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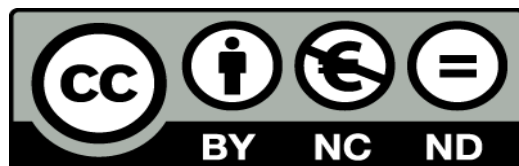
## TESIS DOCTORAL

| Título |
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| **The semantic map of verbal troponymy and *aktionsart* of old English lexical paradigms based on strong verbs** |

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**The semantic map of verbal troponymy and *aktionsart* of old English lexical paradigms based on strong verbs**, tesis doctoral
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# THE SEMANTIC MAP OF VERBAL

# TROPONYMY AND *AKTIONSART*

# OF OLD ENGLISH LEXICAL PARADIGMS

# BASED ON STRONG VERBS

Luisa Fidalgo Allo

2016

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Luisa Fidalgo Allo

PhD Dissertation

Supervised by Prof. Javier Martín Arista

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*To my family*

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Chapter 4

# Chapter 1
# Introduction

## 1.1. Relevance and aims of the undertaking

This thesis deals with the semantics of the Old English verb. Therefore, it contributes to an area of the linguistics of Old English to which less attention has been paid than to other aspects of this language, such as phonology, morphology and syntax. To a certain extent, this PhD dissertation also engages in word-formation, given that the point of departure of the analysis is the derivation of verb from verbal primes. In this respect, this work contributes to an area that has made more advances than semantics but still calls for further research. Kastovsky (1992a) points out that an exhaustive study of the Old English lexicon in general and word-formation in particular is still pending and acknowledges the difficulty of carrying out such a study because the data combine synchronic and diachronic facts (the outcome of word-formation processes remain for a long time in the lexicon even though the word-formation that created them is no longer operative).

An extensive revision of the available bibliography of Old English semantics turns out three main types of works. In the first place, a significant number of publications deal with different areas of the vocabulary of the language, thus plants (Bierbaumer 1975, 1976, 1979; Voigts 1979), weapons (Keller 1967), fish (Köhler 1906), coins (Matzerath 1912), dress (Owen-Crocker 1986), ship building (Thier 2002; Schnepper 2013), insects (Van Zandt Cortelyou 1906), birds (Whitman 1898), mammals (Whitman 1899). Secondly, some words present and organise certain semantic fields of the language like the semantic fields of disgrace and dishonour (Lohmander 1981), mind (Low 2001), emotion (Ogura 2013), pride (Schabram 1973) and theft (Schwyter 1996). Finally, a few works focus on a class of verbs like verbs of vision (Penttilä 1956), verbs of motion (Weman 1933; Ogura 2002) and verbs of tasting (Ogura 2008).

This review shows that, along with the limited number of works engaging in the semantics of Old English, the category of the verb as such as well as the organization of the verbal category have not been a priority of the linguistic research of Old English. While it is clear that the semantics of the Old English verb in general requires more attention, it is not obvious what the starting point of a study in Old English verbal semantics should be. In this respect, it is necessary to look at the border between grammar and semantics so as to describe the state of the art of scholarly research in this area more clearly and to define the aims of this research with respect to the state of the art in the field.

The study of Old English morphology and semantics carried out by Kastovsky (1968, 1971, 1986, 1989a, 1989b, 1990, 1992a, 1992b, 1999, 2001, 2002, 2006) has been continued in four directions: morphological analysis (García García 2012, 2013; González Torres 2010a, 2010b; Novo Urraca and Pesquera Fernández 2015; Ojanguren López 2014; Torre Alonso 2011a, 2011b; Torre Alonso and Metola Rodríguez 2014), semantic analysis of primes (Guarddon Anelo 2009; Martín Arista and Martín de la Rosa 2006; Mateo Mendaza 2013, forthcoming-a, forthcoming-b), analysis of lexical functions (Martín Arista and Vea Escarza 2016; Vea Escarza 2012, 2013, fc-a) and paradigmatic morphology (Martín Arista 2008, 2009, 2010, 2011a, 2011b, 2012a, 2012b, 2014; Novo Urraca 2015, fc.-a, fc.-b).

Given its relevance for an analysis of the semantics of Old English, the work by Vea Escarza (2012, 2013, fc-a) must be reviewed in this section. Vea Escarza develops a framework of lexical functions that explains the change of meaning caused by the word-formation processes of prefixation and suffixation in Old English. Her data comprise a total of of 4,370 affixed nouns and 3,218 affixed adjectives, retrieved from the lexical database of Old English *Nerthus*. The framework of lexical functions is inspired in structural-functional linguistics. The structural basis is provided by paradigmatic morphology and the functional foundations draw on functional theories. The framework of lexical functions consists of the functions themselves as well as a set of semantic categories or macrofunctions that are applicable to the formation of Old English nouns and adjectives by affixation. For example, the lexical function Pejorative is assigned in an instance like PEJ('DǢD 1'): *misdǣd* 'misdeed', while Intensifier is the function applied in an instance such as INTENS('MIHT 1'): *eallmiht* 'omnipotence'. For its part, the semantic category DEGREE is a generalization over the lexical functions INTENS('X') (Intensifier) and MIT('X') (Mitigator). Vea Escarza (2012, 2013, fc-a) assesses the semantic compatibility of Old English affixation on the basis of the possibility of adding new categories to others already present in a derivative. For example, the semantic category **RANK** can only be assigned to derivatives displaying a figurative meaning, as in *undertōdal* 'secondary division'. Similarly, the semantic category **FIGURATIVE** can exclusively be assigned to derived nouns or adjectives that express **QUALITY**, as in *līnenweard* 'clad in linen'. **DEGREE** can only be assigned to derivatives that display **DEGREE** (as in *healfsinewealt* 'semicircular').

Both the analysis of lexical functions proposed by Vea Escarza and the study in paradigmatic morphology conducted by the authors cited above are based on the model of morphology adopted in the work by Trips (2009), who gathers together all the derivatives that share a lexeme and accounts for the relations that hold in the lexical paradigm by means of rules and operations. For example, the lexical paradigm of the adjective *glēaw* 'penetrating, keen, prudent, wise, skilful; good' (Novo Urraca 2015: 61) includes the nouns *gereordglēawnes* 'skill in singing', *glēawnes* 'wisdom, prudence, skill, penetration; diligence; sign, token', *glēawscipe* 'wisdom, thoughtfulness, diligence; proof, indication, test', *unglēawnes* 'folly, ignorance', *unglēawscipe* 'folly'; the adjectives *ǣglēaw* 'learned in the law', *cræftglēaw* 'skilful, wise', *ferhðglēaw* 'wise, prudent', *foreglēaw* 'foreseeing, provident, wise, prudent', *frēaglēaw* 'very wise', *glēawferhð* 'prudent', *glēawhȳdig* 'thoughtful, wise, prudent', *glēawhycgende* 'thoughtful, wise, prudent', *glēawlic* 'wise, prudent, skilful, diligent', *glēawmōd* 'wise, sagacious', *hreðerglēaw* 'wise, prudent', *hyrgeglēaw* 'prudent in mind', *mōdglēaw* 'wise', *steorglēaw* 'clever at astronomy', *unglēaw* 'ignorant, foolish, unwise', *wordglēaw* 'skilful in words'; and the adverbs *foreglēawlīce* 'providently, prudently', *glēawe* 'wisely, prudently, well' *glēawlīce* 'prudently, wisely, clearly, well', *unglēawlīce* 'unwisely, imprudently'. Such a set of lexical items or lemmas is called a *derivational paradigm* and its base of derivation is the *primary adjective*.

The analysis of the derivation within the paradigm is gradual (Martín Arista 2008, 2009, 2010, 2011a, 2011b, 2012a, 2012b, 2014; Novo Urraca 2015, fc.-a, fc.-b). This means that a maximum of one affix is attached by a given process. For instance, the noun *unglēawscipe* 'folly' is the result of the stepwise attachment of the prefix un- and the suffix -scipe. Therefore, whereas some derivatives like *glēaw > glēawlīce* can be directly related to the base of derivation, thus representing instances of non-recursive derivation, others, like *unglēawscipe* 'folly', call for intermediate derivational steps from the base of derivation of the paradigm and involve recursive derivation (Novo Urraca 2015: 62). The analysis of derivation within the paradigm is also panchronic (Martín Arista 2012b). The term panchronic must be understood as the inclusion into the paradigm not only of the processes that are formally transparent on the synchronic axis but also of the processes that are no longer transparent on the synchronic axis and have to be explained with reference to the diachronic axis. For example, the noun *byrst* 'loss, calamity, injury, damage, defect', the verb *tōberstan* 'to burst apart' and the adjective *byrstig* 'broken, rugged' belong to the derivational

paradigm of the strong verb *berstan* 'to break, burst, fail, fall; escape; break to pieces'. However, while the prefixed *tōberstan* 'to burst apart' and the suffixed *byrstig* 'broken, rugged' are the product of processes transparent from the point of view of, at least, the form, the zero derived noun *byrst* 'loss, calamity, injury, damage, defect' cannot be formed in a productive way with the processes available on the synchronic axis. In other words, the panchronic analysis includes synchronic transparency and opacity.

With the state of the art and background presented above, the aim of this PhD dissertation is to draw a semantic map of the verbal derivatives from Old English strong verb primes. This aim requires description of the derivational paradigms of strong verbs, which has been provided by the lexical database of Old English *Nerthus*, and the analysis of the semantic relations that hold between primitive and derived verbs. As has been explained above, Vea Escarza (2012, 2013, fc-a) has proposed a set of lexical functions and applied them to the derivation of nouns and adjectives, thus leaving the class of verbs for future research. This is the starting point of this research. Considering that the class of verbs is semantically different from the noun and the adjective, this PhD dissertation aims at carrying out an analysis of two intrinsic characteristics of verbs, troponymy and *Aktionsart*. The results of this analysis will be represented in the semantic map of each paradigm and, as a conclusion, in a general semantic map of the troponymy and *Aktionsart* of the Old English verbal lexicon. Throughout the analysis, emphasis will be made on the connections between the two phenomena.

The data of analysis have been provided by the lexical database of Old English *Nerthus* (Martín Arista et al. 2016) and comprise 328 lexical primes and 1181 verbs that belong to the lexical paradigms based on the 328 lexical primes. A total of 1509 verbs have been analysed. This represents all strong verb primes and about 1/5 of the verbal lexicon. The remaining 4/5 of the verbs in the lexicon of Old English are not morphologically related to the paradigms under analysis and have been disregarded. In practice, most of the verbs selected for the analysis are strong verbs derived from other strong verbs, such as *bedrīfan* 'to beat', *eftādrīfan* 'to reject', *eftfordrīfan* 'to drive away', which belong to the derivational paradigm of *drīfan* 'to drive'.

**1.2. Overview of chapter content**

The overview of chapter content is as follows. Chapter 2 discusses the theoretical and descriptive aspects relevant for an analysis of the semantics of the verbal lexical paradigms of Old English that can be implemented in a semantic map. The theoretical part of the chapter includes an overview of the main schools, trends and advances of Semantics, a review of lexical functions as a means of explaining the paradigmatic and syntagmatic relations of the lexicon, a discussion of troponymy within the wider context of FrameNet, a review of the typology of *Aktionsart* or internal aspect of the verb. The descriptive part of this chapter addresses three questions: the paradigmatic analysis of lexical and morphological relations, the word-formation processes of zero derivation, affixation and compounding and the lexical functions that apply in the formation of nouns and adjectives by means of affixation in Old English.

Chapter 3 presents the methodology of this thesis. As regards the theoretical background, it is necessary to determine how to apply verbal troponymy and the *Aktionsart* of verbs in Role and Reference Grammar to this research. This entails, for instance, to decide what the differences beween the use of theoretical notions and terms made in this work and standard use are; or what additional theoretical notions are required to carry out the analysis. This chapter also introduces the methodology of semantic maps. The form and function of maps are discussed in order to select a type of map suitable for the research in progress. Afterwards, two types of principles of analysis are presented. The most important general principle is the one that stipulates that, since language is a complex network of relations that hold between related nodes, in order to represent the complexities of troponymy and *Aktionsart* in lexical paradigms it is advisable to draw a semantic map that incorporates graph theory. The specific principles of analysis specify the application of troponymy and *Aktionsart.* These principles are implemented by means of a system of visual representation. Finally, the data of analysis, including the bases and the derivatives of the verbal lexical paradigms of Old English are presented.

The analysis of this dissertation is presented in chapter 4. It offers the semantic maps of the 328 lexical paradigms of Old English that are based on strong verbs. In the semantic map of each paradigm, meanings are assembled into synsets. The primitive is placed in the centre of the diagram and the synsets resulting from the different meanings of the primitive verb are linked by means of the conceptual-semantic relations of troponymy, -troponymy, synonymy, backward presupposition,

cause and opposition. Synsets also display the corresponding *Aktionsart* type according to the taxonomy of *Aktionsart* types: states, activities, accomplishments, achievements, unbounded processes, semelfactives, active accomplishments, causative states, causative activities, causative accomplishments, causative achievements, causative unbounded processes, causative semelfactives and causative active accomplishments. The semantic maps are provided in CD-ROM format, as independent files that can be opened with Adobe Acrobat Reader. Then, the results of the analysis are presented and discussed by semantic relation (troponymy, -troponymy, synonymy, backward presupposition, cause and opposition) and also with respect to *Aktionsart*.

To close this work, chapter 5 summarizes the main findings of the research and draws its conclusions. After a summary, the main problems and solutions are discussed and conclusions are drawn from three perspectives, theoretical, methodological and descriptive. To conclude, some lines of future research are outlined that have to do with classes different from the strong verb and the *Aktionsart* taxononmy.

