Tagung *Aktuelle Forschungen zur linguistischen Luxemburgistik,*
9-11 Oktober 2008

Typological differences between Northern and Southern Dutch in view of history and language contact.

Roland Noske

Lille 3 University, CNRS UMR 8163 *STL*

roland.noske@univ-lille3.fr
http://perso.univ-lille3.fr/~rnoske

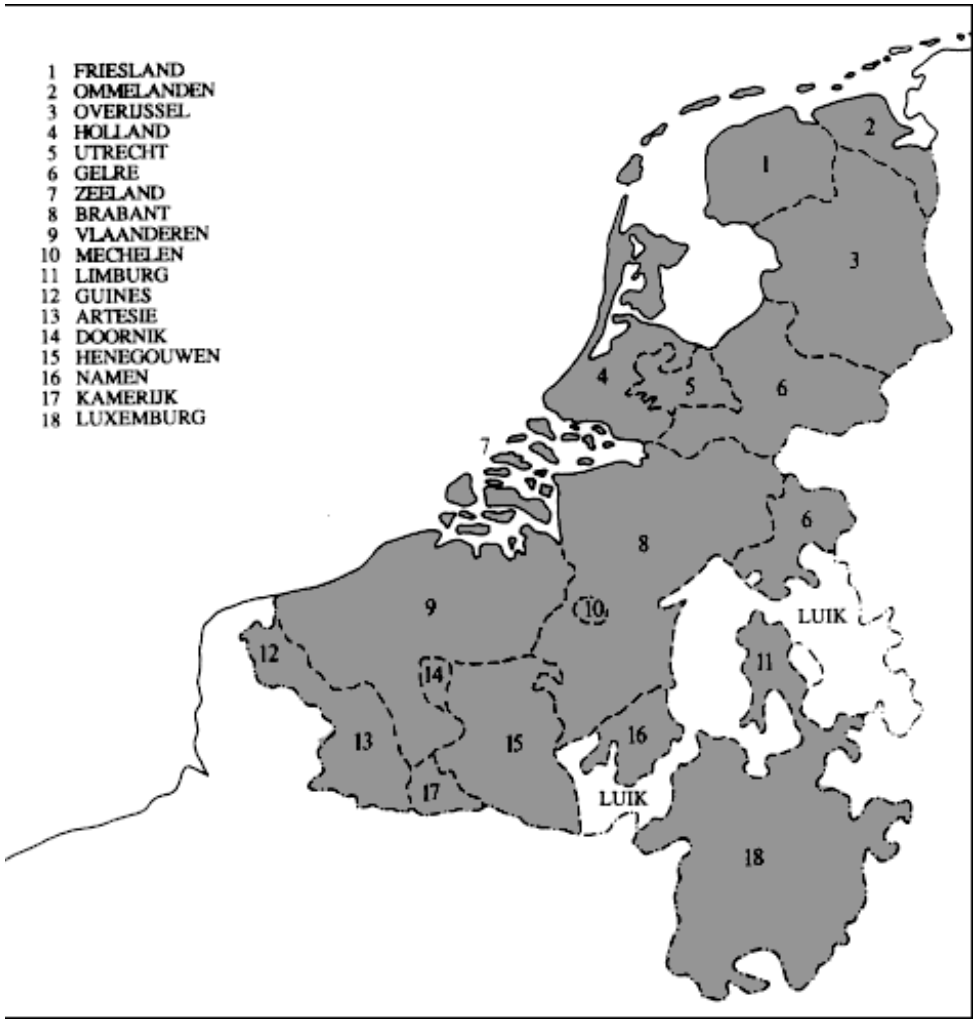
The Dutch language area. (Brussels is bilingual (but mostly French speaking), Friesland in the North is ‘double-lingual’.)

0. A little bit of history

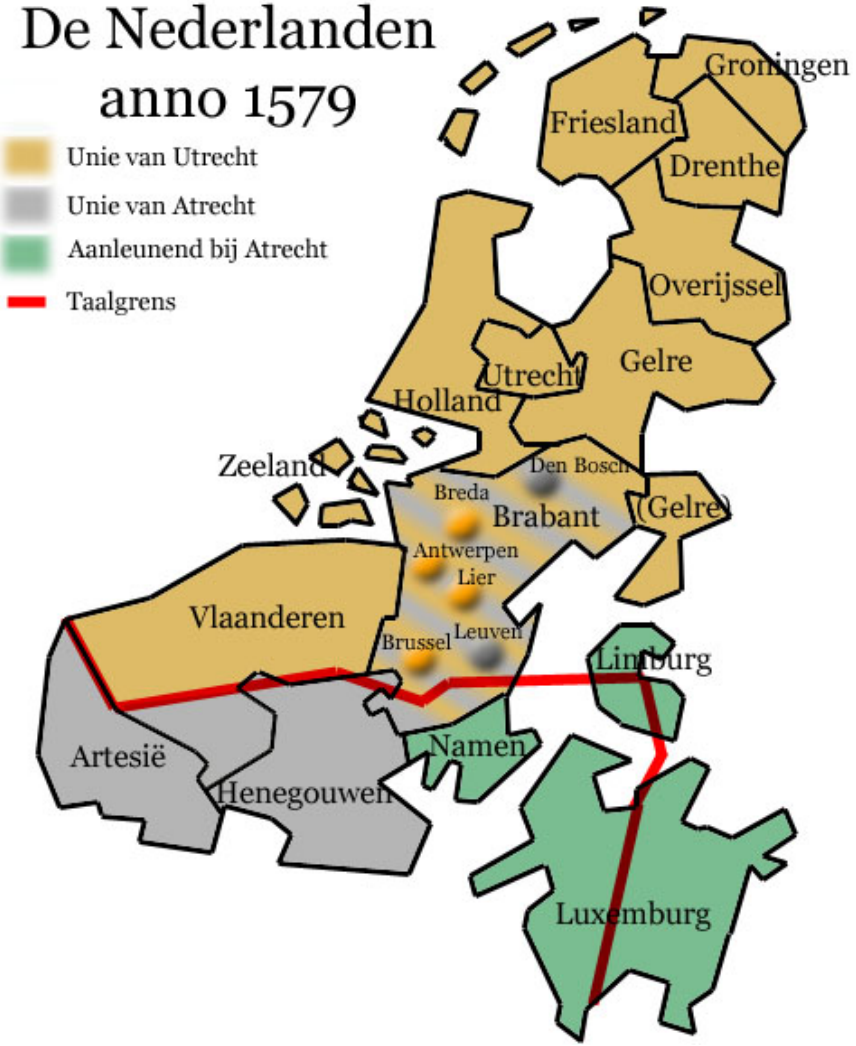
In the Middle Ages: the County of Flanders and, to a much lesser extent, the Duchy of Brabant, are bilingual Dutch (Low-Franconian)/French (and/or Picardian). In, e.g, Kortrijk/Courtrai half the population was French-speaking. There is a rich medieval literature in Dutch, predominantly from Flanders and Brabant.

