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VOWEL REDUCTION AND EMPTY NUCLEI IN EUROPEAN PORTUGUESE: AN ANALYSIS OF THE SYLLABLE STRUCTURE[1]

Abstract

The purpose of this article is to outline Portuguese syllable structure. The shape of the syllable in European Portuguese (the standard southern and central dialect) is suggested to be identical in slow and fast speech (Mateus – d'Andrade 2002). This view is challenged in this article by an analysis of Vowel Deletion and Vowel Nasalisation. It is argued that within the skeletal theory of the syllable, it is impossible to maintain the same syllabic structure for slow speech and fast speech.

1. Introduction

The founding assumptions of skeletal theory[2] go back to Steriade (1982), Clements – Keyser (1983), Levin (1985), Lowenstamm – Kaye (1985), and others. It is also discussed in Dresher (1985), Itô (1986), Nespor – Vogel (1986), Hayes (1989), and McCarthy – Prince (1995). The main principle is that each segment at the melodic tier possesses a corresponding *timing slot* (called X-slot) at the skeletal tier. Thus, for instance, the English word *blend* has five segments at the melodic tier and five X-slots which constitute one syllable (σ). This is shown in (1). I omit the Rhyme node, as it is irrelevant for the purposes of this article.

(1) Syllable structure of the word *blend*

```
            σ
           /|\
          / | \
         /  N  \
        /   |   \
       X  X X X  X
       |  | | |  |
       b  l e n  d
```
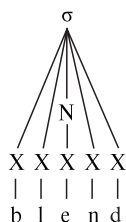
   The X-slot convention differs from the traditional CV approach (Clements – Keyser 1983) in that all segments are assigned abstract X-slots, and there is no distinction between vowels and consonants at the skeletal tier. In (1), the vowel *e* is the nucleus of the syllable (N), while the sounds *bl-* and *-nd* constitute an onset and a coda, respectively.

   The skeletal framework does not necessarily assume a one-to-one correspondence between the melodic and the skeletal tiers. There are instances of words with one segment at the melodic tier which possesses no corresponding X-slots, for example, Slavic yers (see Rubach 1986). Conversely, an X-slot may have no correspondents at the melodic tier (see for example Goldsmith (1990) for a discussion of French h-aspiré). Such an X-slot is called a *floating X-slot*. A floating X-slot may serve as an *empty onset* or as an *empty nucleus*. The notion of empty nuclei is discussed in more detail in the following section.

2. Syllable structure

As was established by Mateus – d'Andrade (2002), Portuguese syllables exhibit rigid limitations regarding the possible shape of each syllable constituent. To begin with, the only well-formed nuclei consist of a vowel or a diphthong, and this is true for both slow and fast speech. There are no syllabic consonants in either speech tempo.

   Secondly, the only segments licensed in the coda are the alveolar liquids [l r] and the voiceless palatal fricative [ʃ].[3] While this assumption is uncontroversial for slow pronunciation, the status of the Portuguese coda in fast speech raises many doubts due to the highly productive process of unstressed vowel deletion.

   In slow pronunciation, unstressed [ɛ e] are raised to the high back vowel [ɨ][4], whereas [ɔ o] are raised to [u]. The relevant examples can be found in (2).

(2) Vowel reduction in slow speech[5]

    (a) ɔ ~ u
        f<u>o</u>rço [ˈfɔrs+u] 'I oblige'   vs.   f<u>o</u>rçar [furˈs+a+r] 'to oblige'[6]

    (b) o ~ u
        f<u>o</u>rç+a [ˈfors+ɐ] 'strength'   vs.   f<u>o</u>rçar [furˈs+a+r] 'to oblige'

    (c) ɛ ~ ɨ
        s<u>e</u>l+o [ˈsɛl+u] 'I stamp'   vs.   s<u>e</u>lar [sɨˈl+a+r] 'to stamp'

    (d) e ~ ɨ
        s<u>e</u>lo [ˈsel+u] 'stamp'   vs.   s<u>e</u>lar [sɨˈl+a+r] 'to stamp'

In fast speech, the vowel [ɨ] does not surface, and [u] never appears before a word boundary. The examples in (3) show the relevant differences between European Portuguese standard and fast speech.

(3) Vowel reduction in slow and fast speech

slow speech	fast speech	gloss
bate [ˈbatɨ]	[ˈbat]	's/he beats'
carro [ˈkaʁu]	[ˈkaʁ]	'car'
chefe [ˈʃɛfɨ]	[ˈʃɛf]	'boss'
parece [pɐˈɾɛsɨ]	[pɐˈɾɛs]	's/he appears'

Mateus – d'Andrade (2002) suggest that the syllable structure of Portuguese fast speech and slow speech is identical. Forms in (3) contain *empty nuclei*, that is nuclei included in the prosodic structure, but having no phonetic realisation.

The difference between slow speech [ˈbatɨ] (4a) and fast speech [ˈbat] (4b) is illustrated in (4).

(4) a.
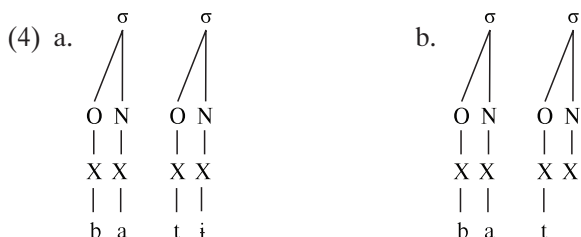
Similarly, (5) presents the syllabic structure of the word *passo* 'I pass' in the two variants.

(5) a.

```
      σ        σ                      σ        σ
      /|       /|                    /|       /|
     / |      / |                   / |      / |
    O  N     O  N           b.     O  N     O  N
    |  |     |  |                  |  |     |  |
    X  X     X  X                  X  X     X  X
    |  |     |  |                  |  |     |
    p  a     s  u                  p  a     s
```
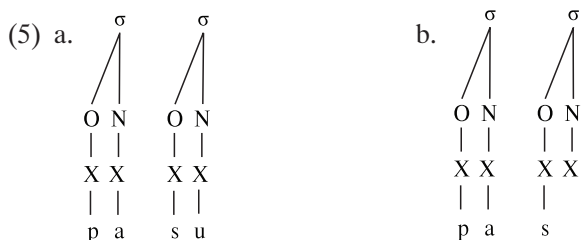
Mateus – d'Andrade (2002) provide a number of independent arguments to support the employment of *empty nuclei*. One of them addresses the difference in the acquisition of forms such as *prato* ['pratu] 'dish' and *pneu* ['pnew] 'tyre'.

The initial cluster in *prato* satisfies both the Sonority Sequencing Generalisation (SSG, Jespersen 1904), which states that the sonority of segments must rise towards the syllable nucleus[7], and the Minimal Sonority Distance[8] (MSD) principle, which requires two segments belonging to the same syllable constituent to have a fixed sonority difference.

While the SSG is universal, the MSD is language-specific. As argued by Mateus – d'Andrade (2002), Portuguese requires that the distance on the sonority scale between two consonants in the same constituent must be higher than one.

Assuming the following scale, starting from the least sonorous segments: obstruents-nasals-liquids-glides-vowels, it becomes apparent that the cluster *pn-* in *pneu* 'tyre' violates the MSD, as the sonority distance between the obstruent *p* and the nasal *n* equals one. This means that *pn-* is not an admissible onset in the language, in contrast to the onset in *prato*, which is well-formed because the sonority distance in the *pr-* cluster equals two.

The argument here is that while children learning Portuguese have no trouble pronouncing 'possible' clusters, such is *pr-* in *prato* 'dish', they insert a vowel to split offending clusters. Thus, the form *pneu* often surfaces as [pɨ'new], but *prato* is never rendered as *[pɨ'rato].

A similar observation applies to certain dialects of Portuguese. In colloquial speech in the European variant, speakers often apply the same repair strategy as discussed above, i.e. they insert the vowel [ɨ]. An analogous process occurs in Brazilian Portuguese, where unacceptable clusters are invariably separated by the vowel [i]. Thus, *pneu* surfaces as [pi'new]. On the other hand, *[pi'ratu] is unattested.

A third argument is made on the basis of voice assimilation. A coda fricative *s* becomes voiced if the following consonant is voiced, as evidenced

in *mesmo* ['meʒmu] 'same' or *mais barato* ['majʒ bɐ'ratu] 'cheaper'.[9]

However, there is no voicing in *ritmo* ['ʀitmu] 'rhythm'. To account for the absence of voicing, the sound *t* cannot be part of the coda; otherwise the surface representation *['ʀidmu] would be obtained[10].

These arguments in favour of empty slots are not entirely convincing. For one thing, it seems highly controversial to draw on evidence from one dialect or speech variant to construct generalisations about another dialect. However, the purpose of this article is to show that, even with these hypotheses about the structure of Portuguese, it is not possible to conduct a tenable analysis of Vowel Reduction in the proposed framework.

3. Nasalisation

Portuguese has the rule of Vowel Nasalisation: a vowel becomes nasalised when followed by a tautosyllabic nasal consonant. This is clearly illustrated by the pair of indefinite articles given in (6). The pair also shows that Nasalisation does not occur if the vowel and the nasal consonant do not belong to the same syllable. The dot marks the syllable boundary.

(6) um [ū]   masculine indefinite article
    uma [u.mɐ]   feminine indefinite article

The examples in (6) lead us to believe that nasal vowels are absent from the inventory of underlying segments in Portuguese. Thus, for instance the word *som* ['sõ] 'sound' is, underlyingly, //son//.[11]

Bearing in mind that Nasalisation only occurs if the vowel and the nasal belong to the same syllable, let us consider some examples with a word-final [ɨ] or [u] preceded by a nasal. Recall that Portuguese deletes these vowels in the word-final position in fast speech. The syllable structure remains unchanged, because, as may be concluded from Mateus – d'Andrade's analysis, an empty nucleus is retained in place of the deleted vowel. (7) presents a fast-speech structure of the words *fome* (['fɔmɨ] in slow speech) 'hunger' and *tenho* (['tɐɲu] in slow speech) 'I have'. Once again I omit the rhyme node.

(7) a.

9
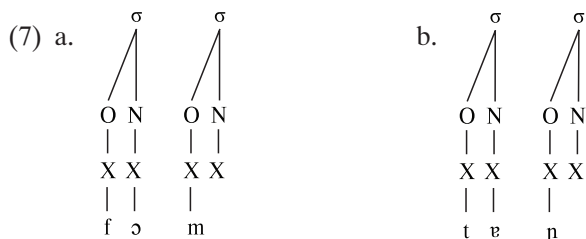
In (7), the context for Nasalisation is not met, as the nasals and the vowels that precede them belong to different syllables. Therefore, the prediction is that the words should be pronounced, respectively, *['fɔm] and *['tɐɲ]. In fact, this observation does not agree with the phonetic facts of Portuguese fast speech.

When producing such examples, native speakers delete the final vowel and nasalise the vowel of the preceding syllable. Since Nasalisation occurs, the nasal consonant must crucially be syllabified into the coda, because, as shown in (6), a nasal does not trigger Nasalisation if it belongs to the onset of the following syllable.

Therefore, a rule of resyllabification must be posited: a nasal consonant preceding a word-final empty nucleus must be resyllabified into the coda of the penultimate syllable. Such a rule would result in the forms given in (8).

(8) a.
```
        σ           σ
       /|\          |
      O N   C N     C N
      | |   | |
      X X   X X
      | |   |
      f ɔ   m
```
b.
```
        σ           σ
       /|\          |
      O N   C N     C N
      | |   | |
      X X   X X
      | |   |
      t ɐ   ɲ
```
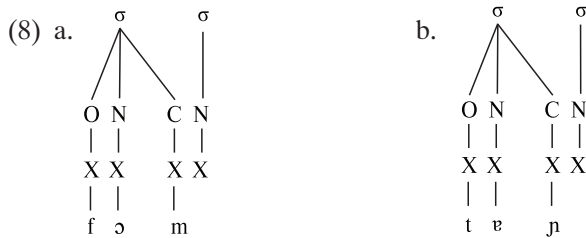
That such syllabic structures can exist is highly improbable from the perspective of language typology. To the best of my knowledge, no language syllabifies the sequence CVCV as CVC.V, much less introduces a process changing the syllabification CV.CV to CVC.V.

The aforementioned facts cast doubt on the view that the syllabic structure of Portuguese fast and slow speech is identical. However, in order to salvage that claim, let us consider the possibility that fast speech requires a slight modification, which is expressed in (9).

(9) Empty Nucleus Constraint
Empty Nuclei are not permitted word-finally.

The constraint given in (9) enables us to account for the examples in (7), i.e. *fome* 'hunger' and *tenho* 'I have' pronounced in fast speech as ['fõ] and ['tɐ̃j].[12] The Empty Nucleus Constraint eliminates the entire prosodic structure of the deleted word-final vowel, hence the nasal consonant ends up unprosodified, and has no other option but to be joined to the coda of the preceding syllable. The final stages of the derivation of *fome* 'hunger' are shown in (10).

(10)

```
        σ           σ
       /|          /|
      / |         / |
     O  N        O  N
     |  |        |  |
     X  X        X  X
     |  |        |
     f  ɔ        m
```
Input (empty nucleus instead of word-final /ɨ/)

```
        σ
       /|
      / |
     /  |
    O   N
    |   |
    X   X   X
    |   |   |
    f   ɔ   m
```
Empty Nucleus Constraint (9)

```
        σ
       /|\
      / | \
     O  N  C
     |  |  |
     X  X  X
     |  |  |
     f  ɔ  m
```
Resyllabification

```
        σ
       /|
      / |
     O  N
     |  |
     X  X
     |  |
     f  �õ
```
Vowel Nasalisation

Owing to the constraint in (9), it is now possible to predict the correct output in the case of examples such as *tenho* 'I have' and *fome* 'hunger'. The Empty Nucleus Constraint forces the syllabification of [m] into the coda. *Ergo*, the context for Vowel Nasalisation is met.

However, the analysis presented above introduces a major change of the syllable structure of Portuguese. Note that if [m] is ultimately syllabified into the coda, so should be all the remaining consonants which precede a word-final empty nucleus. Consider examples such as *carro* 'car' and *parque* 'park', in slow speech respectively, [ˈkaʀu] and [ˈparkɨ]. The analysis of the former, which is analogous to the example *fome* 'hunger', is given in (11).

(11)
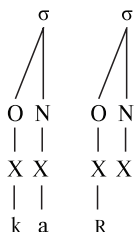
Input (empty nucleus instead of word-final /u/)

Empty Nucleus Constraint (9)

Resyllabification

—   Vowel Nasalisation

As can be observed, the liquid [ʀ] is a member of the syllable coda. By the same token, in *parque* 'park' we would have to syllabify [k] to the coda of the first syllable. This contradicts the initial claim put forward by Mateus – d'Andrade (2002), namely that only three segments are acceptable in the coda: [l r ʃ]. Recall that according to these authors, the generalisation is valid for both slow and fast speech.

4. Conclusions

It has been argued that the syllable structure of standard and fast speech European Portuguese cannot be considered identical from the perspective of the skeletal theory. If that were the case, the existence of empty nuclei would successfully account for the discrepancies in the data (cf. *bato* 'I beat' – ['batu] in slow speech, ['bat] in fast speech). However, as has been shown, the

process of Vowel Nasalisation challenges the claim that the two systems are indeed parallel. Modifications suggested in the previous section, including the *Empty Nucleus Constraint*, enable us to correctly predict nasalisation, but at the same time require a modification of the shape of the coda in fast speech.

All in all, it must be posited that the two speech tempos under discussion have separate syllable systems. In particular, fast speech does not possess rigid limitations on the shape of each syllable constituent, such as the ones found in slow speech or in other Romance languages. Further, there is no reason to forbid the syllabification of *ritmo* 'rhythm' with *t* and *m* belonging to seperate syllables: ['ʀit.mu]. Lack of voicing before the nasal consonant would simply require the rule of coda voice assimilation to apply solely to *s* (see endnote 10).

An outstanding issue is the generalisations mentioned in section 2., namely the different rendering, in the context of language acquisition, of the initial clusters in forms such as *prato* 'dish' ['pratu] and *pneu* 'tyre' [pɨ'new]. To the best of my knowledge, no solution has been suggested as an alternative to the analysis presented by Mateus – d'Andrade (2002). Additional research in this area is required.

NOTES

[1] I would like to thank the two anonymous reviewers for their discussion and criticism, which led to considerable improvement of both the content and the presentation of my analysis.

[2] In this article, the skeletal tier is represented by means of X-slots, rather than CV-constituents. Representations employing moras may obscure the picture, hence moraic theory is disregarded.

[3] [ʃ] undergoes voicing to [ʒ] if the following consonant is voiced.

[4] [ɨ] is absent from the inventory of fast speech Portuguese; in slow speech, it appears solely in unstressed positions.

[5] Most data and generalisations come from Mateus – d'Andrade (2002) and Coetzee (2004).

[6] In this example, [a] is the verbalising morpheme, while [r] introduces the infinitive.

[7] Clusters in onset and coda must adhere to the following formula: SFNLGVGLNFS, where S is a stop, F is a fricative, N is a nasal, L is a liquid, G is a glide, and V is a vowel (nucleus).

[8] Mateus – d'Andrade (2002) refer to the requirement as *Dissimilarity Condition*.

[9] Compare *custar* [kuʃ'tar] 'to cost' and *lápis preto* ['lapiʃ 'pretu] 'black pencil'.

[10] One may stipulate that voice assimilation applies only to the fricative [ʃ] in Portuguese and does not affect any other obstruent, which is a viable analysis because it is not contradicted by the data. However, I disregard this observation for now. I will pursue it further in section 4.

[11] The form *sonoro* [su'noru] 'voiced' indicates that the consonant in the coda is //n//, rather than some other nasal.

[12] Word-final [ɐ ɛ e] undergo diphthongisation when they are nasalised. I ignore the issue of which of these vowels is actually present in the Underlying Representation of *tenho* 'I have'.

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CLUSTER REDUCTION FROM THE PERSPECTIVE OF ARTICULATORY PHONOLOGY: A CASE OF POLISH AFFRICATES*

Abstract

Sequences of affricates followed by homorganic fricatives are simplified to affricates in preconsonantal context in Polish. Similarly, geminates are reduced in this environment, which results from the fact that length distinction is not licensed in this position. Despite common motivation, the two types of reduction cannot be handled by the same rule. Unlike geminates, sequences of affricates and fricatives cannot undergo the process of degemination. However, the simplification is motivated by the phonetic adjacency of identical fricative portions, which leads to a conclusion that the rule belongs to the domain of phonetic implementation. Therefore, an Optimality Theoretic solution is aided by the theory of Articulatory Phonology, which can capture the phonetic facts of reduction processes.

1. Introduction

Despite many combinatorial possibilities, Polish cluster formation is restricted with respect to geminates. Specifically, they are prohibited to occur in consonantal adjacency. In descriptive terms, their distribution in Polish is limited to intervocalic and word-initial positions, provided that initial geminates are followed by a vowel. In order to ban their occurrence elsewhere, Polish employs the strategies of degemination and epenthesis. The former applies among others[1] in the environment of consonants: both preconsonantal (e.g. /sɛvill+ski/ → [sɛvilski] 'Sevillan')[2] and postconsonantal (e.g. /pjɛŋkn+nɨ/ → [pjɛŋknɨ] 'beautiful'), whereas the latter is used to

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avoid clusters of word-initial geminates followed by a consonant (e.g. /v + vžɛɕɲu/ → [vɛ + vžɛɕɲu] 'in September').

In this paper, I refer to the process of degemination. Section 2 presents evidence for the underlying geminates in Polish and shows some facts of degemination, with emphasis on preconsonantal environment. Section 3 compares this rule with the process of cluster simplification affecting preconsonantal sequences of affricates followed by homorganic fricatives. It is argued that degemination cannot be used to account for this cluster simplification. Section 4 offers a solution within Optimality Theory (OT), which must be aided by the theory of Articulatory Phonology (AP). I argue that the standard approach to cluster reduction within AP is inefficient and suggest an alternative based on the theory of local constraint conjunction.

2. Geminates in Polish

Geminates in Polish are predominantly found in intervocalic position, which typologically is an expected distribution. As claimed in Thurgood (1993) and Muller (2001), geminates crosslinguistically are less common when adjacent to a vowel at one side and they are most rare in interconsonantal position. Such distribution can be attributed to perceptual salience in that the constriction for geminates is most perceptible when flanked by segments requiring little constriction (Pająk 2009a, Dmitrieva 2009).

Polish has a phonemic distinction between geminates and single consonants, as shown in (1) below. Pluses denote morpheme boundaries.

(1) [bud+a]   'kennel'   vs.   [budd+a]   'Buddha'
     [ɔtɔ]   'here'   vs.   [ɔtt+ɔ]   'proper name'
     [gam+a]   'scale'   vs.   [gamm+a]   'gamma'
     [al+a]   'proper name'   vs.   [allax]   'Allah'
     [pas+a]   'belt' gen. sg.   vs.   [pass+a]   'streak'

The data above show that geminates can occur in exactly the same context as singleton consonants. In both columns, these segments are flanked by vowels and they belong to the stem. The length of consonants is thus used contrastively to differentiate between the meanings of words. This contrast must be encoded underlyingly since any rule responsible for a change of consonantal length, specifically gemination or degemination, would be conditioned by identical environment.

Examples in (1) present instances of morpheme-internal geminates. They are known as true geminates, in the sense that they are present in the underlying structure. Polish also has fake geminates, which arise due to

morphological and phonological processes.[3] On the surface, they all function contrastively, as shown in (2) below.

(2) [lɛtɕ+ɛ]   'summer' loc. sg.   vs.   [lɛtɕ+tɕɛ]   'to fly' imp. pl.
    [ran+ɨ]   'wounds'   vs.   [ran+nɨ][4]   'wounded'
    [lɛk+i]   'medicines'   vs.   [lɛk+ki]   'light' adj.
    [ɲiš+ɨ]   'niche' gen. sg.   vs.   [ɲiš+šɨ]   'lower'

In this article, the distinction into true and fake geminates plays no role since both types are subject to the process of degemination. In general terms, this rule deletes one root node of a geminate, thus converting it into a singleton consonant. The relevant data is presented below.

As shown above, the intervocalic position preserves the contrast in consonantal length. The situation looks different in consonant adjacency, as shown in (3).

	nouns			adjectives
(3) (a)	[sɛvill+a]	'Seville'	vs.	[sɛvil+ski]
	[sɨbill+a]	'Sibyl'	vs.	[sɨbil+ski]
	[lɔzann+a]	'Lausanne'	vs.	[lɔzaɲ+ski][5]
	[navarr+a]	'Navarre'	vs.	[navar+ski]
(b)	[gvatɛmal+a]	'Guatemala'	vs.	[gvatɛmal+ski]
	[bɔtsfan+a]	'Botswana'	vs.	[bɔtsfaɲ+ski]
	[gur+a]	'mountain'	vs.	[gur+ski]

An observation can be made that underlying geminates in (3a) are reduced in preconsonantal position. Whenever the adjectivising morpheme -*ski* is added, geminates are simplified to singleton consonants. Examples in (3b) show that stems ending in a single coda preserve their consonants. Consequently, deletion takes place only if the stem ends in a geminate.

It is interesting to ask what motivates this cluster reduction. When comparing two subsets in (3), it may seem that segmental count is a driving force behind deletion. Specifically, only one consonant surfaces before the suffix. However, this hypothesis is belied by words such as [sɛrp+ski] 'Serbian' and [štɔkxɔlm+ski] 'Stockholmian', where stems end in two consonants.[6] Another option to consider concerns the syllable structure. As Rubach – Booij (1990) correctly point out, in [sɛvil+ski] the second [l] violates the sonority hierarchy (Jespersen 1904, Selkirk 1982) and thus cannot be syllabified. As a result, its extrasyllabic status motivates degemination. For clarity I present the syllabification of 'Sevillian' and 'Stockholmian' in (4) below.

(4)
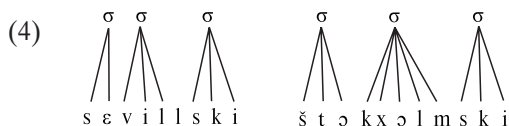
A legitimate question to ask is why the extrasyllabic sonorant is not saved by adjunction to a higher constituent – phonological word. As a matter of fact, this strategy is used in a number of words e.g. *Jędrka, Piotrka, piosnka.* Rubach – Booij (1990) solve this conundrum by rule ordering; specifically, when degemination applies first, it erases the material to be adjoined.

It seems that extrasyllabicity accounts for non-occurrence of geminates preconsonantally. So far I have shown that it may be correct for geminate sonorants. Let us now turn to examples which show degemination of obstruents, as shown in (5).

	nouns			adjectives
(5)	[ɔdɛss+a]	'Odessa'	vs.	[ɔdɛski]
	[frantsus][7]	'Frenchman'	vs.	[frantsuski]
	[pariš]	'Paris'	vs.	[pariski]
	[bjawɔruɕ]	'Belarus'	vs.	[bjawɔruski]

The data set above presents stems with final fricatives. It might seem that corresponding adjectives are formed by adding the suffix *-ki.* Such morpheme division would not block degemination in [ɔdɛski] since the underlying geminate is reduced before [k]. However, there are two lines of criticism against such an analysis. First, the suffix *-ki* is added to bound stems (e.g. [swɔt + ki] 'sweet', [gwat + ki] 'smooth', [xrup + ki] 'crunchy') whereas *-ski* is added only to nouns. Second, it remains problematic why fricatives of different places of articulation change into [s] in the context of a velar consonant. Such assimilatory behaviour is idiosyncratic and unattested elsewhere in Polish. Consequently, I assume that the adjectivising suffix in (5) is *-ski* rather than *-ki.* Under this analysis, degemination targets fricatives in all examples in (5) and it must be preceded by an assimilatory process before an alveolar fricative.[8] To illustrate rule interaction, let us consider the derivation of //bjawɔruɕ + ski//. An assimilatory process produces a geminate fricative in /bjawɔrus + ski/, which is then subject to degemination, thus giving a desired output [bjawɔruski].

Let us now consider the initial question. Can extrasyllabicity motivate degemination in (5)? The answer is negative. Fricatives can be syllabified in all clusters above since Polish permits various combinations of obstruents at syllable margins (Rubach 1999). Consequently, /frantsus+ski/ could have a syllable boundary between two alveolar fricatives, thus forcing the second

[s] to join the onset of the last syllable. In the light of this, motivation for cluster reduction must lie outside the syllable structure. To identify the driving force, let us make an observation that geminates are not permitted in adjacency of consonants, which results from the fact that this position does not license length distinction in Polish. As studies by Pająk (2009a) and Dmitrieva (2009) show, the perceptual salience of geminates is attenuated in consonantal adjacency, which can be accounted for in terms of articulatory gestures. Specifically, geminates occupy an area of little constriction and to achieve the most significant salience they must be flanked by gestures requiring wide constriction of articulators. Any deviation from this structure needs to be penalised in Polish.[9]

    To conclude this section, geminates are reduced in preconsonantal position due to the reasons of perceptual salience. It has been shown that consonantal sonorants (3) and fricatives (5) constitute the input to the rule. It is now of interest to look at other classes of obstruents.[10] Hence, the next section focuses on the behaviour of affricates in the environment of the adjectivising suffix *-ski*.