# Chapter 2

# The semantic and lexical basis of analysis

**2.1. Introduction**

This chapter presents the synthetic part of the thesis, which consists of the theoretical and descriptive aspects relevant for an analysis of the semantics of the verbal lexical paradigms of Old English implemented in a semantic map. Section 2.2 offers an overview of the field of Semantics and makes some remarks of the main schools, trends and advances which provide the background for the rest of the chapter. Section 2.3 deals with lexical functions as a means of explaining the paradigmatic and syntagmatic relations that hold in the lexicon. Section 2.4 focuses on the semantic analysis of verbs by discussing two interrelated proposals, FrameNet and troponymy, or the relations that underlie verbal hierarchies and are comparable to those based on hyponymy which are relevant, above all, for the non-verbal classes of nouns and adjectives. Section 2.5 concentrates on *Aktionsart* or the internal aspect of verbs. Since different versions of verbs are derived from one another by means of lexical rules, the position adopted here is that *Aktionsart* distinctions can also relate a given verb to a different one. Then, section 2.6 puts the focus on Old English specifically with a view to summarising the state of the art of the lexical and semantic aspects relevant for this work. Three questions are raised: the paradigmatic analysis of lexical and morphological relations, the word-formation processes of zero derivation, affixation and compounding and the lexical functions that apply in the derived nouns and adjectives of Old English. The application of verbal troponymy and the *Aktionsart* of verbs in Role and Reference Grammar to this research is discussed in chapter 3.

**2.2. The wider context of Semantics**

This overview of Semantics is based on Geeraerts (2010). For this author, historical-philological semantics is the first framework in the history of lexical semantics and is usually associated with the beginning of the nineteenth century. This framework is characterized by its focus on the semantic evolution of words and the psychological conception of meaning. Regarding the first aspect, a distinction is made between semasiological mechanism, used for providing existing words with new meanings and onomasiological mechanisms, which code a new term for naming an existing concept. In this framework two different models for the classification of semantic change are distinguished: lexicogenetic mechanisms like clipping, blending or borrowing; and processes such as specialization, generalization, metonymy and metaphor, emotive meaning changes (pejorative or ameliorative changes) and semantic calques.

Structuralist Semantics developed in the 1930s on the basis of language as a system, in which relations are more important than the elements of the system. According to Geeraerts (2010: 52), three main approaches emerge within this framework. Lexical field theory rejects the idea that words are isolated entities, they are rather arranged in sets of semantically related words, in such a way that lexical fields imply a conception of language as an intermediate stage between the mind and the external world. Componential analysis is a structural approach that is based on restricted sets of conceptual building blocks, known as semantic components or features, which appear in mutual opposition. The third approach, relational semantics put the focus on lexical relations such as synonymy and antonymy.

Generativist Semantics, for Geeraerts (2010: 101), represents a combination of a structuralist method of analysis, a formalist system of semantic description and a mentalist conception of meaning that lead to an interest in psychological adequacy. Within this framework, computational semantics and formal semantics constitute the two tools that contributed to the formalization of the semantics of natural language. The main contribution of componential analysis was the representation of the different meanings of a word in a formalized dictionary as part of a formal grammar. Two semantic components can be distinguished in this representation: markers, the systematic part of the meaning of a word and distinguishers, or the idiosyncratic aspect of the word.

Cognitive Semantics, which started in the 1980s, conceives language in the larger context of cognition. Language use is the methodological basis of linguistics in this framework, in such a way that the distinction between semantics and pragmatics is no longer necessary. The main contributions of this approach to the study of word meaning are the prototype model of categorization, conceptual metaphor and metonymy and idealized cognitive models and frames, which represent a structured set of beliefs and expectations that rule cognitive processing and the use of language.

Neostructuralist Semantics (Geeraerts 2010: 124) is a framework that comprises various contemporary approaches that combine componential analysis and cognitive semantics. The three main trends are Wierzbicka's Natural Semantic Metalanguage, Jackendoff's conceptual semantics and Pustejovsky's Generative Lexicon. Wierzbicka's Natural Semantic Metalanguage constitutes an attempt to establish an inventory of universal primitives. Conceptual semantics conceives meanings from a strictly linguistic point of view. Furthermore, meanings are entirely

conceptual, that is, there is no explicit link between meaning and extralinguistic knowledge. The Generative Lexicon is for Geeraerts (2010: 147) *the most elaborate formalized componential model in contemporary semantics*. The main interest is in the description of regular polysemy, that is, the presence of polysemous patterns in the lexicon.

The WordNet Project and Mel'čuk's Meaning-Text Theory, according to Geeraerts (2010), also belong to the trend of Neostructuralist Semantics. WordNet (https://wordnet.princeton.edu/wordnet/) is a database, originally for English but also extended to other languages, used for establishing sense relations. Nouns, verbs, adjectives and adverbs are organized in sets of synonyms (synsets). The lexical items that partake of the synsets and the synsets themselves are linked by sense relations. For example, the noun *chair* is represented on WordNet like this (Geeraerts 2010: 158-9): *a seat for one person-professorship, chair- president, chairman, chairwoman, chair, chairperson-electric chair, chair, death chair, hot seat.*

Meaning-Text Theory identifies lexical functions between words rather than general semantic relations. This theory was applied to Russian and French in the first place and consists of more than sixty lexical functions that appear in the *Explanatory Combinatorial Dictionary*, whose entries consist of the analytical definition in propositional form and a list of lexical functions in which the word participates. This research tradition is characterized by its usage-based methodology, the central role of collocation and its technological background. The framework of lexical functions is presented in more detail below.


### 2.3. Lexical function relations

This section draws on Wanner´s (1996) review of Mel'čuk´s Meaning-Text Theory and on Mel'čuk (1996). According to Mel'čuk (1996: 37) there are two types of lexical choices involved in the process of production of text: most lexical units are selected strictly according to their meaning, i.e. independently of the choice of other lexical units. These are semantically-driven choices. But there are other lexical units that are selected contingent to other lexical units, such that their own meaning may be disregarded. Thus, the speaker looks for such lexical units in his lexical storage based on some other lexical units that they have already chosen.

Lexical Functions systematically describe institutionalized lexical relations. A lexical relation is institutionalized if there is an automatic choice, as in *aircraft* and

*crew*, *sheep* and *flock*, etc. Institutionalized lexical relations are also characterized by being language-specific, in the sense that each language uses different mechanisms to create these relations; by their asymmetrical nature, meaning that the relation between *aircraft* and *crew* is not the same as that between *crew* and *aircraft*; and by their impact in the field of human and computational lexical studies.

These lexically-driven choices are carried out along the two major linguistic axes: the paradigmantic axis and the syntagmatic axis. Lexical function relations, therefore, can be paradigmatic and syntagmatic (Wanner 1996; 2). Paradigmatic lexical function relations include sense relations, syntactic paradigmatic relations and argument roles. Syntagmatic lexical relations include free combinations and non-free combinations. Both types of relations are relevant for this work. While troponymy is under the scope of sense relations, the lexical derivation on which the lexical paradigms under analysis are based involves a set of syntagmatic relations between the bases and the derivatives that belong to lexical paradigms.

Paradigmatic relations refer to any kind of contrast and substitution relation between lexical units in specific contexts (Wanner 1996: 2) including the main sense relations (hyponymy, meronymy, synonymy, antonymy and conversion), relations that hold between units that are semantically but not syntactically equivalent and the functional relations or lexicalized argument roles. Within the set of syntactic paradigmatic relations, four groups of relations can be distinguised: relations that hold between nouns, adjectives, adverbs and their verbal derivatives; relations that hold between verbs, adjectives and adverbs and their nominal derivatives; relations that hold between nouns, verb and adverbs and their adjectival derivatives; and relations that hold between nouns, verbs and adjectives and their adverbial.

Syntagmatic relations are those co-ocurring between lexical units that can appear together. Within syntagmatic relations it can be distinguished between *free combinations* and *non-free combinations*. Wanner (1996) distinguishes three kinds of *semantic phrasemes*, that is, purely non-free combinations with a non-compositional semantics: full phrasemes (idioms) whose semantics is totally opaque and that can be treated as single lexical units (*to cool one's heels)*; *quasi-phrasemes* whose semantics can be partially derived from the meanings of its constituents, although they contain an additional meaning (*to start a family)*; and *semi-phrasemes* (collocations) whose semantics is transparent, but not comparable to that of free combinations (*to pay attention)*. Collocational relations represent a special type of syntagmatic relation. A

collocational relation is held between two lexemes if the choice of one of them for the expression of a given meaning is contingent on the other (*to do a favour*, *to make a mistake*).

Beginning with paradigmatic functional relations, sense relations include, in the first place, hyponymy. This is the relation that holds between a more specific, or subordinate, lexeme and a more general, or superordinate, lexeme (Lyons 1977: 291). Hyponymy is frequently interpreted in terms of unilateral entailment. For example, *This is an elephant* entails *This is an animal* (*elephant* is a *hyponym* of animal, the hypernym). Meronymy is a part-whole relation, as it holds in *finger* and *palm*, *sleeve* and *jacket*, etc. Synonymy is defined by Wanner (1996) as bilateral implication or equivalence. There are three types: richer synonymy, poorer synonymy and intersecting synonymy, as in, respectively, *to realize* and *to notice*, *to inform* and *to tell*, *to say* and *to tell*. The relation of opposition subsumes the antonymy (*to start* and *to stop*), conversion (*to buy* and *to sell*) and contrastiveness (*fire* and *ice*).

The second group of paradigmatic functional relations is the set of syntactic paradigmatic relations, which comprises four groups of relations: relations that hold between nouns, adjectives, adverbs and their verbal derivatives (*avoidance: to avoid, grumpy: to grumble, decisively: to decide*); relations that hold between verbs, adjectives and adverbs and their nominal derivatives (*to move: movement, brave: bravery, well: the good*); relations that hold between nouns, verb and adverbs and their adjectival derivatives (*glee: gleeful, to glance: glancing, in the middle of: middle*); and relations that hold between nouns, verbs and adjectives and their adverbial derivatives (*deceit: deceitful, to walk: on foot, good: well*).

The third group of paradigmatic relations is that of argument roles. Two subgroups of relations are distinguished here: participant lexical function relations and circumstantial lexical function relations. The group of participant lexical function relations is determined by the semantic valency of the predicate, i.e. by how many semantic actants a predicate takes, as in *to lecture* (*professor, student, subject*). The group of circumstancial roles that enter into lexical function relation with a lexical unit consists of Location (*to lecture* and *lecture room*), Means (*to lecture* and *teaching materials*), Mode, (*to lecture* and *method*) and Instrumental (*to plane* and *plane*).

Turning to syntagmatic functional relations (or co-occurrence) relations, they hold between lexical units that can appear together, i.e. they co-occur, in the same phrase or clause, as in *the highly talented player*. The general distinction usually made

with respect to syntagmatic relations is between free combinations and non-free combinations. Free combinations are relations that hold between lexemes in a phrase with a purely combinational semantics. Non-free combinations are relations that hold between lexemes in a phrase whose semantics is not purely combinational and has to be partially or entirely derived from the phrase as a whole. In Mel'čuk´s terminology, non-free combinations are semantic phrasemes. Semantic phrasemes are further subdivided into full phrasemes (idioms), quasi-phrasemes and semi-phrasemes (or collocations). The difference between the three classes is the degree of semantic opaqueness. The semantics of the idiom is totally opaque (as in *to cool one´s heels* 'be kept waiting', *to dissolve into thin air* 'be invisible or non-existent', *to spill the beans* 'reveal secret information'). The semantics of the quasi-phraseme is partially obtainable from the meanings of its constituent lexemes. It contains, however, an additional meaning that cannot be derived from these meanings: *to start a family, black belt* (in karate), *shopping centre*. The semantics of the collocation is transparent. Its meaning contains the meaning of one of its constituents modified by some semantic features of the other constituent: to pay attention, to apologize profusely, modest success. Very common examples of collocations are support verb constructions: *to make an effort, to give a hint, to make a remark, to take a walk*. Their main characteristic is that the semantics of the construction as a whole predominantly results from the semantic components that are inherent to its reading as full verb.

## 2.4. WordNet and troponymy

As Green, Bean and Myaeng (2002) claim, relations are not merely empty connectives; they form important conceptual units and provide significant contributions to meaning. Comprehension of the world depends on our innate capacity to recognize and describe the relationships that hold between concepts, in other words, to build conceptually suitable and strong classes of concepts as well as the relationships among them.

> Conceptual structuring relationships are […] an integral part of the very foundation on which we build and organize our knowledge and understanding of the world in which we live. If concepts are seen as the basic building blocks of conceptual structure, then relationships are the mortar that holds it together. (Green, Bean and Myaeng 2002: viii)

Furthermore, these authors state that the relevance of relationships is not merely limited to the manner in which we depict knowledge, but also to the manner in which we reason with it. A significant advance in this direction is WordNet. The web site of this project explains that WordNet is a lexical database of English in which nouns, verbs, adjectives and adverbs are grouped into sets of cognitive synonyms (synsets), each of which expresses a distinct concept. Conceptual-semantic and lexical relations link synsets. As the web site indicates:

> WordNet superficially resembles a thesaurus, in that it groups words together based on their meanings. However, there are some important distinctions. First, WordNet interlinks not just word forms—strings of letters—but specific senses of words. As a result, words that are found in close proximity to one another in the network are semantically disambiguated. Second, WordNet labels the semantic relations among words, whereas the groupings of words in a thesaurus does not follow any explicit pattern other than meaning similarity. [https://wordnet.princeton.edu/wordnet/]

Each of the 117000 synsets of WordNet contains a brief definition or gloss and, in most cases, an illustration of the use of the synset members.

In WordNet, the principal relation established among word forms is synonymy, as in *car* and *automobile* or *shut* and *close*. Building blocks in WordNet are synsets (synonym sets), unordered sets of words and phrases which are cognitively synonymous (Cruse 1986). Each member of a particular synset denotes the same concept, nevertheless not all of the members in a synset are exchangeable in all contexts. *Synonymy is understood as one end of a continuum along which similarity of meaning can be graded. […] [Moreover, the synonymy] relation is symmetric: if x is similar to y, then y is equally similar to x* (Miller et al. 1993: 7). Few absolutely synonymous verbs such as *shut* and *close* are found in the lexicon. In this line, the number varies depending *on how loose a definition of synonymy one adopts* (Miller et al. 1993: 42).

