

THE OLD ENGLISH PREVERBAL *GE-* IN THE LIGHT OF  
THE THEORY OF LANGUAGE CHANGE AS  
STRENGTHENING OR WEAKENING\*

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1. The meaning and the function of the Old English preverbal *ge-*: some current doctrines and what they leave to be desired

1.1. The Old English preverbal *ge-* is one of the most controversial morphemes in the history of the English language. During the last century some thirty-five dissertations, monographs and articles purporting to explain its meaning and function have been published. Some of them admit openly that "... über ae. *ge-* herrscht noch immer weitgehende Unklarheit" (Pilch 1953:129), while others appear to be philosophical hypotheses rather than strict linguistic observations, although at times they "...reveal a very seductive cogency, but only in the light of data that have been especially selected to substantiate them" (Lindemann 1970:1).

1.2. The Old English preverbal *ge-* has traditionally been related to the Gothic *ga-*, which in turn is explained as corresponding to the Latin verbal prefix *cum-/com-* (from Indo-European *\*kom-*). Streitberg (1891:70-178) insisted that the original meaning of the Gothic *ga-* 'with, together' had faded out and that its function was to 'perfectivate' the verb. The Old English *ge-* was described along the same lines as

- a) either completely devoid of any lexical or grammatical meaning: "... *Ge-* apud Saxones semper fere superfluum..." (Benson 1701),
- b) stressing/intensifying the action of the verb (Bernhardt 1870:160-2),

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\* The following paper reports on the results of the investigation into some aspects of the usage of the Old English preverbal *ge-* from the point of view of the theory of language change as strengthening or weakening. The investigation served as the basis for the author's Ph.D. dissertation (1990).

- c) converting an intransitive verb into a resultative verb that is transitive (Lenz 1886:12),
- d) indicating completion, pluperfect or the future perfect (Grimm 1878:829; Lenz 1886:20; Mossé 1938:1-13; Samuels 1949:81-90),
- e) expressing perfective aspect (Martens 1863:322-31).

1.3. The doctrine under e) is similar to the doctrine cited under d), except that it is thrust into a verbal system analogous to that in Slavic languages. Its advocates believed that the aspectual situation in Old English was like in Slavic dialects and that the prefixation of the Old English verbs should be considered as the encoding of aspectual information. From that point of view *ge*-verbs would always denote the perfective aspect and simplex verbs would always denote the imperfective aspect. The alleged dichotomy was sometimes pushed to the extreme. When Weick, a disciple of Streitberg's, examined the Lindisfarne Gospels and discovered that the forms of the verbs were different from what he believed they ought to be (i.e., *ge*-verbs were found to express the imperfective aspect and simplex verbs were found to express the perfective aspect), he suggested they simply be changed: "...Das Simplex sollte stehen... Das Kompositum sollte stehen" (Weick 1911:3-5). He apparently believed more in his doctrine than in the glossator's mastery of his own language.

1.4. In his extensive study of the meaning and function of the Old English preverbal *ge*-, Lindemann re-examined the existing doctrines and accused their authors of having carefully selected data to substantiate them, of "romantic preoccupation with Slavic dialects", and of "transcendental linguistics". According to Lindemann, some scholars "substituted pure speculation for the laborious and objective examination of the prefix per se" (Lindemann 1970:1, 19). Lindemann cites an impressive number of instances from the Old English Gospels and from Orosius that speak against the so-called 'syntactic function' of the preverbal *ge*- (i.e., against its perfectivating role). He agrees with Streitberg's critics in that the grammatical category of verbal aspect in Slavic languages differs from the aspectual situation in Germanic languages. While the former define aspect (*Aspekt*) as a grammatical (mandatory, syntactic) category, Germanic languages operate with a lexical category 'manner of action' (*Aktionsart*)<sup>1</sup>. On the other hand, Lindemann had also become weary of excessive "... dwelling upon (...) *Aktionsart*, for an *Aktionsart* is merely a secondary characteristic, a by-product of the action expressed by a verb" (Lindemann 1970:21). He suggests that the real origin of *ge*- is to be found in the Indo-European demonstrative pronominal stem *\*gho-*, a highly deictic morpheme, stressing the progression of an action from one point towards another, not unlike the German morphemes *von*, *zu*, *zu-*, *ver-* (Lindemann 1970:25)<sup>2</sup>.

<sup>1</sup> For more information on the distinctions between the aspectual situations in Slavic and Germanic languages see Goedsche (1940:189-97).

<sup>2</sup> Lindemann was not the first to dispute Streitberg's belief that the original meaning of *ge*- (*ga*-) was 'zusammen' (Latin *com-*). As early as 1580 Goropius wrote that "*Ge idem est quod Latinus dicit*

Afraid of being accused of 'transcendental linguistics' himself, Lindemann examined 45,000 simplex and compound verbs and concluded that the lexical meaning of the Old English *ge*- was roughly equivalent to the modern English morphemes *to*, *out*, *at*, *on*, *toward*, *forth* and *away*. Lindemann referred to this meaning of *ge*- as its abstract meaning and its semantic nucleus. In Lindemann's study the prefix *ge*- seems to 'do something' to the information conveyed by the verb, to add direction, concretion, and – even *Aktionsart*. The nature of this 'additional information' seems to depend on the context and the meaning of the verb.

