Typological shift from a word language to a syllable language and vice versa

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Abstract

As a replacement for the traditional distinction 'syllable-timed' languages and 'stress-timed' languages, Auer (1993, 1994, 2001) introduces a distinction between '**syllable languages**' and '**word-languages**'.

- In syllable languages: the syllable is the central prosodic category.
- In word languages: the prosodic word is the central prosodic category.

Szczepaniak (2007) shows in detail that in the course of 12 centuries, **High German moved from a syllable language to a word language**.

Here, it is shown that **French** developed in the **opposite direction**.

It is also shown that a **typological split** can occur between different varieties of a language, as happened in Portuguese and Dutch.

Background

The phonetic basis of the traditional **distinction between syllable-timed and stress-timed languages** (i.e. languages in which the temporal distances between, respectively, syllables and stressed syllables would be kept equal, was **disproved** on several occasions, e.g. by Roach (1982) and Wenk & Wioland (1982).

However, Dauer (1983, 1987) shows that, among linguists, there is a **perception** of the existence of the distinction:

(1) characteristics of languages perceived as syllable timed:
  i.   a relatively simple syllable structure
  ii.   the possibilities of contrast between stressed and unstressed syllables are the same (no vowel reduction)
  iii. word accent is weak or non-existent

(2) characteristics of languages perceived as stress timed:
  i.   complex syllable structure
  ii.   existence of vowel reduction in unstressed syllables
  iii. a clearly perceptible word accent, and, on top of that, phonological rules referring to the place of stress

On this basis, and using Prosodic Phonology, Auer (1993, 1994, 2001) proposes a scalar, multifactorial typology the extremes of which are :
- **syllable counting languages** (or simply **syllable languages**)
- **languages that count prosodic words** (or **word languages**).

(3) A (partial) list of properties (adapted from Nübling & Schrambke (2004)

nr.	indicator	syllable languages	word languages
1	syllable structure	CV syllables (rarely closed syllables); all syllables equally long	variable syllable types 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	Geminates	geminates possible	geminate reduction, except in places where they are morphologically relevant, e.g. in internal compound boundaries e.g. German *Schifffahrt* [f:]
4	stress effects	no / few differences in structure of stressed vs. unstressed syllables	stressed syllables are heavy, unstressed syllables are light; diphthongization of stressed vowels, aspiration of initial plosives of stressed syllables
5	stress assignment	mostly syllable based; absence of fixed word stress possible	rules of stress assignment (complex) are morphologically / lexically / semantically determined
6	phonotactics	regular, stable phonotactics, no positionally determined allophones	word boundary (delimitative) signals, positionally determined allophones (initial, medial, final), phonotactic restrictions
7	vocalism	little discrepancy between strongly and weakly stressed vowels, relatively equal tenseness	much discrepancy between strongly and weakly stressed vowels (German, Danish, English). Heavy stress: often difference in length, centralizations (reductions)
8	vowel harmony	possible	rare
9	vowel deletion	for reasons of syllable structure optimisation	conditioned by stress
10	liaison	yes (across morpheme boundaries)	no (border signals / junctures, e.g. glottal stop)

German. Comparison between Old High German (OHG) and New High German (NHG) and Modern Netherlands Dutch (MND) along these criteria:

1 **Syllable structure**. NHG : complex syllables, variable syllable types, determined by stress and morphology. OHG: much less complex syllable structure
2 **Syllable boundaries**. NHG: ill-recognizable syllable boundaries, ambisyllabicity. OHG: clear syllable boundaries
3 **Geminates.** NHG: exist only in internal compound boundaries (otherwise: geminate reduction from MHG onwards). OHG: geminates exist in heterosyllabic position.
4 **Stress effects**. NHG: aspiration of initial plosives of stressed syllables. MND: phonetic diphthongizations of stressed vowels. OHG: No such effects.

5 Stress assignment. NHG: complex stress rules, dependent on morphology, preference to stress heavy syllables. OHG: probably much less complex.

6 Phonotactics. NHG: boundary signals: glottal stop insertion, final devoicing. OHG: final devoicing not present yet.

7 Vocalism. NHG: Vowel reduction. Vowel reduction productive in Modern Netherlands Dutch. OHG: absence of vowel reduction.

8 Vowel harmony. NHG: remnants of vowel harmony (umlaut) have been completely morphologized. OHD: fully productive.

9 Vowel deletion. Syncope and apocope conditioned by stress, like in German *ich hab'* (for *ich habe*), MND: *vreeslijk* (for *vreselijk*): for syllable structure optimization, e.g. wio ër > wior.

10 Liaison. NHG: in general non-existent, instead: glottal stop insertion. OHG: probably existed.

Additional phenomena which contribute to the above typology:
OHG: **vowel epenthesis** in (*malha > malaha* 'bag', *durh > duruh* 'through', **consonant epenthesis** (*būan > būwan* 'to live', Old East Franconian). **These processes contribute to a more regular syllable structure.**

Early New High German (ENHG): **consonant epenthesis to strengthen word edges.** Middle High German (MHG) *nieman* > ENHG *niemand* 'nobody'; *MHG māne* > ENHG *mand, mond* 'month'.

