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**DISTRIBUTION OF WORD CLASSES IN OLD ENGLISH
AND OLD HIGH GERMAN:
A PRELIMINARY CONTRASTIVE STUDY BASED
ON *THE BATTLE OF MALDON*, *HILDEBRANDSLIED* AND
*LUDWIGSLIED***

Abstract:

This paper presents an example of a historical study based on comparable corpora. It aims to analyse and compare the distribution of different parts of speech in Old English and Old High German, thus providing a quantitative basis for further conclusions concerning different patterns of the development of those two West-Germanic languages. A particular attention has been devoted to the frequencies of prepositions and pronouns, as there are considerable differences between the languages in this respect. In addition, the article is an attempt to show the importance and relevance of computational data for contrastive historical linguistics and their role in supporting or disproving traditional theories.

Keywords: word classes distribution, Old English, Old High German, West-Germanic, contrastive analysis, distribution of pronouns, distribution of prepositions, subject omission, inflectional vs. analytic

1. Introduction

Historical linguistics has undergone a considerable change in methodology employed by researchers while examining dead languages. That shift stems from the substantial development of computational techniques and corpus linguistics, which have proved useful for historical analyses of old texts. Moreover, the new technology provides numerous opportunities for contrastive text analyses, which are only beginning to be extensively employed by historical linguists. Thus, similarities and differences between dead languages

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have not been sufficiently explored with the use of corpora, even though modern contrastive linguistics uses them increasingly often. Nevertheless, there is no denying that such modern research methods might broaden our knowledge concerning historical linguistics, providing researchers with data that serve as a basis for interlanguage comparisons and, consequently, making it possible to draw conclusions about differences in development of genetically related languages. Therefore, it will be worthwhile to apply computational methods into this field.

As members of the same language family, Old English and Old High German share many features. They both stem from the same source, called Proto-Germanic, which, however, should be considered as a notion covering various Germanic dialects rather than a name of any specific and homogenous language (König 1994: 9). In addition, they are both members of the West-Germanic sub-family. Anglo-Saxon tribes that invaded Britain around the year 450 A.D. brought with them a set of West-Germanic dialects, and thus Old English came into being. At the same time, Old High German continued its development on the continent. It is impossible to determine any precise date that would indicate the moment in which those languages lost contact with each other. Yet, the fact is that already in the 10th century, when written works started to be created, Old English and Old High German were quite dissimilar in many respects.

2. Methodology

In the course of the research, whose results are presented in the current paper, two small corpora have been used. The first one is composed of the initial 142 lines of *The Battle of Maldon* (from now on referred to as the Old English sample), whereas the second one combines *Hildebrandslied* and *Ludwigslied* (it will be called the Old High German sample). Each corpus contains approximately 900 words (creating larger corpora has been problematic because of the scarcity of Old High German written records). The article presents only a part of a more extensive project (cf. Kamińska 2005).

All numbers occurring in the text indicate frequency, except for numbers in bold preceding each example, which refer to lines in the analysed poems. All charts presented in this work have been produced by the author of the project. The research is based on printed editions of the texts. However, electronic versions of all the poems have served as secondary sources as they are more appropriate and useful for the computational analyses.

3. The general distribution of word classes

Table 1 clearly shows that there are some striking differences in the distribution of parts of speech in the Old English sample when compared to the Old High German one.

Table 1. Word classes distribution

Part of speech	Old English		Old High German	
	&	%	&	%
nouns	251	27,5	225	26
verbs	205	22,5	187	21
pronouns	149	16	197	22,5
prepositions	84	9	40	4
adverbs	79	8,5	93	10,5
adjectives	71	8	79	9
conjunctions	63	7	47	5
negative particles	9	1	7	1
<i>Total</i>	<i>911</i>	<i>99,5</i>	<i>875</i>	<i>99</i>

Whereas nouns, verbs, adverbs, adjectives, conjunctions and negative particles are represented by approximately the same numbers (the differences do not exceed 2%), two categories demonstrate a substantial discrepancy; that is pronouns (16% vs. 22,5%) and prepositions (9% vs. 4%). Figure 1 provides a better visualisation of the results:

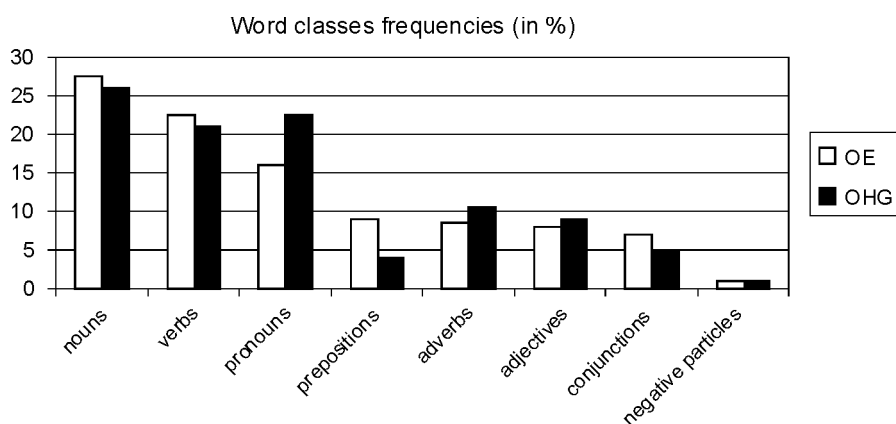


Figure 1.

A similar percentage of content word classes (nouns, verbs, adjectives and adverbs) does not strike one as something exceptional as their frequency depends more on text type than on any grammatical phenomena (Biber 2004: 169). The equally low frequency of negative particles (only 1% in both samples) is related to the rare occurrence of negative sentences in both languages, which is due to their stylistic characteristics. The slightly higher frequency of conjunctions in Old English (7% vs. 5%) may be attributed to the apparently more complex syntactic structure of *The Battle of Maldon*. The Old High German corpus consists mainly of independent clauses and the dominance of parataxis seems undisputable in this context. Even though, according to Baker, Old English literature is generally characterised by *parataxis* (a style that features the concatenation of clauses), as opposed to *hypotaxis* that features much subordination, the Old English sample is definitely more hypotactic than the Old High German one. Yet, in poetry it can be difficult to tell independent clauses from subordinate clauses, and for that reason it is a matter of controversy how paratactic or hypotactic Old English poetry is (Baker 2003: 29). Thus, only the differences in the frequencies of pronouns and prepositions need further investigation and a more detailed analysis.

4. Differences in the distribution of pronouns

The first word class in which the two languages are unequally represented is that of pronouns. In Old English they amount to 16% of all words used, whereas in the Old High German sample their percentage is significantly higher and it reaches the level of 22,5%.

Table 2. Distribution of pronouns

Pronouns	Old English		Old High German	
	&	%	&	%
personal	68	45	117	59
possessive	22	15	28	14
relative	7	4,5	3	1,5
interrogative	5	3	3	1,5
demonstrative	47	31,5	43	22
reflexive	0	0	3	1,5
<i>Total</i>	<i>149</i>	<i>99</i>	<i>197</i>	<i>99,5</i>

Table 2 and Figure 2 show that the discrepancy in the overall distribution of pronouns between the samples is related to the frequencies of personal pronouns, which are very often employed by Old High German (59% of all pronouns which equals 13,3% of all words appearing in the sample), as compared to Old English (45% of all pronouns and 7,2% of all words). Other sub-categories of pronouns demonstrate a comparable frequency, except for demonstrative pronouns that were more readily adopted by Old English, possibly because of textual reasons (the need of indicating specific people or movements described in the course of the battle). It is also probable that the high frequency of demonstrative pronouns indicates that some of them were already assuming the role of definite articles and they were losing their demonstrative function.