3. Cluster reduction of homorganic affricates and fricatives

Polish has 6 affricates in the inventory: [ts], [dz], [tš], [dž], [tɕ] and [dʑ]. All of them can be found in the underlying representation but they can also emerge due to a number of phonological processes.[11] Below I list several Polish place names with word-final affricates and show their adjectival derivatives.

	nouns			adjectives
(6)	[grujɛts]	'Grójec'	vs.	[grujɛtski]
	[ɕɛrats]	'Sieradz'	vs.	[ɕɛratski]
	[karpatš͡]	'Karpacz'	vs.	[karpatski]
	[wutɕ]	'Łódź'	vs.	[wutski]
	[nɔtɛtɕ]	'Noteć'	vs.	[nɔtɛtski]

    The adjectivising suffix in (6) is *-ski* for the reasons outlined in section 2. There is a parallel behaviour with respect to assimilatory processes since both in (5) and (6) word-final obstruents assume alveolar place of articulation. However, cluster reduction presents a challenge. In descriptive terms, the fricative of the suffix becomes deleted. This process takes place in the environment which is typical for degemination, yet there is no geminate in phonological sense. Instead, what is present underlyingly is a sequence of an affricate followed by a fricative, as in /grujɛts + ski/. To solve this dilemma, various analyses have been advanced, notably by Gussmann (1978). I shall present them below.

In accordance with descriptive facts, it is the fricative which undergoes deletion. Consequently, Gussmann (1978) proposes a process of [s]-deletion, which needs to be further specified to exclude the [s] of the suffix. This analysis is assailable on several grounds. First, the process of [s]-deletion replaces degemination in /frantsus + ski/, thus rendering the reduction of a fricative geminate qualitatively different from the reduction of a sonorant geminate. This leads to an *ad hoc* categorisation within a class of geminates. Second, the process of [s]-deletion is unmotivated elsewhere in Polish. In other words, it serves only to simplify clusters of preconsonantal [ss] and [tss], which in turn excessively complicates its formula. Consequently, the rule of [s]-deletion needs to be rejected in favour of a process which would not paralyse degemination elsewhere.

In a strive to develop a unified approach towards the clusters listed above, Gussmann (1978) advances two analyses pivoting around the process of degemination. One analysis is to create a derived geminate out of a sequence of [tss]. This would require imposing agreement with respect to the feature [continuant]. Specifically, it is proposed that the second segment change its value with respect to this particular feature. As a result, there would emerge a geminate affricate, which would be subject to the process of degemination. As Gussmann (1978) correctly observes, such analysis suffers a shortcoming that it postulates a change unmotivated elsewhere in the phonology of Polish. To clarify the matter, it is not affrication which is atypical for Polish (see Coronal Palatalisation in Rubach 1984) but its progressive direction and the segment targeted. Consequently, feature change is rejected to leave room for a solution exploiting phonetic aspects of affricates. On the melody tier, every affricate consists of a plosive followed by a fricative. In a cluster of [tss], it happens that two qualitatively identical fricative portions are adjacent to each other, which according to Gussmann (1978) legitimises the use of degemination to simplify such a cluster. Again, an advantage of such an analysis lies in the common strategy to simplify [ss] and [tss] clusters. However, the costs outweigh the gains since affricates need to lose their monosegmental status in order to submit the fricative portion to degemination. In other words, affricates become decomposable into sequences of homorganic stops and fricatives, which in Polish leads to a loss of contrast in meaning, as shown in (7) below.

(7) [t͡ɕɨ]   'if'   vs.   [tɕɨ]   'three'
     [t͡ɕɨj]   'whose'   vs.   [tɕɨj]   'rub' imp. sg.
     [d͡ʒɛm]   'jam'   vs.   [dʒɛm]   'doze' imp. sg.

Had affricates lost their monosegmental status, the words in the left column would become homophonous with the corresponding words

containing sequences of stops and fricatives, thus leading to a loss of contrast in meaning.

To conclude, none of the analyses proposed so far can account for the deletion of [s] in preconsonantal clusters of affricates and fricatives. Despite the fact that in parallel cases degemination takes place, it cannot be extended to operate in simplification of these clusters. A different mechanism must be active there, which however is driven by the same motivation as degemination (see section 2). Indisputably, there is adjacency of fricative portions in [tss] cluster although phonologically they fail to constitute a geminate. This adjacency motivates simplification but its phonetic character leads to a conclusion that the rule in question belongs to the domain of phonetic implementation (Laskowski 1975, Rubach 1994). The following section explores details of this solution.

4. Optimality Theoretic analysis

Inherent in phonetic implementation is the idea of gradualness. This presents a challenge for generative framework, which deals with categorical changes and accepts no intermediate stages in the application of a given rule (Rubach 1976, Browman – Goldstein 1986). Precisely, this inefficiency of generative models has led to the rise of Articulatory Phonology (AP) – a theory which abstractly encodes not only spatial relations but also linguistic timing, thus opening the way to gradualness in sound changes. This model has been advanced notably by Browman and Goldstein (1986 *et seq.*) and subsequent work has focused on incorporating AP within Optimality Theory (Prince – Smolensky 1993, McCarthy – Prince 1995; henceforth OT). In this section, I shall make crucial reference to papers by Bradley (2007), Gafos (2002) and Davidson (2003).

AP dispenses with the idea of segments with bundles of features since such a view fails to capture the facts of fluent speech. Instead, it introduces the notion of a gesture, a dynamically defined articulatory movement, which leads to a constriction in the vocal tract. Gestures are interrelated and by default they never appear in isolation in fluent speech. Consequently, cluster reduction in section 3 is conceptualised as gestural overlap. To give an example, let us consider the word /grujɛts + ski/. The deletion of the fricative is a direct result of the overlapping movement of adjacent gestures. Specifically, it is either the velar gesture [k] or the alveolar gesture [ts] which overlaps the fricative. The former represents the phenomenon of gestural hiding since adjacent gestures activate different articulators, whereas the latter illustrates gestural blending since, by contrast, gestures occupy the same articulator. This distinction however plays no role in OT formalization

of gestural overlap, which is done by a family of alignment constraints. The details of this mechanism follow below.

Alignment constraints in OT constitute a distinct family from two competing forces of faithfulness and markedness in that they neither regulate the input-output correspondences nor they mandate segmental changes. Instead, they are responsible for association of edges within different phonological and morphological domains pertaining to output forms (McCarthy – Prince 1993). The pattern in (8) below presents general alignment.

(8) Align (Category$_1$, Edge$_1$, Category$_2$, Edge$_2$)
Λ Category$_1$ V Category$_2$ such that Edge$_1$ of Category$_1$ and Edge$_2$ of Category$_2$ coincide
'For every category$_1$ there exists some category$_2$ such that the {L, R} edge of category$_1$ and the {L, R} edge of category$_2$ coincide.'

To clarify, edge stands for the left or right margin of a domain whereas category specifies various domains, such as: stems, syllables, segments etc. AP makes crucial use of alignment, yet it needs to change the referents of edge in order to express the gradualness of changes. Specifically, categories in AP are aligned with temporal landmarks inherent in the articulation of every gesture (Gafos 2002, Davidson 2003). The figure below illustrates the temporal structure of a gesture.[12]

(9)
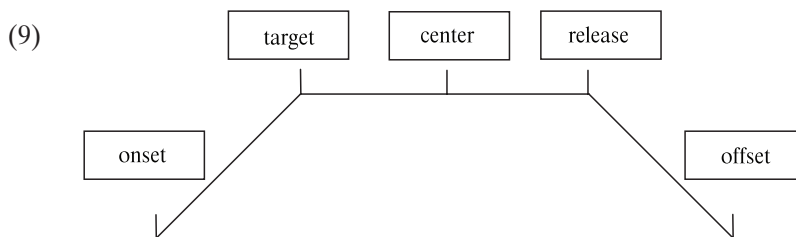
It should also be noted that according to the model categories in AP take the shape of gestures. In the light of these modifications to alignment, cluster reduction results from aligning corresponding temporal landmarks of adjacent gestures. I assume after Bradley (2007) that alignment should refer to C-centers.

With reference to cluster reduction in /grujɛts + ski/, let us consider the alignment of consonantal gestures in the suffix. (10) shows a relevant constraint.

(10) Align (/s/, centre, /k/, centre)
   'In a sequence /sk/, align the centre of /s/ gesture with the centre of /k/ gesture.'

For the constraint in (10) to ensure the reduction of /s/, it needs to dominate a faithfulness constraint MAX militating against deletion. However, placing such an alignment constraint in an undominated position would make it impossible for the morpheme /ski/ to surface. As the data in section 2 show, this is an incorrect solution. To attenuate the force of the constraint, one could locally conjoin it (for the theory of constraint conjunction, see Smolensky 1993) to restrict its application in the position after affricates.[13] Although this could be a promising solution, let us first consider the constraint itself, against which there are several lines of criticism. To begin with, the ALIGN constraint in (10) is particular in its design in that it targets a sequence of two specific gestures. This suggests that the given gestures exhibit exceptional behaviour with regards to other clusters. As the data in (11) show, this is incorrect.

(11) (a) [partaʧ̑]   'botcher'   vs.   [partaʦ̑tfɔ]   'botch-up'
        [bɔgaʧ̑]   'rich man'   vs.   [bɔgaʦ̑tfɔ]   'affluence'
     (b) [ɔbɨvatɛl]   'citizen'   vs.   [ɔbɨvatɛlstfɔ]   'citizenship'
        [aktɔr]   'actor'   vs.   [aktɔrstfɔ]   'acting'

The examples in (11b) show that the shape of the suffix is -stfɔ. Consequently, there must be a process of cluster simplification in (11a), which is analogous to the one presented with the morpheme -ski. The only difference lies in the gesture after the fricative. This renders the constraint in question inapplicable. Possibly, as a repair strategy, one could generalise the shape of the second category to C, any consonantal gesture. Despite a seeming advantage, the constraint becomes even more problematic. Now any cluster /sC/ in the language is penalised, which is an undesirable solution, considering the abundance of Polish data to the contrary (e.g. [miska] 'bowl', [vɨspa] 'island', [lista] 'list', etc.). An expectation is that such a constraint be ranked low in the hierarchy, which would technically solve the problem of /sC/ clusters in numerous output forms. However, the issue why this constraint enters the hierarchy at all remains unclear, which leads us to the second line of criticism.

The superiority of OT over rule-based frameworks resides in explicit articulation of the driving force behind seemingly unrelated processes. By introducing a constraint which penalises /sC/ sequences, no such motivation is revealed. Worse still, the force responsible for cluster reduction, i.e. elimination of length distinction in consonantal adjacency, remains obliterated. The formula of alignment, however, does not allow to add a condition that Align is operative iff the first category is preceded by an

identical gesture. Consequently, it follows from its definition that the idea of alignment cannot account for the nature of cluster reduction in homorganic sequences of affricates and fricatives.

On a general level, it is interesting to ask whether alignment constraints are able to express the phenomenon of any cluster reduction. They are designed to capture the facts of gestural overlap and so far they have been used in the literature to express the gradualness of changes. The moment one gesture fully masks the other, overlap reaches the end of scale, which raises a problem. Specifically, alignment constraints by definition are responsible for collocation of edges and not for expressing dominance. In other words, there is nothing in the formula of a constraint to indicate which gesture appears on the surface. If the direction of overlap were invariably regressive, dominance would naturally follow from the template of gestural alignment. However, phonology knows of numerous cases of progressive overlap, be it coarticulation or masking. Consequently, I claim that a different mechanism within OT is required to account for phonostylistic cluster reduction, yet I leave the matter open.

Given the discussion above, I shall not entertain the option of using alignment constraints to account for the simplification of [ʦs] sequences. Instead, I shall suggest a solution pivoting around the idea of marked affricate + fricative clusters. To a great extent, this line of reasoning follows from the initial distinction of directionality of overlap. Since the analysis of the right margin of [ʦsC] has proven to be unpromising, the alternative approach concerning the other edge needs to be considered. The details of this analysis follow below.

Polish seems to have a dispreference towards clusters of affricates followed by homorganic fricatives. According to the *Dictionary of contemporary Polish* [trans. *Słownik współczesnego języka polskiego*, 1996], no such sequences are attested in the lexicon, which would suggest that Polish has an undominated constraint against them. Its formula is shown in (12) below.

(12) $*Aff_i + Fric_i$
'Sequences of affricates followed by homorganic fricatives are forbidden.'

This markedness constraint however is violated by a number of words because, as data in (13) show, Polish does have such sequences in rapid speech.

	Careful speech			Rapid speech
(13) (a)	[tfartʃi]	'harder'	~	[tfartʃ͡ʃi]
	[ɔdʒɨvjatɕ]	'to nourish'	~	[ɔdʒ͡ʒɨvjatɕ]
	[ɔtɕatɕ]	'to sift out'	~	[ɔtɕɕatɕ]

(b) [pjɛɲʨɛsɛt]   'five hundred'   ∼   [pjɛntssɛt]
   [dzɛvjɛɲʨɛsɛt]   'nine hundred'   ∼   [dzɛvjɛntssɛt]

Homorganic clusters in (13) emerge due to assimilatory processes, which include affrication (13a) and place assimilation (13b).[14] This fact does not differentiate them from words in (6) or (11a), where surface affricates are frequently derived. Thus, it is not the origin but the context where one should seek differences. The deletion in words such as [grujɛtski] follows from preconsonantal position of the cluster, which is not the case in (13). The question now is how to incorporate this information into the format of the markedness constraint in (12). It is impossible to simply expand it by the addition of a consonant (C) since this segment cannot be penalised in output forms. The consonant is the trigger, not the target. In other words, its presence is a prerequisite for the applicability of *Aff$_i$+Fric$_i$. I suggest that this conditional mode can be expressed by means of a constraint conjunction. It remains now to be asked what should be conjoined as a force verbalising this condition.

Let us recall that the difference between words such as /grujɛts + ski/ and examples in (13) resides in the fact that the former group contains a consonant following the problematic cluster. This cannot have implications for the syllable structure since in both groups obstruents can enter the onset due to the rule of Obstruent Sequencing Suspension in syllabification (Rubach 1999). What is different however is the position of C-centre, the mean of all plateau midpoints for the gestures in a sequence (Browman – Goldstein 1988). It is claimed that this global property is crosslinguistically characteristic of onsets and its position is relatively stable with respect to the following coda (Pouplier 2011 and citations therein). The addition of a consonant to [tss] sequence shifts the C-centre to the right edge of the given cluster. This move is potentially problematic in the light of the limitation in cluster formation of strident coronals. Specifically, when two such sounds occur word-initially, they only allow another strident but non-coronal segment to follow the cluster, as in the word [ʃʧfanɨ] 'cunning'. In AP terms, this means that the C-centre of a sequence of strident coronals is only sensitive to another strident, which can be illustrated by means of the constraint in (14).

(14) C-CENTRE (strid, cor)
   'The C-centre in a cluster of strident coronals can be shifted exclusively by another strident sound.'

Interestingly, strident coronals in [ʃʧfanɨ] are sequenced in a reverse order with respect to the clusters of affricates and fricatives presented in this article, which follows from a dispreference against the latter group.

Consequently, it is virtually impossible to find a sequence of an affricate followed by a homorganic fricative and an additional consonant word-initially.

A reviewer asks a question whether the above generalisation about phonotactic restrictions is not invalidated by words such as *trzmiel* 'bumblebee' or *trznadel* 'yellowhammer'. In rapid speech, after affrication has taken place, these forms are said to be pronounced respectively as [t͡ʃʂmjɛl] and [t͡ʃʂnadɛl]. Consequently, they contain sequences of homorganic affricates and fricatives followed by an additional consonant, the combination of which is, to my view, unattested. The reviewer correctly noticed that in Cracow Polish sequences of homorganic affricates and fricatives are simplified to affricates, which means that *trzmiel* and *trznadel* are respectively pronounced there as [t͡ʂmjɛl] and [t͡ʂnadɛl]. I postulate that the same phenomenon occurs in Standard Polish in preconsonantal environment, yet this issue requires further research.

With reference to the constraint in (14), it remains to be asked which place it should occupy in the ranking. It seems that it is not violated by any attested forms. This is however belied by several words which add segments at the left margin of clusters of strident coronals, such as [pʃt͡ʂɔwa] 'bee', [fʃt͡ʂɔɲtɕ] 'to instigate' and [xʃtɕitɕ] 'to baptise'. It is interesting that all additional segments belong to the class of non-coronals, yet this fact does not have to invalidate the constraint. It only suggests that the position of C-CENTRE (strid, cor) in the ranking should be low.

To conclude the analysis of the constraints introduced above, *Aff$_i$+Fric$_i$ as well as C-CENTRE (strid, cor) occupy low positions in the hierarchy, yet they need to be placed higher than a constraint against deletion MAX. Importantly, the conjunction of the new constraints has to outrank its components to ensure cluster reduction in a specific environment. This is illustrated in the following evaluation of /grujɛt͡s + ski/ in (15).

(15) Tableau for /grujɛt͡s + ski/

/grujɛt͡s + ski/	DEP	MAX (ROOT)	C-CENTRE & *Aff$_i$+Fric$_i$	C-CENTRE	*Aff$_i$+Fric$_i$	MAX
a. grujɛt͡ssski			*!	*	*	
☞ b. grujɛt͡ski						*
c. grujɛski		*!				*
d. grujɛt͡ssɛki	*!				*	

The faithful candidate (15a) is eliminated due to a fatal violation of the constraint conjunction C-CENTRE & *Aff$_i$+Fric$_i$. The winning candidate (15b) emerges as the optimal output despite the violation of a low-ranked

MAX. Other candidates cannot be eliminated by means of the conjunction; therefore, the burden of evaluation is passed onto other constraints. Specifically, candidate (15c) satisfies *Aff$_i$+Fric$_i$ but at the cost of affricate deletion. This is penalised by MAX (ROOT), which prohibits deletion of segments in the root. Candidate (15d) incurs a violation of *Aff$_i$+Fric$_i$ but it satisfies C-CENTRE (strid, cor) at the cost of vowel insertion. This is a less optimal solution, which is penalised by DEP a high-ranked constraint against insertion. Interestingly, candidate (15d) is similar to the words in (13) in that a sequence of an affricate and a fricative is followed by a vowel. As is clear from the tableau, the constraint conjunction cannot eliminate such words.[15]

Although the ranking in (15) ensures the selection of the output with simplified [tss] sequence, it faces a problem with the evaluation of /sɛvill + ski/. Neither of the constraints used so far can eliminate the lateral geminate since the system has been adjusted to handle sequences of strident coronals. To account for the deletion of [l], a constraint must be applied specifically targeting geminates. Following the work by Pająk (2009b), I suggest constraints regulating geminate adjacency.

As already discussed in section 2, geminates crosslinguistically are well-attested in intervocalic position yet their distribution is inconsiderable in one-side consonantal adjacency and most rare interconsonantally. These observations are translated into constraints in (16).

(16) *Gem/V_V   'Geminates flanked by vowels are not allowed.'
    *Gem/1 VA   'Geminates adjacent to exactly one vowel are not allowed.'
    *Gem/NVA   'Geminates not adjacent to any vowel are not allowed.'

To express the frequency of occurrence a ban against interconsonantal geminates must crucially dominate a constraint against single vowel adjacency. This in turn must outrank a ban on intervocalic geminates, which needs to be placed low in the hierarchy for Polish. The constraint interaction is shown in (17).

(17) *Gem/NVA >> *Gem/1 VA >> *Gem/V_V

To ensure the selection of the optimal output for /sɛvill + ski/, the rankings (15) and (17) need to interact. This is shown in the following evaluation in (18). I omit the constraints referring to strident coronals as they do not participate in selecting the degeminated output.

(18) Tableau for /sɛvill + ski/

/ sɛvill + ski/	*Gem/NVA	*Gem/1 VA	Dᴇᴘ	Mᴀx (Rᴏᴏᴛ)	*Gem/V_V	Mᴀx
a. sɛvillski		*!				
☞ b. sɛvilski				*		*
c. sɛvillɛski			*!		*	
d. sɛvilɛlski			*!			

    The selection of the winning candidate (18b) shows that deletion is a more optimal solution than leaving a geminate intact, as is the case in candidate (18a). Vowel insertion as a strategy is also rejected, as shown in the evaluation of candidates (18c-d). Importantly, epenthesis turns out to be more costly than deletion, which is indicated by a solid line between Dep and Mᴀx (Rᴏᴏᴛ).

    To summarise, the tableaus in (15) and (18) show how different mechanisms employed within OT can handle the phenomenon of cluster reduction. The advantage of the model is that it makes an explicit distinction between the phonological and phonetic types of deletion. It also bases its constraints on phonetic facts. To this end, it makes crucial use of the theory of Articulatory Phonology. However, the implementation of the theory of local constraint conjunction complicates the analysis, which initially attempted to impose a limit on abstractness by means of the idea of alignment. Consequently, it remains a research topic whether phonostylistic cluster reduction can be expressed without the need to resort to any subtheories within OT. It is also interesting to explore the potential of C-centre metric in designing constraints, especially in articulating phonotactic restrictions.

5. Conclusions

This article has attempted to illustrate that segmental context plays an important role in cluster simplification processes in Polish. On the basis of denominal adjectives formed by the suffix -*ski*, there has been shown a distinction between the rule of degemination and phonostylistic cluster reduction of sequences of affricates followed by homorganic fricatives. To account for the latter process, a solution has been sought within the theory of Articulatory Phonology. Faced with inefficiency of the standard approach, an alternative has been suggested by making use of the theory of local constraint conjunction. Finally, a constraint hierarchy has been designed within Optimality Theory to account for the lack of length distinction in consonantal adjacency.

NOTES

[1] Polish is said to have a ban on word-final geminates (Rubach – Booij 1990, Pająk 2009b, Baković – Pająk 2010).

[2] High front vocalic segments trigger the process of Surface Palatalisation, as a result of which the preceding consonants receive a secondary articulation of tongue body raising (Wierzchowska 1971, Gussmann 1980a, Rubach 1984). I will ignore this process in this paper as it is irrelevant for my analysis. By the same token, I will omit stress in the transcriptions throughout the article.

[3] For discussion of geminates in Polish, see Rubach (1986a, 1986b), Rubach – Booij (1990), Sawicka (1995).

[4] The form [rannɨ] contains two morpheme boundaries since the final vowel is an inflectional ending. Likewise, [lɛkki] and [ɲiššɨ] should have two morpheme boundaries each. Yet I choose not to separate inflectional endings for expository purposes.

[5] The morpheme -ski contains a 'yer', a vowel without a timing slot. This vowel never surfaces but it triggers the process of palatalisation, which, among others, changes [n] to [ɲ]. For more information on palatalisation, see Gussmann (1973, 1980a, 2007), Rubach (1977, 1984, 1994).

[6] Polish in fact simplifies consonantal clusters before suffix -ski, as shown in the following examples: /bidgošt͡ʃ + ski/ → [bidgɔski] 'place name adj.', /šɛft͡s +ski/ [šɛfski] 'shoemaker's', /malbɔrk + ski/ [malbɔrski] 'place name adj.'. Although the sequences of consonants in the coda are in accordance with sonority hierarchy, they are simplified by deleting the final consonant of the stem (Gussmann 1980b). Hence, extrasyllabicity cannot be the trigger of cluster reduction. This matter falls out of the scope of this article, yet it requires further research.

[7] Polish has a productive rule of Final Devoicing and Voice Assimilation (Rubach 1984). I ignore this issue since it has no bearing on the structure of argument.

[8] Rubach (1994) refers to this process of obligatory assimilation as Dental Spreading. As will be shown later, also affricates are in the input to the rule.

[9] Word-initial geminates are resistant to reduction. For more information, see Pająk (2009b) and Pająk – Baković (2010).

[10] I omit here the analysis of stems which end in stops, such as *pirat – piracki* 'pirate' adj., *Szwed – szwedzki* 'Swedish', *kozak – kozacki* 'Cossack'. The adjectives also surface with affricates as in (6) but it is done due to palatalisation rules (Gussmann 1973, 1980, 2007, Rubach 1977, 1984, 1994), which I do not wish to discuss in this article.

[11] For more information on derived and underlying affricates, see Krajewska (2012).

[12] For further information on gestural structure, see Gafos (2002).

[13] A potential candidate for local conjunction could be gestural OCP (Gafos 2002: 26). Unlike its standard version, it could target adjacent fricative portions in [t͡ss] cluster. Both constraints, Align and OCP, would have to be ranked low in the hierarchy to allow /sk/ sequences and geminates respectively. However, their conjunction ranked high would penalise clusters of [t͡ssk].

[14] For more information on the nature of these assimilatory processes, see Rubach (1994).

[15] As a matter of fact, the input form should contain a yer and thus take the shape of /grujɛt͡s + Eski/. The elimination of an unparsed vowel would be due to the violation of a constraint PARSE(SEG), which mandates parsing underlying segments into syllable structure. Since candidates containing yers are less optimal, one could choose forms that

either parse these vowels or delete them. The former strategy would result in the violation of DEP(μ) since a new syllable would be created, whereas the latter would be at the cost of violating MAX(V). The interaction between all of the above mentioned constraints should ensure the selection of a candidate without the problematic vowel. This issue is, however, non-essential for this article as it casts no light on consonantal interactions between affricates and fricatives. Therefore, I shall not include it in the discussion.

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NON-ROOT-INITIAL ICTUS ON NATIVE WORDS
IN OLD AND MIDDLE ENGLISH POETRY

Abstract

Primary word-stress in Germanic languages is generally defined as root-initial. This placement is considered decisive in the metrical shape of native poetic creations, with a tendency for placing prominence where linguistically plausible. However, notable exceptions can be traced in Middle English poetry, with ictus in certain native words falling on a derivative suffix or the second element of an obscure compound rather than the root. The present paper discusses possible reasons for the divergences on the basis of a sample of major poetic works. Focus is placed on the diachronic development from Old to Middle English. Firstly, a discussion from the point of view of linguistic prosody is included, with attention devoted to the possibility of non-weak stress in Old English falling on all heavy, bimoraic syllables. Secondly, semantic aspects are analysed, with focus on the possible impact of incomplete grammaticalization of certain morphemes. Finally, French influences are noted.

1. Non-root-initial ictus in view of the linguistic foundations of poetic metre

Recent studies concerning historical stressing patterns in English, such as Minkova (1996: 95), Russom (2002: 306) or Dresher – Lahiri (1991: 264), frequently argue for the vital role of a connection between linguistic and poetic metre. An earlier publication by Kuryłowicz (1976: 66), states that the metrical principles of Old English poetry should be treated as "transpositions of linguistic rules". This correspondence, which implies that poetic accentuation should never contradict principles of linguistic stress, can be employed in the analyses of Old English phonology.

It is to be expected that the same relation should apply in the case of Middle English verse. Poetic metre should not stand in opposition to phonological principles, especially in the case of medieval verse forms which did not strive for innovation, but rather for the preservation of established traditions. Nonetheless, Middle English poetry displays certain divergences from expected accentuation patterns with considerable frequency.

Table 1. Selected forms showing irregularities in *The Canterbury tales:* data based on *The Riverside Chaucer* (Benson 1988)

	-dom	*-ship(e)*	*-hod/ -hed(e)*	*-ing/ -yng/ -ung*	*also*
all occurrences	33	33	45	763	120
iambic pattern & unstressed Germanic root	4 12.1%	4 12.1%	5 11.1%	127 16.6%	101 84.2%

The typical stress in all the instances in Table 1 would be root-initial and left-bound, of an essentially trochaic shape. It is found both in Old and Modern English and agrees with Campbell's general statement as to the placement of stress in Old English. The latter should also be an accurate description of homogeneously Germanic word forms in Middle English.

> The primitive Germanic language developed a stress accent which fell upon the first syllable of all words, and this is in essentials preserved in all the Germanic languages. Thus in Old English we find the stress on the first syllable in all simple words, and in most compound words. (Campbell 1959: 30)

Campbell's statement, which generally amounts to the stress being root-initial and left-bound stands in agreement with Middle English verse structure in most cases.