From 1568: **War of independence** against Spanish Habsburg, **successful in the North**. From 1600 onwards: the newly founded Republic of the Seven United Netherlands becomes an economic and political superpower and by far the most prosperous country in Europe. Grammarians like Spieghel create a supra-regional language. The bible translation (Statenbijbel) of 1637 is of great influence on the language.

In the South: 1585 Fall of Antwerp to the Spanish army. Definitive separation of the North and the South. A prosperous part of the population flees to the North. Recatholicization, empoverishment, foreign domination in the South. **French becomes more and more dominant from ± 1700 onwards**. **Flemish** (*pars pro toto* for all Netherlandic dialects in the South) becomes more and more **confined to private homes and rural areas.**


1 FRIESLAND
2 OMMELANDEN
3 OVERIJSSEL
4 HOLLAND
5 UTRECHT
6 GELRE
7 ZEELAND
8 BRABANT
9 VLAANDEREN
10 MECHELEN
11 LIMBURG
12 GUINES
13 ARTESIE
14 DOORNIK
15 HENEGOUWEN
16 NAMEN
17 KAMERIJK
18 LUXEMBURG
LUIK
LUIK

1543


De Nederlanden
anno 1579
Unie van Utrecht
Unie van Atrecht
Aanleunend bij Atrecht
Taalgrens
Groningen
Friesland
Drenthe
Overijssel
Gelre
Utrecht
Holland
Zeeland
Den Bosch
Breda
Brabant
Gelre
Antwerpen
Lier
Vlaanderen
Brussel
Leuven
Limburg
Namen
Artesië
Henegouwen
Luxemburg

1815-1830: United Kingdom of the Netherlands, created by the Vienna congress. Present-day Benelux as a single country. Dutch becomes an official language (also in Wallonia and Luxemburg).

1830-31: Belgian revolt or ‘revolution’, backed by France. As for the great powers (England, Prussia, Russia) independence of Belgium is OK, as long as it does not become part of France. Belgium thus becomes a country of its own and **French becomes the only official language**, although the majority of the population speaks Netherlandic dialects.

1840: start of a **long and tedious process of resurrection and emancipation of Dutch** in Belgium. Discussion between the particularists (wanting to create a standard language of their own) and the integrationists (wanting to adopt the standard of the North). Integrationists win, among other things because of the great dialectal diversity.

Landmarks: **1930** Ghent University becomes Dutch-speaking; **October 2008** (credit crisis) the whole of the Belgian banking system is headed by Flemish CEO’s (a situation totally unthinkable just a decade ago).

But: during the 19th and the first half (at least!) of the 20th century: those wanting to climb the social ladder become French speaking.

Three most important points regarding Southern Dutch:

- Long standing cohabitation of Dutch and French, from the Middle Ages onwards.
- Between1700 and ± 1930 Dutch was confined to certain registers.
- For a long time: little or no contact with the North, where it was the standard language.

I. Resyllabification and vowel deletion in Southern and Northern Dutch

In Southern (Belgian) Dutch, morpheme boundaries are not boundaries for syllabification, in contrast to Northern (Netherlandic) Dutch:

(1)	underlying form	Northern Dutch	Southern Dutch
a.	/œyt+ɛində+lək/	[œyt.ˈʔɛində.lək]	[œy.ˈtɛində.lək]
b.	/vər+ɑrm+ən/	[vər.ˈʔɑr.mən]	[və.ˈrɑr.mən]
c.	/ɔn+eːns/	[ɔn.ˈʔeːns]	[ɔ.ˈneːns]
d.	/bɛrɣ+ɑx.təx/	[ˈbɛrx.ˌʔɑx.təx]	[ˈbɛr.ˌɣɑx.təx]

(2) a.	uiteindelijk	‘final(ly)’	*uit* ‘out,’	*einde* ‘end’,	*-lijk* adjectival suffix
b.	verarmen	‘em'poverish’	*ver-* verbal prefix,	*arm* ‘poor’,	*-en* infinitival suffix
c.	oneens	‘in disagreement’	*on-* ‘un-’,	*eens ‘in agreement’*	
d.	bergachtig	‘mountainous’	*berg* ‘mountain’,	*-achtig* adjectival suffix	

II. In Southern Dutch, schwa, and sometimes other unstressed vowels, can be deleted with much greater ease than in Northern Dutch (proclisis & enclisis):

(3) a.	(N. Dutch)	was het	/ʊɑs#ət/	[ʊɑs.(ʔ)ət]	*[ʊɑst]	‘was it’
b.	(S. Dutch)	was het	/wɑs#ət/	[wɑst]		‘was it’

[ʊɑst] (without a schwa) is possible in allegro speech in Northern Dutch, but not at a normal speech rate, like **[wɑst]** in the South.