1.5. The ample – albeit selected – evidence substantiating each and all of the above doctrines clearly shows that the Old English preverbal *ge*- had no single lexical meaning nor grammatical function. Furthermore, there seems to be no consensus whatsoever among the various Old English scribes (speakers?) as to when exactly the prefix *ge*- was called for. Even in different manuscripts of texts like the translations of the Holy Gospels, which were probably treated with great reverence and little freedom of translation, we find *ge*-verbs alternating with simplex forms or with verbs prefixed with some other particles translating the same verbal phrase in the Latin original, e.g.,

Readings in MSS	CORPUS:	HATTON:	LINDISFARNE	RUSHWORTH
Mark, 3/10	<i>ge-hælde</i>	<i>hælde</i>	<i>gehælde</i>	<i>gehælde</i>
Mark, 5/12	<i>gegan</i>	<i>gan</i>	<i>ingeonga/gæ</i>	<i>ingeonga/ingæ</i>
Mark, 11/2	<i>gefredde</i>	<i>fredde</i>	<i>gefoelde</i>	<i>gifoelde</i>
Mark, 5/29	<i>gelædað</i>	<i>gelædeð</i>	<i>to-lædes</i>	<i>to-gi-lædes</i>
John, 3/18	<i>gelyfð</i>	<i>lyfð</i>	<i>gelefes</i>	<i>gilefes</i>

1.6. If, on the one hand, Lindemann offers a putative explanation of the inconsistency of the use of the prefix *ge*- in Old English (i.e., the writer/speaker was free to add it to the simplex form thereby enriching its lexical meaning with some vague sense of direction), and if, on the other hand, there seems little to be added to what is known about the origin of the *ge*-prefix and about the effects of its disappearance from the English language, not much notice has ever been taken of the diachronic aspect of its role and function in Old English. While the gradual withdrawal of the *ge*-prefix (and of other prefixes for that matter) from the English language was described by Mossé as the collapse of the former Germanic aspectual system, which was eventually replaced by expanded verbal forms in modern English (Mossé 1938:42), the process itself was never given any particular attention.

In the study presented in this paper the focus of attention was placed on the loss of the *ge*-prefix as a linguistic change. The initial postulates were as follows:

*versus sive ad*" (1580:215). Brugmann (1904:851-5) and Grimm (1831:158) had each suggested other possible translations of *ge*-: '*an*, *zu*, *hin*, *hinweg*, *über-hin*, *auf*, *e-*, *er-*, *ad-*'.

- (i) (At least) throughout the late Old English period, the preverbal *ge-* was gradually withdrawing from the (written) language; after 1200 it virtually existed only in past participles.
- (ii) (At least) in the late Old English period the preverbal *ge-* was weakened to the point that its usage was not mandatory and that verbs with the prefix *ge-* functioned as syntactic variants of corresponding simplex verbs (and possibly also of verbs with other prefixes)<sup>3</sup>.
- (iii) The actual usage of either syntactic variant can be empirically evaluated in terms of its (grammatical) environment. It is possible to compute the statistical significance of the differences between the values of individual parameters.
- (iv) If statistical evidence for *ge-*verbs shows significantly different values of individual parameters than for simplex verbs, these differences can be assessed in the light of the theory of language change as strengthening and weakening.

## 2. The theory of language change as strengthening or weakening

2.1. The theory of language change as strengthening and weakening was first introduced in the framework of *natural phonology* (Stampe 1979, Donegan 1985) and *natural morphology* (Mayerthaler 1981). In syntax it was partially assumed by Rydén (1979). Syntactic change as strengthening or weakening have also been the subject of research work carried out under the guidance of Orešnik at the Department of Germanic Languages and Literature at the University of Ljubljana.<sup>4</sup>

2.2. On a synchronic level, the theory of strengthening and weakening assumes that of two roughly equivalent language variants one is 'stronger' and the other one 'weaker'. Formally, the stronger variant is more elaborate, it demands more effort from the speaker but it is easier to decode by the hearer. The weaker variant is less elaborate, more economical for the speaker and more difficult to decode for the hearer. Typical examples of strong variants are periphrastic constructions (as compared to simple forms), whereas typical examples of weak variants are assimilations, contractions, generalizations etc.

The speaker has often alternative means at his/her disposal as to the encoding of the message to be conveyed. He/she can choose from the possible synonyms (to express the same lexical meaning), or from different grammatical tools (to express the same grammatical meaning/relation). By analogy, the hearer/reader can decode the message in more than one way (homonyms or constructions covering more than one grammatical meaning).

When referring to a person who teaches English, the speaker of the English language can use at least two constructions: *English teacher* or *teacher of English*.

<sup>3</sup> Other prefixes were not the subject of this study.