Hyperonymy is the most frequent relation among synsets, it is a super-subordinate relation (also known as hyponymy or ISA relation), which links more general synsets such as {furniture, piece_of_furniture} to more specific ones such as

{bed} and {bunkbed}. WordNet holds that the category *furniture* comprises *bed*, which subsequently comprises *bunkbed*. Thus, concepts like *bed* and *bunkbed* constitute the category *furniture*. All noun hierarchies eventually reach the root node {entity}. The relation of hyponymy is transitive and asymmetrical: if a bunkbed is a kind of bed and if a bed is a kind of furniture, then a bunkbed is a kind of furniture. A hyponym inherits all the features of the more generic concept and adds at least one feature that distinguishes it from its superordinate and from any other hyponyms of that superordinate (Miller et al. 1993: 8). WordNet differentiates Types (common nouns) from Instances (particular persons, countries and geographic entities). In this manner, *bunkbed* is a type of *bed*, *Angela Merkel* is an instance of a president. In their hierarchies, instances are leaf (terminal) nodes.

Meronymy, represents the part-whole relation which holds between synsets such as {chair} and {back, backrest}, {seat} and {leg}. Parts are inherited from their superordinates but not inherited "upward", since they may be distinctive just of specific sorts of things rather than characteristic of the whole class. Then, if a chair has legs, an armchair has legs, but not all kinds of furniture have legs. Meronymy is transitive (with qualifications) and asymmetrical (Cruse 1986).

Adjectives are arranged in terms of antonymy. Pairs of direct antonyms like *young-old* and *wet-dry* illustrate this relation. Each of these contrasting adjectives is connected to semantically similar ones: in this manner, whereas *dry* is connected to adjectives such as *parched, arid, dessicated* and *bone-dry*, *wet* is connected to adjectives such as *soggy* and *waterlogged*. Semantically similar adjectives are indirect antonyms of the contrary member of the opposite pole. Relational adjectives (*pertainyms*) point to the nouns they are derived from (*criminal-crime*). As regards adverbs, since the majority of them are directly derived from adjectives by means of morphological affixation there are only few in WordNet.

Most of the relations in WordNet link words belonging to the same part of speech. WordNet comprises four sub-nets, from all four parts of speech considered in the lexical database: nouns, adjectives, verbs and adverbs, with few cross-part of speech pointers. Cross-part of speech relations incorporate the morphosemantic links held among words that being semantically similar share a stem with the very same meaning. For instance, *observe* (verb), *observation*, *observatory* (nouns), *observant* (adjective). The semantic role displayed by the noun with reference to the verb has been specified in numerous noun-verb pairs: {painting, picture} is the RESULT of

{paint}, {painter}is the AGENT and {sleeper, sleeping_car} is the LOCATION for {sleep}.

Focusing on the part of speech of the verb, in its current form (January 2015), WordNet consists of 25047 verb word-sense pairs, 11529 of which are unique strings and 13767 word meanings (synsets). Phrasal verbs are also included. Verbs are classified into fifteen files, mainly in terms of semantic criteria. Fourteen of these files correspond to semantic domains and denote events or actions: verbs of bodily care and functions, change, cognition, communications, competition, consumption, contact, creation, emotion, motion, perception, possession, social interaction and weather verbs (Miller et al. 1993: 41). Another file comprises verbs denoting states. Verbs in this latter category do not conform a semantic domain and do not share semantic properties except from that they make reference to states. This classification illustrates the division found in Jackendoff's (1983:170) and Dowty's (1979) analyses between the major conceptual categories EVENT and STATE.

In relational semantic analysis such as the one carried out by WordNet, lexical items (instead of the meaning atoms used in lexical decomposition) are the smallest unit of analysis. As regards verb taxonomies, it is frequently the case that within a specific semantic field, not all verbs can be arranged under a single unique beginner; and certain semantic fields need to be represented by various independent trees. Furthermore, virtually every verb taxonomy displays a level more richly lexicalized than the rest in the same hierarchy. As one goes down in a verb hierarchy, the range of nouns the verbs can take as potential arguments on a specific level decreases. *This seems to be a function of the increasing elaboration and meaning specifity of the verb* (Miller et al. 1993: 49)

Verb synsets are arranged into hierarchies in a way similar to nouns and adjectives, but also organized according to several entailment relations (Fellbaum and Miller 1990; Fellbaum 1998b). Troponymy, the most prevalent of these relations, relates synset pairs in which one member denotes a particular manner of the other. Verbs placed towards the bottom of the trees (troponyms) convey increasingly specific manners describing an event, as in {communicate}-{talk}-{whisper}. The semantic field determines the specific manner expressed. Verbs expressing events that inevitably and unidirectionally imply one another are linked, as is the case with {succeed}-{try}, {buy}-{pay}, {show}-{see}, etc. In the same way as hyponymy,

troponymy constructs hierarchies of different levels of specificity. As for other relations, backward entailment, presupposition and cause need to be considered.

Regarding entailment, *a proposition P entails a proposition Q if and only if there is no conceivable state of affairs that could make P true and Q false* (Miller et al. 1993: 45). The term can be generalized to deal with the relation established between two verbs $V_1$ and $V_2$ when the sentence Someone $V_1$ logically implies the sentence Somenone $V_2$. Lexical entailment is a unilateral relation*: if a verb $V_1$ entails another verb $V_2$, then it cannot be that case that $V_2$ entails $V_1$. The exception is that where two verbs can be said to be mutually entailing, they must also be synonyms, that is, they must have the same sense* (Miller et al. 1993: 45).

The entailment relation established between verbs is similar to the meronymic relation between nouns. Fellbaum and Miller (1990) claim that since the parts of verbs are not equivalent to the parts of nouns, verbs cannot be taken apart in the same way as nouns. The majority of nouns and noun parts comprise distinct, delimited referents. On the other hand, the referents of verbs do consists of the various parts by means of which objects, groups, or substances are characterized. Verbs cannot be split into referents designated merely by verbs. Moreover, the relations that hold among parts of verbs, diverge from those found among noun parts. Any satisfactory statement about part-relations held among verbs includes the temporal relation between the activities denoted by the two verbs. Thus, one event or activity is part of another event or activity exclusively when it is part of, or a phase or stage in, its temporal realization (Miller et al. 1993: 46).

The study of verb hyponyms and their superordinates indicates that lexicalization comprises numerous sorts of semantic elaborations across diverse semantic fields. In this way, the diverse sorts of elaborations that differentiate a verb hyponym from its superordinate have been incorporated into troponymy, a manner relation dubbed by Fellbaum and Miller (1990) after the Greek word *tropos*, manner or fashion. This relation between two verbs conforms to the formula *To $V_1$ is to $V_2$ in some particular manner* (Miller et al. 1993: 47). Subsets of specific kinds of manners normally group within a particular semantic field.

Turning to the question of entailment and troponymy, it has already been remarked that troponymy is a specific sort of entailment. In this line, every troponym $V_1$ of a more general verb $V_2$ also entails $V_2$." (Miller et al. 1993: 47). Troponymy represents a special case of entailment where pairs are temporally co-extensive. In this

line, verbs related by entailment and proper temporal inclusion are not related by troponymy. Figure 1 represents the two types of lexical entailment distinguished so far.

Entailment

+ Troponymy                                    - Troponymy
(co-extensiveness)                          (proper inclusion)
*limp-walk*                                      *snore-sleep*
*lisp-talk*                                        *buy-pay*
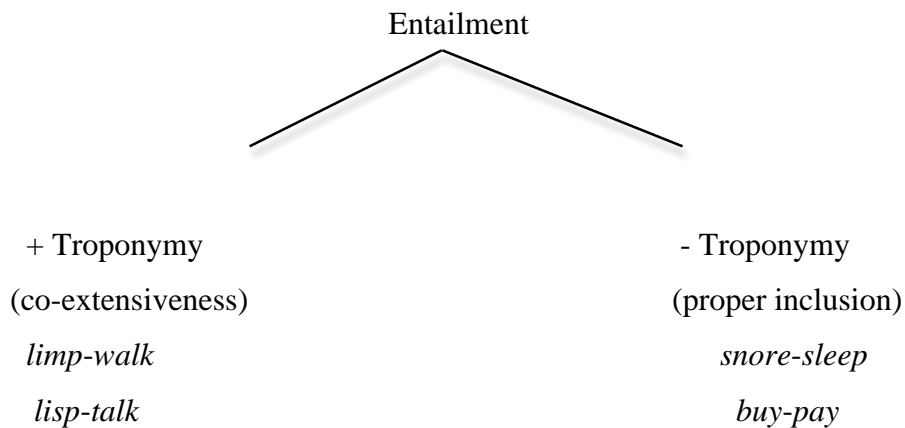
Figure 1. Two kinds of entailment with temporal inclusion (Miller et al. 1993: 48).

As is the case with adjectives, opposition relations are psychologically salient also for verbs. Therefore, after synonymy and troponymy, opposition is the semantic relation most frequently coded among verbs. Again, as in the class of adjectives, negative morphological markers are attached to verbs in order to form their corresponding opposing members as in *tie/untie*, *bone/debone*, *approve/disapprove*. In some pairs, the marked member is not inferred barely from the morphological marker since the opposition comes from the prefixes themselves as in *exhale/inhale*, *emigrate/inmigrate*, *predate/posdate*. Nevertheless, in other pairs of antonyms the members are associated with each other instead of with verbs that are synonyms of their corresponding opposites and that imply the same concept as the opposite. This case represents an opposition relation which is found systematically between troponyms of the same superordinate verbs, that is, between co-troponyms as in *rise/fall*, *walk/run* and *nibble/gorge*. Other pairs of opposites are represented by converses, opposites associated without a common superordinate or entailed verb as in *live/die*, *differ/equal*, *exclude/include*, *wake/sleep*. These pairs occur within the same semantic field, so that all of them make reference to the same activity, but from the perspective of different participants. Their strong lexical association may be derived from their recurrent co-ocurrence in usage. The great majority of antonymous verbs represent stative or change-of-state verbs which can be defined in terms of attributes. Many opposition relations are found among stative verbs. Likewise, opposition relations are frequent among change verbs as well. Virtually, and apart from

synonymy, no other relation keep these verbs together. Therefore, the organization of this part of the lexicon is not hierarchical but flat; apart from the generic *change* and *be* or *have* there are no superordinates and virtually no troponyms. Then, change verbs and stative verbs conform a structure similar to that displayed by adjectives, with merely synonymy and opposition relations.

Numerous verb pairs in a relation of opposition share an entailed verb. For instance, in the pair *hit*/*miss*, both verbs entail *aim* since one must aim in order to hit or miss. Unlike the kind of entailment discussed above, these verbs are not associated by temporal inclusion. Thus, the activities described by *hit* (or *miss*) and *aim*, take place sequentially: aiming is a previous requirement for both hitting and missing. The activity described by the entailed verb (*aim*) precedes in time the activity described by the entailing verb (*hit* or *miss*); this relation established between the entailing and the entailed verbs is one of backward presupposition. This kind of entailment also occurs between some verb pairs associated by a result or purpose relation, like *fatten-feed*. As Miller et al. (1993: 51) remark, *a verb $V_1$ that is entailed by another verb $V_2$ via backward presupposition cannot be said to be a part of $V_2$. Part-whole statements between verbs are possible only when a temporal inclusion relation holds between these verbs*. As can be seen in figure 2, entailment can be classified in terms of temporal inclusion into two mutually exclusive categories:

Entailment

+ Temporal Inclusion

\- Temporal Inclusion
(backward Presupposition)
*succeed-try*
*untie-tie*

+ Troponymy
(Co-extensiveness)
*limp-walk*
*lisp-talk*

\- Troponymy
(Proper Inclusion)
*snore-sleep*
*buy-pay*
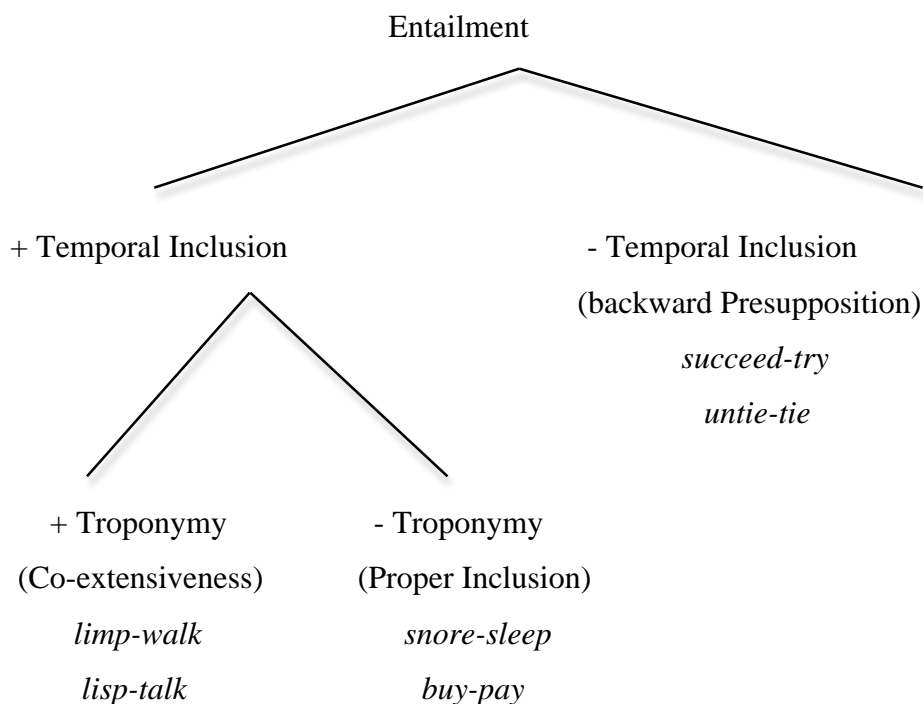
Figure 2. Three kinds of entailment (Miller et al. 1993: 52).

Focusing on the causal relation, one of the two verb concepts involved in a causative relation is the causative (such as *give*), while the other is called the resultative (such as *have*). Normally, the subject of the causative verb has a referent different from the subject of the resultative, which differentiates this relation from the other coded in WordNet. The subject of the resultative verb is an object of the causative, which is necessarily transitive. WordNet only admits lexicalized causative-resultative pairs. The cause relation is inherited by the synonyms of the members in a pair. This relation holds, therefore, between the whole concept instead of between merely individual word forms. For instance, the synonyms {instruct, teach, educate} are all causatives of the concept {acquire knowledge, learn}. Nevertheless, in contrast to entailment, the troponyms of each of these concepts do not inherit this causation relation.

