

OLD ENGLISH VERBS OF INCREASING: THE SEMANTICS AND SYNTAX OF CHANGE IN SIZE¹

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Abstract: This article aims at defining a class of Old English verbs of increasing based on both their common semantic components and grammatical behavior. On the theoretical side, the framework of verb classes and alternations is combined with Role and Reference Grammar. The data selected for this study have been extracted from both textual and lexicographical sources. After the analysis of the linking between syntax and semantics in this set of verbs, the conclusion is reached that *āðindan*, *āweaxan*, *ēacan*, *(ge)ēacnian* and *(ge)weaxan* are the best candidates for membership of the verbal class of increasing, considering the constructions and alternations that they present.

Keywords: Old English, verbs of increasing, constructions, alternations.

1. INTRODUCTION

This research focuses on Old English verbs of increasing, that is to say, those verbs that describe states of affairs in which a Patient undergoes a change of state whereby its size increases, as in *Flowers grow*, or an Agent causes a Patient to increase in size, as in *Alfred grows flowers*.

The aim of this article is to study the verbal class of *increase* in Old English with a view to determining if they constitute a consistent set as to meaning components and grammatical behavior (which is understood as the morpho-syntactic realization of arguments). The steps taken in this research are the following: (i) providing semantic and syntactic principles for class membership; (ii) searching the available textual sources in order to collect the data relevant for the analysis; and (iii) checking on the semantic and syntactic properties of the verbal candidates so as to determine whether or not they can be considered members of the class. The initial list of verbs of increasing relies on the classification of domains and subdomains provided by Faber and Mairal (1999), so as to then search the *Thesaurus of Old English* and the lexical database *Nerthus* to select the verbs whose primary meaning is *increase*. An initial exhaustive analysis (all the canonical inflectional forms of the selected verbs are searched) is followed by qualitative one (all the different linkings of thematic role and morphological case, constructions and alternations are selected). Even though Present-Day English verbs of increasing are examined in passing, the scope of this article is exclusively synchronic.

This paper has been structured as follows. Section 2 presents a review of previous research in the verbal classes of Old English. After that, the theoretical frameworks of verbal classes and Role and Reference Grammar (henceforward RRG) are presented in Section 3. Then, Section 4 describes the sources, methodological steps and data of this research. Present-Day English verbs of increasing are briefly examined in Section 5. While Section 6 features a semantic description of the predication and the linking semantics-syntax, Section 7 focuses on morphosyntactic constructions and alternations. To conclude, Section 8 summarizes the findings of this research and underlines its main conclusions.

2. REVIEW OF PREVIOUS RESEARCH

Old English previous works mostly focus on syntax (Visser, 1963-1973; McLaughlin, 1983; Mitchell, 1985; Campbell, 1987; Traugott, 1992; Denison, 1993; Quirk and Wrenn, 1994; Hogg and Fulk, 2011); and semantics, to a lesser extent (Weman, 1933; Kastovsky, 1992). The relationship between the syntax and semantics of Old English in

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general, and verbs in particular, has drawn less attention. The main references in the area of Old English semantics include the studies of verbs of vision (Penttilä 1956), locomotion (Weman, 1933; Ogura, 2002), knowledge (Ono 1989), thinking (Ogura 1986b), emotion (Ogura 2013), tasting (Ogura 2008), as well as impersonal verbs (Ogura, 1986a; Möhlig-Falke, 2012). More syntactically oriented works, but also relevant to this study, are Ogura (1989) on constructions with *self*; Denison (1993) and Molencki (1991) on verbal complementation; Allen (1995) on oblique case marking; Timofeeva (2010) on non-finite constructions; and Ogura (2018) on periphrastic constructions.

Other scholars have also contributed to bridging the gap between semantics and syntax by applying current theoretical frameworks to Old English and looking in the semantic motivation for the syntactic organization of early English. The present article is intended to follow in this track. Martín Arista (2000a, 2000b) examines the internal aspect of Old English verbs according to the *Aktionsart* classification proposed by Role and Reference Grammar (hereafter RRG), as put forward by Van Valin and LaPolla (1997). From the lexematic functional perspective, an inventory of lexical templates and mapping rules has been proposed that draws on the system of lexical representation of RRG. This model is subsequently applied to some verbal classes in specific works involving the analysis of Old English verbal classes and the corresponding logical structures, constructions and alternations. This includes, for instance, verbs of feeling (C. García Pacheco, 2013) and verbs of existence (L. García Pacheco, 2013).

Another avenue of research pays heed to the paradigmatic morphology of Old English (Martín Arista, 2012, 2013, 2017, 2018) and searches for links with certain syntactic constructions (Martín Arista and Cortés Rodríguez, 2014; Ruíz Narbona, 2018; García García, 2019). This research line also includes the elaboration of a derivational morphology model centered on RRG and an analysis of verbal classes that requires the coincidence of semantic features and grammatical behavior (argument projection and realization), which is couched in terms of constructions and morpho-syntactic alternations. To date, verbs of prohibition (Ojanguren López, 2019b), *end* verbs (Ojanguren López, 2020), inaction verbs (Ojanguren López, 2019a, fc.) and *rejoice* verbs (Martín Arista, 2020) have been addressed.

The analysis in this work focuses on a set of verbs of increasing that approximately match Present-Day English *grow* and *increase* as this class of verbs has not been addressed in the literature or it has been seen from the angle of morphological case only (Visser, 1963-1973; McLaughlin, 1983; Mitchell, 1985). Be that as it may, the framework of classes, constructions and alternations, which is described in Section 3, has been successfully implemented in several verbal classes of Old English.

3. THEORETICAL FOUNDATIONS

The theoretical foundation of this article has been provided by the framework of verb classes and alternations proposed by Levin (1993) and the functional model of RRG (Foley and Van Valin, 1984; Van Valin and LaPolla, 1997; Van Valin, 2005, 2014).

Levin (1993: 1) puts the syntactic and semantic properties of English verbs in the spotlight by stating that “the behavior of a verb, particularly with respect to the expression and interpretation of its arguments, is to a large extent determined by its meaning. Thus, verb behavior can be used effectively to probe for linguistically relevant pertinent aspects of verb meaning”. The concepts of verbal class and alternations are central to this framework since, in her view (Levin, 1993: 10), they “are manifested across languages by verbs of the same semantic types”. As far as argument realization is concerned, the meaning component of a specific verb constrains the form and number of complements that it can take, while according to her (Levin, 1993: 5) “verbs that fall into classes according to shared behavior would be expected to show shared meaning components”.

Although verbal classes are coherent from a semantic and syntactic perspective, alternations comprise a varied range of diathesis alternations (Levin, 1993: 22). The latter are classified in groups depending on the syntactic structures involved. Thus, alternations are divided according to transitivity, arguments within the verb phrase, “oblique” subjects, reflexive diathesis, passive constructions, postverbal “subjects” and other types of constructions. To illustrate, *give* verbs (Levin, 1993: 138) comprise *feed*, *give*, *lease*, *lend*, *loan*, *pass*, *pay*, *peddle*, *refund*, *render*, *rent*, *repay*, *sell*, *serve* and *trade*, which are involved in the dative alternation (1):

(1) (Levin, 1993: 138)

Dative Alternation:

They lent a bicycle to me.

They lent me a bicycle.

Levin (1993: 138) states that *give* verbs “display the dative alternation, though there may be some differences of opinion concerning whether some of these verbs actually are found in the double object construction”. Thus, alternations also contribute to making generalizations across several verb classes.

When applying this model to a previous stage of the language, some issues may arise, due to the changes resulting from the evolution from Old English to Present-Day English. Among others, it is worth mentioning that Old English resorts to case marking to indicate syntactic functions and shows widespread explicit inflections for nouns, adjectives pronouns and verbs. Moreover, transitivity, prepositional government and the lexical borrowing from French, which are not present -or, in the case of prepositional government, regularized- in Old English, are fundamental because many of the alternations and argument realizations presented by Levin’s (1993) framework make reference to them. As Ojanguren López (2019a: 8) proposes, the differences between Old English and Present-Day English advise to complement the framework of verb classes and alternations (Levin, 1993) with an up-to-date and extensive theory of language that deals with the association between the semantics and syntax of verbs. This is offered by RRG (Van Valin and LaPolla, 1997; Van Valin, 2005, 2014) and its *Aktionsart* classes.