<sup>4</sup> The theoretical premises of the research work were stipulated in Orešnik (1990:5-12). See also Orešnik and Trobevšek-Drobnak (1992:146-61).

The hearer/reader can decode the noun phrase *English teacher* in at least two different ways<sup>5</sup>: *teacher of the English language* or *teacher who is of English nationality*.

The probability of (in)correct interpretation depends on several factors: the similarity of the cultural background of the two participants in the process of communication, the medium of communication (written language excludes tools like emphasis, intonation, gesticulation etc.), context and extra-linguistic circumstances. The more the situation referred to is concrete and simple, the greater the probability of correct interpretation and vice versa: the more complex the information (conveying the meanings that the addressee cannot detect from the context or from the extra-linguistic circumstances), the greater the probability of a misunderstanding. From that point of view the speaker may be expected to choose the more elaborate, i.e., the 'stronger', of the possible variants in more complex, less concrete circumstances. In simple, concrete circumstances, when the message is clear or the extra-linguistic elements self-evident, the speaker may be expected to economize and choose the less elaborate, i.e., the 'weaker' of the possible variants.

2.3. Language change can also be viewed as bringing into prominence stronger or weaker linguistic variants. Bringing into prominence stronger variants is called **strengthening**, whereas bringing into prominence weaker variants is called **weakening**. The terminology applied in clustering language change according to the above criteria is usually as follows (Rydén 1979):

strengthening	vs.	weakening
elaboration	vs.	simplification
clarification	vs.	obscuration
Verstärkung	vs.	Schwächung

2.4. From the diachronic point of view, the theory of strengthening and weakening assumes that after the nascent state, i.e., before grammaticalization, stronger variants become prominent under relatively complex (grammatical) conditions, and weaker variants become prominent under relatively simple (grammatical) conditions. The criteria of grammatical complexity/simplicity were first discussed by the Prague School (Jakobson 1932). The Prague School operated with the terms *marked* and *unmarked*, which would roughly correspond to the terms *simple* and *complex* as understood in this paper. According to Mayerthaler (1981), individual parameters of grammatical categories have the following degrees of markedness:

- An independent clause is less marked than a dependent clause.
- The affirmative propositional modality is less marked than the non-affirmative propositional modalities.
- The present tense is less marked than the non-present tenses.
- The indicative mood is less marked than the non-indicative mood.

<sup>5</sup> We shall disregard intonation as a means of expression here.

- *Verb + direct object (in the accusative)* is less marked than *verb + prepositional object* or *verb + object clause*.
- The singular is less marked than the non-singular.
- The active voice is less marked than the non-active voices.

### 3. The application of the theory of strengthening and weakening as an attempt to clarify the inconsistent use of the Old English preverbal *ge-*

#### 3.1. Points of departure

In the research presented in this paper the theory of strengthening and weakening was applied from the following points of view:

- the relation between Old English *ge-*verbs and Old English simplex verbs was determined as to whether or not they were syntactic variants and, if they were, which one of them was the stronger and which one the weaker variant;
- the disappearance of the prefix *ge-* from the English language was assessed in the light of whether it could be classified as strengthening or weakening;
- predictions were made as to under what grammatical conditions Old English verbs were more likely to have *ge-*;
- these predictions were tested against the results of the analysis of the grammatical environment in which *ge-*verbs and simplex verbs occur in authentic Old English texts.

3.1.1. The Old English *ge-*verbs and the Old English simplex verbs were syntactic variants since ample empirical evidence shows that they performed the same syntactic functions. The former can be defined as the stronger and the latter as the weaker syntactic variant – the former are more elaborate, less economical and easier to decode; the latter are simpler, more economical and more difficult to decode.

3.1.2. The process of the withering away of the prefix *ge-* was the assertion of the weaker syntactic variant. The disappearance of the preverbal *ge-* meant that the tendency to economize prevailed over the tendency to make the message more elaborate and hence clearer.

3.1.3. In accordance with the theory of strengthening and weakening the *ge-* prefix was expected to weaken faster under relatively simple/unmarked (grammatical) conditions and to persist longer under relatively complex/marked grammatical conditions. On the basis of the criteria of markedness stated under 2.4. the following predictions were made:

- a) *Ge-*verbs will be more frequent in dependent clauses than in independent clauses.
- b) *Ge-*verbs will be more frequent in clauses of non-affirmative propositional modalities than in clauses of the affirmative propositional modality.
- c) *Ge-*verbs will be more frequent in non-present tenses than in the present tense.
- d) *Ge-*verbs will be more frequent in non-indicative moods than in the indicative mood.
- e) *Ge-*verbs will be more frequently followed by a simple accusative than by a prepositional object or an object clause.
- f) *Ge-*verbs will be more frequent in the non-singular than in the singular.
- g) *Ge-*verbs will be more frequent in non-active voices than in the active voice.

#### 3.2. Grammatical analysis

Two types of samples were taken: basic samples containing *ge-*verbs and control samples containing simplex verbs.