Miller et al. (1993: 53) remark that *causative verbs have the sense of* cause to be/ become/ happen/ have or cause to do. *That is to say, they relate transitive verbs to either states or actions.* For instance, the verbs *give* and *teach* are connected by means of causation to the stative verbs *have* and *know*, while *raise* and *feed* are connected to the events or actions described by *rise* and *eat*. In both examples, causation can be seen as a sort of change. Numerous verbs have the semantics of a causative change like this, but they do not comprise lexicalized resultatives. For instance, *amuse* and *annoy*, subcategory of the psych verbs all cause the experiencer to undergo an emotion, but just one such causative notion, {*frighten*, *scare*} encompass a lexicalized resultative, {*fear*, *drear*}. In English, numerous verbs comprise both a causative and an anticausative utilization. The majority of them converge in the file comprising the verbs of change, where numerous verbs switch between a transitive causative form on the one hand, and an intransitive anticausative form on the other hand. Similary, this causative relation appears systematically among the verbs of motion.

Causation is a particular kind of entailment: *if $V_1$ necessarily causes $V_2$, then $V_1$ also entails $V_2$* (Miller et al. 1993: 54). In this case, verbs such as *bequeath* and *own* display a kind of entailment characterized by the lack of temporal inclusion. The relation of causation is unidirectional; that is, for somebody to *have* something does not imply that he or she was *given* it. Four different types of lexical entailment systematically interact along with the semantic relations coded in WordNet. This is represented in figure 3.

```
                          Entailment
                   /                        \
     + Temporal    Inclusion           - Temporal Inclusion
         /        \                        /            \
  +Troponymy   - Troponymy      Backward Presupposition      Cause
(Co-extensiveness) (Proper Inclusion)    succeed-try          raise-rise
     limp-walk     snore-sleep            untie-tie           give-have
     lisp-talk      buy-pay
```
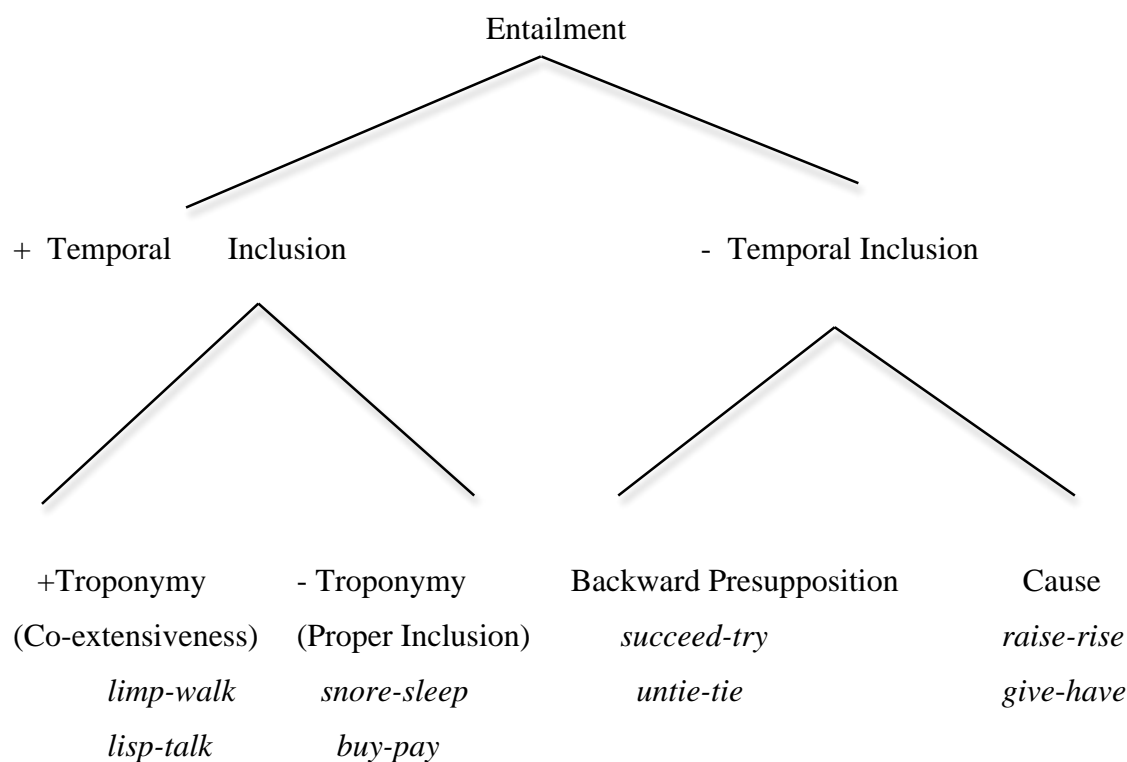
Figure 3. Types of verb entailment (Miller et al. 1993: 54).


To recapitulate, the lexicon of a language consists of words, concepts to which speakers attach a label. Close inspection of these lexicalized concepts reveals that they show systematic divergences, which can be characterized in terms of similarities or contrasts. These divergences among concepts are called semantic relations. WordNet represents word meanings principally on the basis of conceptual-semantic and lexical relations. These relations are transparent and labelled; and limited in number. The resulting structure is an extensive semantic network for nouns, adjectives, verbs and adverbs. As far as nouns are concerned, hyponymy and meronymy relations can be implemented in constructing a semantic net. As for adjectives, in many cases they describe values of attributes and can be associated by means of antonymy. Verbs cluster into semantically linked groups. The members of each group denote a variety of elaborations of one core concept and tend to share syntactic properties and selectional restrictions. In the same way as the hyponymy relation does among nouns, troponymy constructs hierarchical structures or trees. The semantically most inclusive verb is at the root and progressively more specified verbs form the branches and leaves.

This said, the manner relation is relevant when building an extensive semantic network of verbs (Fellbaum 1990, 1998a). Nevertheless, it is remarkably polysemous, comprising various manner relations. A deeper examination of the verbs in hierarchies throughout diverse semantic fields shows that lexicalization implies different sorts of semantic elaborations. For instance, verbs of motion vary in their core meaning along the means of transportation (*train*, *bus*, *truck*, *bike*) or the speed dimension (*walk* vs. *run*). Another example can be illustrated by the verbs of impact, like troponyms of *hit*, which may be distinguished along the semantic dimension denoting the degree of force employed by the agent (*slam*, *chop*, *whack*, *rap*, *swat*, *tap*, *peck*, etc.). As Green et al. (2002: 26) put it, *subsets of particular kinds of manners tend to cluster within a given semantic field, where the semantic feature is part of most verbs' semantic make-up, but is present to a varying degree in the related verbs*. These authors go on to say that a number of experiments outlined to examine the effectiveness of the troponymy relation in WordNet were performed by Fellbaum and Chaffin (1990). The results of these experiments reveal that in spite of its absence of semantic uniformity, troponymy is a salient relation.

Besides their purely denotational meaning, numerous verbs may have meaning aspects dependent on the context. For intance, *walk*, *run* and *swim* are manners of verbs of motion and *bike* is a motion verb using a vehicle. However, they are manners of *exercising* in conjunction with verbs such as *row* and *ski*. Thus, to *walk/ run/ swim* is to *move* and to *exercise* in *some manner* as well. Nevertheless, whereas *walking/ running/ swimming* is always a motion event, only in certain situations is an exercising event. Apart from being movements, *exercise* is a particular function that these verbs can take on; we can call it the "function" relation. In WordNet, when examining the hierarchical trees top-down, the function relation is not easily discernible from troponymy. In fact, the difference becomes evident only when examining the relation of the troponyms to their superordinates. Another discrepancy between the function relation and strict troponomy is that whereas verbs connected by the former relation to a common superordinate do not need to be syntactically similar, troponyms share syntactic characteristics with each other. The function relation is pervasive in the verb lexicon. There are even hierarchies of verbs associated purely by function and which are not intersective with hierarchies of troponyms. Although it is possible to distinghish hierarchical structures based on a function relation from genuine troponymy, both relations are quite similar. Furthermore, for certain verbs, meaning is

more salient as function hyponyms. Conflating troponymy and the function relation is therefore partially justified in WordNet.

While certain verbs encode a function, which might be dependent on the context or situation, and say nothing as regards the manner in which the event is accomplished, other verbs describe the manner but say nothing as regards the purpose of the event. Moreover, many verbs in English designate the result of an action but do not encode the manner of accomplishing this result. *Shut*, for instance, designates an event that culminates in a closed entity. Nevertheless, the manner of shutting diverges broadly, depending on the entity that is being shut. Rappaport Hovav and Levin (1998) have designated result verbs such as *shut* accomplishments and manner verbs such as *run* activities. Both manner and result verbs form hierarchical structures and have subordinates. It seems appropriate to say that *to prance/swagger/ ruffle/ strut/ sashay/ shuffle/ limp/ hobble /* is *to walk* in *some manner* and that *to slam/ bang/ snap* is *to close (something) in some manner*. Thus, manner and result verbs perform alike with reference to the hierarchical structuring and the manner formula.

To close this part, Levin's (1993) study of an extensive part of the verb lexicon of English examines the hypothesis that semantic resemblance is echoed in shared syntactic behaviour. A deeper examination of the verb classes shows that in numerous occasions, the members contain both basic verbs, which give name to the class and verbs that seem to be troponyms, manner subordinates, of the basic verbs. Indeed, the syntactic behaviour that Levin (1993) attributes to the class corresponds only to the basic verb and is not shared by the troponyms.

Levin's (1993) verb classes, which distinguish manner elaborations from "basic" verbs, reinforce the hypothesis of the close association between syntax and semantics. Particular manner elaboration appears to be reflected in syntactic distinctions. In some cases, they are the more "basic" verbs that enjoy greater syntactic privileges, but in other cases they have a more delimited syntax. In the language, the unelaborated verbs, such as *put*, arise with considerably higher frequency than their troponyms. They take the broadest range of noun arguments, whilst the troponyms, which exhibit more specialized meanings, turn out to be more selective with reference to the nouns they select.

To close this section, the application of verbal troponymy to this research is discussed in chapter 3.

## 2.5. Lexical rules and *Aktionsart*

As has been shown in the previous section, WordNet, as a semantic network, depicts the meaning of English words by relating them by means of various conceptual-semantic relations. Focusing on verbs, WordNet lays emphasis on troponymy, a relation that connects verbs on the basis of a manner elaboration; it serves as the principal organizer of verb concept and is also a salient aspect of the mental representation speakers have of verb meanings. Rather than to depict lexical knowledge, WordNet was outlined to model lexical memory. In order to encompass the principal syntactic aspects of verbs, WordNet comprises for each verb synset at least one sentence frame, which identifies the subcategorization characteristic of the verbs in the synset by specifying the sorts of sentences they can appear in. Considering verbs on the basis of semantic relations can additionally yield clues to the comprehension of the syntactic behaviour of verbs given that distinct semantic groups of verbs show different structures. For this reason, this section pays attention not only to the semantic dimension of verbs but also to their syntax by focusing on the *Aktionsart* or internal aspect of verb, which combines the pure semantics of the verb and its associations in the syntax of the sentence.

In Role and Reference Grammar (Foley and Van Valin 1984; Van Valin and LaPolla 1997; Van Valin 2005) the semantic representation of the sentence is based on the lexical representation of the verb which, in turn, depends on the *Aktionsart* class of the verb. The typology of *Aktionsart* proposed by Vendler (1967) distinguishes four classes: state, achievement, accomplishment and activity. States and activities are basic types, while achievements are punctual and accomplishments are durative. Van Valin and LaPolla (1997) distinguish an additional class of active accomplishments (telic uses of activity verbs) and the causative of all the classes just mentioned. VanValin (2005) adds the class of semelfactives, which constitute punctual events, both non-causative and causative. Figure 4 provides some illustrative examples of the non-causative *Aktionsart* classes.

States

*Leon is a fool.*
*The window is shattered.*
*Fred is at the house.*
*John saw the picture.*

Activities

  *The children cried.*

  *The wheel squeaks.*

  *Carl ate snails.*

Semelfactives

  *The light flashed.*

  *John glimpsed Mary.*

Achievements

  *The window shattered.*

  *The balloon popped.*

  *John glimpsed the picture.*

Accomplishments

  *The snow melted.*

  *The sky reddened.*

  *Mary learned French.*

Active accomplishments

  *Carl ate the snail.*

  *Paul ran to the store.*

Figure 4: Non-causative *Aktionsart* classes (http: / / linguistics.buffalo.edu / people / faculty / vanvalin / rrg / RRG_overview.pdf).


The correspondence between non-causative and causative *Aktionsart* classes can be seeen in figure 5.


| State | Causative state |
|---|---|
| *The boy fears the dog.* | *The dog frightens / scares the boy.* |
| Achievement | Causative achievement |
| *The balloon popped.* | *The cat popped the balloon.* |
| Semelfactive | Causative semelfactive |
| *The light flashed.* | *The conductor flashed the light.* |
| Accomplishment | Causative accomplishment |
| *The ice melted.* | *The hot water melted the ice.* |
| Activity | Causative activity |
| *The dog walked in the park.* | *The girl walked the dog in the park.* |

Active accomplishment    Causative active accomplishment

*The dog walked to the park.  The girl walked the dog to the park.*

Figure 5: Non-causative and causative *Aktionsart* classes (http: / / linguistics.buffalo.edu / people / faculty / vanvalin / rrg / RRG_overview.pdf).