(4) a. (N. Dutch)	dat ik	/dɑt#k/	[dɑt.(ʔ)ɪk]	‘that I’
b. (S. Dutch)	dat ik	/dɑ#ɪk/	[dɑk]	‘that I’

(5) a. (N. Dutch)	ik eet	/ɪk#eːt/	[ɪk.ʔeːt]	‘I eat’
b. (S. Dutch)	ik eet	/ɪk#eːt/	[keːt]	‘I eat’

Two constraints:
ALIGN: morpheme boundaries and syllable boundaries must coincide
ONSET: syllables must have onsets / onsets of syllables must be filled

Southern Dutch (oneens)

/ɔn+eːns/	ONSET	ALIGN
.ɔn.eːns.	**	
☞.ɔ.neːns.	*	*

Northern Dutch (oneens)

/ɔn+eːns /	ALIGN	ONSET
☞.ɔn.eːns.		**
.ɔ.neːns.	*	*

Southern Dutch (ik eet)

/ɪk#eːt/	ONSET	ALIGN
.ɪk.eːt.	**	
☞.keːt.		**

Northern Dutch (ik eet)

/ɪk#eːt/	ALIGN	ONSET
☞.ɪk.eːt.		**
.keːt.	**	

III. A possible Influence of French?

The same constraint ranking in French, cf. il arrive, l'homme

/il#arriv/	ONSET	ALIGN
.il.ariv.	**	
☞ .i.lariv.	*	*

/lə+ɔm/	ONSET	ALIGN
.lə.ɔm.	*	
☞.lɔm.		*

(As will be shown, **faulty**) **hypothesis** (Noske 2005, 2007a): Southern Dutch has imported the constaint order ONSET >> ALIGN through a language contact with French, whereas Northern Dutch has retained the order ALIGN >> ONSET.

The situation of Southern Dutch is not unique in West-Germanic: resyllabification of morpheme-final consonants into empty onsets in Luxembourgish (Gilles 2007)

(6)

	underlying form	Luxembourgish	Standard German	gloss
dann en auto	/dɑn+ən+ɑʊtoː/	[dɑ.nə.nɑʊ.toː]	[dɑn.ʔɑɪn.ɑʊ.toː]	'then a car'
wann een	/vɑn+eːn/	[vɑ.neːn]	[vɛn.ʔɑɪ.nɐ]	'when a'
wien ass dat	/viən+as+daːt/	[viə.nas.daːt]	[vɛːɐ.ʔɪst.dɑs]	'who is that'
Dir op	/diʀ+op/	[di.ʀop]	[tyʀ.ʔauf]	'door open'

Also in Swiss German, we find a wide-spread resyllabification across morpheme boundaries (Siebenhaar 2004:428).

The hypothesis of a Romance influence on Germanic dialects which do not respect morpheme boundaries in syllabification may seem a plausible one, but some other Germanic languages and/or dialects for which Romance influence seems unlikely, also display this type of behaviour. This is the case for, e.g., dialects of the province of Noord-Brabant in the Southern part of the Netherlands proper (Johan Taeldeman, p.c.), as well as for Afrikaans (Nübling & Schrambke 2004:286).

IV. Syllable and Word Languages

Typological distinction of **syllable vs. stress timed languages** (Pike 1945, Abercrombie 1967)**:** isochrony between syllables vs. isochrony between stressed elements**.** This distinction was in acoustic phonetics disproved by in *acoustic* phonetics by measurements of, among others, Wenk & Wioland (1982).

But this typology was **revitalised** by Auer (1993, 1994, 2001) and Auer & Uhmann (1988), basing themselves on *perceptual* research by Dauer (1983, 1987). The propose a **multifactorial, scalar** typology the extremes of which are *syllable counting languages* (or simply *syllable languages*) and *stress counting languages* (or *word languages*).

Typologie based on prosodic organization prosodique: word languages vs. syllable languages.

A. Typology proposed par Pike (1945) et Abercrombie (1967)
'syllable timed' vs 'stress timed' languages :

According to this theory:
French, Spanish : syllable time languages : intervals between syllables equal
English, German : stress timed languages : intervals beween stressed syllables are equal sont égaux

The idea was ***refuted*** for French pby Wenk & Wioland (1982) et Roach (1982), because the measurements contradict it.

B. The theory by Dauer (1983, 1987)

Dauer revitalises the theory of stress timed and syllable time languages basing herself on **perceptual** and **phonological** criteria.