3.2.1. The first set of samples was taken from King Alfred's Old English translation of Orosius' *Historiarum Adversum Paganos* (Sweet 1883), a history of the world from the Creation to A.D. 416. Orosius was the third Alfred's translation from Latin and it was probably completed c. 890. The translation was rather free. Not only did Alfred omit what he considered unimportant, he also added his own remarks and observations and inserted original essays (e.g., his description of Europe and the voyages of Ohthere and Wulfstan).

The basic sample (BO) consisted of all 820 occurrences of *ge-*verbs in the edition. The sample included neither the auxiliaries *beon/wesan* and *weorþan* nor the verb *habban* when used with a past participle.

The control sample (CO) consisted of 1000 instances of simplex verbs in the edition. The sample was made up of every other simplex verb in the edition, with the exception of modal verbs, the auxiliaries *beon/wesan* and *weorþan* and the verb *habban* in constructions with past participles. The sample covered most of the text in the edition (294 of 298 pages).

3.2.2. The second set of samples was taken from the Old English translations of the Gospel according to St. Mark (Skeat 1871).

The Old English translations of the Holy Gospels date from the 9th century. Several manuscripts are preserved, none of which, however, retains the original version. All the scribes adjusted their language to that of their time and dialect. Nevertheless, some manuscripts are earlier and probably closer to the original

translation. The last preserved MSS were written quite some time after the Norman invasion, the oldest were probably written some hundred years earlier.

The samples were taken from the Corpus MS<sup>6</sup>, but other manuscripts<sup>7</sup> were consulted, as well as the Latin original of the Lindisfarne MS and the modern English translation of the Bible<sup>8</sup>.

The basic sample taken from the Gospel according to Saint Mark (BM) was made up of all 227 occurrences of *ge*-verbs in the Corpus MS edited in Skeat (1871). The same types of verbs were excluded from the sample as in the case of the basic sample taken from Orosius.

The control sample (CM) consisted of 405 occurrences of simplex verbs. It was made up by taking every third simplex verb in the Corpus MS of the edition. The same types of verbs were excluded from the sample as in the case of the control sample taken from Orosius.

To extrapolate the differences between the basic and the control samples, two sub-samples were formed. The basic sub-sample (BM1) consisted of 179 instances of *ge*-verbs which had the prefix *ge*- in all four consulted MSS, even if the verb itself was different. The control sub-sample (CM1) was made up of those 250 instances of the control sample that took no prefix in any of the MSS cited in the edition.

3.2.3. The third set of samples was taken from the Old English translation of the Gospel according to St. John (Skeat 1878). The basic sample (BJ) consisted of 150 occurrences of *ge*-verbs taken from the first seven chapters of the Corpus MS in the edition. The control sample (CJ) was made up of 160 occurrences of simplex verbs (the first five verbs on each page of the first seven chapters of the Gospel were taken).

On account of such a relatively small basic sample, only one sub-sample was taken, the control sub-sample (CJ1) on the basis of the same criteria as in the case of the sub-samples taken from St. Mark's Gospel.

3.2.4. The choice of parameters was partly dictated by Mayerthaler's criteria of markedness (see 2.4.) and partly by what the author considered to be potentially significant in terms of the complexity of the grammatical environment.

<sup>6</sup> CORPUS MS - MS No. CXL (before S.4), in Corpus Christi College in Cambridge.

<sup>7</sup> HATTON MS (before Hatton 65, now Hatton 38), in the Bodleyan library in Oxford (Auct. D. ii 19).

LINDISFARNE MS, also known as the DURHAM BOOK, now part of the Cotton MSS in the British Museum (Nero D.4), with Latin original and Northumbrian gloss.

RUSHWORTH MS, in the Bodleyan library in Oxford (Auct. D. ii 19).

<sup>8</sup> The Holy Bible containing the Old and New Testaments, set forth in 1611 and commonly known as the King James Version, American Bible Society, New York 1816.

3.2.5. Each instance in each sample was analyzed as follows:

- a) The clause in which the verbal phrase contained a finite *ge*-verb (or a simplex verb respectively) was defined as having affirmative or negative propositional modality. The interrogative propositional modality was not taken into consideration on account of its low absolute frequency.
- b) The clause in which the verbal phrase contained a finite *ge*-verb or a simplex verb respectively was defined as a simple sentence, as a main clause in a complex sentence or as a subordinate clause.
- c) The tense of the verb was defined as preterite or as present. In the samples taken from the two Gospels, future reference of verbs in the present tense was noted. The criterion was the verbal tense in the Latin original of the Lindisfarne MS and in King James' Version of the Bible.
- d) The mood of the verb was defined as the indicative, the subjunctive or the imperative. In ambiguous cases the modern English verb in King James' Bible was consulted. Verbs which took modals in the modern English translation of the Bible were defined as subjunctive. In other dubious cases, verbs were defined as indicative.
- e) Verbs were defined as intransitive, monotransitive or ditransitive. The type of object was defined with transitive and ditransitive verbs as simple accusative, complex accusative<sup>9</sup>, genitive, dative, prepositional object, object clause or non-finite object clause.
- f) The person of the verb was defined as the 1st, the 2nd or the 3rd.
- g) The grammatical number of the verb was defined as plural or singular.