The semantic representations of RRG are based on the *Aktionsart* types of verbs. They differentiate four classes proposed by Vendler (1967): States, Achievements, Accomplishments and Activities. Later, Van Valin and LaPolla (1997) incorporated Active Accomplishments and the causative version of all *Aktionsart* classes and, lastly, Van Valin (2005) integrated Semelfactives, non-causative and causative, as the final class. Figure 1 presents instances of the non-causative and causative versions of *Aktionsart* classes.

a. State:	The boy is afraid.
a'. Causative state:	The dog frightens/scares the boy.
b. Achievement:	The balloon popped.
b'. Causative achievement:	The cat popped the balloon.
c. Semelfactive:	The pencil tapped on the table.
c' Causative semelfactive:	The teacher tapped the pencil on the table.
d. Accomplishment:	The ice melted.
d'. Causative accomplishment:	The hot water melted the ice.
e. Activity:	The soldiers marched in the park.
e'. Causative activity:	The sergeant marched the soldiers in the park.
f. Active accomplishment:	The soldiers marched to the park.
f'. Causative active accomplishment:	The sergeant marched the soldiers to the park.

Figure 1. Examples of *Aktionsart* types in RRG (Van Valin, 2005: 34).

Clausal semantics and clausal syntax are connected through logical structures that determine both the semantics-syntax and the syntax-semantics linking. Logical structures distinguish between stative (**predicate'**) and non-stative (**do'**) parts within them, while the different verbal arguments are represented by the variables *x*, *y* and *z*. INGR(essive), SEM(e)L(factive), BECOME and CAUSE are metalinguistic predicates which indicate ingressives, semelfactives, accomplishments and causatives respectively. Figure 2 sums up *Aktionsart* types and their associated logical structures.

<i>Aktionsart</i> class	Logical Structure
STATE	predicate' (<i>x</i>) or (<i>x</i> , <i>y</i>)
ACTIVITY	do' (<i>x</i> , [predicate' (<i>x</i>) or (<i>x</i> , <i>y</i>)])
ACHIEVEMENT	INGR predicate' (<i>x</i>) or (<i>x</i> , <i>y</i>), or INGR do' (<i>x</i> , [predicate' (<i>x</i>) or (<i>x</i> , <i>y</i>)])
SEMELFACTIVE	SEML predicate' (<i>x</i>) or (<i>x</i> , <i>y</i>), or SEML do' (<i>x</i> , [predicate' (<i>x</i>) or (<i>x</i> , <i>y</i>)])
ACCOMPLISHMENT	BECOME predicate' (<i>x</i>) or (<i>x</i> , <i>y</i>), or BECOME do' (<i>x</i> , [predicate' (<i>x</i>) or (<i>x</i> , <i>y</i>)])
ACTIVE	do' (<i>x</i> , [predicate1' (<i>x</i> , (<i>y</i>))])
ACCOMPLISHMENT	& BECOME predicate2' (<i>z</i> , <i>x</i>) or (<i>y</i>)
CAUSATIVE	α CAUSE β, where α, β are logical structures of any type

Figure 2. Lexical representations for *Aktionsart* classes (Van Valin, 2005: 45).

In RRG, the semantic analysis that motivates clausal realization hinges on two generalized semantic roles or macroroles, Actor and Undergoer, which make grammatical generalizations across argumental structures (Van Valin and LaPolla, 1997: 141). The first argument of the verb is the Actor, while the second argument corresponds to the Undergoer in a transitive predication. However, in an intransitive predication there can be one argument only, Actor or Undergoer, according to the semantic characteristics of the predicate. The Actor-Undergoer Hierarchy, which relates argument position to macrorole, stipulates that the leftmost argument in the hierarchy will be the Actor and the rightmost argument in the hierarchy will receive the macrorole Undergoer.

Macrorole transitivity (Van Valin and LaPolla, 1997: 150-151) establishes the specific number of macroroles that may be taken by a predicate. It is defined semantically, in contradistinction to syntactic transitivity, which specifies the number of syntactic arguments of the verb. There are three types of macrorole transitivity: transitive (2 macroroles), intransitive (1 macrorole), and atransitive (0 macroroles).

With respect to grammatical relations, the concepts of subject and object are not considered universal. RRG rather postulates the concept of Privileged Syntactic Argument (PSA) as a construction-specific relation that results from a restricted neutralization of semantic roles and pragmatic functions for syntactic purposes (Van Valin and LaPolla, 1997: 176). In an active construction, the first argument experiences the PSA status whilst the second argument is PSA in a passive construction. Agreement with the finite verb is controlled by the PSA. The remaining arguments in the clause are either direct or oblique core arguments.

The linking, or association, of syntax and semantics, works both ways in RRG: from semantics to syntax (production) and from syntax to semantics (comprehension). The Completeness Constraint requires that:

All of the arguments explicitly specified in the semantic representation of a sentence must be realized syntactically in the sentence, and all of the referring expressions in the syntactic representation of a sentence must be linked to an argument position in a logical structure in the semantic representation of the sentence. (Van Valin and LaPolla, 1997: 325)

Linking crucially depends on verb agreement, case assignment and prepositional government. For example, in English and other accusative languages the controller of finite verb agreement is the highest-ranking core macrorole which takes nominative case, conversely, the other core macrorole takes accusative, and dative case is assigned to non-macrorole direct core arguments (Van Valin and LaPolla, 1997: 325).

The Layered Structure of the Clause (Van Valin and LaPolla, 1997: 26-29), which articulates the underlying aspects of semantics and syntax, is a hierarchical structure that includes a number of semantic layers determined by operators (grammatical features such as tense, aspect, modality, etc.). It is formed by the Core, a verbal nucleus with its arguments and argument-adjuncts (as in *Mary brushed her hair* and *The soldier ran to the house*, respectively); and the Periphery, which is attached to the Core, as in *They watched a film in the library*. The Sentence consists of one or more units of Clause level, as in *John worked hard to buy a new car*.

With the most relevant theoretical aspects reviewed, the analysis carried out in the following sections relies on the framework of verb classes and alternations as far as the concept of verbal class is concerned, including the need for shared meaning and grammatical behavior; and on the lexical representation, linking rules and clausal structure of RRG.

4. SOURCES, DATA AND STEPS OF ANALYSIS

A combination of textual and lexicographical sources has been used for this research. The textual ones comprise the *Dictionary of Old English Corpus* (3 million words; hereafter DOEC), the *York-Toronto-Helsinki Parsed Corpus of Old English Poetry* (71,490 words) and the *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (1.5 million words; hence YCOE refers to both York corpora). Both textual fragments and numbers have been drawn from the DOEC and, in addition, both the morphological and syntactic considerations have been provided by the parsing available in the YCOE, when these are given. For their part, the lexicographical sources include paper and electronic dictionaries, thesauri and lexical databases. Along with the Old English dictionaries cited in the reference section, the *Dictionary of Old English* (henceforth DOE) has been consulted for the verbs that begin with the letters A-I. Then, the *Thesaurus of Old English* and the *Historical Thesaurus of the Oxford English Dictionary* have provided the meanings and senses of the verbs under the scope of analysis. Finally, *Nerthus*, a lexical database of Old English with around 32,000 entries, has provided lexical and morphological information so that fine-grain distinctions in meaning could be made.

Two basic steps can be distinguished in this research: the compilation of the sub-corpus of Old English verbs of increase and the analysis of the linking semantics-syntax, constructions and alternations with these verbs. The collection of evidence for each verb involves the search for the inflectional forms attested in the texts.

The starting line for collecting the sub-corpus is Faber and Mairal's (1999) classification of lexical domains which considers internal aspect and includes concepts like causativity. In this study, the lexical domain of verbs of increasing is 'Change (to begin to be different)', whereas the lexical subdomains are 'To change by increasing (becoming more)' and 'To cause something to change by increasing it'. These subdomains have been used to guide the collection of candidates for the verbal class of increasing, for which the *Thesaurus of Old English* and the lexical database *Nerthus* have been searched. A total of thirty-three polysemic verbs whose primary meaning is not *increase* have been rejected, which has left us with twenty verbs that primarily convey the meaning 'to (make something) become larger in amount or size' and belong to the subdomains 'to change by increasing (becoming more)' and 'to cause something to change by increasing it'.