Languages perceived as **syllable timed**:

- **simple syllabic structure**
- **the possibilities de of a qualitative contrast between accented vowels are the same as those between unaccented ones**
- **a weak of totally absent word stress**

Languages perceived as **stress timed**:

- **complex syllable structure**
- **vowel reduction**
- **a well perceptible word accent and, in addition, grammatical rules that refer to stress**

Dauer (1987) : in languages that are perceived as stress time consonant **have more allophones** (by final devoicing, intervocalic voicing). Also, in these languages, there are more length contrasts between

C. The *prosodic phonology* by Nespor et Vogel (1986)

Nespor & Vogel (1986) propose a system of hierarchically ordered syllabic constituents. In this system, one or more constituents of one category are licenced by a constituent of an immediately higher category. This implies that an constituent cannot at the same time belong to two higher constituents at the same time. The categories are:

- **syllable (σ)**
- foot (F)
- **phonological word (ω),**
- clitic (C)
- phonological phrase (φ)
- intonational constituent (I)
- utterance (U)

syllable vs. word languages (I)

Auer (1993, 1994, 2001) and Auer & Uhmann (1988), basing themselves Pike & Abercrombie, Dauer, Nespor & Vogel **(preceding slides)** propose a **multifactorial, scalar** typology the extremes of which are *syllable counting languages* (or simply *syllable languages*) and *stress counting languages* (or *word languages*).

In **syllable languages**, the **syllable** is the most important constituent, while in **word languages,** it is the **phonological word**.

Most important constituent: the category to which most distributional rules refer, as well as the majority of the phonetic and phonologicasl processes.

In a syllable language, the border between syllables are clear, while they are not claer in a word language.

Word structure does not play a role in stress assignment in syllable languages, while it does play an important role in word languages.

syllable vs. word languages (Ii)

Nübling & Schrambke (2004) use this typology for explaining facts of Alemanic dialect and give et a typological description of the *Germania* in general.

For example, Southern Allemanic dialects (Switzerland) have many features of a syllable languages. For instance, historical vowel reduction has not fully functioned.

Szczepaniak (2007) uses this typology in a detailed study of the history of German.

.

Table 1: prototypical properties of syllable (syllable counting) versus word (stress counting) languages (adapted from Nübling & Schrambke (2004:284-285); OHG = Old High German, NHG = Middle High German)

nr.	criterion	syllable languages → syllable counting syllable as basic prosodic unit (foot length variable)	word / accent languages → stress counting phonological word as basic prosodic unit (syllable length variable)
1	syllable structure	CV syllables (rarely closed syllables); all syllables equally long	variable syllables type of different complexity, dependent on the stress position; often differences between medial and peripheral syllables
2	syllable boundaries	well defined, constant syllable boundaries	ill-defined, variable, speech-rate dependent syllable boundaries
3	sonority hierarchy	sonority hierarchy is obeyed, i.e. maximal sonority difference between C and V	sonority hierarchy is less obeyed, e.g. voicing of intervocalic plosives, assimilations (word internally).
4	geminates	geminates possible	geminate reduction, except in places where they are morphologically relevant, e.g. in internal compound boundaries e.g. German *Schifffahrt* [fː]

5	stress effects	no / few differences in structure of stressed vs. unstressed syllables	stressed syllables are heavy, unstressed syllables are light
6	stress assignment	mostly syllable based; absence of fixed word stress possible	stress assignment (often complex) is morphologically / lexically / semantically determined
7	tonality	can be present, also on unstressed syllables	if present (which is rarely the case), then only on stressed syllables
8	phonotactics	regular, stable phonotactics, no positionally determined allophones	word boundary (delimitative) signals positionally determined allophone (initial, medial, final) phonotactic restrictions
9	vocalism	little discrepancy between strongly and weakly stressed syllables, relatively equal tenseness.	strong discrepancy between en weakly stressed vowel (German, Danish, English). Heavy stress: often difference in length, centralizations (reductions)

10	vowel harmony/ umlaut	possible	rare
11	vowel deletion	because of reasons of syllable optimization	because of stress
12	epenthesis (vowels, glides)	for reason of syllable optimization (compare epenthetic *e* in Luxemb. *Arem*, *hëllefen*, *Vollek,* intrusive *n* in Allemanic, *wo-n-i, wie-n-i)*	if there is, then in order to let stand out morphemic structures like in German *eigen-t-lich*, *namen-t-lich*, etc, bonding phoneme *s* in German and Dutch
13	liaison	yes (across morpheme boundaries)	no (border signals / junctures, e.g. glottal stop)
14	sandhi	external	internal
15	consequences for morphology	morphs that promote optimization of syllable structure	morphs that promote the information structure of words
16	reanalyses	re-analyses follow syllabic principles (Swed. *ni*, lux. *mir, dir* nis)	reanalyses are not syllabically motivated (OHG *ni.mis.du* > *ni.mist* > NHD *nimmst*)

According to these criteria, **Modern High German** should be catalogued as a **word language**, while Modern **French** is mostly a **syllable language**. Southern Dutch must be located more towards the syllable language end of the scale than Northern Dutch, which is more like the word language prototype. This is because of the criteria 11 and 13 in table 1. Southern Dutch has vowel deletion and liaison effects, in places where Northern Dutch has vowel retention and glottal stop insertion.