The low frequency of non-active voices in all three Old English texts made the consideration of the voice irrelevant. The analysis of the aspect was omitted on account of the possible aspectual function of the preverbal *ge*-.

3.2.6. To compute the probability that a given parameter assumed its marked value in a given sample, the following formula was used<sup>10</sup>:

$$P_a = \frac{n_a}{n}$$

The statistical significance of the differences between probability rates of (marked) values of parameters was computed with the help of the index here named  $I_d$ <sup>11</sup>:

<sup>9</sup> Here the complex accusative denotes an accusative expanded by another accusative (object complement), a prepositional phrase (adjunct) or a relative clause.

<sup>10</sup>  $a$  = a favourable event, i.e. a marked value of the parameter;  $P_a$  = probability of a favourable event;  $n_a$  = number of favourable events;  $n$  = number of all possible events.

<sup>11</sup>  $P$  = mean probability rate of a favourable event in both samples;  $q = 1-P$ ;  $n_1$  = total number of favourable events in sample 1;  $n_2$  = total number of favourable events in sample 2.

$$I_d = \frac{P_1 - P_2}{\sqrt{\bar{P} * \bar{q} * \frac{n_1 + n_2}{n_1 * n_2}}}$$

Two probability rates were considered to be significantly different if the value of the index  $I_d$  exceeded 2 (Pavlić 1985).

3.2.7. To better illustrate the relation between different values of individual parameters in terms of the presence or absence of the *ge*-prefix, the frequency of *ge*-verbs at individual values of a given parameter was determined. One drawback of this method is that it does not reflect the absolute frequency of a given value of a parameter and can therefore be misleading in terms of the statistical significance of the results, unless taken in combination with the method described under 3.2.6.

#### 4. Statistical results of the grammatical analysis in the light of the theory of language change as strengthening or weakening

##### 4.1. Parameter: Type of clause

sample	frequencies of parameter values in %		
	simple sentence	main clause with subordinate clauses	subordinate clause
BO	48.0	19.0	33.0
CO	35.7	19.2	45.1
BM1	41.9	16.2	41.9
BM	42.3	17.2	40.5
CM	62.7	13.8	23.5
CM1	67.6	12.8	19.6
BJ	35.3	18.7	46.0
CJ	52.5	15.6	31.9
CJ1	57.4	15.7	26.9
P <sub>(B)</sub> <sup>12</sup>	41.8	18.8	40.4
P <sub>(C)</sub>	55.2	11.6	29.4

value of parameter	frequencies of <i>ge</i> -verbs in %			
	Orosius	St. Mark	St. John	Total
simple sentences	52.5	27.4	38.7	39.5
main clause with sub. clause	44.8	41.1	52.8	46.2
subordinate clause	37.5	49.2	51.9	46.2

In *Orosius* simple sentences were significantly more frequent in the basic than in the control sample. The frequency of main clauses with subordinate clauses was

<sup>12</sup> P<sub>(B)</sub> = mean probability rate in all basic samples; P<sub>(C)</sub> = mean probability rate in all control samples.

almost the same in both samples, whereas the frequency of subordinate clauses was higher in the control sample. *Ge*-verbs were therefore most likely to appear in simple sentences (52.3 %), in main clauses expanded with more than one subordinate clause (51.6 %), in main clauses with one subordinate clause, and least likely to appear in subordinate clauses.

In *St. Mark's Gospel* the frequency of simple clauses was found to be increasing consistently from the basic sub-sample to the control sub-sample. The frequency of main clauses and of subordinate clauses consistently declined in the same direction. That means that *ge*-verbs were most likely to be found in subordinate clauses (49.2 %), in main clauses (41.1 %) and least likely in simple sentences (27.4 %). In *St. John's Gospel* the results were more or less the same for subordinate clauses and for main clauses (i.e., for complex sentences), while simple sentences seemed to reduce the probability of *ge*-verbs.

The results of the analysis of the two *Gospels* were different from the results of the analysis of *Orosius*, which made them inconclusive, although they confirmed the prediction stated under 3.1.3.

##### 4.2. Parameter: Propositional modality

sample	frequencies of parameter values in %	
	affirmative	negative
BO	96.8	3.2
CO	98.1	1.9
BM1	92.2	7.8
BM	92.6	7.4
CM	94.8	5.2
CM1	96.8	3.2
BJ	87.3	12.7
CJ	91.2	8.8
CJ1	92.6	7.4
P <sub>(B)</sub>	92.2	7.8
P <sub>(C)</sub>	94.7	5.3

value of parameter	frequencies of <i>ge</i> -verbs in %			
	Orosius	St. Mark	St. John	Total
affirmative	44.8	36.4	47.3	42.8
negative	57.8	44.7	57.6	53.4

In all sets of basic samples the negative propositional modality was more frequent than in the control samples. In all three sets of samples *ge*-verbs were more frequent in the negative sentences than in the affirmative sentences. The reliability of such results, which completely supported the prediction cited under 3.1.3, was diminished only by the fact that the absolute presence of the negative propositional modality was low (less than 10 %, except in the basic sample of *St. John's Gospel*).