The relevant citations in the entries to the DOE for the verbs beginning with the letters A-I have been sought in the DOEC. As for those verbs beginning with the letters L-Y, their canonical inflections, based on the paradigms described in Campbell (1987) and Hogg and Fulk (2011), have been searched in the DOEC. This has shown that five verbs do not turn out any attestations in the DOEC that are inflected for a canonical form, specifically *gemārian*, *(ge)miclian*, *grēatian*, *tōætēacnian* and *tōblædan*. Finally, the lemmatised lists by Metola Rodríguez (2015), García Fernández (2018) and Tío Sáenz (2019) have been consulted and manual revision has been necessary.

The sub-corpus for this research is comprised of fifteen verbs that throw a total of 867 textual attestations (tokens), including *ætfllōwan*, *ætȳcan*, *āðindan*, *āweaxan*, *ēacan*, *ēacian*, *forðindan*, *forweaxan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)īecan*, *(ge)weaxan*, *inweaxan*, *tōætȳcan* and *tōgeīecan*. Appendix 1 displays the list of inflectional forms grouped by verb and showing the figure of textual occurrences.

The analysis in Sections 6 and 7 draws on the data from the DOEC, so both the text identifications and the excerpts analyzed have been extracted from this textual source, as is illustrated in Figure 3²; and the morphological tagging and syntactic parsing of the YCOE, as can be seen in Figure 4. The Present-Day English version of the fragments quoted below relies on the cited editions.

[Æ LS (Denis) 004200 (179)]			
<i>and</i>	<i>Godes</i>	<i>gelaðung</i>	<i>weox</i>
and:CONJ	God:GEN;SG	church:NOM;SG	wax:3SG;PST
<i>on</i>	<i>geleafan</i>	<i>swyðe</i> .	
on:PREP	faith:DAT;SG	very much:ADV	

'and God's church waxed exceedingly in the faith' (Skeat 1966: 181).

Figure 3. The arrangement of examples presented in the analysis.

(((IP-MAT (CONJ and)
 (NP-NOM (NP-GEN (NR^G Godes))
 (N^N *gelaðung*))
 (VBDI *weox*)
 (PP (P on)
 (NP (N *geleafan*)))
 (ADVP (ADV *swyðe*))
 (..) (ID coelive,æLS_[Denis]:179.5885))

Figure 4. The syntactic description of an example provided by the YCOE³.

² The interlinear glosses follow the Leipzig Glossing Rules, available at <http://www.eva.mpg.de/lingua/resources/glossing-rules.php>.

³ The following abbreviations for categories and features are used in this example. Syntactic categories: ADVP (adverbial phrase), CONJ (conjunction), NP (noun phrase), PP (prepositional phrase); lexical categories: ADV (adverb), N (noun), NR (proper noun), P (preposition), VBDI (verb, preterit indicative); morphological case at word level: ^G (genitive), ^N (nominative); morphological case at phrase level: -GEN (genitive), -NOM (nominative).

5. VERBS OF INCREASING IN PRESENT-DAY ENGLISH

This section considers Present-Day English verbs of increasing from the perspective of RRG and the framework of verbal classes and alternations.

Van Valin and LaPolla (1997: 105) classify verbs of increasing as Accomplishments since they code states of affairs “necessarily temporally durative” as opposed to Achievements, which are essentially punctual. So, verbs of increasing mostly comprise Accomplishments, as in (2a), but they can also present a causative version, as is the case with (2b).

- (2) a. Accomplishment
Flowers grow.
 BECOME increased' (flowers)
- b. Causative Accomplishment
Alfred grows flowers.
 [do' (Alfred)] CAUSE [BECOME increased' (flowers)]

Additionally, Levin (1993: 245) considers that these verbs, listed within the verbal class ‘other alternating verbs of change of state’, which includes *enlarge*, *expand*, *grow* or *increase* among many others, participate in the following alternations: Causative/Inchoative, Middle and Instrument Subject. On the other hand, Levin (1993: 174) also classifies *grow* verbs separately within the class of ‘verbs of creation and transformation’, which can be found in the Material/Product Alternation and the Causative/Inchoative Alternation.

The points made by these theoretical approaches guide the definition of logical structures in the following sections.

6. THE LINKING SEMANTICS-SYNTAX IN OLD ENGLISH VERBS OF INCREASING

The *Aktionsart* types and logical structures of Old English verbs of increasing are discussed in this section as well as the specific aspects of the linking semantics-syntax of this type of verbs, including thematic roles, the semantic properties of the participants, semantic macrorole assignment and PSA.

Old English verbs of increasing present two different types of *Aktionsart*: Accomplishments and Causative Accomplishments. In Accomplishments, the state of affairs shows a Patient, not necessarily human, that undergoes a change of size to become larger. The corresponding logical structure is given in Figure 5.

BECOME increased' (x)

Figure 5: The logical structure of Accomplishments with verbs of increasing.

The logical structure of Accomplishments presented in Figure 5 can be applied to most of the Old English verbs of increasing analyzed, of which (3) is a representative example.

- (3) [Bede 1 003200 (1.30.8)]
- | | | |
|-----------|-------------------|----------------|
| & | <i>wingeardas</i> | <i>weaxaþ</i> |
| and:CONJ | vineyard:NOM;PL | grow:3PL;PRS |
| <i>on</i> | <i>sumum</i> | <i>stowum.</i> |
| on:PREP | some:DAT;PL | place:DAT;PL |
- ‘And vineyards grow in some places’ (Miller, 1959: 31).
 BECOME increased' (*wingeardas*)

Conversely, in Causative Accomplishments the action of an initiator brings about the Patient’s change of size or subsequent increase. In other words, the causative version comprises a Patient that increases due to an initiator’s action. The logical structure of Causative Accomplishments is given in Figure 6.

[do' (x)] CAUSE [BECOME increased' (y)]

Figure 6: The logical structure of Causative Accomplishments with verbs of increasing.

The logical structure in Figure 6 gives rise to predications such as (4).

(4) [Æ Hex 003100 (107)]

<i>ac</i>	<i>he</i>	<i>gesceop</i>	<i>pæs</i>
but:CONJ	he:NOM;SG	create:3SG;PST	the:GEN;SG
<i>dæg</i>	<i>leoht</i>	<i>and</i>	<i>hit</i>
day:GEN;SG	light:ACC;SG	and:CONJ	it:ACC;SG
<i>syððan</i>	<i>geeacnode</i>	<i>mid</i>	<i>pam</i>
afterwards:ADV	increase:3SG;PST	with:PREP	the:DAT;PL
<i>scinendum</i>	<i>tunglum.</i>		
shining:DAT;PL	star:DAT;PL		

'For He created the light of day, and afterwards increased it with the shining stars' (Norman, 1849: 7).

[do' (he)] CAUSE [BECOME increased' (hit)]

The two types of *Aktionsart* include an argument, *x* in the case of Accomplishments and *y* in Causative Accomplishments, whose thematic role is Patient. Patients increase without external help in the case of Accomplishments such as *wingearðas* 'vineyards' in (3); or, thanks to the action of an initiator in Causative Accomplishments like *hit* 'it', that is the light of day, in (4). On the other hand, initiators fulfill the thematic role of Effector (*x*) in Causative Accomplishments as is the case with *he* 'he' in (4).

Patients are predominantly concrete and countable, such as *bearn* 'child', *blōstm* 'flower', *brēmel* 'bramble', etc. Nevertheless, they can also be fulfilled by abstract nouns like *ād* 'disease, illness', *cnihtād* 'boyhood', and *dēað* 'death', among others; or uncountable nouns like *andleofen* 'food', *bileofa* 'sustenance, food', *corn* 'corn', etc.

As for Effectors, they tend to be human and volitional entities, mostly expressed through personal pronouns or personal names, including *dryhten* 'God, Christ, The Lord', *gāst* 'angel, Holy Ghost' or *God* 'God'.

Turning to semantic macrorole assignment, there are two types which are determined by *Aktionsart* type. Thus, while Accomplishments present Macrorole transitivity 1, the Macrorole transitivity of Causative Accomplishments is 2. The argument *x* is the Undergoer in Accomplishments, whereas in Causative Accomplishments the argument *x* is the Actor and the argument *y* gets the macrorole Undergoer. As can be seen in (5a), *pæt fyr & pæt leg* 'the fire and flame' fulfills the Undergoer macrorole in an Accomplishment; in contrast, *godes muðe* 'the mouth of God' is the Actor and *Adam* 'Adam' receives the Undergoer macrorole of the Causative Accomplishment in (5b).