French. Early Old French (EOF): a word language. Present Day French (PDF): (mainly) a syllable language.

1. **Syllable structure**. Pendular movement:
   i. Classical Latin > Late Latin: simpler syllable structure, hence evolution in the direction of a syllable language.
   ii. Late Latin > Gallo-Romance (GR) and EOF: more complex syllable structure: evolution back to a word language.
   iii. From EOF onwards : Evolution towards a much more open syllable structure (Jacobs 1992): towards a syllable language.
2. **Syllable boundaries.** In PDF: clearly defined constant syllable boundaries. No ambisyllabicity.
3. **Geminates** Degemination in the evolution from GR to EOF: original Late Latin geminates and geminates originating from assimilation in GR are degeminated.
4. **Stress effects.** GR: diphthongisations of stressed vowels (typical of word languages). In EOF: lengthening of stressed low and mid vowels (also typical of word languages).
5. **Stress assignment.** PDF stress assignment is based on the syllable, not on morphology. No minimal pairs of words whose only difference is the place of stress, (as in NHG and Modern Dutch.
6. **Phonotactics. Boundary signals:** emergence of Final Devoicing in EOF (word language). Subsequent loss of Final Devoicing (syllable language). Intervocalic voicing in EOF. Subsequent loss of Intervocalic voicing (typical of a word language).
7. **Vocalism. Vowel reduction of unstressed vowels in Old French.** Subsequently: loss of vowel reduction (absence of vowel reduction is typical of syllable languages) (but omnipresence of schwas as a result of the earlier stage).
8. **Vowel harmony**: exists in some PDF dialects.

9. **Vowel deletion.** GR, EOF: vowel deletion (syncope, apocope) by the influence of stress (typical of word languages). PDE: schwa deletion before vowels, because of reasons of syllable optimization (typical of syllable languages): /lə] + abrə/ > [larbrə]

10. **Liaison.** PDF: omnipresent.

Additional phenomenon confirming the evolution to PDF's stautes as a syllable language: disappearance of word stress around the 15th century.

> **Conclusion 1: German and French have evolved in opposite directions. German from a syllable language to a word language, French from word language to a syllable language.**

Typological splits between varieties of languages

Dutch

Modern Belgian Dutch (MBD) and Modern Netherlands Dutch (MND) differ in a number of ways, showing that MBD is more in the direction a syllable language and MND more in the direction of a word language.
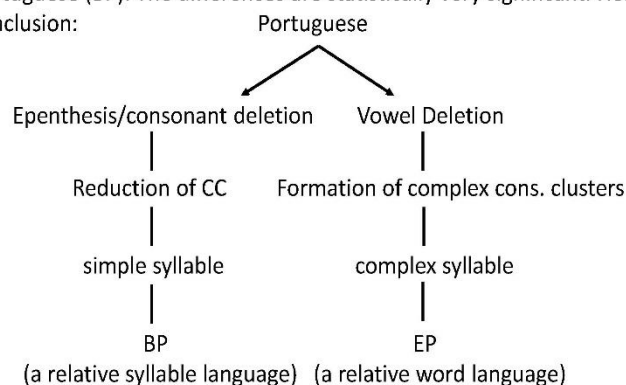**(property nr.)**

1. **Syllable structure.** There is a greater tendency in MBD than MND to delete final *t* in functions words like *dat* 'that' and *niet* 'not', resulting in a CV structure.
2. **Vocalism.** MND has a much greater tendency to reduce unstressed vowels than MBD.
3. **Vowel deletion.** Apocope under the influence of stress is much more developed in MND than in MBD. Oostende (Ostend) would be named 'Oostend', if it were situated more to the North. Vowel deletion for reasons of syllable optimisation is much more frequent in MND: ik hoor 'I hear' > [koːr], even in slow speech.
10. **Liaison.** In MBD, prefix-final consonant are often syllabified together with the following morpheme, whereas this is not the case in MND. *uiteindelijk* ('finally', morphemic gloss: 'out-end-ly') is pronounced [œy.tɛin.də.lək] in MBD, but as [œyt.ʔɛin.də.lək] in MND.

By investigating the history of, among other things, apocope, it can be concluded that it is MND that has undergone an innovation here (which is not surprising, given the developments in High German).

Portuguese

Cunha (2010) conducts a number of experiments regarding vowel reduction and epenthesis in European Portuguese (EP) and Brazilian Portuguese (BP). The differences are statistically very significant. Her conclusion:

Portuguese
Epenthesis/consonant deletion — Vowel Deletion
Reduction of CC — Formation of complex cons. clusters
simple syllable — complex syllable
BP — EP
(a relative syllable language) (a relative word language)

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