa in varieties of Dutch

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## 1 Introduction

Although the phonological and phonetic behaviour of Dutch schwa has been the object of quite some study (cf. Booij, 1992; de Haas, 1986; Gaspar, 2007; Hall, 2005; Kager, 1990; Kooij, 1982; Koopmans-Van Beinum, 1980, 1992; van Bergem, 1995; van Bree, 1975; van Oostendorp, 2000a; Warner et al., 2002; Zonneveld, 1993, and references cited there), the microvariation in its pronunciation is relatively unexplored. In particular, the following sound change in progress within Dutch in (1) has been hitherto neglected, as far as I been able to find.

- (1) *duizend* ‘a thousand’ [dœyzənt], *Meertens* (family name) [mertəns], *lopend* ‘walking’ [lopənt], *Diemen-Zuid* ‘Diemen South’ [dimən zœyt]

Interestingly, even though it is possible to find non-linguists commenting on this change, for instance on the Internet, there has been no linguistic work devoted to it. In this paper, I will first outline the phenomenon, and then give a phonological analysis of some aspects of it.

## 2 Data

The scarce information we have about schwa rounding seems to indicate that its origin is recent, and that it concerns a region to the north of Amsterdam. An overview article of dialectological literature and data from over 30 years ago (van Bree, 1975) does not mention the phenomenon at all. A search in the so-called Goeman-Taeldeman-Van Reenen database (GTRP), collected in the 1980s and 1990s — show that until recently, the phenomenon was restricted to a small region of towns such as Monnickendam, just a few kilometers to the north of Amsterdam.

Furthermore, the phenomenon seems to be currently spreading out and its use e.g. by certain TV presenters has been commented on in the media. The form also seems to make its way into (informal) written language, by spelling *-end* as *-ond*. By googling these forms, we can find quotations such as the following (Frits Barend is the name of a popular TV presenter):

- (2) Frits Barend noemt zichzelf geen Frits Barend maar Frits Barond. (<http://www.bloglog.nl/bericht.php?entryid=1057671239&title=iamzero/balansen>, 20.04.2007)  
“Frits Barend does not call himself Frits Barend, but Frits Barond.”

It may be observed that the word in (2) contains an orthographic <nd> cluster after the schwa, pronounced as *-nt*, because Dutch has syllable final devoicing. The context is slightly widened in some of the the forms in (1) to cases where the schwa is followed by /ns/.

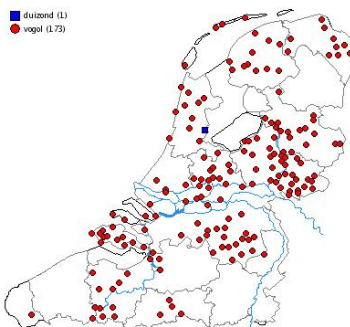
The reason for this may be that rounding can be most easily observed in this context, at least in the region at hand, since /n/ tends to get deleted elsewhere. For instance, the name *Diemen* on its own will be pronounced in many cases as [dimə], without /n/ and without schwa rounding (\*[dimə] seems impossible). However, when the /n/ is not deleted, for instance before a /z/, schwa may get rounded ([dimən]), and following coronal obstruents make /n/ deletion less likely.

### 3 Analysis

From the point of view of featural phonology, it is somewhat curious that schwas get rounded before a coronal nasal, since the contrastive feature specification of the latter segment (minimally [+cons, +nasal, +coronal]) has nothing in common with rounded vowels (which have [-cons, +labial]).

However, we observe that schwa rounding is geographically much more widespread before another coronal sonorant consonant, /l/ (Trommelen, 1993):

- (3) *vogel* ‘bird’ [voxəl], *wandel* ‘walk’ [wandəl], *heikel* ‘difficult’ [hɛikəl]



(4)

We could thus establish a hierarchy of coronal segments:

- (5)  $l > n > z, d, s, t$   
 where  $A > B$  means: A is more likely to invoke rounding than B.