(1) Middle English verses with regular accentuation (based on *The Riverside Chaucer*, Benson 1988)

        / x
-dom   The wisdom of an heep of lerned men (*General Prologue*, l.575)

        /   x
-ship   How that in lordshipe is no sikernesse (*Monk's Tale*, l.2240)

        / x
-hed(e) /*-hod* Thy godhede, that I may been oon of thyne (*Knight's Tale*, l.2381)

| | | /   x   /   x |

-ing/ -yng　　　Of prikyng and of huntyng for the hare (*General Prologue*, l.191)

also　　　Myn herte is also mowled as myne heris (*Reeve's Prologue*, l.3870)

However, the percentages in Table 1 testify to the relatively frequent occurrence of opposite, iambic patterns. Some of the latter are shown below.

(2) Iambic accentuation pattern in Germanic words (based on *The Riverside Chaucer*, Benson 1988)

-dom　　　To been avysed, greet wysdom it were (*Pardoner's Tale*, l.690)

-ship　　　Ful sooth is seyd that love ne lordshipe (*Knight's Tale*, l.1625)

-hed(e)/ -hod And of manhood hym lakkede right naught (*General Prologue*, l.756)

-ing/ -yng　　　Ther koude no wight pynche at his writyng (*General Prologue*, l.326)

also　　　A Somnour and a Pardoner also (*General Prologue*, l.543)

The stressing patterns in item (2) are at odds with what we would expect in terms of the agreement between linguistic and poetic accentuation. In disyllabic words derivational suffixes as well as the second element of a compound receive stress whereas the root morphemes are placed in non-ictic positions.

2. Impact of Old English origins and syllable weight

It should be noted at this point that recent theories, including Dresher – Lahiri (1991), Fulk (1992), Suzuki (1996) or Russom (1998) postulate a somewhat more complex system of accentuation for Old English. Many linguists argue that it is not morphology, but rather suprasegmental phonology that plays the crucial role in both poetic and linguistic stress assignment. Syllable weight is considered the decisive factor.

The role of syllabic quantity in Old English verse has been discovered quite early due to the phenomenon of resolution.

(3) / \ x / x
    frēowine folca   (*Beowulf*, l.430a)

The scansion in (3) shows three lifts and two drops. Lines of this shape, which occur quite frequently in Old English verse, appearing, e.g., in c. 12.5% first lifts of a-verses in *Beowulf* (Sievers 1983: 127), violate what is known as "the four-position requirement", a principle postulated by Sievers (1983: 25), stating that each hemistich of Old English poetry needs to contain four metrical positions, two of which need to be primary lifts.

Sievers's Five Types

(4)

		1st	2nd	3rd	4th
A		/	x	/	x
B		x	/	x	/
C		x	/	/	x
D		/	/	\	x
		/	/	x	\
E		/	\	x	/
metrical position		1st	2nd	3rd	4th

Item (4) shows Sievers's Five Types as being in accordance with the four-position requirement. A metrical drop can contain more than one unaccented syllable.

Along with the observation that the overwhelming majority of lifts are heavy, irregularities of the type listed in item (3) lead to the conclusion that ictus can be assigned either to a heavy syllable or a sequence of two syllables, the first of which is light. Thus the structure of the verse in (3) should be reinterpreted (cf Suzuki 1996: 175, Cable 2004: 149):

(5) / ‿x / x
    frēowine folca   (*Beowulf*, l.430a)

Mora counting across syllable boundaries, which constitutes the basis of resolution, attests to an additional level of representation within the prosodic hierarchy, placed below word-level but above syllable level. This tier is often employed in order to account for linguistic stress assignment in Old English and to explain certain complex phonological phenomena, such as High Vowel Deletion. Dresher – Lahiri's (1991) theory can serve as a representative

example. Their "Germanic Foot" is essentially a moraic trochee erected above the syllable level, defined as a "binary, quantity sensitive left-headed tree whose left branch contains at least two moras" (Dresher – Lahiri 1991: 255).

(6) Germanic Foot (Dresher – Lahiri 1991)

```
    prosodic word
      /   |   \
     S   W   W
     F   F   F
     /\  /\   /\
   m m  mm  mm
   | |  | |  | |
   æ þe l i n g e s
```
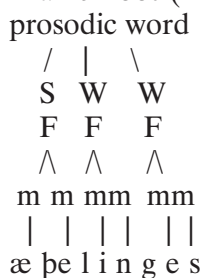
The Germanic Foot can be used to establish the placement of both primary and secondary stress. Each foot, a necessarily bimoraic construct, receives stress, with the strongest being at the left edge. The last foot, although marked as bimoraic (contrary to principles of weight attribution, previously mentioned in the present paper, which would treat a –VC# syllable as light) is always subject to Final Destressing and thus does not, in fact, behave like a heavy syllable. This is in agreement with the frequent occurrence of half-lifts in words like that under item (6), falling on the middle, but not the last foot. Suzuki (1996) further argues for the possibility of as many as four levels of non-primary stress in Old English.

Returning to the issue of non-root initial stress in Middle English poetry, it is important to note that all the forms in Table 1 were bimoraic in Old English. They would therefore have received some degree of stress. Iambic pentameter does not allow for the gradation of stress, thus syllables which were assigned secondary or lesser stress in Old English were used in Middle English poetry as either drops or lifts. It appears that the latter possibility might still have been valid. This would correspond to the principle of 'pertinacity' postulated by Lahiri (2002), which states that rules tend to persist overtime with realizations subject to modification. It should also be noted that "archaic structures tend to persist in poetry beyond their shelf life in spoken language" (Kemenade – Los 2014: 229), therefore such a fossilization of certain aspects of Old English prosody is not improbable. Furthermore, a closer examination of the occurrences of a monomoraic suffix, *-ful*, in *The Canterbury tales* shows a different pattern of occurrence with regard to stress.

Table 2. Irregular accentuation in the context of mora-count: data based on *The Riverside Chaucer* (Benson 1988)

	-dom	*-ship(e)*	*-hod/ -hed(e)*	*-ing/ -yng/ -ung*	*also*	*-full*
all occurrences	33	33	45	763	120	153
iambic pattern & unstressed Germanic root	4 12.1%	4 12.1%	5 11.1%	127 16.6%	101 84.2%	1 0.7%

A syllable which has a short vowel as its nucleus and ends in a single consonant is usually considered monomoraic, unless followed by a another consonant. This might explain the virtual non-occurrence of primary stress on the suffix *-ful* in Middle English poetry. The same seems to have been the case in Old English.

(7) The analysed items showing non-weak (i.e. primary or secondary) stress in Old English

　　　　　　　　　/ ＼ x ／
(a) -dōm　　　Wisdome heold (*Beowulf*, l.1959b)
　　　　　　　　　x　x ／　　＼ x
(b) -scipe　　　and se freondscipe (*Beowulf*, l.2999b)
　　　　　　　　　x ／　＼ x
(c) -hād　　　of childhade (*Elene*, l.914a)
　　　　　　　　　／　　／ ＼　x
(d) -ung　　　breost weorþunga (*Beowulf*, l.2504a)
　　　　　　　　　x　x ／　x　／
(e) swā　　　ond gelaeste swa (*Beowulf*, l.2990b)
　　　　　　　　　／ ＼　x ／
(f) -ful　　　sorhfullne sið (*Beowulf*, l.1275a, 14

The need for the morphemes (listed in the left column) in items (7a) to (7e) to receive some degree of stress is motivated by the four-position requirement. However, the derivational suffix *-ful* should be treated separately. It occurs nine times in *Beowulf* and is stressed three times, but the stress only occurs in the context of a following consonant. The other suffixes do not need to fulfill such a requirement, as they are inherently bimoraic.

3. Word-formation and semantics

Another aspect to be considered are issues of semantics and word-formation. The sample of irregular forms presented in Table 1 shows a marked

difference between the adverb *also* and the other forms. This apparently obscure compound occurs much more frequently in iambic shape in the analysed sample. It might be due to its second element actually being regarded (at least for poetic purposes) as bearing enough of a semantic weight as to be a possible carrier of primary poetic stress. *The Middle English dictionary* states that "Early Middle English has the phrase as well as the compound", furthermore, some of the forms listed in the *Middle English dictionary* (MED) are quite transparent in terms of the compound elements.

(8) Listing of variants for *also* from the MED:
   also (adv.) Also **alswo**, **alz(u)o**; **alswa**, **alsway**, **alsqua**, **alsa**; **elswa**; **alse**, **als**, **as**.

   The stressing of suffixes such as *-dom* and *-hod/-hed(e)* might also be justified by a high degree of semantic weight being attributed to them, due to their frequent occurrence as separate words in Old English. Marchand (1969: 232) states that "combinations with *-hād* as a second-word were (...) compounds in Old English." This state might have been fossilized in poetry, a medium which often uses somewhat archaic patterns.

   However, a preliminary analysis of another suffix seems to disprove the link between the iambic patterns and the degree of semantic weight.

Table 3. Irregular accentuation in a semantic context

	-dom	*-hod/ -hed(e)*	*-ing/-yng/-ung*		
all occurrences	33	45	763		
iambic pattern & unstressed Germanic root	4 12.1%	5 11.1%	127 16.6%	Gerund	83 (65.45%)
				Present Participle	44 (34.6%)
non-iambic pattern	29	40	627	Gerund	397 (63.3%)
				Present Participle	230 (36.7%)

   As shown in Table 3, the occurrences of the iambic pattern in gerunds and present participles seem to be more numerous than in the case of words with the suffixes *-dom* and *-hod/-hed(e)*. Furthermore, the ratio of the occurrences of gerunds to past participles remains virtually unchanged regardless of the stressing pattern. This would suggest that semantic weight is not a decisive factor in the appearance of the discussed irregularities.

4. Conclusions

Only tentative conclusions can be postulated due to the very limited scope of investigation thus far. A preliminary analysis seems to point to the possibility of a link between the seemingly irregular accentuation in Middle English and the recent theories of Old English prosody. It appears that the assignment of the varying degrees of non-weak stress to all bimoraic feet in Old English may have been partially fossilized in Middle English verse. Heavy Germanic syllables and their bimoraic equivalents, regardless of their morphological status, would still have been seen as possible carriers of stress.

Certain semantic and external factors may have contributed to the phenomenon of non-root initial stress on Germanic words in Middle English poetry. Thus far, no connection has been established between the semantic 'weight' of suffixes and their stressing patterns, but the accentuation pattern of the Middle English adverb *also* seems to have been affected by the contemporary transparency of its elements.

An issue unconsidered in the present paper is the question of the influx of French vocabulary, with its foreign stressing patterns. The introduction of French poetic metre and loanwords with foreign stressing patterns may have triggered, to some extent, the development of non-root initial stress in Germanic vocabulary. The matter certainly requires further investigation, although, as Kuryłowicz (1976: 66) points out, poetic metre should not normally contradict linguistic principles. Furthermore, Minkova (1996) discusses similar irregularities in the *Ormulum* and goes as far as to state that "the almost uniformly Germanic vocabulary (...) would preclude any speculations about prosodic influence from French or Anglo-Norman". Thus, regardless of whether external influences contributed to the irregularities, an ultimate rooting of the phenomenon in phonology is to be expected.

Further study and a broader scope of investigation are necessary to reach more decisive conclusions.

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THE PRESENT PARTICIPLE MARK-*ING* IN EAST MIDLAND MIDDLE ENGLISH: A CORPUS STUDY

Abstract

The present paper contains a description of the distribution of the typical forms of the present participle marker in the East Midland dialect, one which also incorporates the relatively autonomous dialectal areas of East Anglia and London. The major contrasting characteristic of the conservative and the advanced types was materialised in the opposition between the old *nd*-forms and the new *ng*-forms. The evidence for the present study comes from the prose and poetic texts of the 13th–15th centuries compiled in the electronic versions of the *Innsbruck computer archive of machine-readable English texts* (ICAMET), *Penn-Helsinki parsed corpus of Middle English* (PPCME2), Chadwyck-Healey's *English poetry full-text database, The Auchinleck manuscript*, and the Michigan *Corpus of Middle English prose and verse*. The selected texts are those from localized manuscripts, established on the basis of the *Catalogue of sources for a linguistic atlas of Early Medieval English* (LAEME) and *A linguistic atlas of Late Mediaeval English* (LALME). The present contribution is another instalment in a series of papers devoted to the rise and spread of the present participle form *-ing(e)* in Middle English.

1. Introductory remarks

Although the provenance of the present participle marker *-ing* remains unclear it seems certain that its rise was connected with the regional transformation of the Old English present participle marker *-ende* to *-inde* in Middle English. Following the merger with *-ung* of the Old English gerund, the form *-inde* may have substituted the sequence *-ng-* for *-nd-* and finally become *-ing(e)*, soon recognized as a standard form in the East Midland.

The present paper, part of a much larger study, contains a description of the distribution of the typical forms of the present participle marker in the East Midland dialect, one which also incorporates the relatively autonomous dialectal areas of East Anglia and London. The major contrasting characteristic of the conservative and the advanced types was reflected in the opposition between the old *nd*-forms and the new *ng*-forms

The evidence for the present study comes from the prose and poetic texts of the 13th–15th centuries compiled in the electronic versions of the *Innsbruck computer archive of machine-readable English texts* (ICAMET), *Penn-Helsinki parsed corpus of Middle English* (PPCME2), Chadwyck-Healey's *English poetry full-text database, The Auchinleck manuscript*, and the Michigan *Corpus of Middle English prose and verse.* The selected texts are those from localized manuscripts, established on the basis of the *Catalogue of sources for a linguistic atlas of Early Medieval English* (LAEME) and *A linguistic atlas of Late Mediaeval English* (LALME).

This contribution is another installment in a series of papers devoted to the rise and spread of the present participle form *-ing(e)* in Middle English, the earlier studies being Budna (2007, 2009, 2010, 2012).

2. Present participle forms in verse and prose

The corpora under scrutiny contribute texts from the three main areas of the East Midlands: northern, central and southern. The only text localized in the northern East Midlands is the *Ormulum* (MS Junius 1 SC 5113, Bodleian Library, Oxford), an early poem dated to c1200. The text was composed by a monk named Orm and comprises a set of metrical homilies written in regular 15-syllable unrhymed iambic lines with a caesura after the eighth syllable. This relatively early Middle English text, localized in Southwest Lincolnshire, still retains the inherited Old English dialectal marker *-end(e)*. The spelling used by the author is unique: consonants are doubled to indicate the preceding short vowel so that the present participle marker obtains an additional *-n*, i.e. *-ennde*.

(1) O þatt allterr haffgenn þeȝȝ (*Ormulum*, l.1066)
    Glowennde gledess arrkedd (*Ormulum*, l.1067)
    Þurrh Drihhtin blettcedd, & to ben (*Ormulum*, l.2289)
    Allwældennd Godess moderr. (*Ormulum*, l.2290)

More numerous texts, dated to c1200–1425, are localized to the central East Midlands, cf.:

(2) c1200 *The Peterborough chronicle* (MS Laud. Misc. 636 E, Bodleian Lib., Oxford)
     c1300 *Proverbs of Alfred* (MS Maidstone)
     c1314 *Guy of Warwick* (MS Auchinleck, Advocates, 19.2.1)
     c1400 *English sermons* Wycliffite (MS Additional 40672, Brit. Lib., London)
     c1425 *The cloud of unknowing* (MS Harley 674, Brit. Lib., London)

The studies on the manuscript of *The Peterborough chronicle* attribute its first lines (up to 1131) to a single scribe, who also copied the earlier material from the other manuscripts of the *Anglo-Saxon chronicle*. The Final Continuation (1132–1154), added by the second copyist differed in its "case-marking systems, showing a progressive deterioration with some interference in the First Continuation from the West-Saxon Standard" (*Penn-Helsinki corpus of Middle English texts*, 2nd ed.). Worth mentioning is that even though various scribes dealt with the manuscript, the text seems to be rather homogeneous in terms of the language and its dialect. *The Peterborough chronicle*, which comes from Northamptonshire, still exhibits the Old English present participle marker *-ende*:

(3) (a) Ða Willelm Englalandes cyng, þe þa **wæs sittend**e on Normandige forðig he ahte ægðer ge Englaland ge Normandige (...) (*The Peterborough chronicle*, 8/5)
     (b) & þær him comon to his witan and ealle þa **landsittende** men þe ahtes wæron ofer eall Engleland (...) (*The Peterborough chronicle*, 9/5)
     (c) & þurh yfelra manna rædas þe him æfre gecweme wæran & þurh his agene gitsunga, he æfre þas leode mid here & mid ungylde **tyrwigende wæs**, forþan þe on his dagan ælc riht afeoll & ælc unriht for Gode & for worulde up aras. (*The Peterborough chronicle*, 27/13)

Another text, *Proverbs of Alfred*, dated to 1300, is preserved in six manuscripts. Although the manuscript chosen here, part of the MS Maidstone originating in the Northampton area (Laing 1993: 121), reveals the authorship of several hands, its language is homogeneous. Despite the fact that the text represents Early Middle English, it unexpectedly shows a slight prevalence of the innovative form *-ing(e)* over the conservative *-ende* (3 instances vs. 5 in *-inge*).

The other texts from the 14th–15th century central East Midland dialect show more variation in the present participle marker. Thus, *Guy of Warwick* (couplets and stanzas), the text from Auchinleck MS, apparently shows

a rivalry between the dialectal variants *-inde* (74 tokens), *-ende* (2 tokens) and a 'gerund-like' form in *-inge* (61 tokens), but it also contains the suffix *-and(e)* (3 tokens) which is regarded as a northern dialectal form. Present participle forms like *-inde/-iende*, *-ande* or *-inge* are commonly found alternating in the same text, even in rhymes:

(4) (a) He seye wiþ þat a grom **cominde**
     To himward fast **erneinge**. (*Guy of Warwick*, l.5419–5420)
  (b) When þe douk Loer herd þis tiding,
     Þat Gij & Tirri were **coming.** (*Guy of Warwick*, l.6203–6204)
  (c) Wiþ þat come Gij **prikeinde**
     & a small tvige in his hond **bereinde**. (*Guy of Warwick*, l.2342–2343)
  (d) Wiþ þat come Tirri **prikeinge**
     In his fest his brond **bereinge**. (*Guy of Warwick*, l.2088–2089)
  (e) No of þat sorwe neuer þe mo
     Þat him was **comand** to (...) (*Guy of Warwick*, l.1125–1126)
  (f) Wiþ þat come **prikeand** Tirri
     Of Gurmoise þerl sone Aubri (...) (*Guy of Warwick*, l.2035–2036)

As regards the present participle markers the scribe of *Guy of Warwick* is rather inconsistent. Apart from attaching various present participle markers to the same verb he uses either of two forms within the same rhyme, so that the forms in *-nd* rhyme with forms in *-ng* frequently. It looks as if the plosives in these clusters were lost.

(5) (a) He seye wiþ þat a grom **cominde**
     To himward fast **erneinge**. (*Guy of Warwick*, l.5419–5420)
  (b) Bi þat side was Otous **fleinde**
     In his hond his swerd **kerueing.** (*Guy of Warwick*, l.4857–4858)
  (c) Of þre kniʒtes so wele **doinde**
     Oʒain þen Loreyns **fiʒting**. (*Guy of Warwick*, l.4765–4766)

The last two central East Midland texts, *English sermons* and *The cloud of unknowing*, contain numerous present participle forms in *-ing*, but differences in the formation of the present participle ending remain. The analysis of the Wycliffite *English sermons*, dated to c1400 and probably originating in the Northampton/Leicestershire area, brings interesting results. Although the text offers a considerable number of *-yng/-ing* tokens (133), it also contains a few instances of forms different from *-ing*, e.g. 5 instances of *-enge* and 2 instances of *-ynde*.

(6) (a) (...) a poore man **lyeng** at hys gate þat was clepyd Lazarus
     (CMWYCSER, 223.12)

Whan Crist saw_þese leprouse men **crienge** (CMWYCSER, 275.888)
And he say anoon and_sewede Crist **heryenge** God (CMWYCSER, 392.2993)

(b) þe þrydde was þe **stynkynde** careyne þat he qwekude in þe graue (CMWYCSER, I, 284.1031)
þis is Lazar þat lyþ **stynkynde** fowre days in his sepulcre (CMWYCSER, I, 284.1039)
þe þridde traueyle herof where to arayle þese **growynde** vynes. (CMWYCSER, 380.2757)

It is hard to determine why the scribe incorporated a small number of dialectal forms in *-enge/-ynde*, considering his frequent use of the most advanced form *-ing*. But pairs of present participle forms spelt *-enge/-inge* or *-ynde/-ing* are occasionally found:

(7) For hit is noo charyte to leue þe ordre þat Crist gaf and to take þese **stynkyng** orders. (CMWYCSER, 328.1825)
He was **cryinge** neþeles he ches to speke more mekely. (CMWYCSER, 342.2063)

It could also be emphasised that in the case of *growynde* and its variants in *-yng/-ing* the scribe uses the ending *-ing* to represent the participle (8a) and the gerund (8b):

(8) (a) (...) and þornes **growing** strangledon hit. (CMWYCSER, 384.2836)
(b) (...) but God gyueþ þe **growyng**, al gif_men planten and watren. (CMWYCSER, 380.2766)
For **growing** of cool wortis and oþtre weedis maken malecoly and oþre synnes (CMWYCSER, 381.2780)
(...) and **growing** of þis hooly seed. (CMWYCSER, 384.2824)

The last group of texts to be discussed, localized in the southern part of the East Midlands, contains the following items:

(9) c1100 *Poema morale* (MS Trinity College B 14, Cambridge)
c1200 *Vices and virtues* (MS Stowe 34 (*olim* 240), Brit. Lib., London)
c1300 *King Alisaundr* (MS Auchinleck (Advocates) 19.2.1)
c1330 *Arthour and Merlin* (MS Auchinleck (Advocates) 19.2.1)
c1350 *Prose psalter* (MS Additional 17376, Brit. Lib., London)
c1395 *The Old Testament* Wycliffite (MS Royal 1.C.8, Brit. Lib., London)
c1400 *Mandeville's travels* (MS Cotton Titus C16, Brit. Lib., London)

The earliest south East Midland text, *Poema morale*, shows no attestations of the present participle. *Vices and virtues*, a text from a slightly later period and produced by three scribes, contains corrections incorporated by at least three other hands. According to the PPCME2 sources,

> "a scribe of the northern border of the South-Eastern area has turned a composition in the dialect of the Middle or Western South into his own, with occasional retention of Southern forms. After a considerable interval his version was copied with little alteration by the three scribes of the Stowe manuscript",

which suggests that the language of the manuscript is older than the date of the copy. As regards the present participle markers, *Vices and virtues* exhibits the alternation of *-enge* and *-inde*. Additionally, the parsed text of the *Penn-Helsinki corpus* classifies the only present participle form as that in *-inge* (Code of oDes *sueriingge*). Assuming that the data is reliable, one may draw the conclusion that the form *-inge* in the East Midlands appeared for the first time in *Vices and virtues*, which seems not to be the case. The item *sueriingge* in the prose text apparently functions as a verbal noun and its meaning is 'of oath's swearing' or 'swearing of an oath'.

The scribes of the Auchinleck manuscript, containing the East Midland poems *King Alisaundr* (1300) and *Arthour and Merlin* (1330), written in Essex/Middlesex, use various markers to signal the present participle. *King Alisaundr* contains the ending *-ing*, but also *-in*, and shows the deletion of <g>.

(10) Swete odour ʒiueþ, ywis,
      Gelofre, quibibbe & þe mace
      Gingeuer, **comin** ʒeueþ odour of gras. (*King Alisaundr*, l.6787)

In *Arthour and Merlin* the scribe's favourite present participle suffix is *-ande*, the commonest northern form. Out of the 49 present participle tokens in the poem, 34 are *-ande*, 12 attach the Midland suffix *-inde/iende*, and only 3 verbs feature the contemporary *-ing* marker.

(11) He was founde þurth **wiching** þin,
      Traitour' þai seyd 'verrament
      For al þine enchauntement (...) (*Arthour and Merlin*, l.3154–3156)

(12) Þe kniʒt fel ded in a forwe;
      In his **falling** brast þe spere -
      Bretel bar it no ferþere. (*Arthour and Merlin*, l.3460–3462)

(13) Foules sing in forest wide,
     Swaines gin on **iustinge** ride,
     Maidens tiffen hem in pride. (*Arthour and Merlin*, l.7620–7622)

Apart from incorporating of so many *-and* forms, the scribe does not hesitate to use the alteration of *-and/-inde* markers in the same words. The context is not clear, but apparently the author used both forms freely, introducing the *-and/-inde* variation in words of high frequency (*comand/cominde*, *doand/doinde*, *fleand/fleainde* and *rideand/rideinde*).

Although *The earliest complete English prose psalter* is regarded as a typical East Midland prose text from the Essex area, a considerable majority of the present participle forms seem to be characteristic of the North. Out of 324 present participle tokens in the text, 295 attach *-and*, 23 represent the Southern type (*-yng/-ing*), and only 4 verbs retain the inherited Old English marker *-end*. Two verbs, *wirchen* and *sechen*, contain the specific sequence *-aund* with *-u* insertion typical of French spelling.

(14) (a) Defende me fram te **wirchaund** wickedness. (CMEARLPS, 69.3015)
     (b) (...) þou shal drescen te rigtful God **sechaund** hertes and reiners. (CMEARLPS, 6.238)

The last two items from the list, the Wycliffite *The Old Testament* and *Mandeville's travels*, an anonymous translation of a French work written in the southern part of the East Midlands (PPCME2), were composed at the beginning of the 15th century. The Wycliffite text contains the suffix *-ynge* exclusively, while *Mandeville's travels* displays a number of forms different from *-ing* (i.e. *-enge/-and*). The vast majority of the present participles exhibit forms with the marker *-ynge/-inge* (102 verbs), whereas 16 items end in *-enge*, with only one verb attaching the suffix *-and*, of Northern origin.

(15) (...) and become holle within of whilk þer er many git **standand** in diuerse placez of the world. (CMMANDEV, 45.1111)

The evidence from the East Midland manuscripts shows a gradual decrease in the use of the continuations of the Old English present participle marker *-ende*. The data selected from the East Midland texts suggest that the present participle suffix *-ing(e)* prevailed over the widely used markers *-end(e)*, *-ind(e)* and even *-and(e)* just before 1400.

3. Concluding remarks

The incidence of the present participle forms in the East Midland texts is shown below:

Table 1. Present Participle forms in East Midland texts (13th–15thc)

	Text name	Manuscript	Date	Genre	Pres. Part. forms
East Midland North	*The Ormulum*	MS Junius 1 (SC 5113), Bodleian Lib., Oxford	c1200	Homilies, poetry	-ennd(e) 11 (100%)
East Midland Central	*The Peterborough chronicle*	MS Laud. Misc. 636 E, Bodleian Lib. Oxford	c1200	History	-ende 22 (100%)
	Proverbs of Alfred	MS Maidstone	c1300	Poetry	-end(e) 3 (37,5%) -ind(e) 5 (62,5%)
	Guy of Warwick	MS Auchinleck (Advocates) 19.2.1	c1314	Poetry	-ind(e) 74 (44%) -end(e) 2 (1,2%) -ing(e) 61 (36,3%) -and(e) 31 (18,5%)
	English sermons Wycliffite	MS Additional 40672, Brit.Lib., London	c1400	Prose	-yng(e) 130 (92,8%) -eng(e) 5 (3,5%) -ing 3 (2,1%) -ynde 2 (1,6%)
	The cloud of unknowing	MS Harley 674, Brit.Lib., London	c1425	Prose	-yng 68 (75,5%) -ing 22 (24,5%)
East Midland South	*Vices and virtues*	2Stowe 34 (*olim* 240), Brit. Lib., London	c1200	Prose	-ende 40 (51,2%) -inde 37 (47,4%) -ingge 1 (1,4%)
	King Alisaundr	MS Auchinleck (Advocates) 19.2.1	c1300	Poetry	-in 1 (50%) -ing 1 (50%)
	Arthour and Merlin	MS Auchinleck (Advocates) 19.2.1	c1330	Poetry	-and 34 (69%) -inde/iende 12 (24%) -ing 3 (7%)
	The earliest complete English prose psalter	MS Additional 17376, Brit. Lib., London	c1350	Prose	-and 295 (91,04%) -yng 15 (4,6%) -ing 8 (2,4%) -end 4 (1,2%) -aund 2 (0,76%)
	The Old Testament Wycliffite	Royal 1.C.8, Brit. Lib., London	c1395	Prose	-ynge 60 (100%)
	Mandeville's travels	Cotton Titus C16, Brit. Lib., London	a1425	Prose	-ynge 97 (81,5%) -eng(e) 16 (13,4%) -ing(e) 5 (4,2%) -and 1 (0,9%)

The evidence above indicates that the East Midland texts of the 13th–14th centuries preserve divergent present participle forms, but according to the data extracted from the texts under scrutiny, the substitution of the Old English marker *-inge* for *-ende* was completed before the end of the 14th century. The data from the East Midland texts suggest that the present participle suffix *-ing(e)* prevailed over the widely employed markers *-end(e)*, *-ind(e)*, *-and(e)* just before 1390.