(5) a. [Bede 2 016800 (7.118.4)]

&	<i>pæt</i>	<i>fyr</i>	&
and:CONJ	that:NOM;SG	fire:NOM;SG	and:CONJ
<i>pæt</i>	<i>leg</i>	<i>swiðe</i>	<i>weox</i>
that:NOM;SG	flame:NOM;SG	very much:ADV	grow:3SG;PST
&	<i>miçlade.</i>		
and:CONJ	increase:3SG;PST		

'And the fire and flame grew and increased much' (Miller, 1959: 119).

BECOME increased' (*pæt fyr & pæt leg*)

b. [GenA,B 033400 (995)]

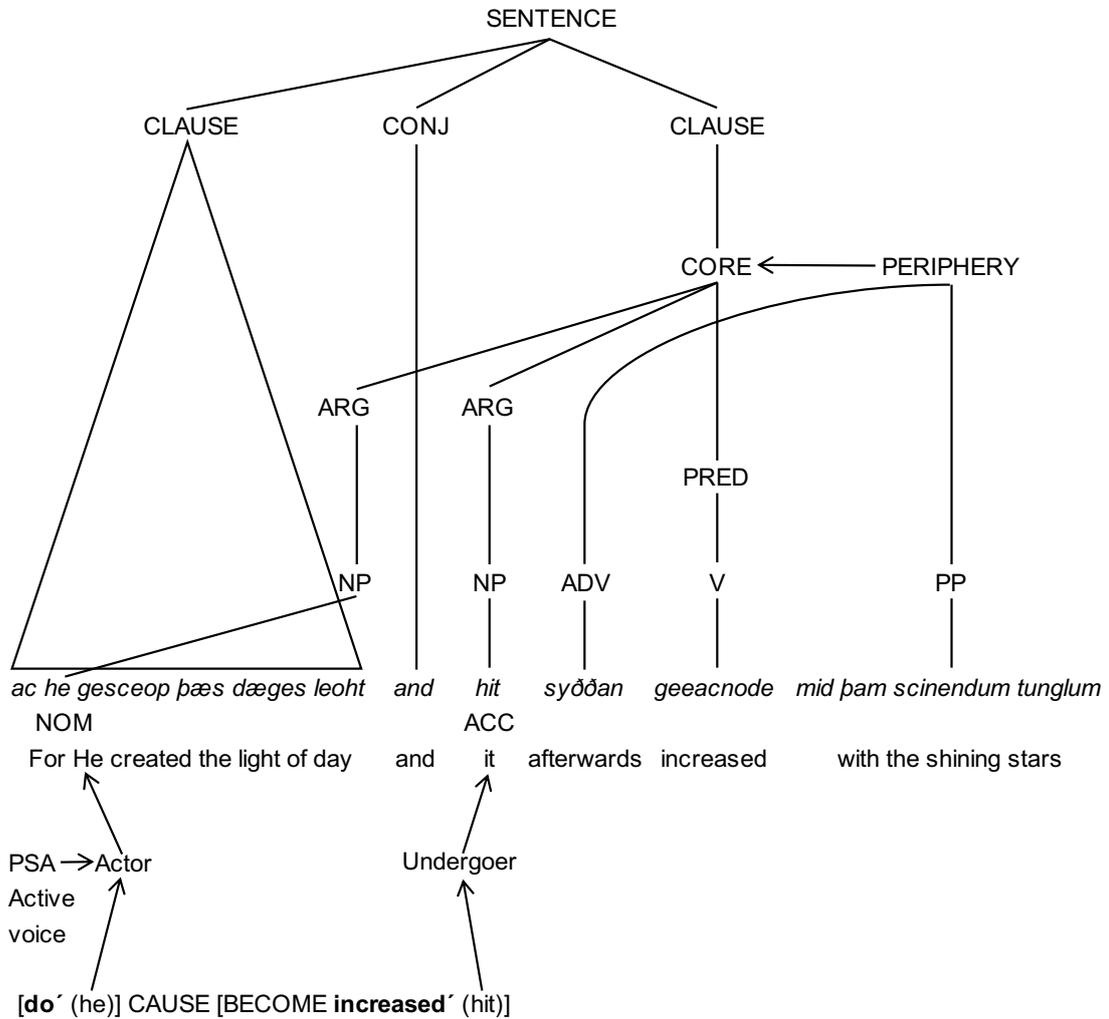
<i>siððan</i>	<i>Adam</i>	<i>wearð</i>	<i>of</i>
after:ADV	Adam:NOM;SG	be:3SG;PST	by:PREP
<i>godes</i>	<i>muðe</i>	<i>gaste</i>	<i>eacen.</i>
God:GEN;SG	mouth:DAT;SG	spirit:DAT;SG	increase:PST;PTCP

'After Adam was increased in spirit by the mouth of God' (Hostetter, 2015b).

[do' (godes muðe)] CAUSE [BECOME increased' (Adam)]

When there is no passivization Causative Accomplishments mostly assign PSA to the Actor, as is illustrated in (7), but Undergoers can enjoy PSA status when the Effector is omitted from the clausal realization of the logical structure.

(7) [Æ Hex 003100 (107)]



(9) [Beo 000400 (6)]

<i>he</i>	<i>bæs</i>	<i>frofre</i>	<i>gebæd,</i>
he:NOM;SG	this:GEN;SG	comfort:ACC;SG	live:3SG;PST
<i>weox</i>	<i>under</i>	<i>wolcnum.</i>	
grow:3SG;PST	under:PREP	sky:DAT;PL	

'He anticipated his remedy, growing hale under the heavens' (Hostetter, 2015a).

[do' (he)] CAUSE [BECOME increased' (∅)]

7. MORPHOLOGICAL CASE, CONSTRUCTIONS AND ALTERNATIONS

In this section the morphological cases taken by the participants found with Old English verbs of increasing are presented as well as the various types of linking. Then, the morpho-syntactic alternations presented by these verbs, namely the Causative Alternation and the Effector Prepositional Government Alternation, are discussed.

The Patient in Accomplishments performs the macrorole Undergoer and mostly takes nominative case, as (10) shows. The Patient can also be inflected for the accusative, genitive or dative. The verbs *ætflōwan*, *āðindan*, *āweaxan*, *ēacan*, *ēacian*, *forðindan*, *forweaxan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)weaxan* and *inweaxan* license nominative case for the Patient; *āðindan*, *ēacian*, *(ge)ēacnian*, *(ge)grōwan* and *(ge)weaxan* select accusative case; *(ge)ēacnian* and *(ge)grōwan* receive a genitive Patient; and *āðindan*, *āweaxan*, *(ge)ēacnian*, *(ge)grōwan*, and *(ge)weaxan* opt for the dative.

(10) [Max I 007200 (158)]

<i>Licgende</i>	<i>beam</i>	<i>læsest</i>	<i>groweð.</i>
lay:PRS;PTCP	tree:NOM;SG	less:ADV	grow:3SG;PRS

'A tree lying flat grows the least' (Hostetter, 2015d).

In turn, the Effector in Causative Accomplishments performs the macrorole Actor and predominantly takes nominative case. Additionally, the Effector receives either the accusative or dative case, but it can also be governed by the prepositions *be*, *from*, *of* and *purh* (in passive constructions). The verbs *ætȳcan*, *āweaxan*, *ēacan*, *forweaxan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)īecan*, *(ge)weaxan*, *tōætȳcan* and *tōgeīecan* select the nominative case as in (11c); *āðindan*, *āweaxan*, *ēacan*, *(ge)ēacnian*, *(ge)grōwan* and *(ge)weaxan* take accusative case, as is shown in (11a); finally, *āweaxan*, *ēacan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)īecan* and *(ge)weaxan* license dative case, as can be seen in (11b).