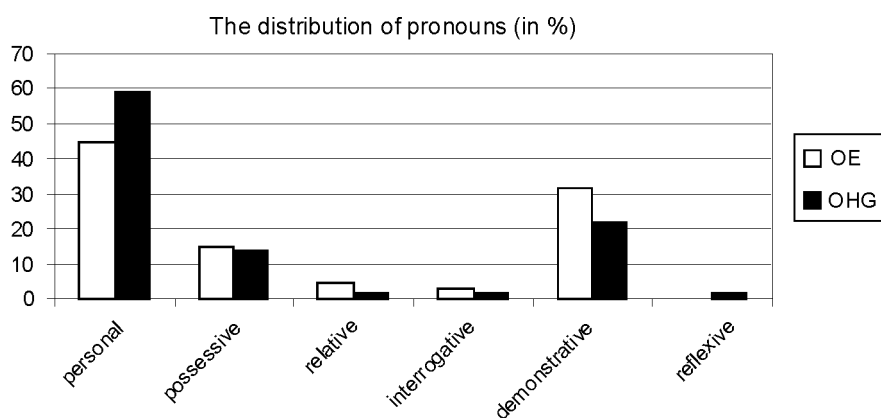


Figure 2.

The unequal distribution of personal pronouns might be attributed to two possible reasons. On the one hand, it may stem from the fact that the Old High German sample contains definitely more dialogues, whilst *The Battle of Maldon* is above all a description. When people speak, they address each other by means of personal pronouns. Since *Hildebrandslied* makes an extensive use of that technique, it can be assumed that the striking discrepancy in the frequencies of personal pronouns results from the differences on the textual level. On the other hand, there may be another possible reason for that tendency; namely the fact that, in general, the Old English sample omits subjects more often (30% of all its clauses have unexpressed subject), whereas in the Old High German sample the subject position of any clause is very often filled with a personal pronoun (only 16% of all its clauses have unexpressed subjects). According to Schmidt, the use of personal pronouns in High German in such a context became more extensive in the 11th century:

Tendenz der Verstärkung des analytischen Sprachbaus weiterhin deutlich zutage. Sie äußert sich beispielweise seit dem 11. Jh. in der zunehmenden Ersetzung des Instr. durch präpositionale Fugungen mit *durch*, *mit*, von und in der zunehmenden Verwendung des Personalpron. beim Verb (Schmidt 1984: 72–73).

It seems that the tendency observed in the sample was strengthened at the beginning of the Middle High German period, when subject started to be perceived as an obligatory part of any clause and the verb ending alone could no longer express person without avoiding textual ambiguity. Therefore, the analysis revealed the existing source of that phenomenon, present already in the Old High German period.

Yet, the observations concerning the distribution of personal pronouns seem even more interesting after considering the following:

Languages in which the verb has a complete set of different flecational endings for the first, second and third persons and for the duals, in all tenses and moods, can dispense with subject-pronouns. Recorded Old English not being such a language owing to its extensive formal syncretism (*ic, heo, hit teah; þæt ic, þu, heo, hit tuge; ic fremme, pæt ic, þu, he, heo fremme*), the use of subject-pronoun was the rule. [...] the exceptions to this rule were not in the first place, if at all, due to the particular form of the verb, but rather to the fact that the statements were sufficiently clear without the pronoun. At least for the listeners and readers of the period (Visser 1963: 4).

The Old English sample has a definitely more complex sentence structure. This may be the reason for such a surprisingly high percentage of clauses with unexpressed subjects. If a subordinate clause follows a main clause, there is no need to repeat the subject, as it is possible for the listener or reader to recognise it. In the following fragment of *The Battle of Maldon*, the actions undertaken by Byrhtnoth are being described:

17

ea Dær Byrhtnoe *ongan* beornas trymian,
Then Byrhtnoth marshalled his soldiers,
rad and *rædde*, *rincum tæhte*
rode and instructed, directed his warriors
hu hi sceoldon standan and þone stede healdan,
how they should stand and the positions they should keep,

20

and *bæd* Dæt hyra randas rihte heoldon
and ordered that their shields properly stand firm
fæste mid folman, and ne forhtedon na.
with steady hands and be not afraid.
þa he hæfde Dæt folc fægere getrymmed,
Then when he beheld that people in suitable array,

he *lihte* þa mid leodon þær him leofost wæs,
 he dismounted amid his people, where he was most pleased to be,
 þær he his heorðwerod holdost wiste.
 there amid his retainers knowing their devotion.