Figure 1 shows the distribution of the present participle variants *-ende/ -inge* in the East Midland between 1200 and 1390:
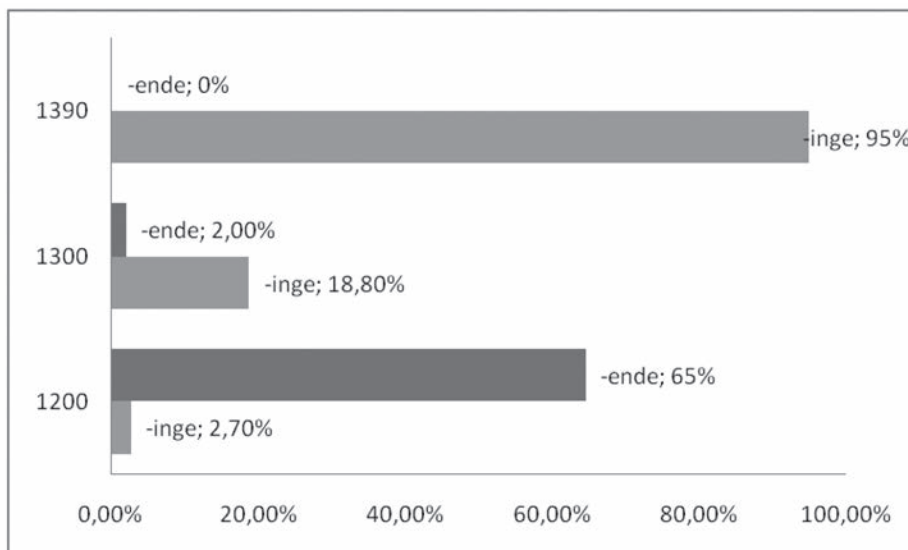
Fig. 1. The distribution of the present participle markers *-ende/-inge* in the East Midlands (1200–1390)

The wide range of prose and poetic texts from between 1200 and 1300 composed in the Central and Southern parts of East Midlands display a gradual disappearance of the present participle suffixes *-ende* and *-inde* in favour of *-inge* at the end of the 13th century. A rapid increase of the prevalence of *-inge* over the other dialectal variants, i.e. *-ende/-inde/-enge* and Northern *-ande*, took place between 1300 and 1400. An intriguing phenomenon is the appearance of the *-and* marker, typical of the North, in several East Midland poems.

To conclude, none of the texts written after 1400 show variation, save one. *Mandeville's travels* shows slight variation with some verbs ending in *-ynge/-inge/-enge* and a single item which attaches *-and*, possibly of Northern origin.

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REFLEXVITY IN OLD ENGLISH

Abstract

The paper discusses changes that took place in the ways of expressing reflexivity in Old English. The study examines and evaluates the two most common forms conveying reflexivity: the use of personal pronouns and the reflexive pronoun *self*. The Early Old English personal pronouns were able to convey a reflexive relation, but, probably in order to avoid ambiguity, the personal pronoun began to be accompanied by the pronoun *self* in sentences rendering a reflexive meaning. The paper also contains an account of *self* used on its own, which was mostly employed in structures with emphatic meanings. Moreover, the work will adduce an example of an Old English inherently reflexive verb. The data come from the *Dictionary of Old English corpus*.

1. Introductory

Modern English distinguishes itself from other Germanic languages as regards the way it expresses reflexivity and intensification. First, it has no morphologically simple reflexive pronouns, such as Ger. *sich* or Pol. *się*. Second, it employs the same -*self* form as an intensifier and reflexive anaphor. Yet, unlike Middle English, Old English had no special reflexive anaphor, which is not so uncommon within the family of Germanic languages. For instance, "Frisian does not have a special form for the reflexive pronoun of the third person singular. The personal *him* 'him' and *har* 'her' can function as a non-reflexive or reflexive pronoun" (cf. Hoekstra *et al.* 2010: 256). The same can be said about reflexivity in Old English, where mainly personal pronouns were employed to convey a reflexive relation. However, as will be shown, some of such constructions were ambiguous, which probably was the reason for the emergence of another way of expressing reflexivity, i.e. the

personal pronoun accompanied by the *-self* form. According to Penning (1875: 12) the main reason for personal pronouns being followed by *self* was the fact that there existed no difference between the third person pronoun expressing a reflexive relation and the third person pronoun referring to a third person. The present study will also demonstrate two different structures in which OE *self* was used as an intensifier: *self* following genitive, dative and accusative objects, and the pronoun standing in isolation. According to Mitchell (1985: 116) *self* used on its own can be reflexive. Yet, all the instances of isolated *self* presented in this paper play the role of the intensifier. The paper will also demonstrate an example of inherently reflexive verbs; verbs which do not require the presence of the pronoun *self* in order to render reflexivity. The study is based on texts from the DOE corpus and the numbers of lines of the presented examples correspond to the numbers given in the corpus. The translations from Aelfric's *Homilies of the Anglo-Saxon Church* are taken from Thorpe (1844). If not stated otherwise, all the remaining examples are translated by the author of this paper.

2. Intensifier *self*

The Old English intensifier *self*, which is an adjective and manifests agreement with its antecedent in number, gender and case, is used in adnominal and adverbial positions. When used adnominally, as shown in (1) and (2), the intensifier usually stands next to individuals of great importance, such as God, Christ or Moses (cf. Farr 1905: 19):

(1) (a) Swa swa **crist sylf** cwæð (...) (*ÆCHom* I, 2, 196.199)
        ['As Christ himself said.']
    (b) **God** gefylð þa hingrigendan mid his goodum. swa swa **he sylf** cwæð. (*ÆCHom* I, 13, 288.199)
        ['God filleth the hungry with his good things; as he himself said.']

In (1), the *self* form directly accompanies the subjects it refers to. This structure was the primary way to express intensification in Early Old English. For instance, in *Beowulf* the intensifier *self* always precedes or follows the noun it modifies:

(2) (...) wolde **self** cyning symbel þicgan. (*Beowulf*, l.1010)
    ['The king himself would take part in the feast.']

The Old English intensifier *self* is usually employed to modify the third person singular pronouns not only in *Beowulf* but also in later manuscripts, such as Ælfric's *Homilies of the Anglo-Saxon church* and *Lives of Saints*. Maybe less common, there are also other examples of nominative uses of

personal pronouns emphasized by *self*. For instance, in item (3), emphatic *self* is used with the first person nominative pronouns in the singular and the plural:

(3) (a) **Ic sylf** wylle gadrian mine scęp þe wæron tostencte. (*ÆCHom* I, 17, 315.64)
['I myself will gather my sheep that were scattered.']
  (b) Nu we **seolfe** geseoð sigores taken (...) (*Elene*, l.1119)
['Now, we ourselves behold the sign of victory.']

By Late Old English another structure expressing intensification had appeared: the intensifier *self* modifying the genitive, dative and accusative objects. Of course, this structure did not outnumber *self* being used after nominative pronouns, but it still can be found in Old English manuscripts:

(4) (a) (...) nu **ic me sylf** ne mæg (...) (*Exeter book*, *Resignation*, l.96)
['Now that I myself may not.']
  (b) beoð **eow sylfe** nu gearwe to gewendenne to Criste (...) (*ÆLS* (*Thomas*), l.169)
['Now you yourselves are prepared to turn to Christ.']
  (c) þæt **he him seolf** ær getimbrade (*Bede* 208, 14; cf. van Gelderen 2000: 32)
['that he himself had built for himself.']

In (4), *self* is used as an intensifier and, unlike the *self* forms in the items (1)-(3), it is accompanied by the dative forms of personal pronouns. As will be shown later, already in Old English the reflexive *self* could have an identical form.

As presented, *self* can intensify the noun and the personal pronoun. Yet, it can also function as a replacement for a previously used subject (cf. Ogura 1998: 149–150):

(5) (...) þæt **þu** þa beorhtan us sunnan onsende, **ond þe sylf** cyme (...) (*Exeter book*, *Christ A,B,C*, l.109)
['that you yourself send us the shining sun, and yourself come']

To summarize briefly, the vast majority of the use of the intensifier *self* in Old English occurs in sentences with the third person nominative pronouns. Maybe less numerous, there are also examples of the intensifier used with the first and the second person pronouns. The least common structures used emphatically are the intensifier added to the object pronoun and the intensifier used in place of the subject.

3. Reflexive use of personal pronoun

Before discussing the way Old English used to express a reflexive meaning, it is worth defining what reflexive verbs are. Generally speaking, reflexivity can be understood as the marking of co-reference of the subject and the object. In such constructions, reflexive pronouns are objects of verbs indicating co-reference with the subject or the complements of prepositional phrases. Therefore, a prototypical reflexive situation is believed to be one where "a participant acts on himself or herself, rather than on any other" (Lichtenberk 1994: 3504). Still, there are some reflexive verbs that have no object. This group of verbs are called inherently reflexive verbs; usually intransitive, these verbs can express reflexivity. In modern English the reflexive personal pronoun is obligatory only for the sake of clarity (e.g. *shaved oneself*) or when its usage has conventionalized into a particular meaning (e.g. *help oneself*). Already in Old English, some reflexive verbs did not require reflexive marking; cf. Peitsara (1997: 278), who claims that "many verbs that from the present-day point of view are intransitive may in early English be connected to coreferential pronouns, which needed otherwise be interpreted as objects of the action":

(6) (a) (...) ond **he hine** ðær hwile **reste** (...) (*Dream of the Rood*, l.63)
['and he rested himself there for a while.']
(b) he **gereste hine** on ðone seofoþan dæg. (*Genesis* 2.2; cf. Siemund 2000: 30)
['He rested on the seventh day.']
(c) **Reste he** ðær mæte weorode. (*Dream of the Rood*, l.69)
['He rested there with few warriors.']

In this paper the main focus will be on reflexive verbs accompanied by the object being the personal pronoun used on its own or accompanied by the *self* form.

The primary way to express reflexivity is the use of personal pronouns. The Old English reflexive pronouns are used in almost all cases. For the first and the second person singular the most common pronouns employed in reflexive relations are the dative forms *me* and *þe*. The special accusative *mec* "does not function reflexively since it is becoming extinct" (van Gelderen 2000: 33). Yet, there is also the accusative *þec* with a reflexive meaning:

(7) (...) cen **þec** mid cræfte. (*Beowulf*, l.1215)
['prove yourself with strength.']

Maybe not as common as the singular dative and accusative cases of pronouns, there are also the first and the second person dual and plural

pronouns rendering a reflexive meaning. For example, the first and the second person plural pronouns *us* and *eow* in Ælfric, the second person dual pronoun *incit* in *Genesis* and the first person dual *unc* in *Beowulf* serve for reflexive constructions:

(8) (a) We sculon **us** gearcian (...) (*ÆCHom* I, 11, 273.196)
['We should make ourselves ready.']

(b) Bicgað **eow** pællene cyrtlas. (*ÆCHom* I, 4, 209.95)
['Buy yourselves costly kirtles.']

(c) Ne ceara **incit** duguða (*Genesis*, l.2733; cf. Visser 1963: 425, van Gelderen 2000: 45)
['Care not to go forth from this land.']

(d) wit **unc** wið hronfixas/werian þohton (*Beowulf*, l.540; cf. van Gelderen 2000: 35)
['We hope to guard ourselves against the whales.']

Most Germanic and Latin-derived languages, as Penning (1875: 2) states, possess a special form to render a reflexive meaning for the third person. For instance, Gothic for the third person has the reflexive pronoun *sik*, *sis* and *seina*, in accusative, dative and genitive case respectively. The English language, however, does not have an equivalent for the Latin pronominal form *se*. Therefore, in Old English, the third person pronoun has to be used in reflexive constructions in the same way as the first and second person pronouns:

(9) for ðan þe **he hine** ætbræd þam flæsclicum lustum. (*ÆCHom* I, 4, 206.13)
['because he had withdrawn himself from fleshly lusts.']

In Old English, the third person pronouns (*him*, *hine/hyne*, *hire/hyre*, *hi/hy* and *hit*) constitute the largest group of personal pronouns rendering a reflexive meaning. The most common pronoun within the group is the accusative *hine/hyne*. The pronoun *him* can be used as the singular masculine dative, plural dative and the dative of the neuter gender. The pronoun used as the plural dative and the singular neuter gender is not used in reflexive constructions in Anglo-Saxon literature. As Penning (1875: 9) contends "[t]he dative of the neutral gender (him) is not used as a reflexive pronoun". Yet *him*, being masculine singular, can be used as a reflexive pronoun "when the verb assigns a dative Case to its object" (van Gelderen 2000: 36):

(10) Gif he mid þam gewitendlicum gestreonum beceapað **him** þæt ece lif. (*ÆCHom* I, 13, 288.205)
['If he with those transitory treasures buy for himself eternal life.']

Less frequent, although found in Old English manuscripts, are the reflexive uses of other third person pronouns, such as the feminine singular dative and plural accusative pronouns *hire/hyre* and *hi/hy*:

(11) (a) Sum **heo hire** on handum bær (...) (*Genesis*, l.636; cf. Penning, 1875: 9)
['Some (apples) she carried in hands.']
  (b) þæt ða aglæcean **hy** eft gemetton
that the fierce-enemies them again meet (*Beowulf*, l.2591–2592; cf. van Gelderen 2000: 36)
['that the fierce enemies met each other again.']

Besides rendering a reflexive interpretation, personal pronouns could refer to some other referents. The referent of the first and second person pronouns could be easily determined and the meaning they rendered could not have a double reading. Yet, the third person pronouns could be understood in two ways: they could anaphorically refer to the subject or to some other referents:

(12) **hine he** bewerað mid wæpnum (*ÆGram* 96.11; cf. Siemund 2003: 484)
['He defended himself/him with weapons.']

In (12), the sentence can be ambiguous and this kind of vagueness could be the cause of developing a new way to convey a reflexive meaning: the intensifier *self* attached to an object pronoun.

The last and the most infrequent way to render a reflexive meaning is the use of *self* without a personal pronoun. *Self* used alone is usually employed in a structure with an emphatic meaning. In *Beowulf*, a reflexive *self* is used on its own in the following expressions:

(13) (a) (...) Biowulf com **sylfes** cræfte (...) (*Beowulf*, l.2359)
['Beowulf came using his own strength.']
  (b) (...) ealle ofercomon, **selfes** mihtum. (*Beowulf*, l.696)
['all overcome by his own might.']
  (c) (...) þæt he beahhordes brucan moste **selfes** dome (...) (*Beowulf*, l.893)
['that he could enjoy the treasure at will.']

All the uses of *self* in (13) are rather emphatic than reflexive, for they emphasize the presence of only one participant in given actions and thereby exclude other potential contributors. For instance, in (13a), Beowulf was able to flee just owing to his own strength.

As Penning (1875: 16) maintains, this construction was not really common in Anglo-Saxon and occurred "mostly in such cases in which

possessive genitive comes in question; they are generally fixed expressions or settled phrases like: sylfes villum, sylfes mihtum, sylfes dome".

Self, as presented, can stand alone in a sentence. Yet, in can be added to the OE adverb *willes*. Here, similarly to the examples in (13), it is a fixed expression with an emphatic meaning:

(14) (a) (...) and þrowade deað **sylfwilles** (*ÆCHom* I, 9, 256.237)
['and voluntarily suffered death.']
(b) Dyslic bið þæt man **sylfwilles** to rode gealgan efste. & hine sylfne to tintregum asende. (*ÆCHom*, I, 38, 516.256)
['It is foolish that a man should hurry wilfully to the cross, and send himself to torments.']

To recapitulate, the primary way to convey a reflexive meaning in Old English is the personal pronoun being either an object indicating co-reference with the subject or with the complements of prepositional phrases. The most common of all the reflexively used pronouns are the third person pronouns. The reflexive constructions with the third person pronoun had a double reading. Therefore, probably in order to distinguish between the markers of co-reference and disjoint reference, English had to employ a new way to render reflexivity. That could give rise to a specialized reflexive, *self*.

4. Reflexive *self*

As already mentioned, in order to avoid ambiguity, in sentences having a reflexive interpretation, the third person pronouns began to be used with the intensifier *self*. It should, therefore, come as no surprise that the only reflexive *self* in *Beowulf* is added to the third person pronoun *he* (van Gelderen 2000: 39):

(15) (...) þæt **he hyne sylfne** gewræc (...) (*Beowulf*, l.2873)
['that he avenged himself.']

In the Junius MS, *self* chiefly plays the role of an intensifier. Penning (1875: 13) indicates only one example of reflexive *self* (16a), Visser (1963: 420) mentions two examples (16a, 16b), whereas van Gelderen (2000: 47) suggests that also *self* in item (16c) can be seen as having a reflexive meaning:

(16) (a) heht hie bringan to **him selfum** (*Genesis*, l.2628)
['ordered (them) to bring her to himself.']
(b) Nu ic þæs tacen wege sweotol on **me selfum** (*Genesis*, l.885)
['Now I clearly bear the token upon myself.']

(c) Sittan læte ic hine wið **me sylfne** (*Genesis*, l.438)
   ['I will let him sit with myself.']

In (16), the reflexive pronoun *self*, apart from the third person pronoun *him*, follows the first person pronoun *me*. The extension of *self* marking to the first and later to the second person, could happen by analogy. As Penning writes (1875: 13), "from the third person this usage was naturally transferred to the first and second persons".

In the *Homilies of the Anglo-Saxon Church* by Ælfric, *self* is regularly added to a reflexively used pronoun. In Ælfric, as in other Old English manuscripts, the most common reflexive pronouns are third person pronouns:

(17) He cwæð gif ge forgifað. eow bið forgyfen. Ne bepæce nan man **hine sylfne**. (*ÆCHom* I ,3, 203.140)
   ['He said, "If ye forgive, ye shall be forgiven". Let no man deceive himself.']

In (17), the *self* form is added to a pronoun being in a direct object position. Yet, in Old English, as in Modern English *self* forms, the reflexive personal pronoun can be placed in the prepositional object position:

(18) (a) þæt is se fæder & his wisdom **of him sylfum** æfre acenned. (*ÆCHom* I, 1, 179.16)
   ['that is, the Father and his wisdom of himself ever produced.']
   (b) forðan þe God Fæder is on heofonum, and he is æghwar, swa swa he sylf cwæð, "Ic gefylle **mid me sylfum** heofonas and eorðan". (*ÆCHom* I, 19, 327.55)
   ['for God the Father is in heaven, and he is everywhere, as he himself said, "I fill with myself heaven and earth".']

Apart from the third person pronouns, being either direct or prepositional objects, the new specialized reflexive pronoun can also accompany first and second person pronouns in the singular and the plural:

(19) (a) **Ic** offrie **me sylfne** þam ælmihtigum gode on bræðe wynsumnysse. (*ÆCHom* I, 29, 425.210)
   ['I will offer myself to the Almighty God, in the odour of pleasantness.']
   (b) Þæt **we us sylfe** clæne & ungewemmede him gegearcian. to blisse & ecere myrhðe (*ÆCHom* I, 2, 193.101)
   ['that we may prepare ourselves for him pure and uncorrupted in bliss and everlasting joy.']
   (c) Cyð **þe sylfne** (...) (*Andreas*, l.1212)
   ['Reveal yourself.']

(d) ac swiþor gearciað **eow sylfe** swa swa godes cempan. (*ÆCHom* I, 36, 515.237)

['but rather prepare yourselves, as God's soldiers.']

In short, in Old English *self* played two roles. First, it was a modifier expressing intensification. Second, it became a specialized form marking co-reference between the subject and the objects. In *Beowulf*, the reflexive *self* occurs only once. By Late Old English, however, this way of marking reflexivity had not been infrequent.

5. Conclusions

In Old English the majority of reflexive constructions are expressed by means of personal pronouns but by late Old English another structure rendering a reflexive relation had appeared: the reflexive *self* modifying genitive, dative and accusative objects. The monomorphemic *self* chiefly serves the role of an intensifier. Yet, already in *Beowulf*, there is one instance of *self* having a reflexive meaning. In this example, *self* is added to the third personal pronoun *hyne*. The cause of the reinforcement of the third person pronoun with *self* could be the way to disambiguate otherwise ambiguous object pronouns. In later works, the *self* forms are still mostly emphatic and simple pronouns are still employed to express reflexive relations. But as compared with *Beowulf* and the Junius MS, *self* in later manuscripts becomes a meaningful part of reflexive relations. Another issue worth mentioning is that already in Old English the intensifier *self* and the reflexive *self* could have the same construction: both could be added to the object pronoun.

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FROM SPATIAL CONCEPTS TO TIME IN THE HISTORY OF ENGLISH: CONTINUITY AND REMOTNESS IN TIME[*] METONYMY AND METAPHOR

> *Specialy siþen alle Christen men... moten*
> *algatis sue Christ, and knowe His lore and His lif.*
> John Wiclif: *DeOfficio Pastorali.*Chap.xv.
>
> (Sisam 1970: 118)

Abstract

The study highlights the transition of the temporal adverbs *always/algates*, expressing continuity in time, and *ago*, expressing remoteness in time, from their historical prototypical concept of space to that of time and beyond. In these processes both metonymy and metaphor play an important role. The data regarding *always* and *algates* suggest a gradual cline from SPACE to TIME and an array of other meanings, subsumed under the cover-term UNCONSTRAINEDNESS. The SPACE-TIME-X chain (with X standing for other more abstract meanings) seems to occur in most languages. The semantic development of these adverbs also features all the properties associated with a change like this: metonymy followed by ever increasing or proliferating metaphorization, fuzzy or non-discrete categories (mostly in the stages of transition). *Ago* owes its origin to the grammaticalization of the past participle of a verb of movement. This spatial concept is metaphorically mapped on to a new temporal prototype. As compared with *always/algates*, the temporal frame of *ago* is monosemous and marked throughout by metaphorization from 'remoteness in space' to 'remoteness in time'.

0. Preamble

This paper deals with the relationship between spatial concepts and time in the history of English in terms of metonomy and metaphor, more particularly the temporal adverbs *always/algates* and *ago*. However, before addressing these particular cases of semantic change, I have to say a few words about prototype semantics in general, which is broadly the underlying methodological paradigm used in this analysis.

Prototype semantics was introduced in the mid-1970s mainly with the research of the psycholinguist Eleanor Rosch and some others, who wanted to react against the then prevailing Aristotelian binary, black-or-white approach, which had been adopted by structural and even generative semantics (Geeraerts 1977: 10–11). The main tenet of this new theory is that the semantic structure of a lexical item consists of more or less polysemous clusters of meaning, which are characterized by differences in salience: there are meanings that have a central or proto-typical status, while others tend to be rather marginal or peripheral, sometimes even ephemeral instances surrounding the proto-type. Prototype semantics also strongly stresses the fuzziness of a particular category, as contrasted with the discrete Aristotelian categories, which will prove to be of crucial importance for the semantic evolution of the time adverbs *alway(s), algate(s)*, less so for *ago*, in Middle English semantic boundaries are blurred, and so mostly not well-delineated. Again, for more details see Geeraerts (1997: 21–23), where the diachronic implications of this theory are very aptly summarized.

Let us now turn to the subject-matter of this paper: from space to time and beyond, or the SPACE-TIME-X axis.

1. Continuity in time

Languages like Dutch and French use adverbs which have to be considered as lexicalizations of phrases expressing time: so Dutch knows *altijd*, literally 'all time' and French employs *toujours* 'all days'. In the history of English such phrases did occur, but they tended to be rather short-lived and do not seem ever to have occupied a central or core position in the set of time adverbs. Here is a (late) 15th century example:

(1) a1500 (1422) *Yonge SSecr*. 121/7: **Altymes** desyrynge in cryste yowre honoure. (MED: *al-times*)

In (2) the phrase *euery tyme* is apparently synonymous with *alwey*, or is some form of gradation involved here?

(2) a1500 (c1410) *Dives* & P. (Htrn 270) 1.316: Þis precept.. bynt nout for
   alwey.. ne for **euery tyme** ne for euery place. (MED: *time*, 10a)

   Typically, the English language is characterized throughout by the use of
temporal adverbs derived from phrases with an underlying spatial meaning. It
is precisely this transition from space to time that will be highlighted in the
following sections.
   Middle English has adverbial compounds with *way/wey* and *gate* (in the
sense of 'the way from one place to another'); the latter is a loanword from
Scandinavian, apparently first attested in Orm, c1200:

(3) ?c1200 *Orm.* (Jun 1) 12749: He wass an off þa tweggen Þat comenn till þe
   Laferrd Crist þær he bi **gate** 3ede. (MED: *gate*, 1a)
   ['He was one of the two who came to the Lord Christ where he went by
   a path.']

   Both nouns have a dynamic potential: they suggest 'movement in space';
and in collocations with the quantifier *all* they express 'movement from one
place to another'. *Alway/alwey* derives from the Old English NP *ealne weg*, an
accusative of extent, surviving in Southern texts as *alnewei* (see MED: *al-wei*).
I came across one interesting example in King Alfred's *Orosius*, 19.33, also
quoted by Traugott (1972: 90):

(4) Þæt scip wæs **ealne weg** yrnende under segle ...
   ['that ship was all way running under sail.']

   The form *alwei(e)s*, marked with the adverbial suffix *-(e)s*, is rare before
1400; again see MED *al-wei* and the OED *alway*. It should be noted that in
Old English this adverbial phrase can occur with a temporal meaning every
now and then; in addition there is also a syncopated form *eallneg/nig*; see OED
alway. These forms are most probably not related to the Middle English
occurrences involved here, seeing that the first attestations date from c1300, so
there is a gap of some three centuries. This then seems to be a case of semantic
regenesis. In the present study we shall focus on the Middle and Early Modern
English developments, leaving aside the scarce Old English data. Similarly,
Middle English also knows *algate* and its extended form *algates*.
   It is worth pointing out that the *Helsinki corpus* only has 21 examples of
this Scandinavian "synonym" of *alwei(s)*, from which we can infer that its
spread must have been somewhat restricted. In addition, this is a time adverb
that is virtually confined to the Middle English period; putting aside a few
regional (Northern) attestations, the last examples in the OED *algate(s)* date
from the 16th century.
   As observed in the introductory section of this paper, prototype
semantics stresses the fuzziness of semantic categories. When verbs of

movement are involved, the prototypical meaning of the adverbial phrases *alwey(s)* and *algate(s)* normally suggests a CONTINUUM IN SPACE, as in example (4) above. However, in contexts like this the meaning can easily shade into a CONTINUUM IN TIME: the ship is sailing all the way, and so also all the time. Some other markedly "fuzzy" examples include:

(5) 1340 *Ayenb.* 84: Þe zone .. **alneway** yernþ and ne is neure were. (MED: *al-wei*, 2.a)
    ['The sun runs (moves) always (? all the way) and is never weary.']