(11) a. [HomU 18 (BIHom 1) 000800 (15)]

<i>&</i>	<i>from</i>	<i>bisse</i>	<i>halettunge</i>
and:CONJ	through:PREP	this:ACC;SG	greeting:ACC;SG
<i>heo</i>	<i>wæs</i>	<i>geeacnod.</i>	
she:NOM;SG	be:3SG;PST		

'And through this greeting (salutation) she conceived' (Morris, 1967: 2).

b. [Æ Temp 003900 (1.36)]

<i>Seo</i>	<i>is</i>	<i>weaxende</i>	<i>purh</i>
she:NOM;SG	be:3SG;PRS	wax:PRS;PTCP	through:PREP
<i>acennedum</i>	<i>cildum,</i>	<i>&</i>	<i>wanigende</i>
produce:DAT;PL	child:DAT;PL	and:CONJ	lessen:PRS;PTCP
<i>purh</i>	<i>forðfarendum.</i>		
through:PREP	go forth:DAT;PL		

'It is waxing because of children being born, and waning because of those dying' (Blake, 2009: 79).

c. [ÆCHom II, 7 004900 (63.93)]

<i>lc</i>	<i>will</i>	<i>ryman</i>	<i>minne</i>
I:NOM;SG	will:1SG;PRS	clear:INF	I:GEN;SG
<i>bertun.</i>	<i>and</i>	<i>mine</i>	<i>bernu</i>
barton:ACC;SG	and:CONJ	I:GEN;SG	barn:ACC;SG
<i>geeacnian.</i>			
increase:INF			

'I will clear my barton, and enlarge my barns' (Thorpe, 1846: 105).

Patients involved in Causative Accomplishments play the macrorole Undergoer and select nominative exclusively when passivization occurs, as in (11b) and (12a); they can also take accusative, as happens in (11c) and (12b); and, less frequently, dative is selected, as is the case with (12c). The verbs *ætȳcan*, *āðindan*, *āweaxan*, *ēacan*, *forweaxan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)īecan*, *(ge)weaxan* and *tōgeīecan* take a nominative Patient; *ætȳcan*, *āweaxan*, *ēacan*, *forweaxan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)īecan*, *(ge)weaxan* and *tōgeīecan* opt for the accusative; finally, *ætȳcan*, *(ge)ēacnian*, *(ge)weaxan* and *tōgeīecan* license the dative case.

(12) a. [ÆColl 013900 (215)]

&	<i>þas</i>	<i>þingc</i>	<i>ealle</i>
and:CONJ	this:NOM;PL	thing:NOM;PL	all:NOM;PL
<i>beoþ</i>	<i>togehyhte</i>	<i>eow.</i>	
be:PL;PRS	add:PST;PTCP	you:DAT;PL	

'And all these things shall be added unto you' (Swanton, 1975: 113).

b. [Hom Fr II 000400 (11)]

< <i>sibpan</i> >	<i>geong</i>	<i>aweox</i>	<i>mægeð</i>
afterwards:ADV	young:NOM;SG	grow:3SG;PST	maiden:ACC;SG
<i>modhwatu</i>	<i>mid</i>	<i>moncynne.</i>	
brave:ACC;SG	among:PREP	mankind:DAT;SG	

'Afterwards the youth grow up a maiden strong-souled among mankind' (Hostetter, 2015c).

c. [Ch 333 (Rob 11) 000600 (22)]

<i>he</i>	<i>þas</i>	<i>ure</i>	<i>gyfe</i>
he:NOM;SG	this:DAT;SG	we:GEN;SG	gift:DAT;SG
<i>geieacnan</i>	<i>wille</i>	<i>oððe</i>	<i>gemonifældan</i>
increase:INF	will:3SG;PRS	or:CONJ	multiply:INF
<i>wille.</i>			
will:3SG;PRS			

'He will augment or multiply this our gift' (Thorpe, 1865: 125).

Table 1 displays the linkings of thematic role and morphological case and their distribution with Old English verbs of increasing.

Table 1: Linking with Old English verbs of increasing.

Linking	Effector	NOM	Ø	ACC	DAT	ACC	DAT	NOM	Ø	Ø	NOM	DAT	Total	Tokens	
	Patient	NOM	ACC	NOM	ACC	DAT	NOM	NOM	Ø	Ø	GEN	DAT			
Verb	<i>ætflōwan</i>	3											3	3	
	<i>ætȳcan</i>		4	1								1	6	6	
	<i>āðindan</i>	11		19	4	2	1						37	37	
	<i>āweaxan</i>	19	2	1		1	2	1	1				27	27	
	<i>ēacan</i>	4	2	1			1	2					11	11	
	<i>ēacian</i>	1			1									2	2
	<i>forðindan</i>	3												3	3
	<i>forweaxan</i>	3	1	7										11	11
	<i>(ge)ēacnian</i>	33	64	35	2	4	9	5	6	2	2	1		163	169
	<i>(ge)grōwan</i>	68	1		7	6	1	1			2			86	91
	<i>(ge)īecan</i>		2	1				1						4	4
	<i>(ge)weaxan</i>	398	11	8	27	8	2	6	6	1		1		468	492
	<i>inweaxan</i>	2												2	2
<i>tōætȳcan</i>										1			1	1	
<i>tōgeīecan</i>		3	2							1			6	8	
Total	545	90	75	41	21	16	16	13	5	4	3		829	867	

By semantic macrorole, the verbs that assign PSA to the Undergoer in Accomplishments comprise *ætflōwan*, *āðindan*, *āweaxan*, *ēacan*, *ēacian*, *forðindan*, *forweaxan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)weaxan* and *inweaxan*. The Undergoer PSA *æðelinges rice* ‘the prince’s empire’ in (13) is a case in point.

(13) [EI 000400 (12)]

<i>Æðelinges</i>	<i>weox</i>	<i>under</i>	<i>roderum.</i>
prince:GEN;SG	increase:3SG;PST	under:PREP	sky:DAT;PL

‘The prince’s empire increased beneath the skies’ (Bradley, 1982: 165).

Likewise, Undergoers can receive the PSA in Causative Accomplishments when the Effector is not realized in the state of affairs or it is prepositionally governed. *ætȳcan*, *āðindan*, *āweaxan*, *ēacan*, *forweaxan*, *(ge)ēacnian*, *(ge)īecan* and *(ge)weaxan* show this omission and subsequent assignment of PSA to the Undergoer, which is represented by *min mærd* ‘my greatness’ in (14).

(14) [ÆCHom II, 33 006100 (253.128)]

<i>Minewitan</i>	<i>me</i>	<i>sohton.</i>	
my:NOM;PL	counsellor:NOM;PL	I:ACC;SG	seek:PL;PST
<i>and min</i>	<i>mærd</i>	<i>wearð</i>	
and:CONJ	my:NOM;SG	greatness:NOM;SG	be:3SG;PST
<i>geeacnod.</i>			
increase:PST;PTCP			

‘My counsellors sought me, and my greatness was increased’ (Thorpe, 1846: 435).

Besides, the verbs *ætȳcan*, *āweaxan*, *ēacan*, *forweaxan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)īecan*, *(ge)weaxan*, *tōætȳcan* and *tōgeīecan* show instances where the macrorole Actor is the PSA in Causative Accomplishments, as is the case with *we* ‘we’ in (15).

(15) [ÆCHom I, 14.1 008700 (295.152)]

<i>for ðan þe</i>	<i>we</i>	<i>geeacniað.</i>	<i>heora</i>
because:CONJ	we:NOM;PL	increase:PL;PRS	they:GEN;PL
<i>werod.</i>	<i>þe</i>	<i>se</i>	<i>feallenda</i>
host:ACC;PL	that:REL	the:NOM;SG	fall:NOM;SG
<i>deoful</i>	<i>gewanode.</i>		
devil:NOM;SG	lessen:3SG;PST		

‘Because we increase their host which the fallen devil had diminished’ (Thorpe, 1844: 215).

With respect to voice diathesis, the verbs *ætȳcan*, *āðindan*, *āweaxan*, *ēacan*, *forweaxan*, *(ge)ēacnian*, *(ge)īecan*, *(ge)weaxan* and *tōgeīecan* participate in both voice variants, as is exemplified by *(ge)weaxan* in (16), whereas *ætflōwan*, *ēacian*, *forðindan*, *(ge)grōwan*, *inweaxan* and *tōætȳcan* show active voice instances exclusively.

(16) a. [CP (Cotton) 001000 (33.214.22)]

<i>&</i>	<i>æghwelces</i>	<i>lareowes</i>	<i>lar</i>
and:CONJ	every:GEN;SG	teacher:GEN;SG	teaching:NOM;SG
<i>wihst</i>	<i>ðurh</i>	<i>his</i>	<i>geðylde.</i>
grow:3SG;PRS	through:PREP	he:GEN;SG	patience:DAT;SG

‘And the learning of every teacher grows through his patience’ (Sweet, 1871: 216).

b. [ÆCHom I, 19 000100 (325.1)]

<i>Se</i>	<i>hælend</i>	<i>crīst</i>	<i>syððan</i>
the:NOM;SG	saviour:NOM;SG	Christ:NOM;SG	after:ADV
<i>he</i>	<i>to</i>	<i>þisum</i>	<i>life</i>
he:NOM;SG	to:PREP	this:DAT;SG	life:DAT;SG
<i>com.</i>	<i>&</i>	<i>man</i>	<i>wearð</i>
come:3SG;PST	and:CONJ	man:NOM;SG	be:3SG;PST
<i>geweaxen.</i>			
increase:PST;PTCP			

‘Jesus Christ, after he came to this life, and was grown to manhood’ (Thorpe, 1844: 259).