As it can be easily observed, in the first fragment of this passage the agent is mentioned at the beginning (Byrhtnoð) and then, although a number of activities is enumerated (verbs related to Byrhtnoth's actions are printed in italics), the subject is not expressed until the 22nd line. This is what Visser calls "a statement sufficiently clear without the pronoun". The context is enough to determine the doer of the action and the language itself allows for the use of such structures, unlike nowadays, when the speaker would have to use the pronoun *he* at least in the clause beginning with "and *bæd*," as it is definitely too far from the subject to be unambiguously interpreted in Modern English.

The Old High German sample is composed mainly of independent clauses. Therefore, it must have been more difficult for the authors to omit subjects, avoiding ambiguity. The initial fragment of *Ludwigslied* is a good example of how often personal pronouns were repeated in the sample:

1	
Einan kuning uueiz ih.	<i>Heizsit</i> <u>her</u> hluduig.
I know a king, his name is Ludwig	
<i>Ther</i> gerno gode <i>thionot</i> .	Ih uueiz <u>her</u> Imos lonot.
He serves God well, I know he will reward him.	
Kind <i>uuarth</i> <u>her</u> faterlos.	Thes uuarth Imo sar buoz
He was a child without a father, but he was given a replacement	
Holoda Inan truhtin.	Magaczogo uuarth her sin.
God himself took care of him and was his guardian.	

The passage is a description of Ludwig's childhood. It is visible that the personal pronoun *her* (meaning *he*) or the demonstrative *ther* is used whenever the verb is related to his actions (again, the verbs are printed in italics). In the fragment there is no example of a clause with unexpressed subject, even though the context is equally clear as in the Old English passage. However, the language must have preferred other structures and it filled the subject position with the constantly repeated personal pronouns.

5. Differences in the distribution of prepositions

The other word class that displays a substantial inequality of distribution between the samples is that of prepositions. Table 3 displays frequencies of specific members of this word class in both languages. It is visible that the Old English sample contains not only more prepositions in general, but also more kinds of them (15 vs. 10).

Table 3. The frequencies of specific prepositions

Old English pronouns		Old High German pronouns	
<i>to</i>	21	<i>in</i>	14
<i>mid</i>	18	<i>bi</i>	5
<i>on</i>	13	<i>mit</i>	6
<i>æt</i>	8	<i>miti</i>	3
<i>wið</i>	6	<i>bei</i>	3
<i>ofer</i>	4	<i>at</i>	2
<i>for</i>	3	<i>to</i>	2
<i>ær</i>	2	<i>ubar</i>	2
<i>of</i>	2	<i>ab</i>	2
<i>ongean</i>	2	<i>untar</i>	1
<i>æfter</i>	1		
<i>be</i>	1		
<i>eac</i>	1		
<i>in</i>	1		
<i>þurh</i>	1		
<i>Total</i>	84		40

The essential difference between prepositions in the Old English sample (in which they amount to 9% of all words) and the Old High German sample (where they account for only 4% of words) could be partly attributed to the textual characteristics of both samples. As it can be easily noticed, the most frequent preposition used in the Old English sample expresses a very dynamic meaning. This word is *to*, indicating movement or direction. Since *The Battle of Maldon* is a military description, involving detailed accounts of strategy and movements of the enemy, such a frequent occurrence of prepositions seems quite natural, e.g. in the fragment:

1

brocen wurde.

...would be broken.

Het þa hyssa hwæne hors forlætan,

Then (he) ordered a warrior each horse be let free,

feor afysan, and forð gangan,

drive afar and advance onward,

higcan to handum and to hige godum.

give thought to deeds of arms and to steadfast courage.