V. The History of Dutch

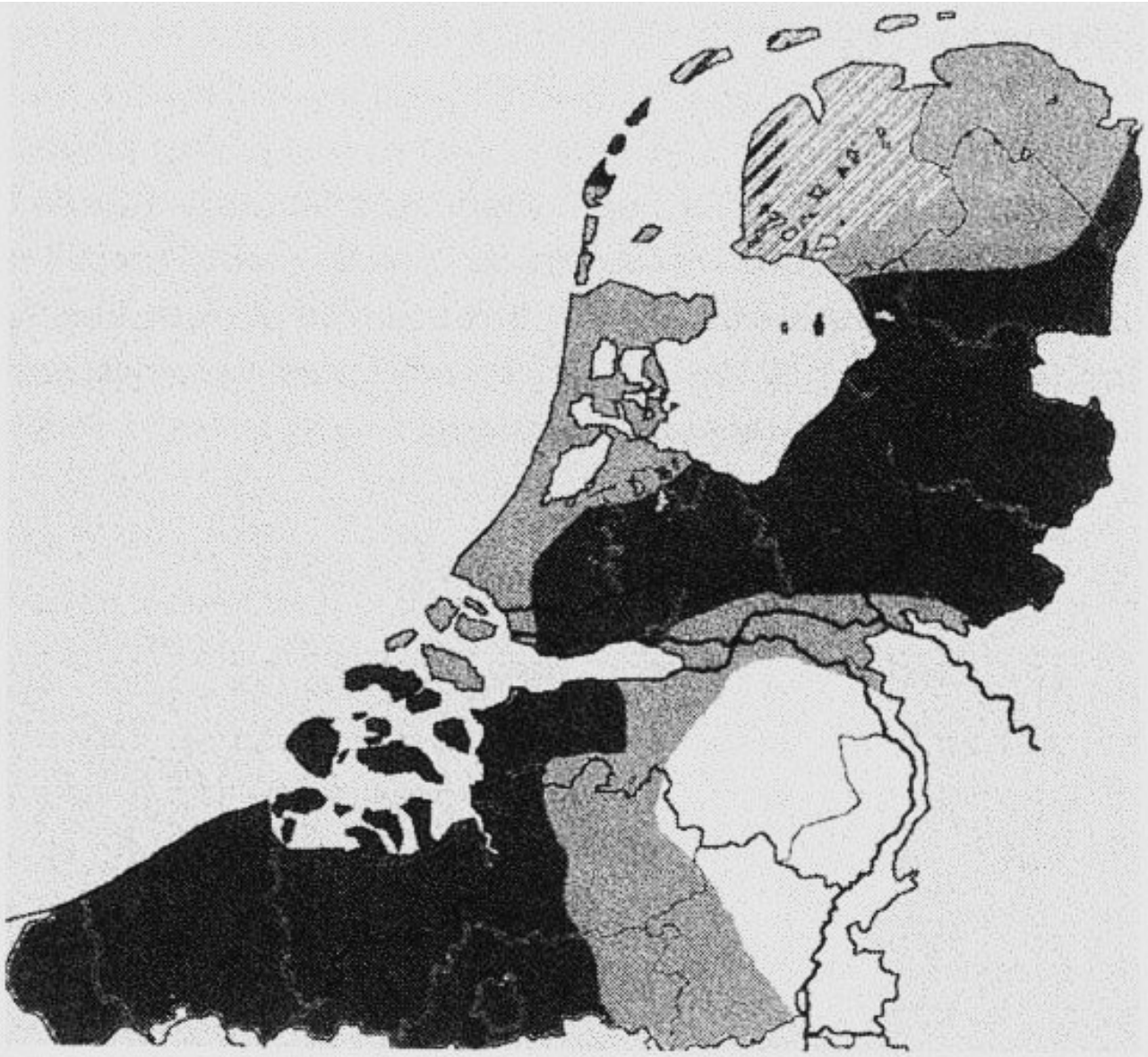
1. Word boundaries were blurred in the spelling of Middle Dutch: Van der Wal (1992:131) notes that there are many examples of proclitic and enclitic forms in Middle Dutch (MD) texts. This shows that word boundaries were often not felt:

(7)	***MD cliticized forms***	***MD non-cliticized equivalents***	***gloss***
a.	**tien tiden**	**te dien tiden**	**'at that time'**
b.	**darme man**	**die arme man**	**'the poor man'**
c.	**hi leidene**	**hi leide ene**	**'he lead him'**

2. **Apocope** in the North, but not in the South: Van Heule (1626) (one of the first grammars of Dutch), notes that **e-apocope** (e.g. *steene > steen)* happens in Hollandic Dutch (i.e. the Dutch spoken in the historic province of Holland), but not in Southern dialects like Flemish. This shows that in the early 17th century, this type of vowel deletion happened in Northern Dutch, but not in Southern Dutch.