Logical structures guarantee the linking semantics-syntax and the linking syntax-semantics. They make reference to verbal classes. Therefore, the main difference is drawn between the stative (predicate´) and non-stative (do´) part of logical structures (corresponding to the basic distinction between static and dynamic verbal classes). In the logical structures in figure 6, the variables x, y and z represent arguments. The elements INGR(essive), SEM(e)L(factive), BECOME and CAUSE correspond, respectively, to ingressives, semelfactives, accomplishments and causatives.

| Verb Class | Logical Structure |
|---|---|
| STATE | **predicate´** (x) or (x, y) |
| ACTIVITY | **do´** (x, [**predicate´** (x) or (x, y)]) |
| ACHIEVEMENT | INGR **predicate´** (x) or (x, y), |
| | or INGR **do´** (x, [**predicate´** (x) or (x, y)]) |
| SEMELFACTIVE | SEML **predicate´** (x) or (x, y), |
| | or SEML **do´** (x, [**predicate´** (x) or (x, y)]) |
| ACCOMPLISHMENT | BECOME **predicate´** (x) or (x, y), |
| | or BECOME **do´** (x, [**predicate´** (x) or (x, y)]) |
| ACTIVE | |
| ACCOMPLISHMENT | **do´** (x, [**predicate₁´** (x, (y))]) |
| | & BECOME **predicate₂´** (z, x) or (y) |
| CAUSATIVE | α CAUSE β, where α, β are LSs of any type |

Figure 6: Logical structures in Role and Reference Grammar (Van Valin and LaPolla 1997).

The semantic interpretation of verbal arguments in Role and Reference Grammar is based on two generalized semantic roles or macroroles called ACTOR and UNDERGOER (Van Valin and LaPolla 1997: 46). The semantic macroroles

ACTOR and UNDERGOER are generalizations across argumental structures. In a transitive predication, the ACTOR is the first argument and the UNDERGOER the second argument of the verb. In an intransitive predication, the only argument can be an ACTOR or an UNDERGOER, depending on the semantics of the verb. For example, the first argument of *Jill is sleeping in the car* is an UNDERGOER because *sleep* is a stative verb whereas the first argument of *Jill is swimming* is an ACTOR because *swim* is an active verb. As can be seen in Figure 7, the relationship between argument positions and macroroles is determined by the Actor-Undergoer Hierarchy, which stipulates that the leftmost argument in the hierarchy will be the ACTOR and the rightmost on will be UNDERGOER. The hierarchy is asymmetric. This means that the leftmost argument in a logical structure is always the ACTOR and the rightmost argument is the default choice for UNDERGOER (Van Valin 2005: 58).

| ACTOR | | | | UNDERGOER |
|---|---|---|---|---|
| -----------------------------------------------------------> | | | | |
| | | <----------------------------------------------------------- | | |
| Arg of | 1st arg of | 1st arg of | 2nd arg of | Arg of state |
| DO | **do´** (x,... | **pred´** (x, y) | **pred´** (x, y) | **pred´** (x) |
| | | | | |
| AGENT | EFFECTOR | LOCATION | THEME | PATIENT |
| | MOVER | PERCEIVER | STIMULUS | ENTITY |
| | ST-MOVER | COGNIZER | CONTENT | |
| | L-EMITTER | WANTER | DESIRE | |
| | S-EMITTER | JUDGER | JUDGEMENT | |
| | PERFORMER | POSSESSOR | POSSESSED | |
| | CONSUMER | EXPERIENCER | SENSATION | |
| | CREATOR | EMOTER | TARGET | |
| | OBSERVER | ATTRIBUTANT | ATTRIBUTE | |
| | USER | IDENTIFIED | IDENTITY | |
| | | VARIABLE | VALUE | |
| | | | PERFORMANCE | |
| | | | CONSUMED | |
| | | | CREATION | |
| | | | IMPLEMENT | |

----> = increasing markedness of realization of argument as macrorole

Figure 7: The Actor-Undergoer Hierarchy (Van Valin 2005: 58).

To summarise, the system of lexical decomposition used by Role and Reference Grammar is based on the distinctions in *Aktionsart* proposed in Vendler (1967), who states that verbs as well as other predicating elements can be classified according to their inherent temporal properties. Vendler proposes four basic classes: states, activities, achievements and accomplishments. States are non-dynamic and temporally unbounded. Activities are dynamic and temporally unbounded. Achievements are temporally bounded because they code instantaneous changes, mostly of state but also of activities. Accomplishments are not instantaneous, temporally extended changes of state, which lead to a terminal point. The whole system of verbal classes can be described in terms of four features, which give rise to six spontaneous (as opposed to causative) types, presented in figure 8.

State [+static], [-dynamic], [-telic], [-punctual]

Activity [-static], [+dynamic], [-telic], [-punctual]

Achievement [-static], [-dynamic], [+telic], [+punctual]

Semelfactive [-static], [+ - dynamic], [-telic], [+punctual]

Accomplishment [-static], [-dynamic], [+telic], [-punctual]

Active accomplishment: [-static], [+dynamic], [+telic], [-punctual]

Figure 8: The features of spontaneous *Aktionsart* classes (Van Valin 2005).

The feature 'static' distinguishes verbs which display a 'happening' from those which display a 'non-happening'; that is, static verbs cannot answer to the question 'what happened?' or 'what is happening? The feature 'dynamic' differentiates verbs that involve action from those which do not. Dynamic verbs can be modified by adverbs such as *vigorously*, *violently*, *energetically* and *strongly*. However, it must be noted that activity verbs presenting non-agentive subjects are not compatible with adverbs requiring a controlling subject such as *carefully* or *deliberately*. As regards the [+ - dynamic] feature displayed in semelfactives, it is explained by the fact that some of these verbs seem to be dynamic like *cough* in *He coughed once violently*, whereas others seems not to be, as is the case with *glimpse* in *\*He glimpsed the robber strongly*. The 'telic' feature refers to whether a verb codes an inherent terminal point

([+telic]) in the state of affairs or not ([-telic]). As regards the feature 'telic' in achievements and semelfactives, whereas achievements are telic and depict a transition between one state of affairs and a new state of affairs, semelfactives are considered as atelic since they represent pure events that do not depict a change of state, there is no transition between one state and the next. Finally, the feature 'punctual' differentiates telic events presenting internal duration ([-punctual]) from those events which lack it ([+punctual]). With reference to achievement and accomplishment verbs, certain verbs are inevitably punctual such as *pop* or *shatter*, while some others are certainly temporally durative like *dry* or *grow*. Nevertheless, Van Valin and LaPolla (1997) remark that many verbs are in between these two groups since they encode states of affairs that may be almost instantaneous but need not be, as the intransitive version of *break*. Similarly, verbs like *freeze* are normally not instantaneous, although under some circumstances, as if one dipped something into liquid nitrogen, may be instantaneous. As these authors explain, the unmarked member of a privative opposition encompasses a much greater range than the marked counterpart, which displays a very specific property. Consequently, a [+ punctual] verb codes always-instantaneous states of affairs (or very close to it); while a [-punctual] verb may code a state of affairs with a temporal duration going from very short (almost instantaneous) to very long. Hence, verbs like *freeze*, which can cover this spectrum of temporal possibilities, should be considered as accomplishments. Since achievements are punctual (Van Valin 2005) these verbs are only compatible with in-phrases that refer to an extremely short period of time like *in the blink of an eye*, *in an instant*, *in a fraction of a second* and that in-phrases that refer to temporal periods longer than this like *in ten seconds*, *in a minute*, or *in an hour* are incompatible with achievements. Nevertheless, *arrive* is generally construed punctually, although in the appropriate context, can be construed non-punctually. As for the verb *break*, it seems to be neutral and its interpretation depends on the properties of the broken object. Both verbs, having the possibility to code state of affairs ranging from a very short temporal duration to a longer one, must be considered as accomplishment if nothing else is added to the verb.

Of these *Aktionsart* classes, the class of accomplishments has drawn remarkable attention. As is noted in Van Valin (2014), some complications emerged with Vendler's classification. In the first place, the term 'accomplishment' is used to cover bounded telic processes, e.g. *recover from illness*, *melt*, *freeze*, *harden*

(intransitive versions); bounded telic actions, e.g. *devour*, *run to the store*, *eat a bagel*, *write a poem*; bounded telic causative processes, e.g. *melt*, *freeze*, *harden* (transitive versions); and bounded telic causative actions, e.g., *feed the cake to X*, *march X to the park*). Secondly, while a class of basic actions (activities) has always been considered, a class of basic processes has not been distinguished. In this sense, apart from the basic *Aktionsart* classes proposed by Vendler, Van Valin and LaPolla (1997) and Van Valin (2005) say that there is another spontaneous class, which is termed *active accomplishment*. Pavey (2010) concurs on this question, although she refers to it as *active achievement*. As Pavey explains, they are comprised of an activity predicate, to which an endpoint is added. Active accomplishments emerge from the basic activity and accomplishment types, in the sense that they depict accomplishment uses of activity verbs. Verbs from this class involve an activity predicate plus a change of state. This class includes verbs of motion (there is a change of location and the motion is completed with the arrival at a particular location), consumption (the result state is of one consumption) and creation (the result state is of creation). If a motion verb has a definite goal, which provides a terminal point, in some manner, it behaves like an accomplishment, e.g. *He walked to the park*. If motion verbs do not display a definite goal, they behave like activities. Then, consumption verbs such as *eat* or *drink* become equally an active accomplishment when a specific amount delimiting the event is provided, as in *He ate a plate of spaghetti* and *He ate the fish*. Finally, creation verbs like *write*, *paint* or *carve* also represent active accomplishments if they make reference to a specific, quantified object, which limits the action, as in *H*e *wrote a poem*. Thus, the terminal point is reached when the distance is covered, or the entity is created or consumed. An instance of a causative active accomplishment would be *The sergeant marched the troops to the barracks*.

As Van Valin (2014) indicates, by elaborating on Vendler (1967), we can establish the following correspondence between the four types of Vendler's 'accomplishments' and the complete spectrum of *Aktionsart* classes now considered. Figure 9 includes a column corresponding to Vendler´s accomplishments in order to complete the comparison.

| Vendler's accomplishment | Predicate type | *Aktionsart* class | Example |
|---|---|---|---|
| Bounded (telic) processes | Non-punctual change of state | Accomplishment | Intransitive *dry* |
| Bounded (telic) causative processes | Caused non-punctual change of state | Causative accomplishment | Transitive *dry* |
| Bounded (telic) actions | Bounded activity | Active accomplishment | *run to the store*, *eat a pizza* |
| Bounded (telic) causative actions | Caused bounded activity | Causative active accomplishment | *Send X to the store*, *feed X a pizza* |

Figure 9: The correspondence between the four types of Vendler's 'accomplishments' and the complete spectrum of *Aktionsart* classes (Van Valin 2014).

As regards active accomplishments, Van Valin (2014) *contra* Van Valin (2005) comments on the problem of incrementality (Dowty 1991; Krifka 1992; Filip 1993; Tenny 1994; Rothstein 2004). Van Valin 2014 explains that processes such as writing, eating and running are incremental processes measured by the incremental theme or path. Van Valin (2014), by drawing on the authors cited above, remarks that the process needs to be maintained as simultaneous with the activity and therefore he proposes the following logical structures:

Motion: **do**' (x, [**pred'** (x)]) ∧ PROC **cover. path. distance'** (x, (y))] & INGR **be-at'** (z, x).

Figure 10: Logical structure of active accomplishment of motion (Van Valin 2014).

For example, *run*: **do'** (x, [**run'** (x) ∧ PROC **cover. path.distance'** (x,(y))] & INGR **be-at'** (z, x). *x* runs, and simultaneously a process of covering a path of distance *y* initiates. Both the activity of run and the process of covering a path of distance finish leading to the result that *x* is located at *z*. The logical structure of *Sally ran two miles* (in only twenty minutes) is: **do'** (Sally, [**run'** (Sally) ∧ PROC **cover. path.distance'** (Sally, two miles)] & INGR **be-at'** (**path. endpoint**, Sally), which is interpreted as *x* runs and simultaneously a process of covering distance *y* initiates. Both the activity of running and the process of covering distance finish leading to the result that *x* is located at the endpoint of a path of length *y*. On its part, *Sally ran two miles to the park* has a logical structure **do'** (Sally, [**run'** (Sally) ∧ PROC **cover. path.distance'** (Sally, two miles)] & INGR **be-at'** (park, Sally). Both the distance and the goal would

have the following representation: **do'** (x, [**run'** (x) ∧ PROC **cover. path.distance'** (x,(y))] & INGR **be-at'** (**path. endpoint**, x).

Turning to non-motion events, figure 11 presents the general logical representation.

Non-motion. Consumption: **do**' (x, [**pred'** (x, y)]) ∧ PROC **consumed'** (y) & INGR **consumed'** (y)

Figure 11: Logical structure of active accomplishment of consumption (Van Valin 2014).

For example, *devour*: **do'** (x, [**eat'** (x, y) ∧ PROC **consumed'** (y) & INGR **consumed'** (y) is interpreted as *x* eats *y*, simultaneously a process of consumption initiates. Both the activity of eating and the process of consumption finish at the same time leading to the result that *y* is consumed.

With respect to creation verbs, the logical structure is given in figure 12.

Non-motion: Creation: **do**' (x, [**pred'** (x, y)]) ∧ PROC **create'** (y) & INGR **exist'** (y)

Figure 12: Logical structure of active accomplishment of creation (Van Valin 2014).

For example, *write*: **do'** (x, [**write'** (x, y) ∧ PROC **create'** (y) & INGR **exist'** (y) is interpreted as *x* writes *y*, simultaneously a process of creation initiates. Both the activity of writing and the process of creation finish at the same time leading to the result that *y* exists.

The application of the *Aktionsart* of verbs in Role and Reference Grammar to this research is discussed in chapter 3.

## 2.6. The convergence of derivation and lexical functions in the analysis of Old English

So far, the relevant aspects of general Semantics relevant for this thesis have been presented, while the basic questions of lexical functions, troponymy and *Aktionsart* have been synthesised. The remainder of this chapter focuses on the application to the Old English language of some of the questions raised in the previous sections. This is done with two purposes. In the first place, a review of the research carried out in this specific area is necessary in order to fill in the the gaps left by previous works. In the

second place, the data of analysis of this thesis have not been selected randomly. Rather, they comprise the verbal elements of the verbal lexical paradigms of Old English, which have been gathered, as is explained below, on the basis of lexical derivation. With these purposes, the foundations of the paradigmatic analysis of Old English are presented in section 2.6.1. Then, section 2.6.2. concentrates on the different processes of word-formation that motivate the verbal lexical paradigms of Old English. Finally, section 2.6.3. introduces the analysis of the lexical functions of Old English. Previous research in the lexical functions found in noun and adjective formation is discussed, in such a way that the relevance and justification of the analysis of the semantics of verbs carried out in chapter 4 are made clear.