(6) 1375 BARBOUR *Bruce* vii. 60: He ran on fut **alwayis** hym by, Till he in-till the wod wes gane. (OED: *always*, 3)
    ['He always (? all the way) ran on foot by him, until he had gone into the wood.']

Even the quotation from Wiclif's *De Officio Pastorali* (Sisam 1970: 118), prefixed to this paper as its motto, allows of both a spatial and a temporal reading, at least as I see it: we must follow Christ all the way in our lives, and consequently also all the time. It is the very fuzziness of these originally spatial expressions that can lead to semantic reinterpretation, or pragmatic inferencing (Hopper – Traugott 1993) and so eventually to semantic change.

The next step is the use of these adverbs with verbs that are not associated with movement or even with adjectives (10), so a spatial meaning is logically excluded. If we give a metaphorical interpretation to the verb *sue* in Wiclif's example, only continuity in time can be involved: we must follow or imitate Christ all the time. This holds for numerous other instances:

(7) a1225 *Trin.Hom.Creed* 23: He aros of deaþe and wunede mid his apostles.. noht **alegate**, ac stund-mele. (MED: *al-gate*, 2a)
    ['He rose from death and lived with his apostles, not always but sometimes.']

(8) c1390 Chaucer *CT.Mel.* B284: That man that .. wole **algates** han werre shal neuere haue suffisaunce. (MED: *al-gate*, 2c)
    ['The man who will always have war shall never have satisfaction.']

(9) 1513 MORE *Edw.V* Ded.: Laudable custome that hath **alweies** been observed. (OED: *always*, 3).
    ['Laudable custom which has always been observed.']

(10) 1584 KING JAMES VI & I *Ess. Prentise Poesie* sig. D: Phoebus crowns all verses.. with Laurers **always** grene. (OED: *always*, 3)

Thus far we have only dealt with *alwey(s)* and *algate(s)* expressing a continuum in time. This meaning gives rise to another extension: repetition

or recurrence, or from *all the time* to *at every time* or *every occasion.* Initially, this shift must have occurred in a twilight zone where continuity and recurrence tend to overlap. Items (8) and (9) are, we believe, good examples in point: here, continuity can also be interpreted as repetition within a (putative) time-span: the pursuit of war can be continuous or be realized at more or less regular intervals, and the same holds for the observance of custom. In some other contexts, however, the notion of continuity is virtually blurred, as in:

(11) ?c1225 (a1200) *Ancr.R.4* Ye schulen **allesweis**, and mid alle mihte.. wel witen þe inre & and þe uttre vor hire sake. (OED: *always*, 3).
['You shall at every time and with all your might well know the ins and outs for her benefit.']

(12) c1300 *SLeg.Magd. (2)* (Ld) 584: Godes Aungles euer-ech day habbe me here i-nome, An ibore me **alne wey** hwane ischolde come. (MED: *al-wei*, 4)
['God's angels have taken me here every day, and carried me every time when(ever) I should come.']

(13) a1398 Trev. *Barth.* 148a/b: Some hennes haue **alwey** twynnes. (MED: *al-wei*, 4)
['Some hens always have twins.']

(14) a1425 (?1400) CHAUCER *Romaunt Rose* l.919: A bachelere, that he made **alleweyes** with him be. (OED: *always*, time, 1)
['A bachelor, whom he always ordered to be with him.']

A last cluster of meanings that we have to account for is, at least at first sight, not related to time at all: they include 'in any or every circumstance', 'in any event' or 'in any case', etc.; see OED: *always* and MED: *al-wei*. Yet, it is arguable that they all originate in the notion of recurrence. To prove this let us take the following instance:

(15) 1565 JEWEL *Repl.Harding* (1611) 36: The Host once consecrated of the Priest, is **algates** to be receiued, whether of many other, or one alone. (OED: *algates*)

There is clearly a notion of recurrence here while, at the same time, the context suggests that the Host can be received in any circumstance, or in any case. When something can always occur or be done, there is no constraint on it, which is precisely what is expressed in (15). Let us assume that in such instances *algates* (and for that matter *always*) expresses unconstrainedness, admittedly covertly coupled with or even based on recurrence. Also the following example shows an overlap of these two meanings:

(16) a1500 (c1400) *Cleges* 227: But wethyr we haue more or less, **Allwaye** thanke we God therefore. (MED: *al-wei*, 5.a)
['But whether we have more or less, let us in any case (?always) thank God therefore.']

Here the meaning of the adverb shades from 'every time' into 'in any case' or 'whatever happens'.

The next step is a mere discourse marker expressing unconstrainedness as such, and so not explicitly linked anymore with any notion of repetition.

(17) c1330 *Orfeo* (Auch) 231: Bot his harp he tok **algate.** And dede him barfot out atte gate. (MED*: al-gate(s)*, 3.a)
['But he took his harp in any case, and went out barefoot at the gate.']

(18) c1390 Chaucer *CT.Sh*. B.: 1586: Tel me **alwey**, er that I fro thee go, If any dettour hath in myn absence Ypayed thee. (MED: *al-wei*, 5.a)
['Tell me in any case, before I go from you, if any debtor has paid you in my absence.']

(19) 1413 LYDG. *Pylgr.Sowle* iv.xx.(1483) 67: He a disciple is, thou arte a lord. Thou **al awey** art greater than he is. (OED: *always*)
['He is a disciple, thou art a lord. Thou art in any case greater than he.']

(20) c1450 Capgr. *St.Kath.* 2.1401: Ye wil wete, **algatis**, what I desyre. (MED: *al-gate*(*s*), 3.a)
['You will know, in any case, what I desire.']

(21) 1490 CAXTON *Eneydos* xxi.76: How be it that he had grete pyte and compassion of her... **alweyes** he determyned himself and went his way. (OED: *always*, 2.b)

(22) 1533 BELLENDENE *Livy* 1.81: **Alwayis** he had ane brother, eldere of yeris than he. (OED: *always*, 2.b)

In all of these examples *alway(s)* and *algate(s)* merely stress the validity of a particular statement, just like *anyhow* and *anyway* in present-day English.

2. From space to time and beyond: metonymization and metaphorization

In what precedes we have briefly outlined the semantic paradigm of the adverbs *alway(s)* and *algate(s)* in Middle and Early Modern English. Schematically, this can be presented in the following cognitive survey, which may also have a diachronic dimension, at least in its broad outline. In other words, the data we have chosen from the OED and the MED do not

necessarily reflect a strictly chronological sequence; they seem to be simultaneous rather than consecutive, except for the concept of unconstrainedness at the top of the process of metonymization and metaphorization. On the issue of the simultaneous and consecutive dimension of semantic change see also Geeraerts (2010: 220–221).

OLD ENGLISH	MIDDLE and EARLY MODERN ENGLISH (1100–1600)
Continuity in space (?time) (4)- >	(a) Continuity in time (?space) (5–6) (with verbs of movement)
	(b) Continuity in time (7–10) (without verbs of movement)
	(c) Recurrence (?continuity) (8–9)
	(d) Recurrence (11–14)
	(e) Unconstrainedness (?recurrence) (15–16)
	(f) Unconstrainedness (17–22)

Note that the bracketed meanings with (?) indicate possible overlaps (or non-discreteness).

These data and many more in the MED and the OED suggest a gradual cline from SPACE to TIME (continuity and recurrence) as well as a variety of other meanings, subsumed under the cover-term UNCONSTRAINEDNESS. The SPACE-TIME-X chain (with X standing for some other more abstract meanings) is by no means uncommon, as it seems to occur in most languages of the world (Heine – Claude – Hünnemeyer 1991ab). Sub *alway* the OED refers a.o. to MDu. *allewege*, MHiG *allewege/allewei*, etc., and in the Romance languages to Anglo-Norman and OFr. *tute veie(s)* or *tote voie(s)*. These were all more or less casual and short-lived expressions. By contrast, English *always* (*algates*) has become the prototypical marker of continuity in time.

In what follows we shall argue that (a) and (b) are instances of METONYMY, while (e) and (f) belong to the domain of METAPHOR, with recurrence as the go-between.

In chapter seven of his book Taylor (1997: 122–141) presents an interesting and at the same time a lucid survey of metonymy and metaphor as discussed in recent semantic studies. It should be stressed that he broadens the scope of metonymy, defined in traditional rhetoric "as a figure of speech whereby the name of one entity e1 is used to refer to another entity e2 which is contiguous to e1" (Taylor 1997: 122) to any process of meaning extension based on possible co-occurrence in a given conceptual structure. In other words, metonymy is involved whenever two cognitive domains are associated. Metaphor, by contrast, is characterized by a transfer from one domain to

another: it "consists in the mapping of the logic of one domain (usually, but not always, a more concrete domain) on to another (usually more abstract) domain" (Taylor 1997: 138). Both metonymy and metaphor have proved to be highly productive processes of semantic change in the history of English. In Dekeyser (1994) it was demonstrated that the meaning of 'multeity' in the Old English quantifier *mycel* historically derives from the prototypical notion of 'extent'; this extent-multiety schema is grounded on the association of two related domains, and so it is a classic instance of metonymy, as in *mycel land* 'large piece of land', hence *much land.* However, as soon as the meaning of the quantifier is transferred to other domains, metaphorical developments come into play, as in *mycel wind* 'much' or 'strong wind', *mycel sciphere* 'large' or 'numerous/powerful fleet'. More recently it was argued in Dekeyser (2013: 250–253) that the semantic changes of *starve* 'suffer severely or die from hunger, long for something' from OE *steorfan* 'die' are also marked by metonymy, then followed by metaphor.

Middle English *alway(s)* and *algate(s)* provide further and hopefully new evidence of metonymy and metaphor as processes of semantic change. Prototypically, these adverbs belong to the domain of 'space' (*way* and *gate*). With verbs of movement (3, 5, 6) there is a natural association between spatial and temporal continuity: here semantic change clearly originates in metonymy. The (metaphorical) transfer to other domains, more loosely linked with the historical prototypical notion of 'space', sets in with continuity in time not connected with verbs of movement (7–10), and then with the notion of 'recurrence', possibly within a time span, as illustrated in (11–14) and (15–16).

When 'unconstrainedness' (15–16) and (17–22) is involved, full metaphorization has been reached. These data substantiate the claim that metaphorical extensions are often grounded in metonymy; see Taylor (1997: 139); also Goossens (1990) and Geeraerts (2010: 220). They also suggest that there can be a gradient from metonymy to metaphor, and that consequently these constitute "fuzzy" categories themselves: meaning (b), as presented in the Schema 2.1 above, is prerequisite for (c) and (d), and the notion of what we label 'unconstrainedness', (e) and (f) is typically grounded on recurrence.

3. Remoteness in time

Another facet of the SPACE-TIME axis concerns the notion of 'remoteness or distancing in time", expressed in Modern English with the adverb *ago*. As is generally known, this owes its existence to the grammaticalization of the past participle of an underlying verb of movement meaning 'from one place

to another': OE *agan*, ME *ago(n)*. Full details about this morpho-syntactic development are to be found in a recent study by Molencki (2013).

The prototypical spatial concept is metaphorically mapped on to a new temporal prototype, in the sense of 'movement from the present time or the time in question to the past'. Interestingly, the OED *agone* cites two examples which, I believe, reveal the *locus* of linguistic change. These are:

(23) Anglo-Saxon Chron. (Parker) anno 745: Her Danihel forþferde; þa was **xliii wintra agan** siþan he onfeng biscopdome.
['In this year Daniel passed away; forty-three years had elapsed since he succeeded to the episcopal see.']

(24) a1275 (?a1200) LAGAMON *Brut* (Calig.) (1963) I.: **Moni yer was agan** seoþþan his cun hider com.
['Many years had passed by/gone since his kin came to this place.']

Another example can be found in the MED *ago*:

(25) c1330 (1300) Guy (I) (Auch.) 1695: **It was ago fif yer** þat he was last þer.

If we leave out the copula *beon* in (23–24) and slightly adapt the overall sentence, the structure noun + *agan* develops and, even more interestingly, in (25) we simply need to move *ago* to a postnominal position. Clearly, it is in structures like these that the past participle of *go* easily gives way to an adverbial interpretation. Actually, these data ideally instantiate the verb-adverb cline, which is an important aspect of grammaticalization. However, since this paper is mainly concerned with semantics, a detailed analysis is outside its scope (for details, see Molencki 2013: 250–254). In the course of Middle English both *agone* (26–27) and *ago* (28–29) occurred side by side as postposed time adverbs, but by Caxton's time the latter form had been virtually generalized (OED *ago/agone*).

(26) c1405 (c1385) CHAUCER *Prioress' Tale*, l.199: I sholde haue dyed, ye **longe tyme agoon.**

(27) a1425 (c1395) *Bible* (Wyclliffite, L.V.) (Royal) (1850) Gen.xxi.2: As yisterdai, and **the thridde dai agoon.**

(28) c1350 (1333) WILLIAM OF SHOREHAM *Poems* (1902) 100: Naught **fern** (= long) **ago.**

(29) c1450 (c1370) CHAUCER *Complaint unto Pity* (Fairf. 16) (1871) l.1: Pite that I haue sought **so yore** (= long) **ago.**

In these examples and in Modern English throughout the prototypical spatial concept of *gone* has virtually receded into the background, so only the new metaphorical interpretation *past* is present in the mind of the speaker.

For the sake of completeness it should be pointed out that the meaning of the whole adverbial phrase can be extended through metonymy. Instead of a temporal noun like *year, month, day*, or the adverb *long*, other nouns that can be indirectly, or more precisely metonymically associated with the concept of 'time' are occasionally used. So the OED *moon* (6) explicitly refers to *many moons ago* in the meaning of 'a long time ago'. Other possible phrases include *several generations ago, a few meetings/exams/chapters ago*, etc. It seems that one can even use *ago* with some spatial nouns: *You should have got off three stations/stops ago.* In examples like these, which generally tend to regarded as "creative usage", mere remoteness is stressed, whether one is speaking of time or place.[1] Obviously, it is too early to draw conclusions, as this extension is still on the verge of putative linguistic innovation.

As compared with *always/algates*, the semantic structure of *ago* is remarkably monosemous. Indeed, it is marked throughout by a single process of metaphorization from 'remoteness in place' (*gone/passed away*) to 'remoteness in time' (*past*). Metonymy is only marginally involved and only affects the entire adverbial phrase, not the adverb *ago* as such.

Here it may be interesting to point out in passing that in Dutch an identical metaphorization process has been at work. Indeed, English *ago* literally translates as *verleden*, which is the past participle of a former, now obsolete verb *lijden* meaning 'go' or 'pass away'. Let me give just one simple example to illustrate this:

(30) Zij verliet dit land **tien jaar geleden**.
　　　['She left this country ten years ago.' Or more literally: 'ten years gone'.]

Contrary to the current linguistic theory (Hopper – Traugott 1993: 145–), the grammaticalized adverb is morphophonologically identical with the original past participle.

To express remoteness or distancing in time the French language uses the grammaticalized clause *il y a...*, literally *there is...*: *elle arrivait ici **il ya deux ans*** ('She arrived here two years ago'.) This expresses an event in the past, the arriving, and at the same time the elapsing of two years: there **are two years** between the present and her arrival two years earlier. However, there seems to be no underlying metaphorical notion of spatial remoteness involved here, unlike in English and Dutch[2].

4. Looking back

In this study we have highlighted the transition of the adverbs *always* (*algates*) and *ago* from the historical prototypical concept of space to that of time, and even beyond, through metaphorization and subsidiarily metonymy. *Always* and *algates* typically feature all the properties associated with this semantic change as described in the available literature: metonymy, ever increasing metaphorization, non-discrete categories (mostly in the stages of transition).

By contrast, *ago* constitutes a remarkable deviation from the current theory: it is simply marked by metaphorization throughout, while metonymy occurs very marginally and affects the whole adverbial time phrase. As pointed out in 3.2, a further metonymical development seems to be in progress in Modern English. If this change were to become fully established, it would be an example of the sequence metaphor-metonymy, and so the opposite of what linguistics normally posits; see 2.3 above. Finally, apart from the incipient phase briefly described in 3.1 non-discreteness does not come into play here.

The PLACE-TIME-(X) axis seems to be a language universal; see 2.1 above. Here the question arises whether there are also cases of the opposite direction: TIME -PLACE? As far as I know there seem to be no established data in either English or Dutch, at least for the time being. Further research in this domain could shed some more light on this matter.

By way of conclusion I want to briefly address the semantic structure of *always* and *ago*. The semantics of these adverbs is characterized by a shifting of the prototype, more particularly from space to time. In Modern English there are even no relics whatsoever of the (historical) prototypical meaning. In addition, the modern prototype of *always* is surrounded by a number of more or less salient clusters which are the result of metaphorization. Impressionistically, I would say that prototype shifting seems to be a common process in the history of English semantics (Dekeyser 1994 and 2013). Clearly, once again research based on more extensive data is necessary to substantiate this claim.

NOTES

* The present article is an adaptation and considerably extended version of an earlier study of 1998 in *Leuvense Bijdragen*. 87: 37–44 ("*Alway(s)* and *Algate(s)* in Middle and Early Modern English: from space to time and beyond").
[1] With thanks to Brian Lowrey, Professor of English Linguistics at the University of Picardie, Amiens. In his private mail he also adds that "the extension from time to space is still under way in English."

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EUPHEMISTIC AND NON-EUPHEMISTIC VERBS FOR 'DIE' IN MIDDLE ENGLISH CHRONICLES

Abstract

The paper examines verbs and verbal expressions for 'die' employed in Middle English chronicles. As one of the aims is to find out to what extent the distribution of euphemistic and non-euphemistic verbs and verbal expressions denoting this sense was determined stylistically, both prose and verse works are analyzed, i.e. *The Peterborough chronicle* 1070–1154*, The Brut, or the chronicles of England*, Layamon's *Brut*, and *The anonymous short English metrical chronicle*. The textual distribution of the verbs is presented, including both numerical data and a synopsized contextual analysis of particular verbs and expressions

1. Introduction

The body of Middle English verbs for 'die' seems extraordinarily large: the *Historical thesaurus of English online* (HTEO) lists over fifty verbs and verbal expressions rendering this sense, whereas the *Middle English dictionary* (MED) records even more, i.e. over one hundred. What accounts for such an abundance is a high number of euphemisms encompassed by this semantic field; it is namely metaphorical and other circumlocutory expressions that constitute the bulk of this group. Their emergence could have been fostered by the fact that death, being a feared phenomenon, was more eagerly referred to in an indirect way; it seems more likely, however, that it was triggered by the demands of literary – in particular poetic – diction of that time.

The aim of the paper is to scrutinize in what way the notion of dying was expressed in one particular genre, i.e. Middle English chronicles. The analysis attempts to examine to what extent the employment of euphemistic versus

non-euphemistic verbs and verbal expressions was determined stylistically. Hence, the study encompasses two prosaic works: *The Peterborough chronicle 1070–1154* (Oxford, Bodley Laud Misc. 636) and *The Brut, or the chronicles of England* (Bodleian Library, Rawl. B.171, c1400), and two verse works: Layamon's *Brut* (Cotton Caligula A.9, c1275) and *The anonymous short English metrical chronicle* (Edinburgh, National Library of Scotland, Advocates 19.2.1, c1330).

Unfortunately, as was the case with many Middle English texts, the chronological distribution of the selected chronicles poses some problems, as they represent different periods of Middle English. Thus, the paper does not aim at drawing general conclusions concerning the semantic field "die" in Middle English, it rather attempts to examine whether the texts offer any parallels as to the distribution of euphemisms. The numerical data concerning particular verbs is presented along with contextual analysis, and the texts are arranged in chronological order. For sake of space, henceforward the term *verb* is used with reference to both single verbs and verbal expressions. Also, the analysis is preceded by a synopsized description of the semantic field "die" in Middle English.

2. Middle English verbs for 'die'

The semantic field "die", like many other areas of English lexis, underwent significant changes in the Middle English period. In the first place, *dīen*, a verb of Scandinavian origin, having found its way into English vocabulary, gradually pushed native *swelten* and *sterven* to peripheries (see Dance 2000, Kłos 2010). On the other hand, two periphrastic constructions *bēn dēd* (OE *beon dæd*) and *worthen dēd* (OE *weorþan dæd*) became more frequent in Middle English. Some other verbs inherited from Old English were retained as well, e.g. *quēlen* (OE *cwelan*) or *forworthen* (OE *forweorþan*), although they were used sporadically.

As regards the euphemistic verbs, many of those recorded in Old English survived into Middle English, e.g. *(līf) ēndian*, *wīten of this world*, *wenden of līf*. Also, the Middle English euphemisms tended to refer to similar concepts as the Anglo-Saxon ones, metaphorically depicting death as a journey, as giving up this world or soul, or as ending life. Some of the euphemisms, however, underwent certain changes. For instance ME *forthfāren*, deriving from two most popular Old English euphemisms for 'die', i.e. OE *forþfēran* and *forþfaran*, gradually ceased to be used in the metaphorical sense, and regained its literal meaning 'depart, go forth' (cf. Burnley 1992: 445). Moreover, there appeared new euphemisms coined on the basis of French loanwords, e.g. *passen awei*, *passen henne*, *departen from līf*, etc.

To sum up, apart from the less frequent forms, the Middle English semantic field "die" encompassed the following verbs:

1) Non-euphemistic verbs:
   a) verbs of native origin: *bēn/worthen dēd, (a)sterven, (a)swelten*
   b) loanwords: *dīen, dēcēsen*
   c) verbal expressions employing the noun *dēth*
2) Euphemistic verbs:
   a) referring to the concept of journey (sometimes followed by a preposition or an adverbial of place):
      – verbs of native origin: *fāren, forthfāren, wenden, wīten*
      – loanwords: *cairen, departen, passen*
   b) referring to the concepts of giving up or losing life, world, or soul: *forlēsen, forlēten, lēsen, lēven, yēlden* followed by *līf, gast, soul, spirit, world*
   c) referring to the concept of ending life:
      – verbs of native origin: *ēnden līf/days, māken end*
      – loanwords: *fīnen* and *finishen*

As for the distinction into euphemistic and non-euphemistic verbs, the first group encompasses verbs whose only or primary meaning was 'die', whereas the latter, those referring to dying in a more explicit way, e.g. metaphors.

3. *Peterborough chronicle*

The earliest of the analyzed works, *The Peterborough chronicle*, originally was an Old English text copied in 1121; its later fragments, however, continued till the second half of the 12th century, reflecting the language of the period of transition from Old to Middle English. The text was written by two scribes. The first copied the entries up till the end of 1121 at one time, and then completed the text irregularly until 1131. The second scribe took over after an over twenty-year break, and filled the missing entries for the years 1132–1154.

Consequently, the bulk of the text represents Old or Late Old English with its "conservative archival language" (Swanton 2000: xxvii), whereas the final part by the last chronicler (the Second Continuation) is written in Early Middle English. Thus, the text does not precisely match the conventional time frame of Middle English; however, following the division of the chronicle offered by the *Innsbruck corpus of Middle English prose*, this paper analyzes the entries from the year 1070 onwards. This part of the chronicle contains 62 verbs denoting the sense 'die'; they are all presented in alphabetical order in Tables 1 and 2, separately for euphemistic and non-euphemistic ones, and the year of the entry is given for each hit.

Table 1. Non-euphemistic verbs for 'die' in *The Peterborough chronicle*

VERB	HITS	THE YEAR OF THE ENTRY
bēn dēd	4	1087, 1123, 1129, 1154
sterven	2	1124, 1137
swelten	6	1087 (x3), 1091, 1123 (x2)
worthen dēd	8	1103, 1123, 1128, 1135, 1140 (x2), 1154 (x2)

As for the non-euphemistic verbs, they include *bēn dēd, sterven, swelten*, and *worthen dēd*. *Worthen dēd* seems most frequent, although it should be observed that it first appears in the chronicle relatively late, i.e. in the entry for the year 1013. Similarly, *bēn dēd* is first recorded in the entry for 1014; this suggests that both constructions may have been rather rare in the Old English period, and it was not until Early Middle English that they came to be employed more often. As illustrated by the examples (1), although seemingly static, in most contexts they were used with the dynamic meaning 'die, become dead' and were often complemented by an adverbial of place or time. *Sterven* appears twice, whereas *swelten* six times. As regards the former verb, the two occurrences in the entries for 1124 and 1137 are the only instances of *sterven* in the whole text of *The Peterborough chronicle*, i.e. in both the Old and Middle English part of the work.

(1) (a) (…) þat ilc gær **warth** þe king **ded** ðat oþer dæi efter Sancte Andreas massedæi on Normandi. (*The Peterborough chronicle*, p.54, r.6–7)
   (b) Þa þe king **was ded**, þa was þe eorl beionde sæ (…) (*The Peterborough chronicle*, p.60, r.3–4)

Taking into consideration that the text comprises nearly 22,000 words, the overall number of non-euphemistic verbs appears relatively low. However, as evidenced by the data in Table 2, this can be accounted for by the significant dominance of the euphemistic verb *forþfāran*. Recorded 39 times throughout the text, it had more instances than the non-euphemistic verbs in total. Its prevalence, though, was probably not due to its euphemistic character, but to the convention, as the verb dominated also in the older part of the chronicle.

Table 2. Euphemistic verbs for 'die' in *The Peterborough chronicle*

VERB	HITS	THE YEAR OF THE ENTRY
forfāren	1	1096
forthfāren	39	- throughout the whole text
gast ayēven	1	1093
iwīten of līf	1	1089

This seems additionally evidenced by the low number of occurrences of other euphemistic verbs, which have only single instances, i.e. *forfāren*, *gast ayēven*, *iwīten of līf*. What seems noteworthy is that the second scribe used neither *forthfāren* nor any other euphemism, as he clearly preferred non-euphemistic *worthen dēd*, which suggests that he was not too much concerned with the literary diction employed in the earlier parts of the text. This is in accordance with what Swanton (2000: xxvii) observed stating that "during the following hiatus [i.e. 1131–1154, when no entries were made; MK] this conservative archival language (...) seems to have fallen in disuse, and the new scribe chose to use the contemporary local colloquial speech". The emergence of euphemistic verbs for 'die' in the analyzed part of *The Peterborough chronicle* can be thus said to be dependent on the literary convention rooted in Old English.

4. Layamon's *Brut*

The manuscript of the second of the chronicles under consideration, Layamon's *Brut*, dated to c1275, represents the South-Western dialect. What is special for Layamon's chronicle is the author's inclination to preserve Anglo-Saxon conventions: although created in the Middle English period, the text is partly alliterated and employs some features typical of the Old English poetic diction. Its style, though, is not pure as alliteration is applied less rigidly than in Anglo-Saxon poetry; moreover, it is combined with rhymed verse. Thus, some lines contain alliteration only, some contain rhymes, whereas others are both alliterated and rhymed. What is also characteristic of Layamon's *Brut* is its richness of vocabulary (cf. Wyld 1933: 48), which, apparently, can be noticed also in the considerable number of verbs for 'die', as the text contains 32 various items and expressions rendering this sense.

The non-euphemistic verbs are adduced in Table 3 below. As the requirements of poetic diction could clearly have had some impact on the employment of particular verbs, the table also contains the number of instances where the verbs were alliterated (marked with "A"), rhymed

(marked with "R"), and those where they were neither alliterated nor rhymed (marked with "Ø"). For lack of space, only the most frequent verbs are discussed.