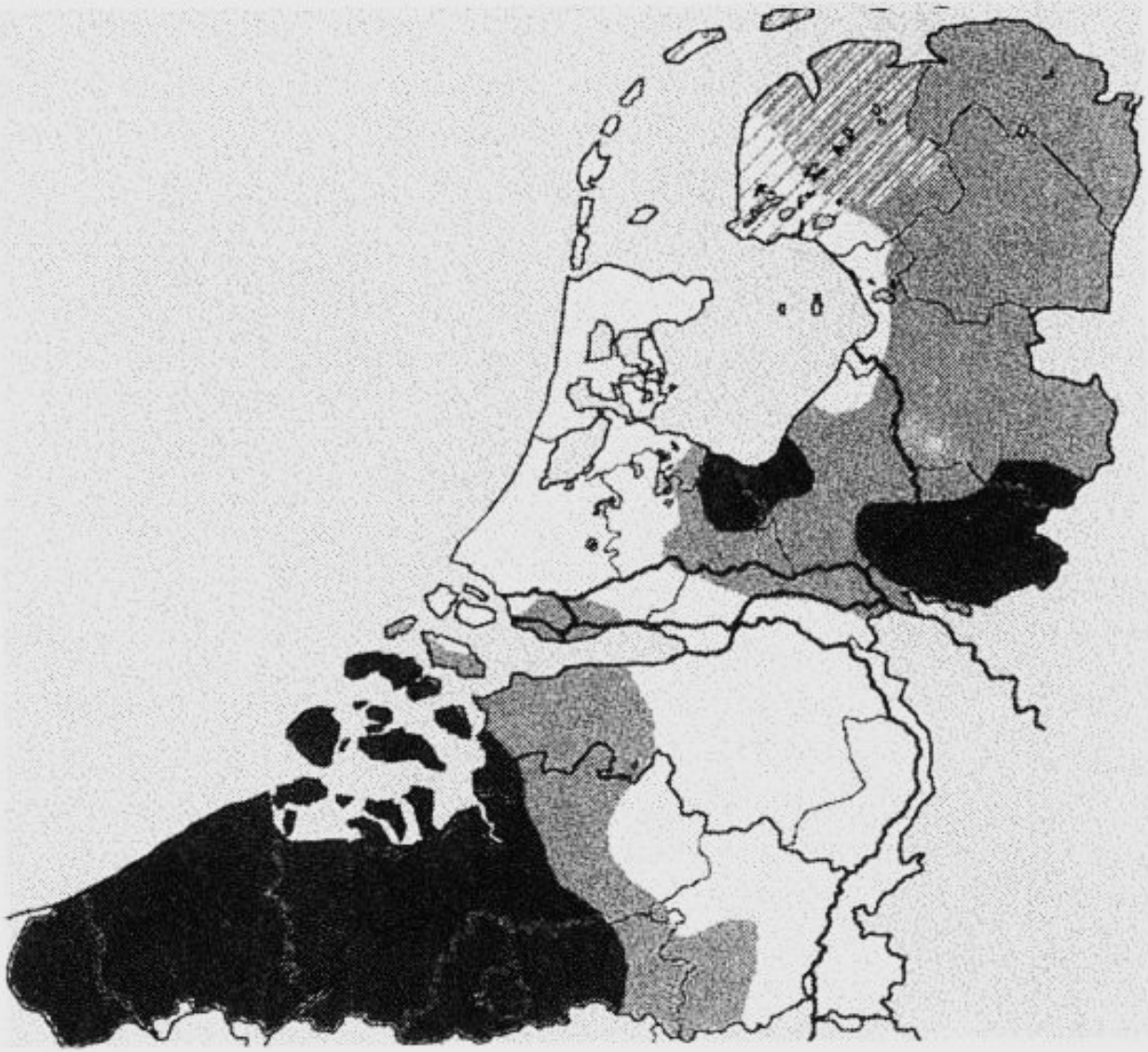
Apocope can be seen as a vowel deletion under the influence of stress, a charateristical feature of a word language (criterion 11 in table 1).

During the 14th century apocope **proliferates** in Hollandish (the dialect of the county of Holland) (Margit Rem, p.c.). Cf. the following maps given in Van Reenen & Mulder (2003:190-192) for the apocope in *zone > zoon* 'son'. (dark = *zone,* light = *zoon)*