Table 2 tabulates the findings of the previous discussion.

Table 2: Old English verbs of increasing: linking and constructions.

	Aktionsart		Accomplishment				Causative Accomplishment						PSA		Voice		
	Accomplishment	Causative Accomplishment	Patient				Effector			Patient			Actor	Undergoer	Active	Passive	
			NOM	ACC	GEN	DAT	NOM	ACC	DAT	NOM	ACC	DAT					
<i>ætflōwan</i>	X		X											X	X		
<i>ætȳcan</i>		X					X			X	X	X	X	X	X	X	X
<i>ādindan</i>	X	X	X	X		X		X						X	X	X	X
<i>āweaxan</i>	X	X	X			X	X	X	X	X	X		X	X	X	X	X
<i>ēacan</i>	X	X	X				X	X	X	X	X		X	X	X	X	X
<i>ēacian</i>	X		X	X										X	X		
<i>forōindan</i>	X		X											X	X		
<i>forweaxan</i>	X	X	X				X			X	X		X	X	X	X	X
<i>(ge)ēacnian</i>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>(ge)grōwan</i>	X	X	X	X	X	X	X	X	X	X	X		X	X	X		
<i>(ge)īecan</i>		X					X		X	X	X		X	X	X	X	X
<i>(ge)weaxan</i>	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
<i>inweaxan</i>	X		X											X	X		
<i>tōætȳcan</i>		X					X						X		X		
<i>tōgeīecan</i>		X					X			X	X	X	X	X	X	X	X

On the subject of alternations, the verbs that include both *Aktionsart* types and comply with the condition of being found with the Causative Alternation, illustrated by *(ge)ēacnian* in (17), are *ādindan*, *āweaxan*, *ēacan*, *forweaxan*, *(ge)ēacnian*, *(ge)grōwan* and *(ge)weaxan*. For their part, *ætflōwan*, *ēacian*, *forōindan* and *inweaxan* only depict Accomplishments, whereas *ætȳcan*, *(ge)īecan*, *tōætȳcan* and *tōgeīecan* present Causative Accomplishments exclusively.

(17) a. [Lk (WSCp) 001900 (1.24)]

Soðlice *æfter* *dagum* *Elizabeth*
 truly:ADV after:PREP day:DAT;PL Elizabeth:NOM;SG
his *wif* *geeacnode*.
 he:GEN;SG wife:NOM;SG increase:3SG;PST
 ‘And after those days, Elizabeth his wife conceived’ (Douay-Rheims, 1971: 2127).
 BECOME increased’ (*Elizabeth*)

b. [Ch 452 (Birch 735) 000600 (16)]

Se *ðe* *ðysne* *freols*
 the:NOM;SG who:REL this:ACC;SG freedom:ACC;SG
geeacnige *God* *his* *lief*
 increase:SG;SBJV God:NOM;SG he:GEN;SG life:ACC;SG
her *on* *life*.
 here:ADV on:PREP life:DAT;SG
 ‘Whoever shall augment this privilege, may God preserve him here in life’ (Thorpe, 1865: 177).
 [do’ (se) CAUSE [BECOME increased’ (*ðysne freols*)]

Finally, in the Effector Prepositional Government Alternation the Effector alternates nominative with either accusative or dative case governed by the prepositions *be*, *from*, *of* or *purh*. The verbs found with this alternation include *ādindan*, *āweaxan*, *ēacan*, *(ge)ēacnian*, *(ge)grōwan*, *(ge)īecan* and *(ge)weaxan*. This alternation is illustrated by means of *(ge)ēacnian* in (18).

(18) a. [Æ LS (Vincent) 004200 (163)]

and *hi* *þa* *teartan*
 and:CONJ they:NOM;PL the:ACC;PL severe:ACC;PL
wita *mid* *witum* *geeacnodon*.
 punishment:ACC;PL with:PREP punishment:DAT;PL increase:PL;PST
 ‘And they augmented the sharp torments with (new) tortures’ (Skeat, 1966: 437).

b. [E1 011500 (337)]

<i>swa</i>	<i>þæs</i>	<i>modor</i>	<i>ne</i>
so as:CONJ	the:GEN;SG	mother:NOM;SG	not:NEG
<i>bið</i>	<i>wæstmum</i>	<i>geeacnod</i>	<i>þurh</i>
be:3SG;PRS	growth:DAT;PL	increase:PST;PTCP	through:PREP
<i>weres</i>	<i>frige.</i>		
man:GEN;SG	love:ACC;SG		

'Whose mother shall not grow pregnant with offspring through a man's lovemaking' (Bradley, 1982: 173).

Table 3 displays the alternations discussed in this section by verb.

Table 3: Alternations presented by Old English verbs of increasing.

	The Causative Alternation	The Effector Prepositional Government Alternation
<i>ætflōwan</i>		
<i>ætȳcan</i>		
<i>āðindan</i>	X	X
<i>āweaxan</i>	X	X
<i>ēacan</i>	X	X
<i>ēacian</i>		
<i>forðindan</i>		
<i>forweaxan</i>	X	
<i>(ge)ēacnian</i>	X	X
<i>(ge)grōwan</i>	X	X
<i>(ge)īecan</i>		X
<i>(ge)weaxan</i>	X	X
<i>inweaxan</i>		
<i>tōætȳcan</i>		
<i>tōgeīecan</i>		

This said, the preceding analysis turns out the following answers to the research question as to the class membership of increase verbs.

The verbs *āðindan*, *āweaxan*, *ēacan*, *(ge)ēacnian* and *(ge)weaxan* are members of this class as they take part in all the class defining alternations and constructions and almost all of them show a significant number of tokens.

The verbs regarded as potential candidates for class membership are *ætȳcan*, *forweaxan*, *(ge)grōwan*, *(ge)īecan* and *tōgeīecan* given that they participate in at least one or two of the alternations and constructions. Moreover, they present a relatively low number of tokens with the exception of *(ge)grōwan*.

Finally, *ætflōwan*, *ēacian*, *forðindan*, *inweaxan* and *tōætȳcan* do not belong to the verbal class of *increase* since they do not partake in any of the alternations or constructions and, in addition, their number of tokens is rather low.

8. SUMMARY AND CONCLUSIONS

This study has assessed the consistency of the class of Old English verbs of increasing. Two types of conclusions can be drawn from this research. On the theoretical side, the application of RRG to Old English (including *Aktionsart*, semantic macroroles, PSA and linking) has been found particularly adequate to describe syntactic projections on semantic descriptions and, moreover, to combine with other theories, such as the framework of verb classes and alternations, into a remarkably descriptive and explanatory theoretical model. On the descriptive side, this research

is a contribution to the onomasiological organization of the Old English lexicon. The data indicate that *āðindan*, *āweaxan*, *ēacan*, *(ge)ēacnian* and *(ge)weaxan* are the best candidates for membership of the class of increasing verbs. These verbs participate in all the alternations and constructions that have been found relevant for defining this class. Others, like *ætȳcan*, *forweaxan*, *(ge)grōwan*, *(ge)īecan* and *tōgeīecan*, take part in just some of these alternations and constructions. The remaining verbs do not comply with the grammatical behavior of this class. The main conclusion of the article, then, is that Old English verbs of increasing do not constitute a consistent verbal class if meaning components and grammatical behavior are taken into account.

To conclude, the textual distribution and the textual frequency evinced by verbs of increasing, as well as their diachronic evolution, remain pending tasks for future research. Likewise, while the period has been considered as unified, another prospect line of investigation might search for similarities and differences that can be attributed to dialectal variation, or specific works or authors.