## 4.3. Parameter: Tense

sample	frequencies of parameter values in %		
	preterite	present – total	present – future ref.
BO	97.0	3.0	
BC	83.7	16.3	
BM1	59.2	40.8	26.0
BM	59.5	40.6	22.8
CM	66.9	33.1	16.4
CM1	62.8	37.2	16.1
BJ	54.7	45.3	20.6
CJ	64.3	35.7	17.5
CJ1	59.3	40.7	13.6
P <sub>(B)</sub>	67.6	32.4	23.1
P <sub>(C)</sub>	67.4	32.6	15.9

value of parameter	frequencies of <i>ge</i> -verbs in %			
	Orosius	St. Mark	St. John	Total
preterite	48.7	33.3	44.3	42.1
present total	13.3	38.8	53.5	35.5
present – fut.	—	48.8	58.3	53.6

The prediction cited under 3.1.3, that preterite would be more frequent in the basic samples than in the control samples, was corroborated by the results of the analysis of *Orosius*. The probability rate for the parameter tense to assume its marked value (preterite) was significantly higher in the basic sample than in the control sample. But the results of two other sets of samples were contrary to the prediction stated above. Preterite was found to be more frequent in the control than in the basic samples. Such a marked difference between the results obtained from the analysis of *Orosius* and the results obtained from the analysis of the two *Gospels* made it obvious that the prediction needed to be re-examined. A closer look at the verbs in the present tense (in all samples) revealed that the nature of most of such verbs in *Orosius* was the universal time reference:

Of þære ie Indus, þe be westan eallum þæm lande *ligeð*, betux þære ie Indus 7 þære þe be westan here *is*, Tigris *hatte*, þa *flowað* buta suþ on þone Rædan Sæ<sup>13</sup> (Sweet 1883:10/19-22).

The real time reference of the present-tense verbs in the two *Gospels* was much more complex:

Se *ge-gearwað* þinne weg be-foran ðe. (... which *shall prepare* thy way before thee. KJV<sup>14</sup>, Mark, 1/12).

<sup>13</sup> The verbs underlined are the verbs in the present tense.

<sup>14</sup> King James Version of the Holy Bible (1611).

Sona þænne hi þæt word *ge-hyrap* and þæt mid blisse *onfoð*. (...who, when they *have heard* the word, immediately *receive* it with gladness. KJV, Mark, 4/16).

Ne *wene ge* þæt ic eow wrege to faeder. (Do not *think* that I *will accuse* you to the father. KJV, John, 5/45).

To account for the real time reference and its relation to the presence or absence of the prefix *ge*-, the verbs referring to future time were selected from all the verbs in the present tense in the samples taken from the two *Gospels*. This time reference was chosen because it was possible to test it against the modern English translation of the verb in the present tense and/or the Latin original in the Lindisfarne MS. It was assumed that of all possible real time references of verbs in the present tense the future reference was one of the more complex (marked) ones (as compared to the universal time reference for instance). The results confirmed the assumption that not only was the frequency of future time reference expressed by the present tense higher in the basic than in the control samples, but the trend of its presence was found to be consistently rising from the control sub-sample via the control and the basic samples to its highest level in the basic sub-sample. *Ge*-verbs were found in 35.5 % of all analyzed present tenses, in 42.1 % of all preterites and in 53.6 % of all present tenses with future reference.

## 4.4. Parameter: Mood

sample	frequencies of parameter values in %		
	indicative	subjunctive	imperative
BO	88.1	11.6	0.3
BC	90.9	9.0	0.1
BM1	78.3	12.8	8.9
BM	77.1	13.2	9.7
CM	86.0	8.6	5.4
CM1	85.5	5.6	8.8
BJ	85.0	11.3	4.7
CJ	91.9	5.0	3.1
CJ1	93.3	1.9	4.6
P <sub>(B)</sub>	82.1	12.2	5.9
P <sub>(C)</sub>	89.5	6.0	4.4

value of parameter	frequencies of <i>ge</i> -verbs in %			
	Orosius	St. Mark	St. John	Total
indicative mood	44.3	33.5	46.2	41.3
subjunctive mood	51.4	46.2	68.0	55.2
imperative mood	75.0	50.0	58.3	61.1

The prediction cited under 3.1.3, namely, that non-indicative moods were to be expected to be more frequent in the basic than in the control samples, proved to be correct for all three sets of samples. The low frequency of the non-indicative

moods (especially of the imperative) in *Orosius* lessened to some extent the reliability of the results, but their consistency still spoke in favour of the prediction cited above.