## 2.6.1. Paradigmatic morphology

Kastovsky (1992a: 294) remarks that the vocabulary of Old English *is characterised by large morphologically related word-families.* Such families present the various vocalic grades of the strong verb that is as a general rule the lexeme on which all the derivational set is based. This is illustrated in example (1), which gives strong verbs with their verbal (weak), nominal and adjectival derivatives:

(1)     (Schuldt 1905)

   *āswīcan* (strong I): weak verb *āswician* (class 2) and noun *swice* (feminine)

   *brēotan* (strong II): weak verb *gebryttan* (class 1) and noun *gebrot* (neuter)

   *flēotan* (strong II): weak verb *flotian* (class 2) and noun *fleot* (neuter)

   *drēopan* (strong II): weak verb *dryppan* (class 1) noun *dropa* (masculine)

   *heofan* (strong II): weak verb *heofian* (class 2) and noun *heof* (masculine)

   *ðurfan* (strong II): weak verb *ðearfian* (class 2) and noun *ðearf* (feminine)

   *ðrēotan* (strong II): weak verb *ðreatian* (class 2) and noun *ðreat* (masculine)

   *brecan* (strong IV): weak verb *brocian* (class 2) and noun *gebroc* (neuter)

   *faran* (strong VI): weak verb *ferian* (class 1) and noun *faru* (feminine)

   *sacan* (strong VI): weak verb *sæccan* (class 1) and noun *sacu* (feminine)

   *fealdan* (strong VII): weak verb *fieldan* (class 1) and adjective *feald*

Any given word-family, then, can be broken down into a series of vocalic grades that is morphologically related directly or indirectly to a strong verb in most cases. Thus, for instance, *beorgan-bearg-burgon-borgen* 'to protect'.

(2)

a.      eo as in *beorgan*

*beorg* 'protection, defence, refuge', *beorglic* 'fitting, profitable; safe, prudent', *beorhnes* 'refuge', *beorhstōw* 'place of refuge'.

b.      o as in *borgen*

*borg* 'pledge, security, bail, debt, obligation, bondsman, debtor', *borgbryce* 'breach of surety', *borgfæstan* 'to bind someone to the allegiance of someone else by', *borgsorg* 'trouble on account of lending or security', borough 'walled town', *friðborh* 'surety of peace'.

c.      u as in *burgon*

*būrgeteld* 'pavilion, tent', *burg* 'a dwelling or dwellings within a fortified enclosure, fort, castle', *burgðelu* 'castle floor', *burgāgend* 'city- owner', *burgbryce* 'breaking into a (fortified) dwelling, penalty for that offence', *burgende* 'city boundary', *burgfæsten* 'fortress', *burgfolc* 'townspeople', *burggeat* 'castle gate, city gate', *burghege* 'fence of a burg', *burghlið* 'fortress-height', *burglagu* 'civil law', *burglēod* 'citizen', *burgloca* 'fortified enclosure, walled town', *burglond* 'native city', *burgræced* 'fortress', *burgsæta* 'town-dweller, citizen', *burgsæl* 'city-hall, house', *burgscipe* 'borough', *burgsele* 'castle-hall, house', *burgsittende* 'city- dwellers', *burgsteall* 'citadel, city', *burgstede* 'city, castle', *burgstrǣt* 'town road', *burgtūn* 'city', *burgwaran* 'inhabitants of a 'burg', burghers, citizens', *burgware* 'inhabitants of a 'burg', burghers, citizens', *burgweall* 'city wall', *burgweg* 'road street', *burgwīgend* warrior', *burhðegn* 'living in a burg', *burhbiscop* 'bishop of a city', *burhbōt* 'liability for repair of the walls of a town or fortress', *burhealdor* 'burgomaster, mayor', *burhgeðingð* 'town council', *burhgeard* 'castle yard', *burhgemet* 'measure used in a town', *burhgemōt* 'town's meeting', *burhgerēfa* 'chief magistrate of a town, provost, mayor', *burhgerihta* 'town due', *burhmann* 'citizen', *burhrǣdden* 'citizenship', *burhrest* 'chamber- couch', *burhriht* 'town right, town law', *burhrūn* 'fury, sorceress', *burhscīr* 'city limits, city, township', *burhscipe* 'township, civil district', *burhsprǣc* 'courtly speech', *burhstaðol* 'foundation of the wall of burg', *burhwarumann* 'burguess', *burhwealda* 'burguess', *burhweard* 'city defender', *burhwela* 'treasure of a city', *burhwelle* 'spring in a burg', *burhwerod* 'townsfolk', *burhwita* 'town

councillor', *friðburg* 'town with which there is peace, city of refuge', *sǣburg* 'seaport town'.

By word-formation processes (which are discussed in detail in the next section), the word-family *beorgan-bearg-burgon-borgen* 'to protect' consists of the derivatives and compounds listed in (3), except the compounds whose first element is morphologically related to *beorgan*, which are usually classified on the basis of the second element.

(3)

a.     Zero derivation

*beorg* 'protection, defence, refuge', *borg* 'pledge, security, bail, debt, obligation, bondsman, debtor', *burg* 'fort, castle, borough, walled town'.

b.     Prefixation

*anburge* 'sureties', *bebeorgan* 'to be on one's guard, defend, protect', *gebeorg* 'protection, defence, refuge', *onbyrgan* 'to be surety', *underburg* 'suburb'.

c.     Suffixation

*burgende* 'city boundary', *burgscipe* 'borough', *burhscipe* 'township, civil district', *gebeorglic* 'fitting, profitable; safe, prudent', *gebeorhnes* 'refuge'.

d.     Compounding (*beorgan* as first element):

*burgāgend* 'city-owner', *būrgeteld* 'pavilion, tent', *borgfæstan* 'to bind someone to the allegiance of someone else by giving security', *borgbryce* 'breach of surety', *borgsorg* 'trouble on account of lending or security', *burgðelu* 'castle floor', *burgbryce* 'breaking into a (fortified) dwelling, penalty for that offence', *burgfæsten* 'fortress', *burgfolc* 'townspeople', *burggeat* 'castle gate, city gate', *burglagu* 'civil law', *burglēod* 'citizen', *burghege* 'fence of a burg', *burghlið* 'fortress-height', *burgloca* 'fortified enclosure, walled town', *burglond* 'native city', *burgrǣced* 'fortress', *burgsǣta* 'town-dweller, citizen', *burgsæl* 'city-hall, house', *burgsele* 'castle-hall, house', *burgsittende* 'city-dwellers', *burgsteall* 'citadel, city?', *burhðegn* 'living in a burg', *burgwaran* 'inhabitants of a 'burg', burghers, citizens', *burgware* 'inhabitants of a 'burg', burghers, citizens', *burgweall* 'city wall', *burgweg* 'road street', *burgwīgend* 'warrior', *burgstede* 'city, castle', *burgstrǣt* 'town road', *burgtūn* 'city', *burhbiscop* 'bishop of a city', *burhbōt* 'liability for repair

of the walls of a town or fortress', *burhealdor* 'burgomaster, mayor', *burhgeðingð* 'town council', *burhgeard* 'castle yard', *burhgerihta* 'town due', *burhmann* 'citizen', *burhrǣdden* 'citizenship', *burhgemet* 'measure used in a town', *burhgemōt* 'town's meeting', *burhgerēfa* 'chief magistrate of a town, provost, mayor', *burhrest* 'chamber-couch', *burhriht* 'town right, town law', *burhrūn* 'fury, sorceress', *burhscīr* 'city limits, city, township', *burhsprǣc* 'courtly speech', *burhstaðol* 'foundation of the wall of burg', *burhwarumann* 'burguess', *burhwealda* 'burguess', *burhweard* 'city defender', *burhwela* 'treasure of a city', *burhwelle* 'spring in a burg', *burhwerod* 'townsfolk', *burhwita* 'town councillor', *beorhstōw* 'place of refuge'.

e.  Compounding (*beorgan* as second element):

*bānbeorge* 'leg-armour, greaves', *cinberg* 'defence of the chin or cheek, cheek-guard', *friðborh* 'surety of peace', *friðburg* 'town with which there is peace, city of refuge', *goldburg* 'city in which gold is given, rich city', *hēafodbeorg* 'helmet, protection for the head', *healsbeorg* 'neck-armour', *hēahburg* 'chief city, town on a height', *hlēorberg* 'cheek-guard, helmet', *hordburg* 'treasure-city', *inburg* 'hall', *lēodburg* 'town', *lēodgebyrga* 'lord, protector, prince, king', *meduburg* 'mead-city, rejoicing city', *randburg* 'fortified city, shield wall of waves (in the Red Sea)', *sǣburg* 'seaport town', *scancgebeorg* 'leg-greafe', *stānburg* 'town or fort of stone', *wederburg* 'exposed town', *wīnburg* 'festive city, walled vineyard, castle'.

Although strong verbs constitute the starting point of Germanic derivation (Bammesberger 1965; Hinderling 1967; Bammesberger 1992; Kastovsky 1992; Seebold 1970), this does not mean that strong verbs only give rise to word-families. As an illustration of a nominal word-family, consider the one of *heorte* 'heart' in (4):

(4)

a.  Nouns

*efenheorte* 'harmony', *hātheort* 'anger, rage', *hātheortnes* 'rage, mania; zeal', *heardheortnes* 'hard-heartedness', *heortancnys* '(com)pulsus cordis?', *heortcoða* 'heart disease', *heortcoðu* 'heart disease', *heorte* 'heart (organ), breast, soul, spirit; will, desire; courage; mind, intellect; affections', *heortece* 'heartache', *heortgesida* 'entrails', *heortgryre* 'terror of heart',

*heorthama* 'pericardium, internal fat', *heorthogu* 'heart-care', *heortlufu* 'hearty love', *heortsārnes* 'grief', *heortscræf* 'heart', *heortwærc* 'pain at the heart', *mildheortnes* 'loving-kindness, mercy, pity', *oferheortnes* 'vehemence of feeling', *rūmheortnes* 'liberality', *wēdenheort* 'madness', *wēdenheortnes* 'madness, frenzy', *wōdheortnes* 'madness', *bucheort* 'a tragelaph', earmheortnes 'pity', *efenheortenes* 'harmony'.

b.      Adjectives

*gramheort* 'hostile-minded', *(ge)hātheort* 'wrathful, furious, passionate; ardent, whole-hearted '*hēahheort* 'proud', *heardheort* 'hard-hearted; stubborn', *(ge)heort* 'high-minded, stout-hearted', *heorten* 'of a heart', *heortlēas* 'dispirited', *heortsēoc* 'ill from heart disease', *mildheort* 'merciful, clement, compassionate', *rihtheort* 'righteous, just', *rūmheort* 'large-hearted, generous; free from care', *samheort* 'unanimous', *stearcheort* 'stout-hearted', *ungeheort* 'disheartened', *wēdenheort* 'mad, insane', *wulfheort* 'wolf-hearted, cruel', *hellheort* 'terrified; disheartened', *blīðheort* 'happy, joyful; kind, merciful', *bundenheort* 'with bounden tresses', *cealdheort* 'cruel', *clænheort* 'pure in heart', *earmheort* 'humble, poor in spirit; tender-hearted, merciful', *ēaðmōdheort* 'humble-minded', *ellheort* 'disheartened', *mildheortlic* 'merciful, clement, compassionate'.

c.      Adverbs

*(ge)hātheortlīce* 'furiously, ardently, fervently', *geheortlīce* 'cheeringly', *mildheortlīce* 'kindly, compassionately, mercifully', *rūmheortlīce* 'in a 'light-hearted, generous; free from care manner'.


A typical word-family of the adjectival class is the one of *æðele* 'noble' given in (5):


(5)

a.      Nouns

*æðelborennes* 'nobility of birth or nature; inborn nature', *æðelcundnes* 'nobleness', *æðelcyning* 'noble king', *æðelduguð* 'noble retinue', *æðelferðingwyrt* 'stitch-wort (plant)', *æðeling* 'man of royal blood, nobleman, chief, prince; king, Christ, God; man, hero, saint; in pl. men, people', *æðelinghād* 'princely state', *æðelnes* 'nobility, excellence', *æðelu* 'nobility, family, descent, origin; nature; noble qualities, genius, talents, pre-eminence;

produce, growth', *fæderæðelo* 'patrimony; paternal kinship', *rihtæðelcwēn* 'lawful wife', *rihtæðelo* 'true nobility', *sibæðeling* 'related noble', *unæðelnes* 'ignobility'.

b.  Adjectives

*onæðele* 'natural', *unæðelboren* 'not of noble birth, low-born', *unæðele* 'of low birth, ignoble, base', *æðele* 'noble, aristocratic, excellent, famous, glorious; splendid, fine, costly, valuable; lusty, young; pleasant, sweet-smelling', *geæðele* 'natural, congenial, suitable', *æðelboren* 'of noble birth, distinguished; free-born; inborn, natural', *æðelcund* 'of noble birth', *æðellic* 'noble, excellent', *efenæðele* 'equally noble', *fullæðele* 'very noble'.

c.  Adverbs

*unæðelīce* 'ignobly, basely', *æðellīce* 'nobly'.

d.  Weak verbs

*unæðelian* 'to degrade, debase', *geæðelian* 'to make noble or renowned'.