REFERENCES

Dictionaries and thesauri

- Bosworth, J. and T.N. Toller. 1973 (1898). *An Anglo-Saxon Dictionary*. Oxford: Oxford University Press.
- Clark Hall, J.R. 1996 (1896). *A Concise Anglo-Saxon Dictionary*. Toronto: University of Toronto Press.
- Healey, A. diPaolo (ed.). (2018). *The Dictionary of Old English in Electronic Form A-I*. Toronto: Dictionary of Old English Project, Centre for Medieval Studies, University of Toronto.
- Kay, C., J. Roberts, M. Samuels, and I. Wotherspoon (eds.). (2009). *Historical thesaurus of the Oxford English dictionary (2 vols.)*. Oxford: Oxford University Press.
- Roberts, J. and C. Kay with L. Grundy. 2000 (1995). *A Thesaurus of Old English (2 vols.)*. Amsterdam: Rodopi.
- Sweet, H. 1976 (1896). *The Student's Dictionary of Anglo-Saxon*. Cambridge: Cambridge University Press.

Corpora and databases

- Healey, A. diPaolo (ed.) with J. Price Wilkin and X. Xiang. (2004). *The Dictionary of Old English Web Corpus*. Toronto: Dictionary of Old English Project, Centre for Medieval Studies, University of Toronto.
- Pintzuk S. and L. Plug. (2001). *The York-Helsinki Parsed Corpus of Old English Poetry* [<http://www-users.york.ac.uk/~lang18/pcorpus.html>].
- Taylor, A., A. Warner, S. Pintzuk, and F. Beths. (2003). *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* [<https://www-users.york.ac.uk/~lang22/YcoeHome1.htm>].
- Martín Arista, J. (ed.), L. García Fernández, M. Lacalle Palacios, A.E. Ojanguren López, and E. Ruiz Narbona. (2016). *NerthusV3. Online Lexical Database of Old English*. Nerthus Project. Universidad de La Rioja [www.nerthusproject.com].

Bibliographical references

- 1971 (1899). *The Holy Bible Translated from the Latin Vulgate (Douay-Rheims Version)*. Tan books and publishers.
- Allen, C. (1995). *Case marking and reanalysis: Grammatical relations from Old to Early Modern English*. Oxford: Clarendon Press.
- Blake, M. (ed. and trans.). (2009). *Ælfric's De Temporibus Anni*. Cambridge: D.S. Brewer.
- Bradley, S.A.J. (1982). *Anglo-Saxon Poetry*. London: J.M. Dent & Sons LTD.
- Campbell, A. (1987). *Old English Grammar*. Oxford: Oxford University Press.
- Denison, D. (1993). *English Historical Syntax: Verbal Constructions*. London: Longman.
- Faber, P. and R. Mairal. (1999). *Constructing a Lexicon of English Verbs*. Berlin: Mouton. <https://doi.org/10.1515/9783110800623>
- Foley, W. and R. Van Valin. (1984). *Functional Syntax and Universal Grammar*. Cambridge: Cambridge University Press.
- García Fernández, L. (2018). *The Lemmatization of the Verbal Lexicon of Old English on a Relational Database. Preterite-Present, Contracted, Anomalous and Strong VII Verbs*. PhD Dissertation. University of La Rioja.
- García García, L. (2019). "The basic valency orientation of Old English and the causative ja-formation: a synchronic and diachronic approach". *English Language and Linguistics*, 24/1, 153-177. <https://doi.org/10.1017/S1360674318000345>
- García Pacheco, C.L. (2013). *Los verbos de sentimiento en inglés antiguo: Arquitectura léxica e interfaz semántica-gramática*. PhD Dissertation. University of La Laguna.

- García Pacheco, L.M. (2013). *El dominio verbal de la existencia en anglosajón. Análisis semántico-sintáctico*. PhD Dissertation. University of La Laguna.
- Hogg, R.M. and R.D. Fulk. (2011). *A Grammar of Old English. Volume 2: Morphology*. Oxford: Blackwell. <https://doi.org/10.1002/9781444327472>
- Hostetter, A.K. (2015a). *Beowulf*. Rutgers. Retrieved from <https://oldenglishpoetry.camden.rutgers.edu/beowulf/>
- Hostetter, A.K. (2015b). *Genesis A & B*. Rutgers. Retrieved from <https://oldenglishpoetry.camden.rutgers.edu/genesis-ab/>
- Hostetter, A.K. (2015c). *Homiletic Fragments*. Rutgers. Retrieved from <https://oldenglishpoetry.camden.rutgers.edu/homiletic-fragments/>
- Hostetter, A.K. (2015d). *Maxims I*. Rutgers. Retrieved from <https://oldenglishpoetry.camden.rutgers.edu/maxims-i/>
- Kastovsky, D. (1992). "Semantics and Vocabulary". In R. Hogg (ed.), *The Cambridge History of the English Language I: The Beginnings to 1066*. Cambridge: Cambridge University Press, 290-408. <https://doi.org/10.1017/CHOL9780521264747.006>
- Levin, B. (1993). *English Verb Classes and Alternations*. Chicago: University of Chicago Press.
- Martín Arista, J. (2000a). "Syntax medieval inglesa I: complementación, caso y sintaxis verbal". In I. de la Cruz Cabanillas and J. Martín Arista (eds.), *Lingüística histórica inglesa*. Barcelona: Ariel, 224-312.
- Martín Arista, J. (2000b). "Syntax medieval inglesa II: funciones, construcciones y orden de constituyentes". In I. de la Cruz Cabanillas and J. Martín Arista (eds.), *Lingüística histórica inglesa*. Barcelona: Ariel, 313-377.
- Martín Arista, J. (2012). "Lexical database, derivational map and 3D representation". *Revista Española de Lingüística Aplicada* (Extra 1), 119-144.
- Martín Arista, J. (2013). *Nerthus. Lexical Database of Old English: From Word-Formation to Meaning Construction*. Lecture delivered at the English Linguistics Research Seminar (Centre for Research in Humanities), University of Sheffield.
- Martín Arista, J. (2017). "El paradigma derivativo del inglés antiguo". *Onomazein*, 37, 144-169. <https://doi.org/10.7764/onomazein.37.05>
- Martín Arista, J. (2018). "The semantic poles of Old English: Toward the 3D representation of complex polysemy". *Digital Scholarship in the Humanities*, 33/1, 96-111. <https://doi.org/10.1093/llc/fqx004>
- Martín Arista, J. (2020). "Old English Rejoice verbs. Derivation, grammatical behaviour and class membership". *Poetica*, 93, 133-153.
- Martín Arista, J. and F. Cortés Rodríguez. (2014). "From directionals to telics: meaning construction, word-formation and grammaticalization in Role and Reference Grammar". In M.A. Gómez González, F. Ruiz de Mendoza Ibáñez and F. González García (eds.), *Theory and Practice in Functional-Cognitive Space*. Amsterdam: John Benjamins, 229-250. <https://doi.org/10.1075/sfsl.68.10mar>
- McLaughlin, J. (1983). *Old English syntax: a handbook*. Tübingen: Max Niemeyer Verlag. <https://doi.org/10.1515/9783111411590>
- Metola Rodríguez, D. (2015). *Lemmatization of Old English Strong Verbs on a Lexical Database*. PhD Dissertation. University of La Rioja.
- Miller, T. (ed. and trans.). 1959 (1890). *The Old English Version of Bede's Ecclesiastical History of the English People. Part I, 1*. Oxford: Oxford University Press.
- Mitchell, B. (1985). *Old English Syntax (2 vols.)*. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198119357.001.0001>
- Möhlig-Falke, R. (2012). *The Early English Impersonal Construction. An Analysis of Verbal and Constructional Meaning*. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199777723.001.0001>
- Moléncki, R. (1991). *Complementation in Old English*. Katowice: Uniwersytet Śląski.
- Morris, R. (ed.). 1967 (1874). *The Blicking Homilies*. Oxford: Oxford University Press.
- Norman, H. (1849). *The Anglo-Saxon Version of the Hexameron of St. Basil*. London: John Russell Smith.
- Ogura, M. (1986a). *Old English 'Impersonal' Verbs and Expressions*. Copenhagen: Rosenkilde and Bagger.
- Ogura, M. (1986b). Old English Verbs of Thinking. *Neophilologische Mitteilungen* 87 (3): 325-341.
- Ogura, M. (1989). *Verbs with the Reflexive Pronoun and Constructions with SELF in Old and Early Middle English*. Cambridge: D.S. Brewer.
- Ogura, M. (2002). *Verbs of Motion in Medieval English*. Cambridge: D.S. Brewer.
- Ogura, M. (2008). Old English Verbs of Tasting with Accusative/Genitive/Of-Phrase. *Neophilologus*, 92/3, 517-522. <https://doi.org/10.1007/s11061-007-9098-0>
- Ogura, M. (2013). *Words and Expressions of Emotion in Medieval English*. Frankfurt am Main: Peter Lang. <https://doi.org/10.3726/978-3-653-02780-8>
- Ogura, M. (2018). *Periphrases in Medieval English*. Berlin: Peter Lang. <https://doi.org/10.3726/b14460>