#### 4.5. Parameter: Transitivity

sample	frequencies of parameter values in %		
	intransitive	monotransitive	ditransitive
BO	14.4	63.9	21.7
CO	32.3	56.3	11.4
BM1	18.4	76.6	5.0
BM	18.1	77.5	4.4
CM	37.5	50.0	12.3
CM1	41.2	46.8	12.0
BJ	14.7	80.0	4.7
CJ	45.6	45.0	9.4
CJ1	45.4	47.2	7.4
P <sub>(B)</sub>	16.4	74.5	9.1
P <sub>(C)</sub>	40.4	49.1	10.5

type of object<sup>15</sup>:

sample	frequencies of parameter values in %						
	accus.	obj. cl.	non-fin.	com. ac.	gen.	dat.	prep.
BO	58.1	11.4	2.1	11.0	2.9	4.8	9.7
CO	43.0	15.8	7.6	17.8	1.2	2.5	12.1
BM1	52.9	8.0	4.5	17.6	1.7	10.2	5.1
BM	60.1	6.8	1.5	4.9	1.5	14.3	10.8
BJ	39.6	11.6	3.3	18.2	—	9.1	18.2
CJ	55.6	9.7	1.4	6.9	—	4.2	22.2
P <sub>(B)</sub>	50.2	10.3	3.3	15.6	1.5	8.0	11.0
P <sub>(C)</sub>	52.8	10.8	3.5	10.0	0.9	7.0	14.8

value of parameter	frequencies of <i>ge</i> -verbs in %			
	Orosius	St. Mark	St. John	Total
intransitive	26.8	21.2	23.2	23.7
monotransitive	48.3	46.3	62.7	52.4
ditransitive	60.9	16.7	31.8	36.5
– accusative	55.8	43.2	54.5	51.2
– object clause	40.3	50.0	66.7	52.3
– non-finite clause	20.4	72.7	80.0	57.7
– complex acc.	36.7	75.6	81.5	64.6
– genitive	68.2	38.2	—	53.2
– dative	64.1	50.0	78.6	62.2
– prepositional ob.	42.9	29.0	57.9	43.3

<sup>15</sup> acc. = bare accusative; obj. c. = object clause; non-fin. = non-finite object clause; com. ac. = complex accusative; gen. = genitive; dat. = dative; prep. = prepositional object.

In all sets of samples there was a marked (significant) difference between the probability rate (frequency) of intransitive verbs in the basic and in the control samples respectively. Intransitive verbs were found more frequently in the control samples and transitive verbs were more frequent in the basic samples. The situation with the ditransitive verbs was more complex. In *Orosius* ditransitive verbs were more frequent in the basic than in the control sample, whereas in the two *Gospels* they were more frequent in the control than in the basic samples. In *Orosius* the frequency of the prefix *ge*- was highest with ditransitive verbs. In *St. John's Gospel* the frequency of *ge*-verbs was highest with monotransitive verbs, lower with ditransitive verbs and lowest with intransitive verbs. In *St. Mark's Gospel* the frequency of *ge*-verbs was highest with monotransitive verbs, lower with intransitive verbs and lowest with ditransitive verbs.

The presence of the prefix *ge*- significantly correlated with the transitivity of the verbs in that it was higher with transitive than intransitive verbs, but the number of expressed objects showed no correlation with the presence or absence of the prefix.

As far as the form of the object is concerned, the frequency of the construction *verb* + *accusative* was found to be higher in the control samples than in the basic samples of *St. Mark* and *St. John*, which would agree with the prediction stated under 3.1.3, but it was lower in the control sample than in the basic sample of *Orosius*. The form of the object did not correlate with the presence or absence of the *ge*-prefix. Quite contrary to the prediction stated above, the prefix *ge*- was found less frequently in constructions of *verb* + *prepositional* object than, for example, in constructions of *verb* + *dative*, which would roughly express the same deep case relation.

#### 4.6. Parameter: Number (3rd person only)

sample	frequencies of parameter values in %	
	singular	plural
BO	66.2	33.8
CO	65.8	34.2
BM1	53.7	46.3
BM	56.9	43.1
CM	64.0	36.0
CM1	66.4	33.6
BJ	51.3	48.7
CJ	74.3	25.7
CJ1	78.3	21.3
P <sub>(B)</sub>	57.0	43.0
P <sub>(C)</sub>	69.8	30.3

value of parameter	frequencies of <i>ge</i> -verbs in %			
	Orosius	St. Mark	St. John	Total
singular	45.5	36.4	39.3	40.4
plural	45.1	40.2	64.0	49.8



The prediction stated under 3.1.3, that plural would be more frequent in the basic than in the control samples, proved to be correct in the case of *St. Mark's* and *St. John's Gospels*. In *Orosius*, the results of the analysis did not corroborate the prediction, however, the difference between the frequencies of plural in the basic and in the control samples was not statistically significant. The consistency of the results in the basic and control sub-samples nevertheless substantiate the conclusion that there exists a correlation between the presence of the prefix *ge-* and the grammatical number of the verb.