Table 3. Non-euphemistic verbs for 'die' in Layamon's *Brut*

VERB	HITS (**A**-alliterated, **R**-rhymed, **Ø** – neither rhymed nor alliterated)
bēn dēd	42 (7xA, 12xR, 23xØ)
bēn feie	10 (8xA, 1xR, 1xØ)
bēn on dēth	4 (1xA, 3xØ)
dēdsīgh comen	1 (R)
dēth onfōn	1 (R)
dīen	9 (5xA, 1xR, 3xØ)
feiesīth maken	3 (3xA)
forworthen	8 (3xA, 5xØ)
līen dēd	7 (7xR)
quēlen	10 (Ø)
swelten	4 (4xØ)
worthen dēd	12 (8xR, 4xØ)
worthen feie	1 (A)
TOTAL	**112**

As borne out by the numerical data, it is the periphrastic construction *bēn dēd* that is dominant in quantitative terms. In most cases it neither alliterates nor rhymes, which may suggest that it is least marked of all the verbs for 'die' employed in the text. The second most often used expression, *worthen dēd*, has 12 occurrences, 8 of which rhyme. As illustrated under 2, in most cases *worthen dēd* follows the clause *nes þer nan oðer ræd*. It seems likely, that it was one of the formulaic phrases which the author repeated throughout the poem.

(2) (a) nes þer nan oðer ræd; buten þe Mavric **iwærð** dæd. (Layamon's *Brut*, l.5915)
(b) & þer nis nan o[ð]er ræd; nu nan ich **wurðe** dæd. (Layamon's *Brut*, l.8890)

Bēn feie and *quēlen* also have a considerable number of occurrences, i.e. 10 each. The meaning of *bēn feie*, however, appears ambiguous, as the adjective *feie* denoted both the sense 'dead' (3a) as well as 'doomed to death' (3b); thus, depending on the context, it cannot be always interpreted as a synonym of 'die'.

(3) (a) Swa heo fehten al dæi; monie þer **weoren fæie**. (Layamon's *Brut*, l.3960)
   (b) Modred þat iherde; & him toʒeines heolde.
       mid vnimete folke; þer **weore** monie **uæie**.
       Uppen þere Ta[m]bre; heo tuhten to-gadere. (Layamon's *Brut*, l.14236–14238)

As for *quēlen*, its seemingly high frequency of occurrence is surprising as the verb was rather peripheral in Middle English; the MED, for instance, quotes only its four instances. Still, in Layamon, all the instances appear in one fragment listing the victims of a plague (cf. 4), where *quēlen* is repeated in order to build a kind of an emphatic parallel.

(4) **quelen** þa eorles; **quelen** þa beornes.
    quelen þa þeines; **quelen** þa sweines. (Layamon's *Brut*, l.15887–15888)

The number of the occurrences of *dīen*, on the other hand, seems surprisingly low, as Layamon's *Brut* is said to contain a vast Scandinavian vocabulary (Hahn 1999: 85). It suggests that although *dīen* – first recorded in 1185 – dominated the semantic field "die" surprisingly quickly (cf. Kłos 2010), in the 13th century it was not that prevalent yet. Next comes *forworthen*, with 8 instances. The verb actually had two meanings in Middle English: 'to die, perish' and 'to be condemned, lost'. Despite its vague meaning it was, though, included in the analysis, as in some contexts it clearly denotes 'die' (see 5a). Both in the case of *dīen* and *forworthen* it is difficult to define some particular reasons for which they are employed, as it is only in some instances that they loosely alliterate with other words in the line. In contrast, *lien dēd*, which has 7 instances, appears only in the contexts where it rhymes with the noun *day* (5b):

(5) (a) for ʒif ihc her **for-wur[ð]e**; auerst þe beoð þa wurse. (Layamon's *Brut*, l.4381)
   (b) & sone þer-after com þe dai. þat þe king **dead lai**. (Layamon's *Brut*, l.1396)

On the whole, if one considers the numbers indicating the alliterating or rhyming contexts of all the non-euphemistic verbs, it seems that the employment of particular items tended to be determined by the verse

pattern. The same seems true for the euphemisms for 'die' recorded in Layamon's *Brut* (all presented in Table 4). As many as nineteen different verbs can be listed, although most of them have only single instances.

Table 4. Euphemistic verbs for 'die' in Layamon's *Brut*

VERB	HITS (**A**-alliterated, **R**-rhymed, **Ø** – neither rhymed nor alliterated)
Verbs referring to life's end	
ēnden	2 (2xØ)
his ēnd bicomen	1 (R)
it comes to līfes ēnd	1 (R)
līfes ēnd comes	5 (3xR, 2xØ)
līfes ēnd maken	1 (R)
līf ēnden	1 (Ø)
Verbs referring to lying / collapsing	
hēlden doun	1 (A)
līen	8 (8xA)
līen doun	1 (A)
wale līen	1 (A)
Verbs referring to the concept of journey	
bēn forthfāren	3 (1xA, 2xR)
forfēren	1 (R)
fāren of this līf / this līf-dai	2 (2xØ)
iwīten	3 (3xR)
iwīten of this world	1 (A)
wēnden henne	1 (Ø)
wēnden of līf	1 (R)
Other verbs	
bilēven līf / gast	2 (2xR)
shrinken	1 (A)

In statistical terms it is the verb *līen* that is most popular among the euphemistic verbs. It alliterates in all the contexts it appears in, cf. (7a), but

also in 5 instances out of 8 it is accompanied by the verb *liven* coining a phrase *liven ōr lien* (7b). The expression *līfes end comes* also is slightly more frequent than other euphemisms, although, like other expressions with the noun *end*, it does not alliterate but rhymes (8).

(7) (a) For leouere me is to **liggen**; bi-fore mine leoden; (Layamon's *Brut*, l.11783)

   (b) To-gadere þe kinges come; & æðes heo sweoren
     þat heo wolde **libben to-gadere. oðer liggen**; (Layamon's *Brut*, l.2572–2573)

(8) þis lond he hire lende; þat **come hir lifes ende**. (Layamon's *Brut*, l.115)

    To sum up, the number as well as the variety of verbs for 'die' in Layamon's *Brut* testify to the richness of the text's vocabulary. The occurrence of the majority of verbs appears to have been stylistically determined. This is in particular true of the euphemistic verbs, which, in 29 instances out of 37, appear in the text because they matched the rhyming or the alliterative pattern of particular lines.

5. *Anonymous short metrical chronicle of England*

The anonymous short metrical chronicle of England is a poem consisting of 2,361 lines (comprising nearly 15,000 words). Probably intended for recitation (cf. Potter 1936), the text seems to have been relatively popular, as it survived in seven manuscripts. The version found in the Auchinleck manuscript (Edinburgh, National Library of Scotland, Advocates 19.2.1) is dated to c1330 and represents the language of London (*LALME*).

Table 5. Non-euphemistic and euphemistic verbs for 'die' in *The anonymous short metrical chronicle of England*

VERB	HITS
Non-euphemistic verbs	
bēn dēd	15(12xR, 3xØ)
dīen	6 (6xØ)
Euphemistic verbs	
ēnden days	1 (R)
ēnden tīm	1 (R)

As presented in Table 5, the verbs for 'die' employed in the text are few; only two non-euphemistic and two euphemistic verbs appear in the chronicle. The sense 'die' is most often rendered by *bēn dēd*, which, in most cases, i.e. 12 out of 15, forms rhymes (9). In contrast, *dīen*, recorded 6 times, in all the instances is used in the middle of the line, as exemplified by (10). It is thus both in the verse *Brut* and in the *Metrical chronicle* that *bēn dēd* prevails over *dīen*; however, whereas in Layamon's text the first verb tends to be used in metrically neutral contexts, in the latter work its emergence seems to be motivated primarily by the poem's meter.

(9) Biside Newe Troye he **was ded**
   & ybirid þer so he bed. (*Metrical chronicle*, l.1697–1698)

(10) & seþþe he **dyed** at ham
    In Normondye at Cam. (*Metrical chronicle*, l.1981–1982)

It also is only in the rhyming contexts that the two euphemistic phrases for 'die' recorded in the text appear. Both employ the verb *ēnden* followed either by *days* or by *tīm* (see 11ab).

(11) (a) Þus **ended he his day** -
    God his soule iuge may. (*Metrical chronicle*, l.1915–1916)
  (b) Þus **ended his time**,
    Ywis, he hadde an euel fine. (*Metrical chronicle*, l.2283–2284)

Thus, the vocabulary for 'die' present in the *Metrical chronicle* is not varied neither as regards non-euphemistic nor euphemistic verbs. This may be the result of the poem's character; as it probably was composed to be memorized and recited, its diction had to be relatively simple. What also may account for the relative simplicity of the text's vocabulary is the fact that, as stated by Potter (1936: 560), the poem was "intended for an uncritical audience." This may, in turn, confirm that euphemisms were treated as indicators of a more decorative style.

6. *Brut, or the chronicles of England*

The last text, *The Brut or the chronicles of England*, written in prose, is an English translation of an Anglo-Norman work originally composed in the second half of the 13th century and then extended until 1333. The English version was also expanded and continued until 1461. It is found in more than 170 manuscripts, which makes it the second most popular Middle English prose work after the Wycliffite Bible. Brie's edition of the text, available in the *Innsbruck corpus of Middle English prose*, compiled over twenty various

manuscripts; hence, this study is only concerned with the part of the text taken from Oxford, Bodleian Library, Rawl. B.171. The manuscript, composed in the South-Western dialect (Herefordshire), is dated to c1400.

Table 6. Verbs for 'die' in *The Brut or the chronicles of England*

VERB	HITS
Non-euphemistic verbs	
bēn dēd	44
dīen	203
Euphemistic verbs	
bēn passed of līf	1
ēnden līf	4
passen out of this world	1

As the data presented in Table 6 reveal, the text is characterized by a significant prevalence of the verb *dīen* (203 occurrences). The high number of the occurrences of *dīen* confirms the undoubtedly strong position the verb had gained within its semantic field by the 14th century. The periphrastic construction *bēn dēd* is also considerably frequent with its 44 occurrences. Also, the chronicle provides some interesting instances, where *ben dēd* is used in a clearly dynamic sense, accompanied, for instance, by an adverbial of manner, see below:

(12) And Vortymere was so annoiede for his broþeres deþ, Cattegren, þat he **was dede in soche a maner** (...) (*Brut*, p.53, r.16–20)

Compared to the number of occurrences of *dīen* and *bēn dēd*, the proportion of euphemistic verbs in the chronicle is drastically meager. The text contains 3 such verbs, of which only *ēnden līf* is used more than once. As borne out by the examples under (13ab), *ēnden līf* seems to have somehow denoted the manner of dying, and so it could even be combined with *dīen* as in (13a).

(13) (a) And þis deuel tyraunt Maxence, þat þo was in þe lande of Greke, when he herde þis tydynges, he bicome wode, and sodeynely **deide**, and so he **endede his lif**. (*Brut*, p.40, r.24–26)
 (b) (...) and anone lete him take and bynde, hondes & feete in maner of a traitour', & lete caste him into Thamise; and in þi maner þe false traitour **endede his lif**. (*Brut*, p.120–121, r.29–1)

The two other euphemistic phrases employ the verb *passen* borrowed from French in the 14th century, which, judging by the number of quotations in the MED, became a very common metaphor for 'die'. Used as a euphemism for 'die' it referred to the image of death as journey, in particular when followed by an adverbial of place, as in *The Brut* (see 14a). The form *bēn passed of þis līf* appearing in the chronicle clearly does not render the passive but rather perfective sense (14b).

(14) (a) (...) men might synge masse3 in couenable cherches, & make Godes body, and 3if it to sik men þat shulde **passe out of þe worlde**. (*Brut*, p.161, r.27–29)

    (b) When þe gentil Erl **of þis lif was passede**, þe Prioure and þe monkes of Pounfrett geten Sir Thomas body of þe Kyng (...) (*Brut*, p.224, r.1–3)

The dominance of *dīen* and the peripheral status of euphemistic verbs in the prose *Brut* prove clearly how significantly the literary conventions used in this Late Middle English text differ from those in *The Peterborough chronicle*. Obviously, this may be to some extent accounted for by the different character of the two works: whereas *The Peterborough chronicle* was composed by many annalists and was originally written in English, *The Brut*, or at least the part analyzed for the study, was written by one person and translated from Anglo-Norman. Still, the considerable differences in the employment of verbs for 'die' found in the texts undoubtedly illustrate the changes that English literary diction underwent after the Conquest.

7. Conclusions

In conclusion, the data presented in the previous sections and synopsized in Table 7 below evidence that the four analyzed texts do not offer any clearly parallel tendencies as to the distribution of verbs for 'die'. In the case of the prose chronicles, the proportions between euphemistic and non-euphemistic verbs are nearly reverse. In *The Peterborough chronicle* the euphemistic verbs, in particular *forthfāren*, prevail, constituting 67% of all the verbs for 'die'. In contrast, in the prose *Brut*, written nearly three centuries later, the non-euphemistic verbs are definitely favored (on the average, they were employed in 98% of cases). It must be stressed though, that the late, i.e. Early Middle English entries of *The Peterborough chronicle*, show a clear preference for expressing the sense 'die' non-euphemistically, which most likely marks the beginning of the literary language becoming less stylized, a tendency which is evidently visible in the prose *Brut*.

Table 7. The distribution of non-euphemistic versus euphemistic verbs for 'die' in the Middle English chronicles

		Non-euphemistic		Euphemistic	
ROSE	*The Peterborough chronicle*	33%		67%	
	The prose *Brut*	98%		2%	
VERSE	Layamon's *Brut*	75%		25%	
		Rhyming or alliterating	Neither rhyming nor alliterating	Rhyming or alliterating	Neither rhyming nor alliterating
		53%	47%	78%	22%
	The short metrical chronicle of England	91%		9%	
		Rhyming or alliterating	Neither rhyming nor alliterating	Rhyming or alliterating	Neither rhyming nor alliterating
		58%	42%	100%	–

The verse chronicles, written within the span of sixty years, offer more consistent results, as in both works the non-euphemistic verbs are more frequent. It must be stressed though, that *The Metrical chronicle* is ten times shorter than Layamon's *Brut*, and thus the percentage data given for the two texts is not equally representative. Still, in both texts the euphemistic verbs are clearly in minority, although in Layamon's *Brut* they are more numerous (constituting 25% of all the verbs for 'die' used in the text). What is also crucial, both in *The Metrical chronicle* and in the verse *Brut* the emergence of particular verbs is determined stylistically, i.e. most often they are employed to match the metrical scheme of each poem.

Also, the fact that most of the euphemisms appearing in the texts (with the exception of *forthfāren*) have single instances only, suggests that euphemistic forms were often coined *ad hoc*. Most likely they were treated as purely literary forms, whose emergence was dictated by the requirements of the decorum principle. However, as testified by the meaning of ModE *pass away*, some of the euphemisms used in Middle English were also adapted to everyday language.

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FURTHER PROBLEMS IN THE INTEGRATION
OF ANGLO- FRENCH LOANWORDS

Abstract

The present study in a way continues an earlier article by the present writer entitled "Problems in the integration of Anglo-French loanwords" (Diensberg 2011: 109–145). That article dealt with the phonological reception of Old French loanwords. It focussed on the structures *vowel plus -ff, -fl, -ft*, which are mostly due to borrowing from French (including Latin and Greek) and, occasionally, from other Germanic languages or dialects. Their position and ultimately their integration in the Middle English phonological system will be examined. The structures *vowel plus -ff, -fl, -ft* may be at most peripheral within native word stock (see Muthmann 2002: 64b; 107c–108c; 264c–265b). Here, loanwords of the structure *-er + C- > -ar + C-* are discussed.

1. Late Old French/Middle English lowering of *-er + C- > -ar + C-* (in checked syllables)

The change under examination occurs in late Middle English in Anglo-French (AF) loanwords of the structure *-er + C- > -ar + C-* (in checked syllables) during the 14th/15th centuries (Berndt 1960: 70). It may well have had its origin in the French source language (Pope 1934/66: §§ 496, 1123, 1147).

As the examples listed below will demonstrate, there is an alternation between changed forms showing *-ar + C-* on the one hand, and *-er + C-* on the other hand, the unchanged vocalism being mainly due to Latin influence.

clerk *n.* (a1200?, BDE) EME *clerc* 'member of the clergy/clergyman', also *clearc* (c1230), adapted from AF *clerc, clerck, clerk, clerke, cleark, clerk, clerq, clierke, klerk*, pl. *clers, cleres, clerqs* 'cleric', 'scholar; learned man, clerk,

scribe, cashier'(AND²: *clerc*), from church Latin *clēricus*, derived from *clērus* 'clergy', ultimately of Greek origin; see the latinism CLERIC *n.*; see also related CLERGY *n.*; cf. ModF *clerc* 'cleric, clergyman' (DHEF: 159a, 10ᵗʰc.). The change is still preserved in the spelling of the surname *Clark, Clarke* (Reaney 75a) and in the American pronunciation of the word. (BDE:178b; KDEE: 239a; ODEE: 181b)

clergy *n.* (a1300, BDE) ME *clergie* 'a group of persons ordained for religious work'; earlier 'learning, branch of learning' (c1200?), adapted from AF *clergie, clergé, clergy, cleregie, clerigé; klergie* (pl.) 'clergy; fact of being in religious orders; (law) (benefit of) clergy, ability to read, learning, scholarship, Latin, science' (AND²: *clergie*). The etymon *clēricātus (< eccl. Latin *clēricus*, 3ʳᵈ c., from *clērus* 'clergy') would have regularly yielded OF *clergié* and *clergé* (AF *-é* for OF *-ié*); *clergie* (showing the ending *-ie*) is an analogical form. All these 3 variants are not always kept distinct (in writing) in Old French texts. Cf. ModF *clergé* 'clergy' (DHEF: 159a, s.v. *clerc*, 1160, from *clericatus, from eccl. Latin *clericus*, 3ʳᵈc., from *clērus* 'clergy'); see also related CLERK *n.* and the latinism CLERIC *n.*; (BDE: 178b; KDEE: 238b; ODEE: 181a)
NB: of the two meanings of AF/OF *clergie* and ultimately ME *clergie* only *clergy* 'a group of persons ordained for religious work' survived to the present day (cf. BDE: 178b, s.v. *clergy*).

garner *n.* (a1200?, BDE) ME *garner* for earlier *gerner* (c1230); adapted from AF *gerner, gernier, gernir, garner, garnere, garnier, garner, graner, grenier, guernir*, etc. building for storage of grain, granary; (fig.) granary, storehouse; (in a ship) compartment of a hold (for grain, and other things); (for grain) container, basket, case (AND²: *gerner*¹); from L *grānārium* 'granary, storehouse for grain', from *grānum*, 'grain'; see related GRAIN *n.* and GRANARY *n.* (1570); cf. ModF *grenier* (DHEF: 352b, 12ᵗʰ c.), (BDE: 422b; KDEE: 558b; ODEE: 390b)

grain *n.* (c1300, BDE) ME *greyn* small hard particle, earlier in the surname *Graindorg* (c1202), seed of plants, etc. (c1325), seeds as fruit of cereal plant (a1333), adapted from AF *grain, graine, grayn, grayne, grein, greine, greyn, greyne, gren, grene* '(bot.) grain, seed of (cereal) plant; (fig.) seed; corn, grain; pip (of fruit); berry; individual fruit in a bunch; bead, pearl; (of sand, gold, pepper etc.) grain, small roundish particle, etc.' (AND²: *grain*¹), from L *grānum* 'grain, seed'. Cf. ModF *grain* (DHEF: 349a, 1160). See related GARNER *v./n.* and the latinism GRANARY *n.* (1570). (BDE: 445a; KDEE: 587b, s.v. *grain*¹; ODEE: 408b, s.v. *grain*¹)
NB: for the origin and the record of OF *grain* see DEAF G: 1157–59/66 & of OF *graine*, see DEAF G: 1166–68;

granary *n.* (1570, BDE) EModE *granary*, adapted from L *grānāria* plural form of *grānārium*, ultimately derived from L *grānum* GRAIN *n.* (q.v.). Cf. ModF *grenier* 'granary' (DHEF: 352b, 12thc.). (BDE: 445b; KDEE: 588b; ODEE: 409b)

harbour/harbor (US) *n.* (c1125, BDE) EME *herbyrge* 'refuge', also *herbearhe* 'lodgings' (a1200?/c1230), also *herberwe* 'harbour' (a1200?), from OE *here-beorg*, literally 'shelter for the host/army'; *harbor* (1311) and *harber* (c1375) due to the change *er* +C- > *-ar* + C- (in checked syllables); influenced by AF **herbour/harbour* (so far unattested); loss of ME *-(e)we*, *-(o)we* goes unaccounted for so far; cf. MDutch *herberghe*. Cf. ModG *Herberge* (9thc.; Kluge²⁴) and *be-herbergen* 'to accommodate, lodge', from Old High German *heribergon*, 8th c.; Kluge²⁴). Cf. ModF *héberge* and *héberger* (DHEF: 366b, *herberge*, 1050, from Frankish **heriberga*); for the origin see under HARBOUR/HARBOR v.; (BDE: 465a; KDEE: 621a; ODEE: 427b)
REFERENCES: Zettersten 1965: 76, s.v. herbearhe 'lodgings';
Nota: see AF *herberge, herbage; herbege* (*herberch*) 'lodging, inn; building, edifice; (mil.) camp, encampment; tent; lodging, shelter' (AND²: *herberge*)
[FEW: 16,160a *haribergôn; Gdf: 4,453a herberge; GdfC: ∅; TL: 4,1057 herberge; DEAF: H371 herbergier (herberge); DMF: heberge; TLF: ∅; OED: ∅; MED: ∅; DMLBS:∅]

harbour/harbor (US) *v.* (c1125, BDE) EME *herbyregen* 'to shelter', also *herbearhin* 'to lodge' (AR, MS Corpus, a1200?/c1230), also *herborwen* (a1200), either reflecting OE *herebeorgian* or derived (E)ME from the noun *herbyrge* 'refuge', later *herberwe/herborwe* 'harbor, shelter'; cf. ModG *Herberge* (9thc., Kluge²⁴) and *be-herbergen* 'to accommodate, lodge' Old High German *heribergon*, 8thc.; Kluge²⁴). See OF *herbergier* 'to lodge, shelter' (DEAF H 2, 1998: 361–371) and *herberge* 'lodge, shelter' (DEAF H 2, 1998: 371–374). Cf. ModF *héberger* 'to shelter' (DHEF: 366b, *héberge*, attested 1050) and ModF *auberge* (DHEF: 51a *aulberge* 15thc., influenced by Provençal *auberjo*/Italian *albèrgo* – DEI: 109a – from the same root). (BDE: 465a; KDEE: 621a; ODEE: 427b)
Nota: see AF *herberger, herbergeer, herbergier, herberjer, herbager, herbeger, herbegier, herbejer, herberchier, herbereger, herbergere, herbiger, erberger, heberger*, etc. 'to lodge, shelter; (mil.) to encamp; (of prisoners) to incarcerate; (horses) to stable; to store; to contain, hold; (of town, land) to populate, occupy; to build; to build upon; to stay, lodge (in, at); (mil.) to encamp; to dwell, reside; (fig.) to take up quarters, lodge' (AND²: *herberger*²). [FEW:16,159b *haribergôn; Gdf: 4,455a herbergier 1; GdfC: ∅; TL: 4,1063 herbergier; DEAF: H361 herbergier; DMF: heberger; TLF:

héberger; OED: harbinge v.; MED: herbergen v.; DMLBS: 1147b herbergare]

harbinger *n.* forerunner (c1471, BDE) ME *herbengar*, alternation of earlier *herberger* 'provider of shelter' (a1200?), later *herbergour* 'a purveyor' (1384–85), adapted from AF *herberger* 'one who offers lodging, innkeeper' (AND[2]: *herberger*[1]), derived from AF *herberger, herbergeer, herbergier, herberjer, herbager, herbeger, herbegier, herbejer, herberchier*, etc. 'to lodge, shelter; (mil.) to encamp; etc.', of Germanic origin. Cf. ModF *héberger* 'to give shelter, lodge' (DHEF: 366b, s.v. *héberge*, 1050); see also related HARBOUR/HARBOR *n.* for the origin. (BDE: 465a; KDEE: 886a; ODEE: 572a)
Nota 1: for the change *er* +C- > *-ar* +C- (in checked syllables) see under HARBOUR/ HARBOR *n.*;
Nota 2: the intrusive n as in *messenger, ostringer, passenger, scavenger, wharfinger* remains unaccounted for; cf. ME *regibben* (and the simplex JIB *v.*) as compared to ModF *regimber*; cf. REJIB/REGIBBE *v.* (obs.); BRIBE *v./n.*; JUGGLE *v.*;
Nota 3: regarding ModE *harbinger* n. see Diensberg 2012: 9

harlot *n.* (male) beggar (a1200?, BDE), later 'prostitute' (a1425?) EME *hearlot* 'beggar, vagabond' (*Ancrene Wisse*, MS Corpus), *herlot* (*Ancrene Riwle*, MS Nero, a1250), also *harlot* (AR, MS Vernon, c1390), adapted from AF *harlot, harlote, harlotte, harlet, herlot, arlot*; pl. *harloz* 'beggar, vagabond' (AND[2]: *harlot*) [FEW: 16,753a *hara 1; Gdf:1,399c arlot; GdfC: ∅; TL: 4,1088 herlot; DEAF: H 412 herlot (herlot); DMF: herlot; TLF: ∅; OED: harlot *n.*; MED: harlot *n.* ; DMLBS: 1135c harlotus]
Nota: See also DEAF H: 410–12, s.v. *herlot*. The word is obviously related to *harlequin* (see BDE: 466a; cf. DEAF H: 410); a Germanic root *herl-a* 'a follower of *King Herla*' (see HARLEQUIN *n.*) + OF *-ot* (<L -ottus), a suffix denoting a person (DEAF H 3, 1999: 412); see also HARLOTRY *n.*; (BDE: 466a; KDEE: 624a; ODEE: 428a);
REFERENCES: Zettersten 1969: 241, s.v. hearlot; DHEF 41b, s.v. arlequin (*Hellequin*, 1160; *Harlequin*, 1324). See also MedL *arlotus* (DuCange) and synonymous RIBALD *n.*;

harlotry *n.* 'beggary' (a1376, KDEE) ME *harlotrie*, derived from ME *harlot* + -ERY (BDE: 341a), from OF *-erie* (Meyer-Lübke/Piel, §§ 9, 74, 91*, 94, 103, 126; OF *harlotrie* is not found; see also HARLOT *n.*; see AF *harloter harloter* v.a. to turn into a vagabond, beggar (?) (AND[2]: *harloter*) (cf. BDE: 466a, s.v. *harlot*; KDEE: 624a; ODEE: 428a)
Nota: [FEW:*16,753a *hara; Gdf: ∅; GdfC: ∅; TL: ∅; DEAF: H414 herlot (harloter); DMF: ∅; TLF: ∅; OED: harlot v.; MED: ∅; DMLBS:1135c harlotus]

market *n.* (a1121, BDE) (LOE, OED³: market *n.*) LOE *market(e)*, also *market* (1125), from LL *marcātus*, variant of *mercātus* 'handel, markt'; from the Latin verb *mercārī* 'handel treiben'. Cf. Late Old English *gēarmarkett*: annual market (OED³: market *n.*). Cf. related Old French *marchiét* 'Markt' from Latin *mercātum* (T/L V: 1134). From the same root is AF *marché, marchee, marchet, marchié, marchied, marchiet; merché, merchee, merchet, merchié* 'market; right to hold a market(?); market place, square; trading; transaction; value, market price; goods, merchandise (AND²: *marché¹*), not on Central French *martʃ-* (cf. Old French *marchiet*). Furthermore, most Old French forms show the change of *-er* + C to *-ar* + C, e.g. *marché, marchié, market* as compared to *merché, merchié, merchet* (FEW, 6: 1b, s.v. *mercātus* 'handel, markt'); (OED, s.v. *market* sb., mentions Late Old English *gēarmarkett*: the second element of the compound may be an early loan from Anglo-Norman?); see also MART *n.*; MERCHANT *n.* & MERCHANDISE *n.*; (BDE: 634b; KDEE: 863a; ODEE: 556b)
Nota: ModF /martʃ-/ march-, as compared to ModE /mark-/ as in market.; see ModG *Markt* market (8ᵗʰc., Kluge²⁴ : 602b–603a).
REFERENCE: see Diensberg 2002: 102–103 for an earlier etymological discussion.