Finally, the question of recursivity in word-families should be addressed. In general, recursivity is the repetition of a rule. In the context of word-formation, recursivity entails the derivation of previously derived words. This is an important aspect of the analysis that is going to be carried out because the lexical sets discussed in chapter 4 do not always derive from the strong verb but rather are derivatives of the derivatives of the strong verb. In other words, many of the verbs that have been analysed are recursive derivatives. For example, from the strong verb *brinnan* 'burn', the zero derivative *bryne* 'burning, conflagration, fire, flame, heat, inflammation, burn, scald, torch, fervour, passion' is obtained. This means that one derivational process only has taken place. On the other hand, to form all these derivatives, which are recursive, at least two derivational steps are taken: *brynig* 'fiery, burning', *brynenes* 'hard, fiery trial', *inbryne* 'conflagration', *bryneādl* 'fever', *brynebrōga* 'fire-terror', *brynegield* 'burnt-offering', *brynehāt* 'burning-hot', *brynelēoma* 'fire-gleam, flame', *brynetēar* 'hot tear', *brynewylm* 'wave of fire, flame, burning heat', *brynstān* 'brimstone', *fǣrbryne* 'scorching heat', *hellebryne* 'hell-fire', *hūsbryne* 'burning of a house', *līgbryne* 'burning, fire', *mānbryne* 'fatal, destructive fire', *sunbryne* 'sunburn', *synbryne* 'burning ardour of sin'.

Given the nature of the data described above, a research line in the paradigmatic analysis of the derivational morphology of Old English has been

pursued by (Martín Arista 2008, 2009, 2010, 2011a, 2011b, 2012a, 2012b, 2014) and Novo Urraca 2015 (forthcoming-a, forthcoming-b). The starting point of this research is Pounder´s (2000: 82) concept of derivational paradigm: *a set of paradigmatic relations between word-formations sharing a lexemic root*.

Pounder (2000) distinguishes between the paradigm as a morphological structure, consisting of a set of paths between a base and the operations that turn out its derivatives and the lexical paradigm involving a structured pattern of instructions for operations on stems. The morphological paradigm is valid for a whole lexical class, such as the class of nouns, or a subclass like deadjectival adverbs. The latter is the individual paradigm of the member of a lexical class such as, for example, the paradigm of a strong verb. Put in another way, the morphological paradigm defines a set of possible operations that can be instantiated by the lexical paradigm. The morphological paradigm, as a set of operations, accounts for the dynamic side of word-formation, whereas the lexical paradigm, as the product of the operations, guarantees the static side of word-formation. Pounder (2000: 86) excludes from the paradigm the lexemes that do not hold a regular relation of form to the lexemic base of the paradigm because a shared lexemic origin is a requisite for the establishment of a word-formation relation.

Novo Urraca (2015) illustrates this concept of derivational paradigm with the set of derivatives that can be traced back to the adjectival base *glēaw* 'penetrating, keen, prudent, wise, skilful; good', given in (6):

(6)

a.     Nouns

*gereordglēawnes* 'skill in singing', *glēawnes* 'wisdom, prudence, skill, penetration; diligence; sign, token', *glēawscipe* 'wisdom, thoughtfulness, diligence; proof, indication, test', *unglēawnes* 'folly, ignorance', *unglēawscipe* 'folly'.

b.     Adjectives

*ǣglēaw* 'learned in the law', *cræftglēaw* 'skilful, wise', *ferhðglēaw* 'wise, prudent', *foreglēaw* 'foreseeing, provident, wise, prudent', *frēaglēaw* 'very wise', *glēawferhð* 'prudent', *glēawhȳdig* 'thoughtful, wise, prudent', *glēawhycgende* 'thoughtful, wise, prudent', *glēawlic* 'wise, prudent, skilful, diligent', *glēawmōd* 'wise, sagacious', *hreðerglēaw* 'wise, prudent',

*hyrgeglēaw* 'prudent in mind', *mōdglēaw* 'wise', *steorglēaw* 'clever at astronomy', *unglēaw* 'ignorant, foolish, unwise', *wordglēaw* 'skilful in words'.

c.  Adverbs

*foreglēawlīce* 'providently, prudently', *glēawe* 'wisely, prudently, well' *glēawlīce* 'prudently, wisely, clearly, well', *unglēawlīce* 'unwisely, imprudently'.

In paradigmatic morphology, a set of lexical items such as (6) is called a *derivational paradigm* and the lexemic root that functions as the base of derivation of the paradigm is dubbed the *basic adjective*. The members of a derivational paradigm are free lexemes or *lemmas*. As can be seen in (6), members of several lexical categories result from morphological processes with the base *glēaw*. While some derivatives are directly related to the base of derivation (as in *glēaw > glēawlīce*) others take additional derivational steps (as in *glēaw > glēawlīce > unglēawlīce*). Derivations in the paradigm are strictly gradual. From the point of view of meaning, one or more of the meaning senses of the base in (6) are found in the derivatives.

Derivational paradigms thus defined reinforce the associative character attributed to the Old English lexicon by Kastovsky (1992a: 294). Moreover, derivational paradigms constitute a significant advance with respect to word-families because paradigms constitute well defined sets in which the morphological relatedness is explicit, whereas word-families are less structured inventories in which formal and semantic relations are looser.

### 2.6.2. Word-formation

This section describes in a detailed way the units and relations on which the derivational paradigms of Old English are based. Such units and relations can be identified in the derivational processes of zero derivation, prefixation, suffixation and compounding.

To begin with, zero derivation, for Kastovsky (1968: 31), involves *those cases where a certain stem is used for the formation of a categorically different word without a derivational element being added*. Pilch (1970) gives an account of the phenomena of word-formation that resort to internal modification in Old English that does not always concur with Kastovsky's definition of zero derivation as derivation

without derivational morphemes. For example, the formation of nouns with the suffixes -ere and -estre is not compatible with such a definition. The suffix -ere derives strong masculine nouns, as in *bæcere* 'bake' < *bacan* 'to bake'; *folgere* 'follower, attendant'< *fylgan* 'to follow, pursue'; *lēogere* 'liar, false witness'< *lēogan* 'to lie'; *bōcere* 'scholar'< *bōc* 'book'; *sēamere* 'beast of burden, mule'< *sēam* 'burden, load'. The suffix -estre derives weak feminine nouns, such as *bæcestre* 'baker' < *bacan* 'to bake'; *webbestre* 'female weaver' < *wefan* 'to device, contrive'; *lybbestran* 'sorceress' < *lybban* 'to live, experience'; *sēamestre* 'sewer, tailor'. The same holds for the derivatives from strong verbs with the suffixes -d and -t, which are no longer transparent in Old English, including the masculine nouns *ǣrist* 'rising, resurrection' < *ārīsan* 'to arise'; *flyht* 'flying, flight' < *flēon* 'to fly from, flee; put to fight, fly'; *swylt* 'death' < *sweltan* 'to die, perish'; *slieht* 'stroke, slaughter, murder' < *slēan* to strike, beat; to kill; to slaughter'; *blǣd* 'blowing, blast' < *blāwan* 'to blow'; and the feminine nouns *cyst* 'freewill, choice' < *ceosan* 'to choose'; *wyrd* 'fate' < *weorðan* 'to become'; *scyld* 'offence, fault' < *sculan* 'to be obliged'; *miht* 'might, bodily strenght; power' < *magan* 'to be able; to be strong'; *glēd* 'glowing cold' < *glōwan* 'to glow'.

Other instances of zero derivation as described by Pilch (1970) fall under the scope of what González Torres (2010a, 2010b, 2011) calls the boundary between inflection and derivation because an inflectional ending also plays a derivational role (it marks the category change and causes a change of meaning with respect to the base of derivation). This includes masculine nouns with -a in the nominative singular derived from class I-VI strong verbs like *boda* 'messenger, herald, angel' < *bēodan* 'to command; inform'; *lida* 'sailor < *līðan* 'to go, travel, sail'; *scinna* 'spectre, illusion' < *scīnan* 'to shine, flash'; *wiga* 'fighter' < *wīgan* 'to fight, make war'; *wita* 'sage, philosopher' < *witan* 'know, understand'; *bora* 'ruler' < *beran* 'to bear'; *fricca* 'herald, crier'< *frignan* 'to ask, inquire' *webba* 'weaver'< *wefan* 'to device, contrive'; *fara* 'traveller'< *faran* 'to go, travel'; *stapa* 'grasshoper, locust' < *steppan* 'to step, go, advance'; *wealda* 'ruler'< *wealdan* 'to rule, control'; masculine nouns with -e in the nominative singular derived from strong verbs of classes I-VI, such as *bite* 'bite' < *bītan* 'to bite'; *lyre* 'loss' < *lēosan* 'to lose'; *wyrp* 'a throw, cast' < *weorpan* 'to throw'; *cyme* 'coming' < *cuman* 'to come'; *byre* 'child, son, descendant' < *beran* 'to bear'; *bryce* 'breach' < *brecan* 'to break'; *stede* 'place, site, position' < *standan* 'to stand'; *fiell* 'fall, destruction' < *feallan* 'to fall'; feminine nouns with -u in the nominative singular derived from class I-VI strong verbs and class 3 of weak verbs, of

the type *notu* 'enjoyment, use' < *nēotan* 'to use, have the use of'; *giefu* 'giving, gift' < *giefan* 'to give'; *faru* 'way, going, journey' < *faran* 'to set forth to, travel'; *sagu* 'saw, saying, report' < *secgan* 'to say, speak'; and strong feminine nouns with -u in the nominative singular such as *strengu* 'strength' < *strang* 'strong'; *hǣtu* 'heat, warmth' < *hāt* 'hot'; *ieldu* 'age, period' < *eald* 'old'; *cwalu* 'killing, murder' < *cwelan* 'to kill, murder'; *wracu* 'revenge, vengeance' < *wrecan* 'to drive, impel: revenge, avenge'.

The case with the nouns listed above is comparable to the one of adjectives derived from strong verbs (Pilch 1970) with -e in the nominative singular (both with and without i-mutation): *swice* 'fallacious, deceitful' < *swīcan* 'to wander'; *lyge* 'lying, false' < *lēogan* 'to lie'; *hryre* 'perishable' < *hrēosan* 'to fall'; *eaðfynde* 'easy to find' < *findan* 'to find'; *dægryne* 'daily, of a day' < *rinnan* 'to run'; *bryce* 'fragile' < *brecan* 'to break'; *ungemete* 'huge' < *metan* 'to measure'; *gefrǣge* 'well-known' < *gefrignan* 'ask, inquiry'; *genǣme* 'taking, receiving' < *niman* 'to take'; *oferǣte* 'gluttonous' < *etan* 'to eat'; *twēosprǣce* 'doubt' < *sprecan* 'to speak'; *gefēre* 'accesible' < *faran* 'to set forth'; *oncnǣwe* 'known, recognised' < *cnawan* 'to know'; *andfenge* 'acceptable, agreeable' < *fōn* 'to take'; *anhryrne* 'unicorn' < *anhorn* 'unicorn'; *unrime* 'countless' < *unrim* 'counless number'.

The characteristics of the verbs cited by Pilch (1970) is also similar to the ones of the nouns and the adjectives presented above. This includes denominal weak verbs of class 1 with i-mutation in the root vowel and gemination with short vowels, such as *andswerian* 'to answer' < *andswaru* 'answer, reply'; *dēman* 'to judge' < *dōm* 'doom, judgement, ordeal'; *fēdan* 'to feed' < *fōda* 'food'; *fēran* 'to go, come, depart' < *fōr* 'going, course'; *ferian* 'to carry, convey' < *fær* 'movement, movable possessions'; *hǣlan* 'to heal' < *hāl* 'hale, safe, healthy'; *fyllan* 'to fill' < *full* 'full'; *gremman* 'to enrage, provoke' < *gram* 'angry, cruel'; denominal weak verbs of class 2 without affix, without i-mutation in the root vowel and without gemination, like *andswarian* 'to answer' < *andswaru* 'answer, reply', *lufian* 'to love' < *lufu* 'love', *geōmrian* 'to be sad, complain' < *geōmor* 'troubled, sad', *hēan* < *hēah* 'high', *smēagan* 'to think' < *smēah* 'sagacious, acute', *twēogan* 'to doubt, hesitate' < *twēo* 'doubt, ambiguity'; and verbs derived from strong verbs with i-mutation in the root vowel: *rǣran* 'to rear, raise' < *rīsan* 'to rise, stand up'; *āflīegan* 'to put to flight' < *flēon* 'to fly from, flee'; *drencan* 'to give to drink' < *drincan* 'to drink'; *sengan* 'to singe, burn slightly' <

*singan* 'to sing, sound'; *swebban* 'to put to sleep' < *swefan* 'to sleep, slumber'; *settan* 'to make to sit' < *sittan* 'to sit, sit down'.

More clear instances of zero derivation are found in the formation of masculine and neuter nouns without ending in the nominative singular (Pilch 1970) from strong verbs and weak verbs of class I (there is gemination), such as *fær* calamity, sudden danger' < *faran* 'to set forth; happen, exist, act'; *gebind* 'binding, fetter' < *bindan* 'to tie, bind, fetter'; *gefeoht* 'action of fighting' < *feohtan* 'to fight'; *gielp* 'boasting, pride, arrogance' < *gielpan* 'to boast, exult'; *græf* 'cave, grave, trench' < *grafan* 'to dig, dig up'; *lād* 'course, journey'< *līðan* 'to go, travel'; *rād* 'ride, riding, expedition'< *rīdan* 'to ride'; *webb* 'web' < *wefan* 'to weave'; *wīg* 'strife, war' < *wīgan* 'to fight, make war'; *witt* 'philosopher, wise man' < *witan* 'know, understand'; in the formation of masculines and feminines without ending in the nominative singular from strong verbs of classes IV, V and VI, such as *bǣr* 'bier' < *beran* 'to bear', *ǣt* 'eatables, food' < *etan* 'to eat'; *sprǣc* 'language' < *sprecan* 'to speak'; *wrǣc* 'misery, vengeance, persecution; exile' < *wrecan* 'to drive, impel'; *brǣc* 'breaking, destruction' < *brecan* 'to break'; *fōr* 'going, course, journey' < *faran* 'to set forth to, travel'.