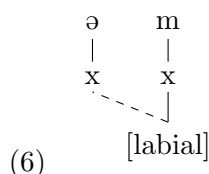
Interestingly, the hierarchy in (5) corresponds to the sonority hierarchy (see Parker, 2002, for a recent overview). The obstruents are at the bottom of the hierarchy in the sense that they never seem to trigger rounding: we have not been able to find even a single instance of rounding in words such as *alles* ‘everything’ [ɑləs] or *lemmet* ‘blade’ [ləmət].

This raises at least two questions. First, why do we find schwa rounding before coronal segments? And secondly, what explains the correspondence between (5) and the sonority hierarchy? We will discuss each of these questions in turn.

### 3.1 Rounding before coronals

As to the relation between the consonantal context and rounding, there are various possibilities. With respect to the /l/, for instance, it could be observed that this vowel has a relation to round vowels also in other contexts and in other languages. It is well known that in the history of French, a word like *journals* ‘journals’ turned from /ʒurnals/ (disregarding the sound changes in the first syllable) through /ʒurnaus/ to /ʒurno/. Comparing Standard Dutch forms such as *oud* ‘old’ [ɑut], *koud* ‘cold’ [kɑut] to their English cognates instructs us that something similar has been going on here as well. This rounding effect of the liquid can possibly be related to its appearance as a ‘dark’ /l/ in this coda context.

However, I have not been able to detect a similar correlation for the coronal nasal. As a matter of fact, neither backness nor roundness could be the triggering factors. All Dutch dialects have [ŋ] and [m]. The former *never* triggers rounding in the GTRP database; the latter does so, but in a completely different area (approximately around Brussels, that is to say, the outer south of the language area). Here, we find forms such as [bezum] or [bezom] for *bezəm* ‘broom’. This can be readily understood under autosegmentalist assumptions as the result of spreading:



Since, it is not found in the same area rounding before coronals cannot be of this type, and I suggest that it has to be of a different nature, and in particular dissimilation.

Interestingly, the dialects in the region close to Monnickendam are known for a somewhat similar type of dissimilation (Daan, 1950; van der Torre, 2003; van Oostendorp, 2000b, 2001): words which etymologically ended in -Vnd (with V a back vowel), these dialects have developed a velar nasal: hɔŋt rather than *hond* ‘dog’, mɔŋt rather than *mand* ‘basket’. Also in this case, it is a requirement that the nasal is followed by a coronal obstruent.

There are reasons to believe that dissimilation also plays a role elsewhere in the system. We observe that in most varieties of Dutch, there is an intimate relation between schwa before velar segments and the mid front unrounded vowel [ɪ], which behaves schwa like in words such as *haring* ‘herring’ [harɪŋ / harəŋ], *konink* ‘king’ [konɪŋ / konəŋ] or *Vlaming* ‘flemming’ [vlamɪŋ / vlaməŋ]. The options represent geographic variation, but most dialects in GTRP do not display the schwa variant, as the following table (for the word *haring* ‘herring’) shows:

(7)

Variant	Number of dialects	Percentage
harəŋ	21	3
harɪŋ	16	3
harɪŋ/harəŋ	567	94
<b>total</b>	604	100

Additional evidence for the cooccurrence of a front realisation of schwa and velarisation of the nasal comes from the development of Afrikaans (den Besten, 2000). In this language, original Dutch words ending in *-ən* orthographically end in *-ing*: *koren* ‘cereal’ turned into *korīng*. Although the unstressed vowel does not necessarily sound front in all dialects of Afrikaans, it has apparently been indistinguishable from it at some stage of the development.

However, even in the dialects which do have a coloured vowel in this context, this vowel behaves phonologically like schwa, as has been demonstrated by Trommelen (1982). For instance, like schwa syllables, *-ing* sequences tend to avoid stress. In polysyllabic words ending in *-ing*, stress is never on this syllable.<sup>1</sup> Furthermore, Dutch stress strictly obeys to a three-syllable window requirement at the end of the word with a fairly small class of exceptions: those are toponyms like *Scheveningen* [sxé:vəniŋə] and *Wageningen* [wáy:ŋəniŋə].

It thus seems that we are dealing here with a case of place dissimilation: schwa tends to be front before a back nasal and back before a front nasal. The rounding of schwa in (1) and (3) would under such a view be a phonetic enhancement of backness.