merchant *n.* (c1200?, BDE) (c1225, OED³: merchant *n.* and *adj.*) EME *marchaunt*, also *marchaund* (KDEE), later in the surname *Merchaunt* (1332), adapted from AF *marchant, maarchaund, marcande, marchaant, marchand, marchande, marchante, marchaund, marchaunde, marchaunt, marchaunte, marchauntz, marcheant, marcheaunt, marchent, marchun, markand, markande, markant, mercant, merchand, merchande, merchant*, etc. 'merchant, trader; (fig.) purchaser, redeemer; adj.: mercantile, (of a) merchant; businesslike, astute' (AND²: *marchant*), from VL **mercātantem* obl.sing. of **mercātāns* pres.p.ppl. of **mercātārī* for CL *mercārī* 'to trade'; related to MARKET *n.* (q.v.); cf. ModF *marchand* (DHEF: 455a, *marchedand*, 980, *marchaant* 1050, *marcheant* 1150). = (BDE: 652b; KDEE: 883a; ODEE: 570a)

merchandise *n.* (a1250, BDE) (a1300, OED³: merchandise *n.*) ME *marchaundise* 'act of trading, wares, later *merchaundise*' (a1387?), adapted from AF *merchandise, marcaandise, marcandise, marchandice, marchandies, marchandiez*, etc. 'trade, buying and selling; bargain, deal; (fig.) bargain, deal; merchandise, goods; etc.' (AND²: *marchandise*), ultimately from the noun *merchand, merchaund*; + *-ise/-ize*; for the origin see MERCHANT *n.*; cf. ModF *marchandise* (DHEF: 455a, s.v. *marchand*, 1130). (BDE: 652b; KDEE: 883a; ODEE: 570a)

pardon *n.* (a1300?, BDE) (c1300, OED³: pardon *n.* & int.) ME *pardoun* 'forgiveness, (papal) indulgence, *pardon* (c1300), adapted from AF *pardun, pardon, pardoun, perdone,* dispensation; (eccl.) penitential procession at which indulgences were granted' (AND¹: *pardun*), derived from VL **perdonum* < **perdonāre* to give wholeheartedly (< *per-* 'thoroughly' + *donāre*). Cf. ModF *pardon* (DHEF: 547a, s.v. *pardonner*, 1130). (BDE: 757a, s.v. pardon *v.*; KDEE: 1031b; ODEE: 651b)
Nota: The variants *pardun, pardon, pardoun* show the change *er-* > *ar-* in the source language, co-occurring with Old French/Anglo-French *perdone*, which has preserved the original vocalism.

pardon *v.* (1433, BDE) (1433, OED³: pardon *v.*) ME *pardonen* to forgive, adapted from AF *parduner, pardoner, pardonner, pardoner, perdoner* 'to pardon; to remit; (law) to waive; to excuse, relieve of; to give up, renounce; to forgo; to dismiss, send away; to grant; etc.' (AND¹: *parduner*), from VL **perdonum* < **perdonāre* to give wholeheartedly (< *per-*'thoroughly' + *donāre*); as to Anglo-French & Middle English *er* + C- > *-ar* + C- in checked syllables; 14th/15th centuries. (Pope 1934/66: §§ 496, 1123, 1147; Berndt 1960: 70) (see under PARSON *n.*); cf. ModF *pardon* (DHEF: 547a, s.v. *pardonner*, 1130). (BDE: 757a; KDEE: 1031b; ODEE: 651b)
Nota: The variants *parduner, pardoner*, pardonner show the change *er-* > *ar-* in the source language, co-occurring with Old French/Anglo-French *perdoner*, which has preserved the original vocalism.

parlous *adj.* (arch.) 'risky' (c1400, BDE) (c1390, OED³: parlous *adj.* and *adv.*) ME *parlows*, also *perlous* (1401), a variant of *perilous adj.* (q.v.); cf. ModF *périlleux* dangerous (DHEF: 567a, s.v. *péril*, 12th c., *perillos*, from L *periculōsus* dangerous, derived from *perīculum* 'trial, test'). – the word shows the change *er* + C- > *-ar* + C- in checked syllables; cf. FARMER *n.*, VARMINT *n.*, etc.; (BDE: 758b; KDEE: 1033a; ODEE: 652b)

perilous *adj.* (c1300, BDE) (c1300, OED³: perilous *adj.* and *adv.*) ME *perilous* 'dangerous, risky', later 'perilous' (a1325), adapted from AF *perillus, pereillous, perilius, perilious, perilleus, perilous, perillous*'dangerous; risky, hazardous' (AND¹: *perillus*), derived from PERIL *n.* (c1225?, OED³: peril *n.*); cognate with PARLOUS *adj.*; cf. ModF *perilleux* 'dangerous' (DHEF: 567a, s.v. *péril, perillos* 12th c.)
(BDE: 777b, s.v. peril *n.*; KDEE: 1051b, s.v. peril n.; ODEE: 668b, s.v. *peril n.*)

peril *n.* (c1300, BDE) (c1225?, OED³: peril *n.*) ME *peril* 'danger, risk', adapted from AF *perill, perel, pereil, perill, perile, perille, perelle, perrelle, perril*, etc. 'danger, peril; harm, hurt; risk' (AND¹: *peril*¹), from L *perīculum*

trial, danger. Cf. ModF *péril* danger (DHEF:567a, 980 trial, test). (BDE: 777b; KDEE: 1051b; ODEE: 668b)

parson *n.* 'clergyman, minister' (c1250, BDE) (c1275, OED[3]: parson *n.*) ME *persone*, also *persoun*, adapted from AF *persone, personne, parsone, parsoune, person, persoun* 'person; persona; person of consequence, personage; man; (eccl.) person; body; religious; parson' (AND[1]: *persone*), from L *persōna*; PERSON *n.* (q.v.). (BDE: 759a; KDEE: 1034a; ODEE: 653b)
Nota: the Anglo-French & Middle English alternation *er* + C- ∼ *-ar* + C- in the word family under scrutiny has survived to the present, though semantically differentiated.

person *n.* 'character, role (obs.); individual' (a1200?, BDE) (c1225?, OED[3]: person *n.*) EME *persone*, adapted from AF *persone, personne, parsone, parsoune, person, persoun* 'person; (gram.) person; (law) persona; person of consequence, personage; man; (eccl.) person; body; religious; parson' (AND[1]: *persone*), from L *persōna* (Latin influence); see cognate PARSON *n.*; (BDE: 759a; KDEE: 1054b; ODEE: 671a)
Nota: the Anglo-French & Middle English alternation *er* + C- ∼ *-ar* + C- in the word family under scrutiny has survived to the present, though semantically differentiated.

persona *n.* (in Jungian psychology) a person's outward or social personality, etc.; (1917, BDE); OED[3] 1. An assumed character or role, *esp.* one adopted by an author in his or her writing, or by a performer. Also: a dramatic or literary character (*obs.*). 1732 R. Bentley *Pref. Paradise Lost* sig. A3, If any one fancy this Persona of an Editor to be a mere Fantom, a Fiction, an Artifice to skreen Milton himself. (1732, OED[3]: persona *n.*), borrowed from L *persōna* PERSON (q.v.); (BDE: 780b; KDEE: 1054b; ODEE: 671a, s.v. *person*)

partridge *n.* (a1300?, BDE) (c1300, OED[3]: partridge *n.*) ME *pertris*, earlier in a surname *Pertris* (1176), *partrich* (c1300), adapted from AF *perdriz, perdrice, perdris, pardis, perdicz, perdis, perdix, pardriz, partriz, pertriz, partreiz* (orn.) partridge (AND[1]: *perdriz*), from L *perdīcem* obl.sing. of *perdīx*, ultimately from Greek *pérdix*; OF/AF *perdis* became *pertris, perdris* under the influence of *-tris, -triz* feminine ending (< L *-trīcem* < *-trīx*); cf. ModF *perdrix* (DHEF: 565b, *perdriz* 1170). (BDE: 760b; KDEE: 1035a; ODEE: 655a)

perfect *adj.* (c1300, BDE) (c1300, OED[3]: perfect *adj., n.* and *adv.*) ME *parfijt* 'fully formed', earlier as a surname *Parfet* (1196), also *parfit* (a1325), *perfet* (c1380), *perfect* (a1425?), the last form modelled on L *perfectus*, adapted

from AF *parfit, perfit* perfect (AND: 495a), from L *perfectus* p.ppl. of perficere 'to accomplish, complete'; cf. ModF *parfait* (DHEF: 548a, s.v. *parfaire*, OF *perfit* 1050); see MF/late ME *er*+C- > *-ar* + C- (in checked syllables; 14th/15th cies. (see under PARSON *n.*). Cf. parlous *adj.* (arch.) 'risky' (BDE: 776b; KDEE: 1050b; ODEE: 667b)

quarrel *n.* angry dispute, strife (1340, BDE) (1340, OED[3]: quarrel *n.*[3]) ME *querele*, adapted from AF *querele, querelle, querel, queril* 'dispute, controversy; complaint, lament; (law) complaint, legal action, etc.' (AND[1]: *querele*), from L *querella*, variant of *querēla* 'complaining', derived from *querī* 'to complain'. Cf. ModF *querelle* 'dispute' (DHEF: 637b, 1155). The modern English tonic vowel is due to the change of *-er* + C to *-ar* + C in checked syllables. (BDE: 872b, s.v. *quarrel*[1]; KDEE: 1137b, s.v. *quarrel*[1]; ODEE: 729b, s.v. *quarrel*[2])

quarrel *v.* 'argue' (a1393, BDE) (c1391, OED[3]: quarrel *v.*) ME *querelen* 'to dispute', adapted from AF *quereler, queroler* '(law) to bring a plaint' (AND[1]: *quereler)*, from LL *querellare*, derived from LL *querella* 'complaining', influenced by QUARREL *n.*; cf. ModF *quereller* 'to complain' (DHEF: 637b, s.v. *querelle*, 1175). (BDE: 872b, s.v. *quarrel*[1]; KDEE: 1137b, s.v. *quarrel*[1]; ODEE: 729b, s.v. *quarrel*[2])

sergeant *n.* a rank of non-commissioned officer (a1200?, BDE) EME *sergante* 'servant', later 'city officer' (c1250), 'common soldier' (c1300), from OF *sergent, serjent*, cf. MedL (?) *servientem*, obl.pres.ppl. of *servīre* 'to serve'; AF *sergant, sergaunt, sergeaunt, serjant, serjaunt, serjeaunt*; etc. 'servant; workman; foot-soldier; soldier, man-at-arms; fellow; serjeant, baillif, officer of the peace of town; etc.' (AND[1]: sergant). See MF/late ME *er* + C- > *-ar* + C- (in checked syllables; 14th/15th centuries; Pope 1934/66: §§ 496, 1123, 1147; Berndt 1960: 70); cf. ModF *sergent* (DHEF: 705a, 1050); see also related SERVANT *n.* and SERVE *v.*; (BDE: 986b; KDEE: 1252a; ODEE: 811b, s.v. *sergeant/serjeant*)

sermon *n.* 'homily, sermon' (a1200?, BDE) EME *sarmun* (AW, MS Corpus, c1230), also *sermun* (c1200) and *sermon* (a1325), adapted from AF *sermun, sermon, sermoun, sarmon, sarmoun, sarmone* 'sermon, homily; exhortation; discourse, speech; etc.' (AND[1]: *sermun*), from L *sermōnem* obl.sing. of *sermō*; only ME *sermon* and *sermun* may be learned borrowings directly from L *sermōnem*; while *sarmun* exhibits the change *er* + C- > *-ar* + C- (in checked syllables).
(BDE: 987a; KDEE: 1253a; ODEE: 812a)

varmint *n.* (dial./AmE) (1539, BDE) EModE *varment* 'noxious animals', later *varmint* (1829), doublet of ME *vermyne*, adapted from AF *vermine, vermin*'worms, maggots; vermin, harmful creatures' (AND[1]: *vermine*), which shows the change *er* +C- > -*ar* + C- (in checked syllables; see VERMIN *n*.; the excrescent -*t* remains unexplained. (BDE: 1194b; KDEE: 1517b; ODEE: 970b)
REFERENCE: Diensberg 2008: 45.

varsity *n.* university (1846, BDE) derived from earlier *versity* (c1680), clipped form of UNIVERSITY *n*. (c1300, BDE); see MF/late ME *er* + C- > -*ar* + C- (in checked syllables; 14th/15th centuries; Pope 1934/66: §§ 496, 1123, 1147; Berndt 1960: 70); see also VERSITY *n*. and UNIVERSITY *n*.;
(BDE: 1194b; KDEE: 1517b; ODEE: 970b)

university *n.* university (c1300, BDE) ME *universite* 'institution of higher learning', adapted from AF *université, univercyté, universeté, universitee* 'corporation, community; university'(AND[1]: *université*), from MedL *ūniversitātem* obl.sing. of *ūniversitās*, derived from L *ūniversus* 'whole, entire'; see UNIVERSE *n.*; (BDE: 1186b; KDEE: 1517b; ODEE: 970b)

2. Conclusions

The changes in the Anglo-French loanwords examined above aptly show the impact of the French donor language on a smaller, but certainly not negligible, area of Late Middle English phonology and morphology. The verbal ending -*ish*, though no longer productive, still occurs in a clearly remarkable verbal group (see also the Appendix below). The issues discussed above illustrate the consequences of language contact between the various Middle English dialects on the one hand, and Anglo-French spoken not only by the ruling classes after 1066, but, apart from Latin, widely used as language of record right into the 15th century as Professor William Rothwell has convincingly illustrated in a whole series of articles (cf., e.g. Rothwell 1994).

An impressive volume entitled *Borrowed words. A history of loanwords in English*. Oxford: Oxford University Press, 2014, by Dr Philip Durkin, Deputy Chief Editor with the ongoing revision of the *Oxford English dictionary*, gives a thoroughgoing overview over successive phases of language contact which left their mark on the vocabulary of English.

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Appendix

ME *abasshen(n), abaisshe(n)*, from OF *abaisser*; *abolish*; *accomplish*; *admonish; anguish* v. & n. (< OF angoisse); *astonish*; *banish*; *blandish*; *blemish*: *brandish*; *burnish*; *cherish*; *demolish*; *depolish*; *diminish*; *disestablish; disfurnish; disrelish; distinguish; embellish; empoverish;* enfeeblish (arch.), ME enfeblishen v. (a1380/a1425, MED), from extended (weak) stem of OF *enfeblir*; *establish*; *eternish; extinguish; famish; finish; flourish; furbish; furnish; garnish; impoverish* (*seeempoverish*); ME isshe(n) 'to come forward' (< OF eissir/issir); *languish; lavish; minish* (see *diminish*); *monish* (see *admonish*); *nourish*;ME *obesshe(n)* to obey OF obéir, obéiss- (extended stem); ME *oblishe(n)* , a variant of *oblige(n)*; *overflourish; perish; plenish* (from *replenish*); *pre-establish; premonish* (*seeadmonish*); *publish; punish; ravish* (< F *ravir*); *re-establish*; *reflourish*; *refurbish; refurnish; relinquish; relish; replenish; republish; revarnish; tarnish (* < F ternir); vanish; vanquish (< F vaincre); *varnish* (< F *vernir*)

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(INTER?)SUBJECTIVITY OF EXPLICIT CONTENT
IN RELEVANCE THEORY

Abstract

Relevance Theory (RT) (Sperber – Wilson 1986 [1995], Wilson – Sperber 2004) postulates the existence of explicit content in utterance meaning, called explicature. The explicitness of explicatures might be expected to consist, among other properties, in their inter-subjectivity. However, the RT theoretical assumptions and tools crucial to explicature construction and identification all seem to be individual-relative and, as such, subjective. If so, the explicitness of explicature needs further elaboration.

1. Introduction

Among many questions Relevance Theory (RT) (Sperber – Wilson 1986 [1995], Wilson – Sperber 2004) faces, there is this: to what extent, if at all, is RT explicit content potentially inter-subjective in terms of the theory's own assumptions[1]?

The assumptions underlying explicit content construction (Carston 2004, 2009) are the relevance of an input to an individual, optimal relevance, relevance-theoretic comprehension procedure with its operational steps of decoding and logical form development comprising disambiguation, reference resolution and free pragmatic enrichment/adjustment including ad-hoc concept construction. None of these theoretical constructs leaves room for necessarily inter-subjective stable "portion" of explicit content.

Similarly, the availability principle, taken to be the discriminatory criterion of explicit content identification, is subjective in its nature. The underdeterminacy thesis[2] pointing to the inherent underdeterminacy of

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communication also requires subjective bridging of the omnipresent gaps between what is meant to be conveyed and what is actually evidenced as such. The assumptions and resulting example analyses indicate the individual-relative view of communication in Relevance Theory. The question remains, then, in what sense can explicit content (explicature) be explicit without being inter-subjective?

2. Explicit content in Relevance Theory[3]

Speaker's meaning, that is the thought communicated by a speaker, is explicit if it is the explicature of the speaker's utterance.

> An assumption communicated by an utterance U is explicit (hence, is an explicature) if and only if it is a development of a logical form encoded by U, where explicitness is a matter of degree [...]. Any assumption communicated, but not explicitly so, is implicitly communicated. It is an implicature. (Sperber – Wilson 1986[1995: 82])

Carston and Hall (2011: 8) say that "[...] the explicit content of an utterance is taken to be that content which ordinary speaker – hearer intuitions would identify as having been said or asserted by the speaker."

Attempts to draw a demarcation line between the explicit and the implicit in RT have been made since the publication of *Relevance: Communication and cognition* (Sperber – Wilson 1986 [1995]) (Carston 2002b, 2004, 2009, Carston – Hall 2011, Mioduszewska 2002). They must be deemed inconclusive since only the availability principle (Carston – Hall 2011: 14, Recanati 1993) is assumed to have withstood critical evaluation, remaining the only criterion of explicature identification, apart from its operational definition, according to which explicature is the result of logical form development in the relevance-theoretic comprehension procedure.[4]

In the examples below,[5] the versions of B's utterance in square brackets are approximations to its explicature as possibly recovered by A in each case.

Example I
Context: Two acquaintances (A and B) are talking about John.
 A: *What does John do for a living?*
 B: *He is a butcher.*
  [John earns money working as a butcher]

Example II
Context: Two acquaintances (A and B) are talking about John's professional
  skills.
 A: *Is John a good surgeon?*
 B: *He is a butcher.*
  [John is a bad surgeon]

Example III

Context: Two acquaintances (A and B) are talking about John.
    A: *What kind of person is John?*
    B: *He is a butcher.*
       [John's personality is somehow related to the concept BUTCHER[6]]

What makes A recover the explicit content of B's utterance is A's search for relevance as predicted by the two principles of relevance: "Cognitive Principle of Relevance: Human cognition tends to be geared to the maximization of relevance." (Wilson – Sperber 2004: 610) and "Communicative Principle of Relevance: Every ostensive stimulus conveys a presumption of its own optimal relevance." (Wilson – Sperber 2004: 612).

Relevance and optimal relevance which A expects to find and looks for are defined as:

Relevance of an input to an individual: a. Other things being equal, the greater the positive cognitive effects[7] achieved by processing an input, the greater the relevance of the input to the individual at that time. b. Other things being equal, the greater the processing effort expended, the lower the relevance of the input to the individual at that time. (Wilson – Sperber 2004: 609)

Presumption of optimal relevance: a. The ostensive stimulus is relevant enough to be worth the audience's processing effort. b. It is the most relevant one compatible with communicator's abilities and preferences. (Wilson – Sperber 2004: 612)

The two principles of relevance and its two definitions explain why the same string of words (*He is a butcher*) may have different interpretations, depending on the context activated by A. According to the availability principle, A may claim the interpretations to be explicitly communicated by B in each case. Relevance Theory shows not only why we may construct different explicatures of the same string of words in different situations but it also describes the way in which explicatures are constructed in the process of utterance comprehension. The construction follows the relevance-theoretic comprehension procedure with all its subtasks.

Relevance-theoretic comprehension procedure: a. Follow a path of least effort in computing cognitive effects. Test interpretive hypotheses (disambiguation, reference resolution, implicatures, etc.) in order of accessibility. b. Stop when your expectations of relevance are satisfied (or abandoned). (Wilson – Sperber 2004: 613)

Subtasks in the overall comprehension process: a. Constructing an appropriate hypothesis about explicit content (EXPLICATURES) via decoding, disambiguation, reference resolution and other pragmatic enrichment processes. b. Constructing an appropriate hypothesis about the intended contextual

assumptions (IMPLICATED PREMISES). c. Constructing an appropriate hypothesis about the intended contextual implications (IMPLICATED CON-CLUSIONS). (Wilson – Sperber 2004: 615)

The relevance-theoretic comprehension procedure is claimed by relevance theorists (Wilson – Sperber 2004) to reflect the human pragmatic comprehension capacity, constituting a dedicated sub-module (of the general mind reading module) of our cognitive system, comprising the processes of adjustment or modulation of lexically encoded meaning.

In the utterance comprehension process, as one of its subtasks, we construct hypotheses about explicit content, that is, the explicature of the utterance, via decoding, disambiguation, reference resolution and other pragmatic enrichment processes such as ad-hoc concept construction. Decoding and pragmatic enrichment processes, as understood in RT, have a bearing on the inter-subjective or subjective nature of explicit content of utterances.

The automatic decoding process results in logical form construction, comprising semantically/linguistically encoded meaning (Carston 2009, 2010). Logical forms are structured sets of atomic concepts, potentially undergoing individual-relative pragmatic adjustment (Carston 2010).

In RT, concepts are "enduring elementary mental structures, capable of playing different discriminatory or inferential roles on different occasions in an individual's mental life." (Sperber – Wilson 1998 [2012: 33]) They may be lexicalized atomic concepts, atomic concepts not encoded in our linguistic system and some innate concepts (Carston 2010: 14). Concepts may be shared by interlocutors but they may also be individual-relative and, potentially, non-communicable. They are "arrived at through mutual pragmatic adjustment of explicatures and contextual implications." (Carston 2010: 10)

Words may encode full-fledged (atomic) concepts, pro-concepts or procedural meaning. In the case of open-class items there is a simple mapping from lexical form to mental atomic concepts (Carston 2010: 8, 9). Words do not have to encode the same concept for all successful users. Words are used to convey not only the concepts they encode but also indefinitely many other related concepts to which they may point in a given context (Sperber – Wilson 1998 [2012: 43]).

In the process of free pragmatic enrichment, ad-hoc concepts (marked with *) can be constructed or retrieved (Carston 2002b, 2010). They are "pragmatically derived, generally ineffable, non-lexicalized [...] rough indication to aid readers in understanding what we have in mind in particular cases." (Carston 2010: 13)

In the case of examples I-III, the structure of the decoded logical form of the string of words *He is a butcher* is the same. The differences among the three explicature approximations

(1) [John earns money working as a butcher]

(2) [John is a bad surgeon]

(3) [John's personality is somehow related to the concept BUTCHER]

follow from the differences in the concept BUTCHER in each case.

In example I, guided by his search for relevance, A accesses a mental atomic concept BUTCHER via simple mapping from the lexical form of the open-class item *butcher*. The accessed concept (close to the literal, dictionary reading of the word) may undergo individual-relative pragmatic adjustment, depending on A's BUTCHER related assumptions and experience. If the recovered/constructed explicature of B's utterance meets A's expectations of relevance, he accepts it and stops processing.

In example II, the same kind of processing will not secure the expected relevance of B's utterance. Consequently, the word *butcher* in II cannot map onto BUTCHER of I. The word *butcher* in II leads A to construct an ad-hoc concept BUTCHER*, which is arrived at through mutual pragmatic adjustment of potential explicature and contextual implications. In this case the word *butcher* is a pointer to aid A in understanding what B has in mind and lead A to construct an ad-hoc concept BUTCHER*, that is a pragmatically derived, generally ineffable, non-lexicalized concept. The ad-hoc concept BUTCHER* allows A to construct explicature (2), which meets his expectations of relevance and makes him stop processing. A similar situation occurs in III, where A has to construct another ad-hoc concept BUTCHER**, leading to the relevant explicature (3), which meets A's expectations of relevance.[8]

In RT, explicit content (explicature) has been tacitly taken to be, at least to some extent, inter-subjective across speaker-hearer (Carston 2010, Sperber – Wilson 1998 [2012]). Yet, it seems that the assumptions of the theory do not require its inter-subjectivity at any level of the description.[9]

3. Subjectivity of explicit content in Relevance Theory

If any inter-subjectivity of explicature was to be present in RT understanding of the notion, it should surface in the criteria of its identification (the availability principle), in its operational definition, according to which explicature is the result of logical form development of the relevant utterance, in the process of its construction including motivation for the

construction, its driving force, its actual operational steps of which decoding and pragmatic enrichment are crucial[10] or in the overall process of forming hypotheses about its ultimate content.

The explicit content identification criterion, that is the availability principle, leaves the decision about the explicit or implicit nature of the communicated meaning to the intuitions of interlocutors. Nothing in the availability principle formulation or interpretation requires speaker – hearer intuitions to be shared, that is to be inter-subjective. What B may consider asserted in (2), A may think to be implicated, suggested or hinted upon. Intuitions are individual-relative, thus subjective and not open to scrutiny or discussion unless verbalized.

By the operational definition of explicature, it is an assumption communicated by an utterance which is a development of logical form encoded by this utterance. Here, the inter-subjectivity of the resulting form depends on the degree to which a logical form encoded by an utterance is itself inter-subjective and what the development of logical form consists in.

The process of explicature construction is motivated and triggered by the two principles of relevance and guided by the search for relevance. Relevance, as its definition states, is relative to an individual. It is a balance between positive cognitive effects an individual gains and the effort he expends in the process. There is no constraint within the theory requiring or predicting shareability[11] of cognitive effects between two or more individuals processing the same utterance.

For example, in II, A's explicature of B's utterance *He is a butcher* will be (2) against what A assumes makes a good surgeon but C's possible explicature of the same expression could be [John is a good surgeon], if C's view of good surgeons is that they should be like butchers – tough, decisive and insensitive. In example III, different hearers would probably get different explicatures via constructing their respective *ad-hoc* concepts related (or not) to BUTCHER, depending on their encyclopedic entries for the concept accessed via the word *butcher* and other contextual premises activated on hearing the utterance. Similarly, the relevance of B's utterance to himself does not have to be the same (or even similar in some cases) as A's relevance of this utterance.[12] In fact, nothing in the definition of relevance requires its shareability between interlocutors, each of whom looks for the relevance of an input only to himself.

The greatest expectations of inter-subjectivity in communication are probably tied up with the decoding process. Decoding, contrary to inference, should be a process of retrieving conventionalized language meaning from an utterance.

In Relevance Theory, the automatic decoding process results in logical form construction. Logical forms, that is structured sets of atomic concepts,

should contain inter-subjective, semantically/linguistically encoded meaning. It would be the case if RT secured the shareability/publicity of at least those atomic concepts which are encoded by lexical items (public lexicon). This, however, is not the case. Even in the simplest situations of direct word/ concept mappings (between open-class items and lexicalized mental concepts), as possibly in I between the word *butcher* and the concept BUTCHER, from which the word gets its meaning, inter-subjectivity is not necessary; the accessed atomic concept may potentially undergo individual-relative pragmatic enrichment. In I, for A *butcher* may map onto BUTCHER – with the denotation of people butchering animals, and for B *butcher* may map onto BUTCHER, the denotation of which will be people selling meat. Such straightforward cases, which turn out to lack full inter-subjectivity anyway, are rare. Lexicalized atomic concepts are a minority if compared with atomic concepts not encoded in our language system. Inter-subjectivity of the latter may be only accidental if interlocutors happen to have their mental concepts grounded in common experience, rather than fully idiosyncratic and non-communicable. In either case, concepts are (individually) accessed via words serving as pointers to them and their ultimate understanding is arrived at through mutual pragmatic adjustment of various premises.