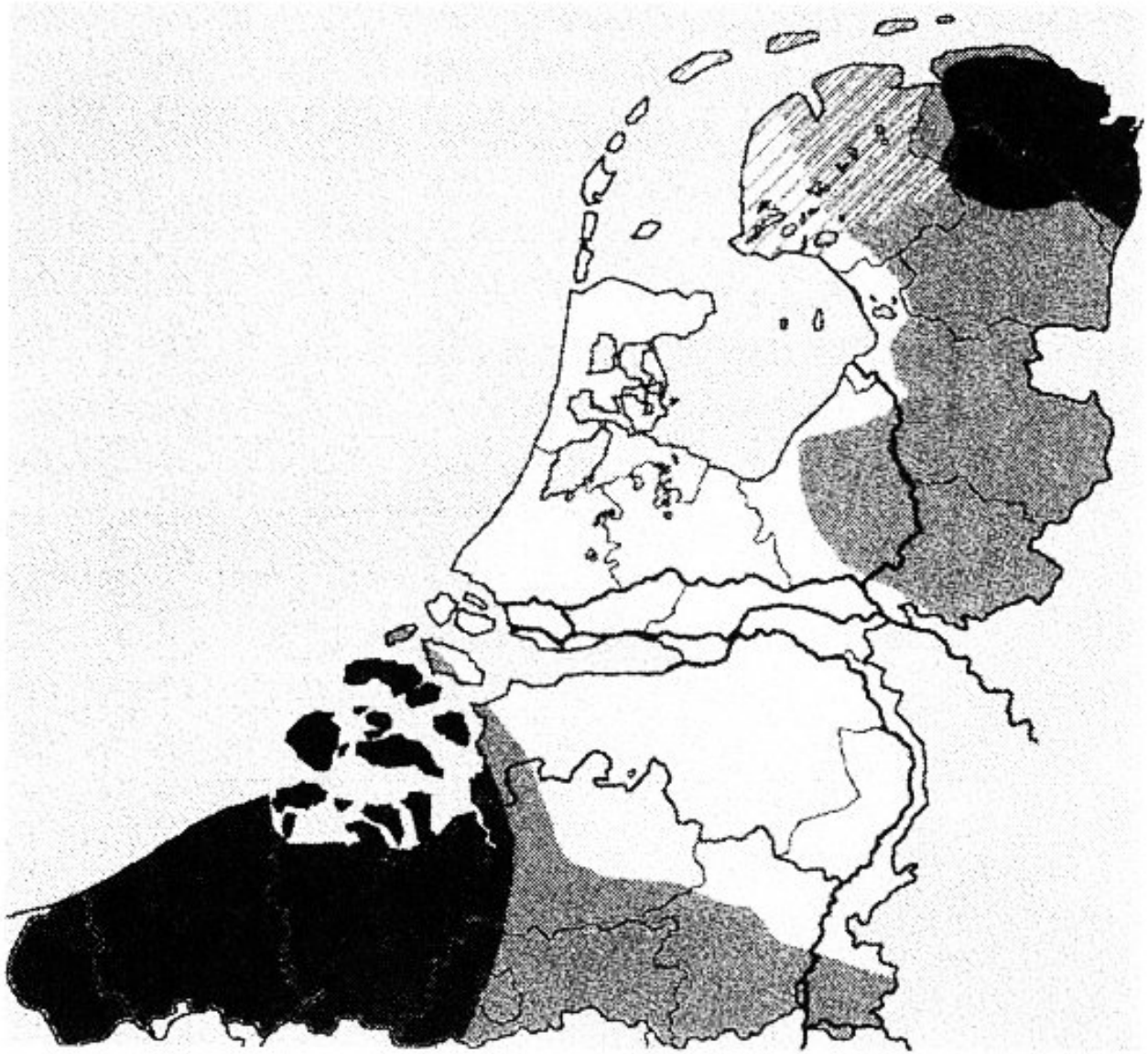


Map 1. Apocope in Middle Dutch *zoon*: *zone* >*zoon* 'son' (1330-1349)[3]

Map 2a. Apocope in Middle Dutch *zoon*: *zone* >*zoon* 'son' (1350-1369)



Map 2b. Apocope in Middle Dutch *zoon*: *zone* >*zoon* 'son' (1370-1389)



Map 3. Apocope in Middle Dutch *zoon*: *zone* >*zoon* 'son' (1390-1400)

Map 4. Apocope in Modern Dutch *zoon*: *zone* >*zoon* 'son'; modern dialects.

In Northern Dutch, long accented vowels become more and more diphthongized, contrary to Southern Dutch. (Stroop 1998) This can also be seen as a influenc of criteriom nr. 9 (vocalism).

VI. The history of Germanic in general

Nübling & Schrambke (2004) observe that, using the Auer's typology of syllable vs. stress counting languages sketched above (see table 1), one can find that there is a scalar difference between the Germanic languages.

Swedish, Norwegian and Afrikaans: 'peripheral Germanic languages': syllable languages

Danish, German and English: 'central Germanic languages': stress languages, with Luxembourgish (and Southern Dutch?) in the middle.

Nübling & Schrambke (2004) mention a number of diachronic processes supporting this view:

i. An ever increasing **marking of word beginnings** in the course of the history of High German, like the insertion of glottal stops instead of resyllabification, i.e. criterion 13 of table 1 and exactly the point that distinguishes Northern Dutch from Southern Dutch, see (2).
ii. Various **syncope processes** taking place in the history High German, making it increasingly a language of syllabic complexity (criterion 1), for which Nübling & Schrambke (2004:292-293) cite Werner (1978). Werner shows that these processes are part of a systematic movement towards syllabic com-plexity in coda position (traditionally called *Konsonantenhäufung* 'consonant crowding').

iii. The presence in Old High German (**OHG**) of **vowel harmony / metaphony** (criterion 10) and the **loss** of its productivity **in later stages of High German**.
iv. The frequent **cliticizations** and **concatinations** of small words OHG (referring to criterion 13 for syllable languages), much like the forms in (7) in Southern Dutch.
v. The **degemination** of OHG geminates (criterion 4) in Middle High German (MHG).
vi. The appearance of **linking elements** 'Fugenelemente' between morphemes in Early New High German (nowadays highly productive), like in *Qualitäts*kontrolle, a feature NHG shares with Modern Dutch (*kwaliteits*controle). This is manifestation of a boundary signal for words (hence criterion 13).

To this list, one can add two more diachronic processes, one of which is of particular importance for us here:

vii. The **reduction of full unstressed vowels to schwa** (criteria 9 and 11) in the transition from OHG to MHG.] (and between Old Dutch and Middle Dutch).
viii. The **advent of devoicing of final stops in MHG and MD**, where the devoicing is absent in OHG and OD. Its function can be seen as the introduction of yet another boundary signal (criterion 13).

Vowel reduction from full vowels to schwa also marks the *transition* from Old to Middle Dutch and from Old to Middle High German.

==> In both languages, Dutch and High German, the vowel reduction started around 1050/1100. <==

These processes show that **German has indeed moved into the direction of a clear word language.**

(Some of these processes, like final devoicing and vowel reduction are absent in certain Bavarian and Alemannic dialects, showing that these dialects are much less word type languages, but rather more like syllable type languages).

Indeed, Nübling & Schrambke (2004:290), basing themselves on Frey (1988) mention that

==> OHG must be catalogued "as being very much of the syllable type". <==

In this light, taking into account the development of apocope in Dutch, it seems right to assume that it is Northern Dutch that has changed and that Southern Dutch has remained slightly more a syllable language. This goes against a French influence.

Could the same be true for Standard High German vs. Luxembourgish?

References:

Abercrombie, David. 1967. *Elements of General Phonetics*. Edinburgh: University Press.

Auer, Peter, 1993. *Is a rhythm-based typology possible*? = KontRI Arbeitspapier Nr. 21, Universität Konstanz. Downloadable from: http://www.germanistik.uni-freiburg.de/auer/?Personal:Prof._Dr._Peter_Auer:Publikationen#Online.

Auer, Peter, 1994. “Einige Argumente gegen die Silbe als universale prosodische Hauptkatergorie”, in: Ramers, Karl Heinz et al. (eds.), *Universale phonologische Strukturen und Prozesse.* Tübingen: Niemeyer, 55-78.