### 3.2 Sonority and rounding

As to the second question, we observe that schwa in Dutch can only be followed by sonorant consonants, except for voiceless coronals {s, t}. There are virtually no words ending in *-/əp/*, *-/əf/*, *-/ək/* or *-/əx/*. From this we may conclude the following:

- (8) Schwa can only be followed by sonorants within the syllable.

The reason why words ending in coronal obstruents such as *alles* ‘everything’ or *lemmet* ‘blade’ are no counterexample to this generalisation, is that those coronals seem to be outside of any syllabic template for independent reasons McCarthy and Taub (1992). For instance, no Dutch word ends in more than two consonants: although there are words like *arm* (id.) and *lamp* (id.), there are no words like *\*armp*. The only exceptions to this generalisation are cases where the last consonant is s and/or t: *herfst* ‘autumn’ [hɛrfst].

Similarly, biconsonantal clusters are disallowed after long vowels (*\*aarm*, *\*aamp*). The only exceptions we find involve with a voiceless coronal at then end (*paars* ‘purple’ [pa:rs]).<sup>2</sup>

A common way to analyse this, is by assuming that voiceless coronals at the edge of words can fall outside the syllabic template (van Oostendorp, 2003). They do not have to be syllabified, hence any restrictions on syllabification do not apply to them. The word *herfst* has the prosodic structure  $(herf)_\omega st$ : only the structure within the prosodic word needs to be syllabified. We could assume that also after a schwa these segments are extrasyllabic, so that (8) still holds: schwas can only occur in closed syllables if the closing consonant is a sonorant. Words like *alles* ‘everything’ would have the prosodic structure  $(allə)_\omega s$ , and schwa would be in an open syllable.

<sup>1</sup>Some care is needed here because there are monosyllabic words with *-ing* (*zing* ‘sing’, *ding* ‘thing’, etc.) where stress is obviously on this one syllable, whereas it

<sup>2</sup>This disregards the numeral *twaalf* ‘twelve’.

The question remains what explains the generalisation (8) itself. We argue that at a somewhat more abstract level of representation (e.g. at the root level of Lexical Phonology), closed schwa syllables are phonologically headed by a syllabic consonant. The following thus holds at the root level:

- (9) Syllables headed by schwa or a sonorant consonant need to be open.

This generalisation can be understood in terms of the theory of phonological projection developed in van Oostendorp (2000a): both schwa and sonorant consonants lack the relevant vocalic features to license a closed (marked) syllable. Since in many languages syllabic positions are restricted to sonorants, the restriction in (8) follows.

At a higher level (e.g. the word level), the schwa may be considered epenthetic. If we assume (plausibly) that dissimilation only occurs between two segments within the same nucleus, for instance because this is the domain of the relevant OCP constraint, part of the hierarchy in (5) also follows: obstruents never are in the same nucleus as a schwa.

The only explanandum left is the difference between /l/ on the one hand and /n/ on the other. Various observations may help us understand this. First, notice that /n/ can be marginally extrasyllabic in Dutch as well, as in *hoorn* ‘horn’ [ho:rn] in which we find an exceptional cluster after a long vowel, on a par with *paars*. We would thus have to analyse these forms as (*hoor*)<sub>ω</sub>*n*. Under such an analysis, we do not expect rounding before *n* just like we do not find it before *s* or *t*.

The fact that speakers tend to make words like these bisyllabic ([horən / horə]) may be an indication that /n/ loses its ability to be extrasyllabic. This may lead to two results, as the two pronunciations given here already indicate. In some cases, we find an open schwa syllable and /n/ gets lost. In other cases, the (see van Hout and van der Velde, 2000, for a sociolinguistic overview of *n* deletion after schwa in Dutch) /n/ does show up.

Finally, given the fact that the This in turn might be a reason why the schwa before it becomes more subject to rounding, and the pronunciations in (8) might become as common as those in (3).

## 4 Conclusion

In this paper, I have drawn attention to the new and curious phenomenon of schwa rounding before /n/ in varieties of Dutch. The phenomenon seems relatively new, and has not been analysed before. Even the related phenomenon of schwa rounding before /l/ has so far largely escaped the attention of phonologists. We have argued that we find here the rounding of an epenthetic schwa, due to reasons of dissimilation.

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