#### 4.7. Parameter: Person

sample	frequencies of parameter values in %					
	1st sg	2nd sg	3rd sg	1st pl	2nd pl	3rd pl
BO	1.1	0.1	65.4	—	—	33.4
CO	0.8	0.1	64.2	1.1	0.5	33.3
BM1	3.4	3.4	46.9	3.9	11.7	30.3
BM	4.0	4.4	48.5	3.5	11.0	28.6
CM	5.4	7.2	51.4	1.0	6.4	28.6
CM1	7.6	9.2	49.6	1.2	6.0	26.4
BJ	5.3	5.3	40.7	6.7	16.7	25.3
CJ	8.8	4.4	61.3	1.9	5.0	18.8
CJ1	11.1	5.5	62.0	1.9	4.6	14.4
P <sub>(B)</sub>	3.5	3.3	50.4	3.5	9.9	29.5
P <sub>(C)</sub>	6.6	5.3	57.7	1.4	4.5	24.3

value of parameter	frequencies of <i>ge-</i> verbs in %			
	Orosius	St. Mark	St. John	Total
third persons	45.4	38.9	43.6	42.6
non-third persons	28.6	39.1	61.4	43.0

The reason for abstaining from any assumption about the relation between the person and the prefixation of the verb was that the structure of person(s) in the verb is too complex to be squeezed into the dichotomy of simple-complex or marked-unmarked. Nevertheless, the relation of the third person versus the non-third persons was noted in the sense that the third person was considered to be the 'non-person', neither the speaker nor the hearer of the message, and from that point of view less complex (less marked) than the first and the second persons.

The results of the analysis showed slightly higher frequency values for the non-third persons in the basic than in the control samples. However, no conclusion could be reached on account of the fact

- a) that it is difficult to separate the notion of the person from the notion of the number (all persons in plural tend to be more frequent in the basic than in the control samples);
- b) that individual persons cover more than one notion, e.g., the 1st person plural can be inclusive (I + you) or exclusive (I + they); the 3rd person

can design human beings or inanimate subjects, abstract or concrete subjects etc.

#### 5. Conclusion

5.1. The results of the analysis of the grammatical environment of Old English *ge-*verbs and their comparison with the results of the analysis of the grammatical environment of Old English simplex verbs in the same Old English texts confirm the initial hypothesis that the presence of the Old English preverbal *ge-* correlated with the complexity (markedness) of the grammatical environment of the respective verbs.

5.2. Of seven observed parameters five (propositional modality, tense, mood, transitivity, number) showed higher probability rates of assuming marked values in the basic than in the control samples. That means that at the marked values of these parameters verbs were more likely to have the prefix *ge-* than at the unmarked values of the same parameters. According to our statistical results, the type of the clause and the person of the verb do not seem to affect the frequency of the preverbal *ge-*.

5.3. A closer look at the results, those confirming the initial hypothesis and those contradicting it, shows that the statistical results corroborate the initially stated predictions whenever the classification of the two compared parameter values as simple or complex is clearcut (e.g., negative vs. affirmative propositional modality, non-indicative moods vs. the indicative mood, present tense with future reference vs. present tense with universal reference, transitivity vs. intransitivity). In other cases, the criteria of the complexity (markedness) of grammatical environment, such as formulated by Mayerthaler (1981), need further elaboration if they are to be applied in the examination of the correlation between the complexity of grammatical environment and the assertion of stronger or weaker language variants. The example of the inconclusive (and rather perplexing) results in the case of the preterite tense and its effects upon the complexity of the grammatical environment opens new veins of research:

- The complexity/simplicity of grammatical environment must be assessed not only from the formal but also from the notional point of view. The real future temporal relation prevailed over the formal simplicity of the present tense. Prepositional objects showed lower correlation with the frequency of *ge-*verbs than the bare datives, which express roughly the same deep case relation. In her extensive synchronic and diachronic analysis of German sentences referring to future time Teržan (1990) found sentences with verbs in the present tense to contain more complex (marked) elements than sentences containing verbs in the explicit future tense (the *werden* future).

- The non-transparency of the value of a given parameter seems to aggravate the effects of the complexity of the grammatical environment. Transparency, however, will have to be assessed at the level of (at least) the sentence. Neither in the case of the present research nor in the case of the research carried out by Teržan has the presence of temporal adjuncts and clauses been noted, for example. The fact that in our research ditransitive verbs did not feature as more complex than the monotransitive ones could perhaps be ascribed to the fact that only verbs with explicitly expressed two (or more) objects were qualified as ditransitive.

5.4. The conclusion that the occurrence of the Old English preverbal *ge-* correlated with the complexity of the grammatical environment in the clause in which the verbal phrase containing a *ge-*verb occurred is defensible. However, the complexity of the grammatical environment must be primarily considered in its deep and also cumulative sense: the greater the amount of information (meanings) to be expressed and the more complex the temporal and argumentative information, the greater the pressure to expand the formal expression of the communication unit. In other words, if complex, marked relations are not (cannot be) explicitly encoded in specific language units, they will affect the choice of language variants in the sense that the weight of (grammatical) information is balanced with the length of the utterance.

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