5

þa þæt Offan mæg ærest onfunde,

Then it was that Offa's kinsman first perceived,

þæt se eorl nolde yrhðo geþolian,

that the Earl would not endure cowardice,

he let him þa of handon leofne fleogan

he let then from his hand flee his beloved

hafoc wið þæs holtes, and to þære hilde stop;

falcon towards the woods and there to battle went forth.

be þam man mihte oncnawan þæt se cniht nolde

By this a man might understand (it could be understood) that this youth would not

10

wacian æt þam wige, þa he to wæpnum feng.

prove soft at the coming battle, when he takes up arms.

Even in this short fragment, prepositions appear as many as eight times. Yet, both *Hildebrandslied* and *Ludwigslied* are similar in character and a difference reaching the level of 5% is too significant for this hypothesis to be deemed sufficient. In the initial fragment of *Hildebrandslied*, hardly any prepositions can be found:

1

Ik gihorta dat seggen,

I have heard it said

ðat sih urhettun ænon muotin,

that (they) met each other

Hiltibrant enti Haðubrant untar heriun tuem.

Hildebrand and Hadubrand between two armies.

sunufatarungo iro saro rihtun,

The son and the father examined their gear

garutun sê iro guðhamun, gurtun sih iro suert ana,

prepared their weapons, buckled their swords

helidos, ubar hringa do sie to dero hiltiu ritun.
 heroes, over the chain mail, before they went to battle.
 Hiltibrant gimahalta, Heribrantes sunu, – her uuas heroro man,
 Hildebrand said, the Heribrant's son – he was the older man
 ferahes frotoro – her fragen gistuont
 more experienced – he asked questions
 fohem uuortum, hwer sin fater wari
 with few words, who was his father

In a fragment of similar length, only three prepositions can be identified. Such a discrepancy is bound to have a more complex reason than stylistic characteristics alone.

Therefore, it seems plausible to draw the following conclusion: at that stage of development Old English had already begun to transform into an analytic language as it is today, whereas Old High German was still a highly inflected language that expressed the same meanings by means of endings. The importance of prepositions and the value of frequency data is stated by Gardner:

The preposition is the distinctive member of a prepositional phrase. With it we have a syntactic unit; without it, an entirely different construction. Therefore, the frequency with which prepositions occur is an important consideration in investigating the syntactical properties of a language (1971: 22).

The results of the present study conform with the results of Gardner, who found approximately 10% of prepositions in the analysed Old English sample.

Thus, the high percentage of prepositions in a Late Old English text proves that the shift from inflectional to analytic was gradual and that it began already in the Old English period. The history of English is a systematic transformation from an inflection-driven grammar to an almost inflectionless system. This view is expressed by Classen:

The syntax of Old English is visibly passing from the synthetic to the analytic structure. The grammatical relations of the noun are still for the most part expressed synthetically; the inflections of case are still largely preserved, even though the cases have been reduced to four ... But as there still remains a considerable number of inflections, the word order in the sentence is still free (1930: 24–25).

This observation proves that the changes which have led to the present state of affairs have their roots in the 10th century, or even earlier. That would

probably be an additional piece of evidence supporting the theory that the contact with Vikings, speaking Old Norse, had a significant influence on the simplification of the English inflectional system and that the shift took place, or at least started, before the Norman conquest.

By contrast, Old High German presents a more traditional – and more Germanic – way of expressing e.g. movement or verb complementation: inflectional endings. Modern German is a synthetic language that makes an extensive use of inflections. Again, the roots of this phenomenon are rooted in history, as at the moment when Old English was transforming itself into an analytic language, Old High German showed no signs of innovation and remained traditionally inflected.

6. Conclusions

It should be noted that even a technically simple analysis of word classes distribution can prove useful for a detailed description of the state of any language at any stage of development. The above presented study provides a quantitative basis for the analysis of Old English and Old High German and it makes it possible to draw precise conclusions concerning some aspects of both languages in question. Frequency data are easy to compare and they enable any linguist to perform an objective contrastive analysis of two related languages. Without the calculations it would be extremely difficult to present a balanced view of some linguistic phenomena and certain important discrepancies between the languages could escape linguists' attention. Therefore, it seems worthwhile to adapt such methods and use them to support or question older theories that were formed before the emergence of computational techniques.

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