- Ojanguren López, A.E. (2019a). *The Classes of Old English Inaction Verbs. Linking, Alternations and Constructions*. PhD Dissertation, University of La Rioja.
- Ojanguren López, A.E. (2019b). "Old English verbs of prohibition. Grammatical behaviour and class membership". *SELIM* 24/1, 1-28. <https://doi.org/10.17811/selim.24.2019.1-28>
- Ojanguren López, A.E. (2020). The Semantics and Syntax of Old English End Verbs. *Atlantis*, 42/1, 163-188. <https://doi.org/10.28914/Atlantis-2020-42.1.09>
- Ojanguren López, A.E. (Forthcoming). Interclausal relations with Old English verbs of inaction. Synchronic variation and diachronic change. *Revista Española de Lingüística Aplicada*.
- Ono, S. (1989). *On Early English syntax and vocabulary*. Tokyo: Nan'un-do.
- Penttilä, E. (1956). *The Old English verbs of vision: A semantic study*. Helsinki: Société Néophilologique.
- Quirk, R. and Wrenn, C.L. 1994 (1955). *An Old English Grammar*. DeKalb, Illinois: Northern Illinois University Press.
- Ruiz Narbona, E. (2018). *Transitivising Formations in Competition? Lability and the Effects of Preverbs on Old English Causative Oppositions*. PhD Dissertation, University of La Rioja.
- Skeat, W.W. (ed.) 1966 (1890). *Ælfric's Lives of Saints. Volume II*. Oxford: Oxford University Press.
- Swanton, M. (ed. and trans.). (1975). *Anglo-Saxon Prose*. Guilford, Surrey, UK: Dent & Sons LTD.
- Sweet, H. (ed.). (1871). *King Alfred's West-Saxon Version of Gregory's Pastoral Care*. London: Trübner & Co.
- Thorpe, B. (ed. and trans.). (1844). *The Homilies of the Anglo-Saxon Church. Volume I*. London: Red Lion Court.
- Thorpe, B. (ed. and trans.). (1846). *The Homilies of the Anglo-Saxon Church. Volume II*. London: Red Lion Court.
- Thorpe, B. (ed. and trans.). (1865). *Diplomatorium Anglicum Ævi Saxonici. A Collection of English Charters*. London: Macmillan & Co.
- Timofeeva, O. (2010). *Non-finite constructions in Old English*. PhD Dissertation. University of Helsinki.
- Tío Sáenz, M. (2019). *The Lemmatisation of Old English Weak Verbs on a Relational Database*. PhD Dissertation. University of La Rioja.
- Traugott, E.C. (1992). "Syntax". In R. Hogg (ed.), *The Cambridge History of the English Language I: The Beginnings to 1066*. Cambridge: Cambridge University Press: 168-289. <https://doi.org/10.1017/CHOL9780521264747.005>
- Van Valin, R. (2005). *Exploring the Syntax-Semantics Interface*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511610578>
- Van Valin, R. (2014). *Some questions concerning accomplishments*. Lecture delivered at the 2014 Symposium on Verbs, Clauses and Constructions, held at the University of La Rioja.
- Van Valin, R. and R. LaPolla. (1997). *Syntax: Structure, meaning and function*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781139166799>
- Vendler, Z. 1967 (1957). *Linguistics in philosophy*. Ithaca: Cornell University Press. <https://doi.org/10.7591/9781501743726>
- Visser, F. (1963-1973). *An Historical Syntax of the English Language* (4 vols.). Leiden: Brill.
- Weman, B. (1933). *Old English semantic analysis and theory: with special reference to verbs denoting locomotion*. Lund: A.-b. P. Lindstedts univ.-bokhandel.

APPENDIX 1. VERBAL TYPES AND TOKENS

The inventory of verbs selected for this study is presented below. The number of inflectional forms (tokens) per verb (type) is given between brackets.

ætlōwan (3): *ætflowan* (1), *ætflowon* (2).

ætȳcan (6): *ætece* (1), *ætecte* (3), *ætecton* (1), *otectun* (1).

āðindan (37): *aðindað* (1), *aðinden* (1), *aðint* (2), *aðunde* (1), *aðunden* (6), *aðundene* (3), *aðundnan* (1), *aðundne* (1), *aþindað* (2), *aþunden* (8), *aþundena* (1), *aþundenan* (1), *aþundene* (6), *aþundeno* (1), *aþundenum* (2).

āweaxan (27): *auexe* (1), *aweaxað* (1), *aweaxen* (7), *aweaxene* (1), *aweaxeð* (2), *aweox* (7), *aweoxe* (1), *aweoxð* (1), *awexe* (1), *awexene* (1), *awox* (4).

ēacan (11): *eacan* (3), *eacen* (5), *ecanne* (1), *geiecd* (2).

ēacian (2): *eakiað* (1), *eaciende* (1).

forðindan (3): *forþunden* (3).

forweaxan (11): *forweahsan* (1), *forweaxe* (1), *forweaxen* (5), *forweoxen* (1), *forwexen* (3).

(ge)ēacnian (169): *æcniendes* (1), *eacnade* (1), *eacnað* (3), *eacnian* (1), *eacniend* (1), *eacniende* (5), *eacniendis* (1), *eacniendra* (1), *eacniendum* (3), *eacnigende* (3), *eacnigendes* (1), *eacnigendum* (1), *eacnude* (1), *geæcnað* (1), *geecna* (1), *geecnad* (5), *geecnade* (2), *geecnast* (3), *geecnað* (16), *geecnap* (3), *geecniæn* (1), *geecnian* (15), *geecniad* (5), *geecnie* (2), *geecniendan* (1), *geecnienne* (1), *geecnige* (5), *geecnod* (37), *geecnodan* (1), *geecnode* (32), *geecnoð* (2), *geecnodest* (1), *geecnodon* (4), *geecnodost* (1), *geecnande* (1), *geecnað* (1), *geecneð* (1), *geecnod* (1), *geieacnan* (1), *geiecnað* (1), *giecnade* (1).

(ge)grōwan (91): *gegrew* (1), *gegrewð* (1), *gegrowan* (2), *gegrowen* (1), *greow* (4), *greowan* (1), *greowon* (3), *grewð* (9), *growað* (7), *growan* (12), *growap* (1), *growe* (4), *groweð* (10), *growende* (27), *growendes* (2), *growendra* (3), *growendum* (3).

(ge)īecan (4): *geieced* (2), *iecan* (1), *iecað* (1).

(ge)weaxan (492): *geweaxan* (1), *geweaxað* (1), *geweaxap* (1), *geweaxe* (7), *geweaxen* (14), *geweaxene* (2), *geweaxeð* (3), *geweaxeþ* (2), *geweox* (13), *geweoxe* (1), *gewexð* (1), *wæx* (3), *wæxende* (2), *weahsan* (1), *weax* (8), *weaxæð* (2), *weaxæn* (1), *weaxænde* (1), *weaxan* (54), *weaxat* (1), *weaxað* (33), *weaxap* (6), *weaxe* (32), *weaxeð* (20), *weaxen* (5), *weaxendan* (4), *weaxende* (38), *weaxendes* (4), *weaxendum* (6), *weaxene* (1), *weaxet* (1), *weaxeþ* (12), *weaxst* (2), *weaxð* (4), *weox* (107), *weoxan* (3), *weoxe* (6), *weoxon* (21), *weoxsen* (1), *weoxson* (1), *wexan* (11), *wexanne* (1), *wexe* (1), *wexende* (17), *wexendum* (4), *wexeð* (2), *wexeþ* (4), *wiexð* (2), *wihst* (2), *woxon* (1), *wyxt* (4), *wyxt* (12), *wyxd* (3), *wyxp* (2).

inweaxan (2): *inwæxað* (1), *inwyxd* (1).

tōætȳcan (1): *toætyhte* (1).

tōgeīecan (8): *togeece* (3), *togeeced* (1), *togeece* (1), *togehyhte* (1), *togeihte* (2).