Auer, Peter. 2001. “Silben- und akzentzählende Sprachen", in: Haspelmath, Martin, Ekkehard König, Wulf Oesterreicher & Wolfgang Raible (eds.). *Language Typology and Language Universals. An International Handbook.* Berlin: de Gruyter, 1391-1399.

Auer, Peter & Susanne Uhmann. 1988. “Silben- und Akzentzählende Sprachen”. *Zeitschrift für Sprachwissenschaft* 7/2: 214-59.

Dauer, Rebecca. 1983. “Stress and syllable-timing reanalysed.” *Journal of Phonetics* 11, 51-62.

Dauer, Rebecca. 1987. “Phonetic and phonological components of language rhythm”. *Proceedings of the XIth International Congress of Phonetic Sciences.* Vol. 5. Tallinn: Academy of Sciences of the Estonian S.S.R., 447-450.

Frei. Evelyn. 1988. *Wortteilung und Silbenstruktur im Althochdeutschen.* München: CD Copy & Druck.
Gilles, Peter. 2007. Aspects of Luxembourgish Prosody. Paper presented at the 29th annual meeting of the German Linguistic Society (DGfS), 1 March, Siegen.
Moulton, William. William G. 1941. *Swiss German dialect and Romance Patois*. Supplement to *Language* 17/4. Baltimore: Linguistic Society of America.
Nespor, Marina & Irene Vogel. 1986. *Prosodic Phonology*. Dordrecht : Foris Publications.
Noske, Roland. 2005. “A prosodic Contrast between Northern and Southern Dutch: a Result of a Flemish-French Sprachbund”. In: Broekhuis, Hans et al. (eds.). *Organizing Grammar. Linguistic Studies in Honor of Henk van Riemsdijk.* Berlin: Mouton de Gruyter, 474-482. Downloadable from: http://perso.univ-lille3.fr/~rnoske
Noske, Roland. 2007a. “Een aan het Frans ontleend principe van fonologische organisatie in het Zuid-Nederlands”. In: Fenoulhet, Jane, Arie J. Gelderblom, Josien Lalleman, Lut Missinne & Jan Pekelder (eds.). *Neerlandistiek in contrast*. Amsterdam: Rozenberg, 275-285. Downloadable from: http://perso.univ-lille3.fr/~rnoske

Noske Roland 2007b. Schwa on the border between Dutch and French. Two refutations of assumptions about the histories of Dutch and French.' *Proceedings JEL'2007 Schwa(s), 5th Nantes Linguistic Meeting,* 61-68. Downloadable from http://perso.univ-lille3.fr/~rnoske

Nübling, Damaris & Renate Schrambke. 2004. “Silben- versus akzentsprachliche Züge in germanischen Sprachen und im Alemannischen”. In: Glaser, Elvira, Peter Ott, & Rudolf Schwarzenbach (eds.), *Alemannisch im Sprachvergleich. Beiträge zur 14. Arbeitstagung für alemannische Dialektologie in Männedorf (Zürich) vom 16.-18.9.2002*. Stuttgart: Franz Steiner, 280-320.

Pike, Kenneth. 1945. *The Intonation of American English*. Ann Arbor: University of Michigan Press.

Siebenhaar, Beat (2004): “Berner und Zürcher Prosodie. Ansätze zu einem Vergleich.” In: Glaser, Elvira; Ott, Peter und Schwarzenbach, Rudolf (eds.): *Alemannisch im Sprachvergleich. Beiträge zur 14. Arbeitstagung für alemannische Dialektologie in Männedorf (Zürich) vom 16. - 18.9.2002*. Stuttgart: Franz Steiner, 419-437.

van der Wal, Marijke. 1992. *Geschiedenis van het Nederlands.* Utrecht: Het Spectrum.

Spieghel, Hendrick Laurenz. 1584. Twe-spraack vande Nederduitsche letterkunst, ofte, Vant spellen ende eyghenscap des Nederduitschen taals. Amstelredam: Hendrick Barentz.

Stroop, Jan (1998), *Poldernederlands; Waardoor het abn verdwijnt*, Amsterdam.

Szczepaniak, Renata. 2007. Der phonologisch-typologische Wandel des Deutschen von einer Silben- zu einer Wortsprache. Berlin: de Gruyter.

Willemyns, Roland & Wim Danëls (ed.) 2003. *Het verhaal van het Vlaams. De geschiedenis van het Nederlands in de Zuidelijke Nederlanden. Antwerpen/Utrecht: Standard uitgeverij/Het Spectrum.*

Van Heule, Christaen. 1626. *De Nederduytsche Spraeckonst ofte Taelbeschryvinghe.* Leiden: Jacob Roels. Facsimile edition of the 2nd edition (1633), edited and commented by W.J.H. Caron, published in 1953 by Wolters, Groningen.

van Reenen, Pieter & Maaike Mulder. 2003. “Linguistic Interpretation of Spelling Variation and Spelling Conventions on the Basis of Charters in Middle Dutch and Old French: Methodological Aspects and Three Illustrations.” In: Goyens, Michèle & Werner Verbeke (eds.), *The Dawn of the Written Vernacular in Western Europe.* Leuven : Leuven University Press, 179-199.

Werner, Otmar. 1978. “Schwa-Schwund und Phonotaktik im Deutschen”. In Birnbaum, Henrik et al. (eds.) *Studia Linguistica Alexandro Vasilii filio Issatschenko a Collegis Amicisque oblata.* Lisse: The Peter de Ridder Press, 471-486.