Since words do not have to encode the same concept for all users and they are used to convey not only the concepts they encode but also indefinitely many other related concepts, we cannot expect inter-subjectivity at the level of decoding.

Neither can we expect it in the pragmatic enrichment process of ad-hoc concept construction. They are always pragmatically derived, not lexicalized, often ineffable and ranging from those that have a firm presence in the hearer's cognitive system to those that are entirely ad hoc and pre-conceptual in status (Carston 2010: 15). All those cases may be exemplified by various interpretations of *butcher* in example III. In the case of *ad-hoc* concepts the question of inter-subjectivity does not even arise – they are strictly subjective.

All the factors discussed so far play their role in constructing an appropriate hypothesis about explicit content of an utterance. Such hypothesis formation is an online, non-sequential process, during which the interpreter has access to all contextual premises, provided his search for relevance makes him activate them. The premises are individual-relative and hence subjective as well (individual life experience, memory stock etc.) but Relevance Theory provides a tool for securing some inter-subjectivity of some of them. The tool is the concept of mutual cognitive environment. Mutual cognitive environment is "any shared cognitive environment in which it is manifest which people share it." (Sperber – Wilson 1986 [1995: 41]) where "A cognitive environment of an individual is a set of facts that are manifest to them." (Sperber – Wilson (1986 [1995: 39]) and "A fact is

manifest to an individual at a given time if and only if he is capable at that time of representing it mentally and accepting its representation as true or probably true." (Sperber – Wilson 1986 [1995: 39])

It follows that facts forming interlocutors' mutual cognitive environment are inter-subjectively accessible to them in this environment. It does not follow, however, that the relevant mental representations will be actually accessed, as this depends on individual-relative search for relevance of the participants in the communicative process. So, although mutual cognitive environment allows for some inter-subjectivity in utterance comprehension by singling out some common implicated premises, it does not enforce it.

In fact, none of relevance-theoretic constructs crucial for the process of explicit content construction leaves room for the necessarily inter-subjective, stable "portion" of explicit meaning. It seems that the explicitness of explicit content of utterance meaning needs further elaboration in Relevance Theory even if, or especially if, its inter-subjectivity is not to be expected.

4. Conclusions

Explicature (explicit meaning) construction, identification and interpretation in Relevance Theory seem to be individual-relative and, as such, subjective. The nature of explicitness without inter-subjectivity, other than when understood as a technical construct of the theory, seems to need further explication. On the other hand, in order to acknowledge and accept the requirement of explicit content's inter-subjectivity across speaker – hearers, a lot more would have to be said in Relevance Theory about the semantically/ linguistically encoded meaning and the nature of lexicalized mental concepts pragmatic adjustment.

NOTES

[1] RT is a cognitive theory (Wilson – Sperber 2004). As such it deals with mental representations, which by definition are individual-relative and thus subjective. So, the question about explicit content's inter-subjectivity may seem to be wrongly posed. However, RT claims that there exists explicit part of communication, namely explicatures. In what other than purely technical way can this explicit content be explicit without being inter-subjective?

[2] According to the underdeterminacy thesis (Carston 2002a, 2009, 2010: 4) "the meaning encoded in the linguistic expression type that a speaker utters inevitably underdetermines the content that the communicator [conveys] not only her implicatures but also propositional content she communicates explicitly ('explicature')". What can be communicated goes well beyond what can be encoded and effability of thoughts/mental states is a matter of degree.

³ Explicit content is limited in the discussion to the explicit content in verbal (ostensive-inferential) communication for the sake of clarity of exposition. The claims apply to non-verbal conventionalized ostensive stimuli equally well.

⁴ The availability principle has it that "in deciding whether the pragmatically determined aspect of utterance meaning is part of what is said, we should always try to preserve our pre-theoretic intuitions on the matter." (Carston – Hall 2011: 14) Other criteria such as minimal complete proposition, linguistic directionality principle, functional independence principle, scope of logical operators test have been shown to be inadequate (see, among others, Mioduszewska 2002) and accepted as such by relevance theorists (Carston – Hall 2011).

⁵ Various examples of category extension/narrowing/change analysis, including the "butcher" case, reappear in numerous Relevance Theory papers (Carston 2010, Sperber – Wilson 1998 [2012]).

⁶ Capitals are used to mark concepts.

⁷ Positive cognitive effects are contextual implications, that is new assumptions resulting from connecting new and old information, and/or weakening, abandonment or strengthening of old assumptions (Wilson – Sperber 2004, Sperber – Wilson 1986 [1995]).

⁸ For a detailed analysis of the differences among the three types of cases, see Mioduszewska (In press).

⁹ Examples of utterance interpretation, focusing on the nature of concepts and ranging from using the "unambiguous" verb *dance* to communicate any of the indefinite range of related concepts. (*Let's dance*: children dancing spontaneously, ballet dancers, walking rhythmically, spending life together) (Carston 2010), through interpreting *tired* in Peter: *Do you want to go to the cinema?* Mary: *I am tired.* as "tired enough not to want to go to the cinema" via contextual construction as a by-product of the relevance-guided comprehension process (Sperber – Wilson 1998 [2012]) to complete denotational dissolution of SHARK, BUTCHER etc. in *He is a shark.* and strictly contextualist interpretation of *open* confirm the view that none of RT theoretical constructs leaves room for necessarily inter-subjective stable "portion" of explicit content.

¹⁰ Disambiguation and reference resolution, though vital for utterance comprehension and deserving thorough and extensive studies, which they have been receiving, would not change the line of reasoning about inter-subjectivity of explicit content in RT presented here.

¹¹ The concept of manifestness and mutual cognitive environment will be discussed later in the paper.

¹² RT does assume that we want to ascribe intentions to our interlocutors (with relevance-theoretic comprehension procedure being part of our mind reading capacity) but in doing so, it does not secure any shareability or publicity of lexically encoded meaning, which itself undergoes the process of subjective pragmatic adjustment.

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USE OF THE WRITING SPACE ON THE FRANKS CASKET: EDITORIAL AND LINGUISTIC ISSUES

Abstract

The Franks Casket (ca. 700 AD) preserves both continuous and single word inscriptions, mainly in Old English and carved in runes. The present paper discusses the editorial issue of where each text begins, which is far from obvious because the main inscriptions entirely surround three panels in an unbroken line. On the basis of the conclusions reached, new editions are provided for all inscriptions on the panels under consideration. The back panel uniquely combines runes, Roman letters, Old English and Latin – the present paper offers an explanation of the engravers' choices basing on paleographical considerations.

1. Introduction[1]

The Franks Casket (FC) is a whalebone box measuring 23 x 19 x 13 cm, dated to about 700 AD by the majority view.[2] Its panels contain images of scenes from the Judeo-Christian tradition, Germanic mythology and Roman legend, surrounded by mainly runic (three words are in Roman letters) inscriptions amounting to about 59 words, predominantly in Early Old English (five words are in Latin). The inscriptions involve a diversity of techniques, directions, orientations, functions and even variety of alphabets and languages. Comprehensive accounts of the history and contents of FC have been published in Napier (1901), Viëtor (1901), Page (1973: 174–182), Elliott (1963: 96–109), and Webster (2012).

One of the aims of the present paper is to discuss the issue of where each text begins and to provide new editions for all inscriptions on the panels under consideration. Another is to explain the engravers' choices of the languages and alphabets used as well as the layout of the inscriptions. Their

reading is mainly uncontroversial, thanks to their excellent state of preservation and the fact that they contain no rare or otherwise problematical characters.[3] Hence any clear system of transliteration into Roman letters could serve equally well. The present study adopts the widely used system which was devised by Dickins (1932) and improved by Page ([1984] 1995). To simplify matters, each rune receives a single-letter equivalent, the letters are in lower-case, no bold face or italics are used, and the whole text is put between a set of single inverted commas. Bind-runes (i.e. ligatures specific to runic writing) are marked with a superscript curve connecting the two characters, e.g. 'fa'. Still, transliteration does not produce a very legible text, hence it is here used only when both feasible and necessary. Otherwise the wording of the inscriptions is presented according to philological conventions, i.e. with normalised word divisions, modern punctuation and capitalised proper names. All transliterations, editions and translations of inscriptions on the Franks Casket are mine, unless indicated otherwise.

2. The right panel

The inscription on the right panel (Fig. 1) begins with *her* 'here', which proves the texts' close connection with the images. This link needs such proof because neither the inscription nor the iconography have yet received compelling interpretation. Regarding the images one observation may be added to the previous studies. The most enigmatic element here seems to be the leftmost figure, a polymorphic creature with hooves, a man's hips and thighs, a bird's torso, and the head of a – presumably – horse, with the muzzle tied up by a snake. The creature is seated, which together with its leftmost position on the panel suggests that the first and, possibly, most important words of the inscription refer to it: *Her Hos sitaþ* 'Here Hos (?) sit (pres. ind. pl.)'. Therefore even insignificant clues might prove helpful, and the observation alluded to above is that, except for the snake, exactly the three elements forming the creature, i.e. man, horse, and bird, can be seen separately in the next scene of the panel.
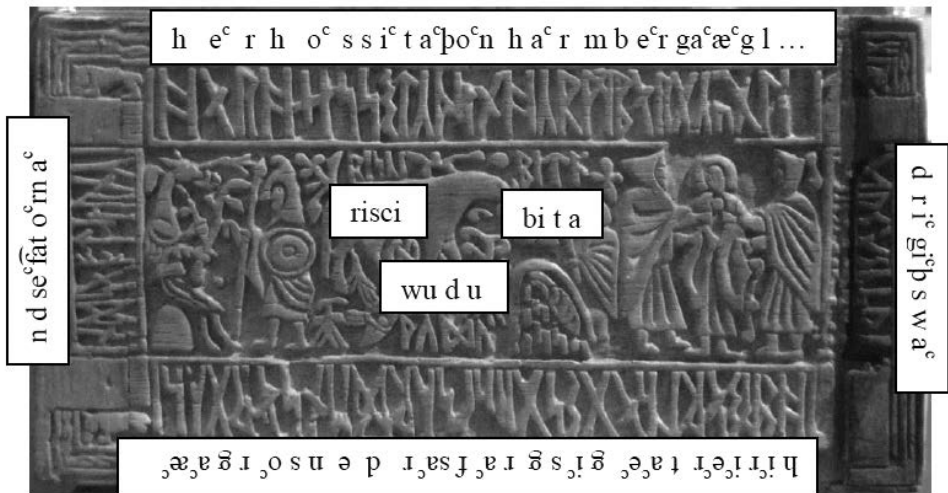
Figure 1. Cast of the right panel of the Franks Casket, British Museum.
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(1) Main inscription:
   Her Hos sitaþ   on harmberga,
   ægl drigiþ   swa hiri Ertæ gisgræf
   sarden sorga   ænd sefa torna.[4]
   ['Here Hos (?) sit on a hill of sorrow, suffers (?) as her/them Ertæ (?)
   dug (?) a wretched den of sorrows (?) and griefs of the mind.']

(2) Minor inscriptions:
   risci ['rush (?)']
   bita ['bitter (?), biter (?)']
   wudu ['wood']

Although the meaning of the right panel has hitherto evaded scholars,
the fact that the inscription on the right panel begins in the top left-hand
corner is uncontroversially proven by its wording. *Her* 'here' opens the top
line, a helpful way to begin a description of a picture, while the runes on the
left-hand side read 'n d s eᶜ f͡a t oᶜ r n aᶜ', an impossible beginning.

3. The left panel

The left panel (Fig. 2) depicts the mythological scene of Romulus and Remus
being suckled by a female wolf and found by shepherds. Here the iconography
agrees with the surrounding inscription, which adds the information that the
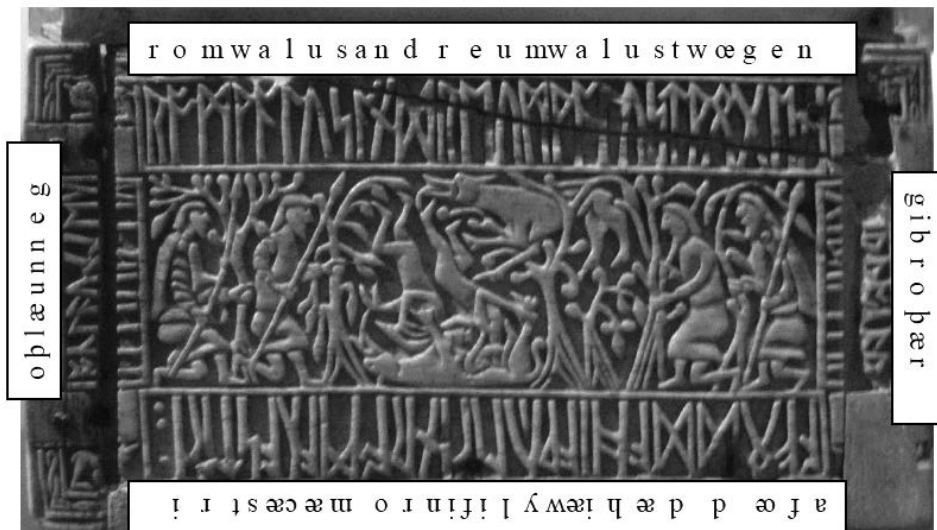scene takes place in Rome, far from the twins' native land.

Figure 2. The left panel of the Franks Casket, British Museum.
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(3) Inscription:

Romwalus and Reumwalus, twœgen gibroþær. Afœddæ hiæ wylif in Romæcæstri; oþlæ unneg.

['Romulus and Remus, two brothers. A female wolf fed them in the City of Rome; far from (their) native land.']

Even though the content of both the inscription and the images is quite obvious, the precise point at which the inscription begins still leaves some doubt. The panel's right-hand side reads *oþlæ unneg* 'far from [their] native land', an adverbial of place which could either begin or end such a text (cf. examples and commentary in Mitchell 1985: §§1121–1125, 1593, 3903, 3942). Indeed, this could be the beginning of the inscription, especially if one takes into consideration the three dots at the end of the bottom line, which form the only punctuation on this panel, likely to mark the text's end.

However, it seems more reasonable to begin such a description with the names of the most important figures, *Romwalus and Reumwalus*, the first words of the top line. Hence, the main text on the left panel begins in the top left-hand corner, in agreement with modern expectations. The text proceeds from left to right, then continues down the right-hand side. Yet, against modern expectations, the line of text is unbroken, with the bottom line filled with runes engraved upside-down and from right to left. The unbroken line continues up the left-hand side. This view of the sequence of words in the inscription is reflected in the edition offered above.

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4. The front panel

The front panel (Fig. 3) is the most conspicuous one, which designates it as, in a sense, the Casket's first panel, its "beginning". The interior part of the panel is clearly divided into two halves by a decorative line in the same pattern as the outer frames. The left half shows two or three scenes from the story of Weland's revenge, whilst the right half – the Adoration of the Magi. The whole is framed by the famous verse riddle about a stranded whale together with its (presumable) solution *hronæs ban* 'a whale's bone(s)' – the material from which the Casket is made.
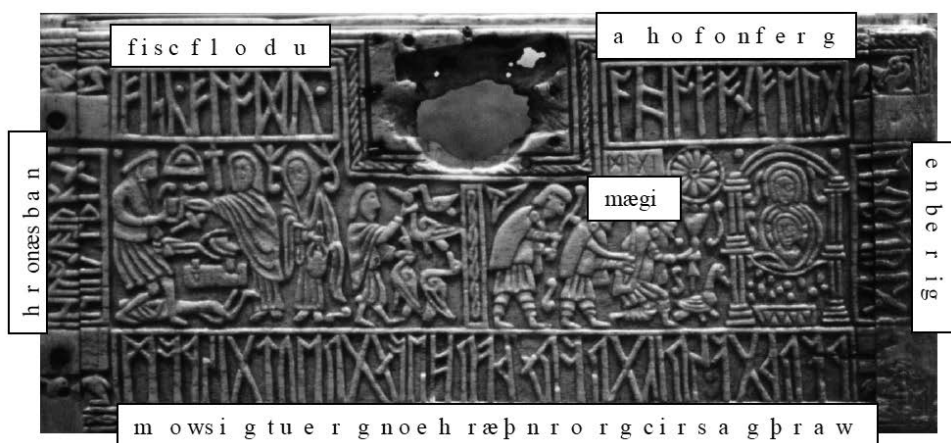

Figure 3. The front panel of the Franks Casket, British Museum.
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(4) Main inscription:
Fisc flodu ahof   on fergenberig.
Warþ gasric grorn   þær he on greut giswom.
Hronæs ban.
['The water lifted up the fish on a hill. The king of terror (?) became sad where he swam out on sand. A whale's bone(s).']

(5) Minor inscription:
mægi ['Magi']

The front panel is the only one to bring together Germanic legend and Biblical story. It is also the only one in which the inscription does not appear to relate to the iconographic representation in any way.[5] Furthermore, no other panel refers to the material from which the Casket is made, thus referring to the whole box. The reference brings to mind the medieval

practice of beginning the body of a text with a description of what it contains, for which information the modern reader expects rather titles and summaries. This additionally supports the procedure of viewing the front panel as the "first" one.

Explanation of the intended textual layout of the inscription on the front panel involves problems similar to those of the left panel, discussed above. No grammatical or metrical link exists between the words inscribed on the panel's left-hand side, *hronæs ban* 'a whale's bone(s)', and either the "following" words in the top line or the "preceding" ones in the bottom line. These have sometimes been interpreted as the answer to the riddle written on this panel, but the riddle speaks about a stranded whale, not about its bone(s). Nevertheless, none of the above considerations could offer a satisfactory solution to the problem of establishing where the inscription begins.

The answer to this question may be provided by paleography. The runes of the left half of the top row have a stately appearance, as do those beginning the right half of the same top row. They have been executed with comparatively thick lines and without any attempts at saving space. However, all the following runes look crowded in comparison, their lines get thinner and their breadth becomes reduced. The characters forming the above mentioned *hronæs ban* 'a whale's bone(s)' also have this very crowded appearance, to be seen especially in the choice of the mirror-image shape of the 's' ⵑ (Fig. 4). Thanks to this the lower side of the rune could be fit under the two side strokes of the preceding 'æ' �. Yet one rune on this side has not been compressed: the final 'n' is formed with comparatively thick lines and is placed so that it takes much space – all that remained to be filled, apparently.

Figure 4. Detail from the front panel of the Franks Casket, rotated by 90°. The runes read: 'h r o n æ s b a n', with the 'æ' ⊦ rune lacking the lower part of its stave. © John W. Schulze / Wikimedia Commons / CC-BY-2.0

It seems illogical to begin an inscription with the most intense space-saving approach (as in *hronæs* 'whale's') causing a slight deformation of the characters, and only after filling the first part decide to continue in ampler

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characters (as in *fisc*), just to revert back to saving space shortly afterwards. Therefore the inscription most probably starts with the ample runes in the top left-hand corner, with the words *fisc flodu ahof* 'the sea lifted up a fish' (or 'a fish lifted up the sea-water'), and continues with characters executed more and more economically. These follow down the right-hand side and from right to left in an unbroken line as on the panels discussed above. The difference, however, consists in the runes' orientation, as on the front panel they are not upside-down but executed in mirror-image.

5. The back panel

The back panel (Fig. 5) in turn connects Roman and Judeo-Christian history by showing the capture of Jerusalem conducted by Titus in 70 AD. The iconography of this panel is the most complex in the whole Casket: the space is divided into five separate fields, four of them crowded by human figures. The link between the scenes depicted and the surrounding text is here the strongest both visually and conceptually. The roof of the Temple splits the writing space at the top, while the size of the whole image leaves the remaining two strips at the top very narrow. There was no more writing space left for comments on the two fields at the bottom, so these could receive only single-word descriptions. The general purport of these seems uncontroversial, for the field described as *dom* 'judgement' shows a figure seated on a throne in the middle, probably the judge, while in the picture labelled *gisl* 'hostage' the figure in the middle is gagged.
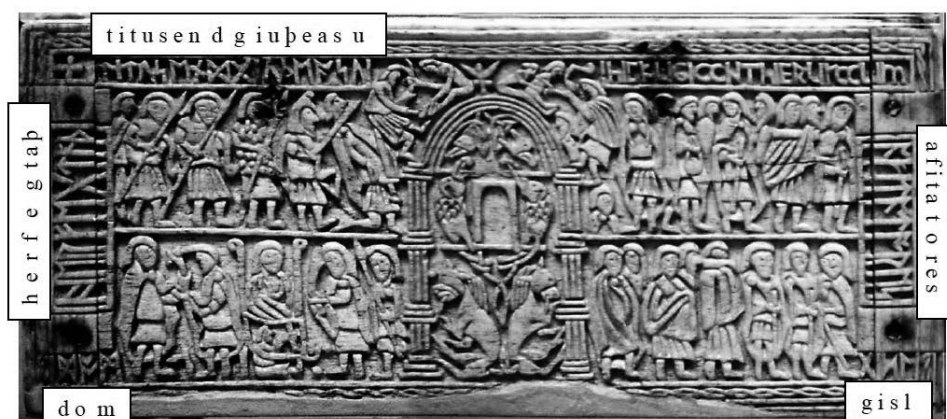

Figure 5. The back panel of the Franks Casket, British Museum.

(6) Main inscription:
    (runes, Old English) Her fegtaþ Titus end Giuþeasu. ['Here fighting are Titus and the Jews.']
    (Roman letters, Latin) Hic fugiant Hierusalim
    (runes, Latin) afitatores. ['Here fleeing are Jerusalem's inhabitants.']

(7) Minor inscriptions:
    dom ['judgement']
    gisl ['hostage']

The back panel is the only one to combine runes and Roman letters, as well as Old English and Latin. The inscription uncontroversially begins in the bottom left-hand corner in Old English and runes, continuing until the middle of the top line in the same language and alphabet: *Her fegtaþ Titus end Giuþeasu* 'Here fighting are Titus and the Jews'. Unexpectedly, the second sentence begins in Latin and Roman letters, yet ends in runes (without abandoning the Latin language, however): (Latin, Roman letters) *Hic fugiant Hierusalim* (Latin, runes) *afitatores* 'Here fleeing are Jerusalem's inhabitants'.

Various explanations have been offered as to why the back panels' engravers changed twice both the language and the alphabet of the inscription. Thus, Becker (2001) provides a rather fanciful numerological theory, which scrupulously adds up the number of the runes used and their presumable numerical values. A different theory was proposed by the prominent runic scholar and Old Germanic philologist, Ray I. Page (1973: 179), and appears to be the most widely held one today. Page suggested that the engraver was copying from a manuscript exemplar, translating from the Latin of the exemplar and at the same time transliterating from the Roman script directly onto FC. The engraver supposedly forgot to either translate or transliterate in the middle of the inscription on the back panel, and remembered only when he reached the final word of the second sentence, *afitatores* 'inhabitants'. Since finishing in Old English a sentence begun in Latin would have been unacceptable, the engraver continued in the Latin language, but returned to runes. However, it seems impossible that creators of such a complicated work as FC could be guilty of such carelessness.

Yet again the solution offered in the present paper resorts to paleography. As stated above, in the bottom line of the back panel there was no room left to continue the main inscription. Additionally, part of the inscription had to be compressed, as did part of the main inscription on the front panel. The narrowness of the two parts of the top line forced the engravers to deform the runes: the material would probably not allow thinner lines, so the only option left was to make the vertical staves shorter – or, as was done with the second of the two strips, to use the Latin alphabet, which

could fit such space without deformation. This explanation seems preferable to the fanciful numerological theory of Becker (2001) or the helpless appeal to the engraver's presumable sloppiness of Page (1973: 179). Probably the shape of the remaining space on the right-hand side made the engraver return to runes, whose normal dimensions fit it neatly and economically. Yet because not only the Latin alphabet was used at the beginning of the second sentence, but also the Latin language, the final word *afitatores* (for *habitatores* 'inhabitants') ended up in Latin but written in runes.

Figure 6. Detail from the back panel of the Franks Casket.
The inscription reads: hic fugiant hierusalim.
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It is intriguing why the three words *hic fugiant Hierusalim* 'here flee Jerusalem's' could not have been executed in English. Was it because the authors of FC were unused to writing their native language with Latin characters? Indeed, two clues may be found pointing in this direction. First, the Latin letters used in the inscription (Fig. 6) appear to have been produced inexpertly, as they consist of a random mix of capitals (c, g, t, e), uncials (h, u), Insular half-uncials (a, f, n, m), and Insular minuscule (s). Hence they give a confused impression, additionally heightened by the wrong inflection in *fugiant*, which ought to be *fugiunt* (3rd. p. pl. pres. ind.), because the present subjunctive suggested by the *-ant* ending could not have been intended in the description of an image showing historical events. The second clue consists in the spelling of the runic *afitatores* representing the Latin word *habitatores* 'inhabitants'. The choice of "phonetic transcription" instead of transliteration indicates the lack of any direct links between runes and Latin letters in the consciousness of FC's authors.

6. Conclusions

The present paper has discussed a few issues pertaining to the layout and paleography of the inscriptions on the Franks Casket, offering solutions to problems which have not received satisfactory answers hitherto. On three panels (front, left, right) the inscription encircles the central field in an unbroken line, hence the question of where the texts begin is not trivial. In all cases answers have been offered on the basis of either paleography, language or logic. Another issue to which the present paper has offered a solution consists in the inter-alphabetic and inter-linguistic versatility of the back panel. Again

the major argument has been provided by paleography in that the natural shape of runes is significantly more elongated than that of Roman letters. The creators of the Casket showed awareness of the esthetical characteristics of runes versus Roman letters, and consciously switched from the one to the other to avoid deformation of characters, whenever the shape of the available writing space would have otherwise enforced it. Once they had decided to switch to Roman letters, the Latin language was possibly their only choice – the present paper has presented some evidence against the practice of writing Old English in Roman letters in the milieu in which FC was created.

NOTES

[1] I would like to thank the two anonymous reviewers for their help in improving both the content of my paper and its exposition.

[2] A persuasive dissenting opinion has been expressed by Vandersall (1972), who argues for 10th/11th century basing solely on art-historical considerations. However, no linguistic form preserved on FC suggests a date later than the 8th century. Such linguistic uniformity seems unattainable otherwise than through current usage. In contrast, stylistic parallels referred to by Vandersall appear far less definite. Therefore the traditional dating is here preferred.

[3] Two exceptions must be mentioned. First, the right panel still defies scholarly attempts at interpretation; its readings are not discussed in detail here. And second, the lid is in an incomplete state of preservation: originally it might have contained as long an inscription as do all the other panels; now it only preserves the word *ægili* – presumably the oldest attested form of the name Egill, Weland's brother. Therefore the lid has been excluded from the present discussion.

[4] Since the present paper does not aim at providing a conclusive interpretation of the highly enigmatic right panel, the edition offered here follows to a large extent the most commonly accepted one from Dobbie (1942). However, my edition provides a different interpretation of the cryptic runes, marked by superscript 'c' in transliterations throughout the paper. The interpretation of the cryptic runes assumed here follows Ball (1966) rather than earlier solutions, which reverse the meaning of 'aᶜ' and 'æᶜ', because of the superior readings thus obtained, e.g. *sitaþ* 'sit (3rd p. pl. pres. ind.)' instead of **sitæþ* and *sar* 'pain, suffering' instead of **sær*.

[5] Numerous, highly questionable attempts at finding such a relationship have been made, cf. the better known ones by Osborn (1974), or Becker (2003: 9–14).

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