As regards affixation, Jember et al (1975) provide the most detailed inventory of the prefixes of Old English. The set of prefixes includes: *a-* (*abacan* 'bake', *abarian* 'bear', *aberstan* 'burst out', *abrædan* 'spread out', *acleopian* 'call out'; *abeatan* 'beat to pieces', *acalan* 'become frost-bitten', *adrygan* 'dry out'); *æ-*(*æbylga* 'anger, offence', *ðæcyrf* 'wood-choppings', *ærist* 'rising, resurrection', *æblæce* 'lustreless, pale', *æfelle* 'without skin, peeled', *æwæde* 'without clothes'); *æf-* (*æfgrynde* 'abyss', *æfðanca* 'insult', *æfweard* 'absent'); *and-* (*andcwiss* 'answer', *andgiet* 'understanding', *andsaca* 'adversary', *andlean* 'retribution' *andcweðan* 'contradict', *andhweorfan* 'move against', *andspurnan* 'stumble against'); *be-* (transitivisation: *befeohtan* 'take by fighting', *befleogan* 'fly upon', *besðrengan* 'besprinkle'; intensification: *bebrecan* 'break to pieces', *begnidan* 'rub thoroughly'; without specific meaning: *bebeodan* 'offer, anounce', *beceapian* 'sell'; in nouns as deverbal derivatives: *beclypping* 'embrace' < *beclyppan*, *befrinung* 'inquiry' < *befrinan*, *begimen* 'attention' < *begiman*); *bi-* (with meaning 'about, around': *bifylce* 'neighbouring people', *bigyrdel* 'girdle, belt', *binama* 'pronoun'; in deverbal nouns derived from *be-* verbs: *bigeng*, *bigenge* 'practice, worship', *bigenga* 'inhabitant, cultivator', *bisæc* 'visit'); *ed-* ('back, again' with nouns: *geedcucoda* 'man restored to life', *edgift* 'restitution', *edlean* 'reward'; with adjectives: *edcwic* 'regenerated,

restored to life', *edgeong* 'becoming, being young again', *edniwe* 'renewed'; with verbs: *geedciegan* 'recall', *edgyldan* 'remunerate', *edhwierfan* 'return'); *fær-* (*færblæd* 'sudden blast', *færcwealm* 'sudden pestilence', *færgripe* 'sudden grip', *færræs* 'sudden rush'); *for-* (in verbs and deverbal derivatives with the meaning 'loss, destruction': *forberstan* 'burst asunder', *fordon* 'destroy', *forweorðan* 'perish'; with the meaning of intensification or perfectivity: *forbærnan* 'burn up', *forbitan* 'bite through', *forceorfan* 'cut out, down'; in adjectives: *forgeare* 'very certainly', *forheard* 'very hard', *formanig* 'very many', *foroft* 'very often', *forbeodan* 'forbid, refuse, annul'; *ge-:* (verbal function denoting 'perfectivity, result': *gærnan* 'gain by running', *geascian* 'learn by asking', *gesittan* 'inhabit'; *gestandan* 'endure, last', *gebæran* 'behave', *geweorðan* 'agree'; with no difference in meaning: *(ge)adlian* 'be, become ill', *(ge)æmtian* 'to empty', *(ge)campian* 'strive, fight'; with nouns meaning 'collectivity of persons or objects': *gegeng* 'body of fellow-travellers'); with the meaning 'repetitive action': *gebeorc* 'barking'; *gebroðor* 'brethren', *gefylce* 'collection of people, army', *gesceaft* 'creation', *gescy* 'pair of shoes'; with the meaning 'associativity': *gefara, gegenga* 'one who travels with another', *gebedda* 'one who lies in bed with another', *gehada* 'brother-monk', *gehlytta* 'partner', *gefera* 'companion', *gesið* 'fellow-ship'; with adjectives meaning 'having, provided with': *gebirde* 'bearded', *gecelfe* 'great with calf', *gecnæwe* 'knowing, aware', *gefræge* 'known', *gecladed* 'clothed', *geglofed* 'gloved', *geheafod* 'having a head'; denoting 'associativity': *gefederen* 'having the same father', *gemod* 'of one mind, agreed'; *mis-* ('bad, badly' with verbs, nouns and participial adjectives: *miscweðan* 'speak ill', *misdon* 'do evil', *misfaran* 'go wrong', *misdæd* 'misdeed', *misgehygd* 'evil thought', *misgewidere* 'bad weather', *misboren* 'abortive', *mishæbbende* 'being ill', *misscrence* 'distorted, shrivelled'); *or-* (with the meaning 'without, lack of': *orblede* 'without blood', *orsawle* 'lifeless', *orwurð* 'ignominy'; with an intensifying sense: *orcnæwe* 'evident, well-known', *oreald* 'very old', *orgyte* 'well-known'); *sam-* ('together' with adjectives: *samheort* 'unanimous', *samsæle* 'agreed', *samrad* 'harmonious'; with nouns: *samræden* 'married state', *samwist* 'living together', *samwrædness* 'union'; with the meaning 'half' with adjectives: *samcwic* 'half-dead', *samgrene* 'half-green', *samlæred* 'half-taught'; with nouns: *sambryce*; with verbs: *samwyrcan* 'to half do a thing'); *sin-* ('perpetual, lasting, excessive' modifying adjectives: *sinbyrnende* 'ever burning', *sincald* 'perpetually cold', *singrim* 'exceedingly fierce'; nouns: *sinfrea* 'overlord, husband', *sinhiwan* 'wedded couple', *sinnið* 'perpetual misery'); *un-* (with a

negative sense with adjectives and nouns: *unæðele* 'of low birth', *unawemmed* 'unstained', *unberende* 'unbearable, unfruitful', *unbrad* 'narrow'; *unar* 'dishonour', *unbealu* 'innocence', *unfrið* 'enmity', *unlif* 'death'; with a pejorative sense meaning 'bad(ly), excessive(ly)' with adjectives: *unforht* 'afraid', *unhar* 'very grey'; with nouns: *unæt* 'gluttony', *undæd* 'wicked deed', *unlæce* 'bad physician', *unlagu* 'bad law, injustice'; with verbs denoting the undoing of the result of a pre-action: *unbindan* 'unbind, loosen', *undon* 'undo', *unlucan* 'unlock', *unwreon* 'uncover'; *wan-* ('lacking, not' modifying nouns: *wanhælð* 'weakness, sickness', *wanhafa* 'poor man', *wanhoga* 'thoughtless one', *wansped* 'poverty'; with adjectives: *wanhafol* 'needy', *wanhal* 'unsound', *wanscryd* 'poorly clad').

Within prefixation, the question of the weakening of the verbal prefixes calls for special attention given that this thesis deals with the semantics of morphologically related verbs. De la Cruz (1975) divides Old English preverbs into two main types, pure prefixes (prefixes without a prepositional counterpart or with a prepositional counterpart that differs in function) and preverbs with a prepositional or adverbial counterpart of place or direction. Martín Arista and Cortés Rodríguez (2014) illustrate these groups with the following complex verbs, respectively:

(7)

a. *ā-*     *āberan* 'to bear'

     *be-*     *bebītan* 'to bite'

     *for-*     *forlēogan* 'to lie'

     *ge-*     *gebringan* 'to bring'

     *of-*     *ofðīnan* 'to be too moist'

     *on-*     *oncunnan* 'to accuse'

     *to-*     *tōstincan* 'to distinguish by smell'

b. *æt*     *ætslāpan* 'to sleep beside'

     *ofer*     *oferberan* 'to carry over'

     *forð*     *forðhrēosan* 'to rush forth'

     *fore*     *foresittan* 'to preside over'

     *fram*     *frambringan* 'to take away'

     *geond*     *geondsāwan* 'to scatter'

     *in*     *inasendan* 'to send in'

     *oð*     *oðiernan* 'to run away'

ðurh   ðurhdrīfan 'to drive through'

under  underwrītan 'to write at the foot of'

up     ūpārīsan 'to rise up'

ut     ūtātēon 'to draw out'

wið    wiðspurnan 'to hit against'

ymb    ymblicgan 'to surround'

While the complex verbs in (b) are transparent from the point of view of meaning, the pure prefixes, having cognates in the other Germanic languages that indicate a common origin and a long period of use, are rather opaque as far as meaning is concerned. To illustrate the semantic opaqueness of the pure prefixes, Martín Arista and Cortés Rodríguez (2014) give the following example, with the base of derivation *(ge)beran* 'to bear':

(8)    *āberan* 'to bear'

       *beberan* 'to carry to'

       *forðberan* 'to bring forth'

       *forberan* 'to forbear'

       *foreberan* 'to prefer'

       *ināberan* 'to carry in'

       *inberan* 'to carry in'

       *oðberan* 'to bear away'

       *oferberan* 'to carry over'

       *onberan* 'to carry off'

       *tōberan* 'to carry off'

       *underberan* 'to endure'

       *ymbberan* 'to surround'

As can be seen in the example, the relationship between form and meaning is not transparent in sets like *beran/āberan/geberan* 'to bear', *inberan/ināberan* 'to carry in', and *onberan/tōberan* 'to carry off'. On this question, de la Cruz (1975), Horgan (1980), Hiltunen (1983) and Kastovsky (1992a) agree that the pure prefixes of Old English are indicative going through a process of semantic weakening. Hiltunen (1983: 54), for instance, remarks that *the fact that one and the same verb may occcur with two*

*or more different prefixes (...) is often taken to indicate the lack of expressive content in the prefixes, and their incipient decline.* Martín Arista and Cortés Rodríguez (2014) give an overall picture of a phenomenon that involves the following aspects: an affix can be deleted without change of meaning, as in *rihtan*/*gerihtan* 'set straight' and the examples in (9a); two affixes are interchangeable without change of meaning, as in *āsǣlan/gesǣlan* 'to tie' and the examples in (9b); an affix and a free form are interchangeable, as in *ondrincan/indrincan* 'drink' and the other examples in (9c); and three or more affixes are interchangeable without change of meaning, as in *āspillan/gespillan/tōspillan* 'to destroy' and the rest of the examples given in (9d).

(9)

a.     *ābacan/bacan* 'to bake'

      *begylpan/gielpan* 'to boast'

      *getredan/tredan* 'tread'

      *forcwolstan/cwolstan* 'to swallow'

      *oflinnan/linnan* 'to cease'

      *onblōtan/blōtan* 'to sacrifice'

      *tōsceacan/scacan* 'to shake off'

b.     *ā-/be-*     *ādrīfan/bedrīfan* 'to follow up'

      *ā-/ge-*     *ālēogan/gelēogan* 'to lie'

      *ā-/for-*     *āmeltan/formeltan* 'to melt away'

      *ā-/of-*     *āsnīðan/ofsnīðan* 'to cut off'

      *ā-/on-*     *āhōn/onhōn* 'to crucify'

      *ā-/tō-*     *ācnāwan/tōcnāwan* 'to recognise'

      *be-/ge-*     *belēogan/gelēogan* 'to lie'

      *be-/for-*     *beflēon/forflēon* 'to flee from'

      *be-/of-*     *behrēosan/ofhrēosan* 'to overwhelm'

      *be-/on-*     *behātan/onhātan* 'to promise'

      *be-/to-:*     *becuman/tōcuman* 'to come'

      *for-/ge-*     *forsweltan/gesweltan* 'to die'

      *for-/of-*     *fortredan/oftredan* 'to tread down'

      *for-/on-*     *forgieldan/ongieldan* 'to pay for'

      *for-/tō-*     *forhēawan/tōhēawan* 'to hew in pieces'

      *ge-/of-*     *gelēogan/oflēogan* 'to lie'

| | | |
|---|---|---|
| | *ge-/on-* | *gebēodan/onbēodan* 'to command' |
| | *ge-/tō-* | *gehelpan*/tōhelpan 'to help' |
| | *of-/on-* | *ofmunan/onmunan* 'to remember' |
| | *of-tō-* | *ofsnīðan/tōsnīðan* 'to cut off' |
| | *on-/tō-* | *onhlīdan/tōhlīdan* 'to open' |
| c. | *æt-/ā-* | *æthebban/āhebban* 'to take away' |
| | *ofer-/for-* | *oferniman/forniman* 'to take away' |
| | *oð-/be-* | *oðcwelan/becwelan* 'to die' |
| | *oð-/on-* | *oðhrīnan/onhrīnan* 'to touch' |
| | *geond-/ge-* | *geondscīnan/gescīnan* 'to shine upon' |
| | *ofer-/of-* | *ofertredan/oftredan* 'to tread down' |
| | *oð-/of-* | *oðswerian/ofswerian* 'to abjure' |
| | *ūp-/on-* | *ūphebban/onhebban* 'to lift up' |
| | *oð-/to-* | *oðglīdan/tōglīdan* 'to glide away' |
| | *ūpā-/ūtā-* | *ūpābrecan/ūtābrecan* 'to break out' |
| | *wið-/wiðer* | *wiðstandan/wiðerstandan* 'to resist' |
| d. | *ā-/be-/for-* | *āweorpan/beweorpan/forweorpan* 'to throw' |
| | *ā-/be-/ge-* | *ālēogan/belēogan/gelēogan* 'to lie' |
| | *ā-/be-/tō-* | *ābrecan/bebrecan/tōbrecan* 'to break to pieces' |
| | *ā-/ge-/for-* | *āblāwan/geblāwan/forblāwan* 'to blow' |
| | *ā-/ge-/on-* | *ābēodan/gebēodan/onbēodan* 'to command' |
| | *ā-/ge-/to-* | *āhelpan/gehelpan/tōhelpan* 'to help' |
| | *be-/on-/to-* | *becuman/ancuman/tōcuman* 'to arrive' |
| | *be-/for-/of-* | *beswelgan/forswelgan/ofswelgan* 'to swallow up' |

Martín Arista and Cortés Rodríguez (2014) describe the following recursive patterns in verb formation *forð-ge-, fore-ge-, fram-ā-, in-be-, in-ge-, niðer- ā-, of-ā-, ofer-be*, *ofer-ge-, on-ā-, on-be-, on-ge-, onweg-ā-, tō-be-, tō-ge-, ūp-ā-, ūt-ā-*. They also remark that the limit is two preverbs and that the typical pattern is a free preverb followed by a pure prefix, as, for instance in (Martín Arista and Cortés Rodríguez 2014):

(10 )

a.      *of-ā-*

*ofāceorfan* 'to cut off', *ofādrincan* 'to quench', *ofāhēawan* 'to cut off', *ofāniman* 'to take away', *ofāsceacan* 'to shake off', *ofāsciran* 'to cut off', *ofāsēoðan* 'to purify', *ofāslēan* 'to smite off', *ofāsnīdan* 'to cut off', *ofāstīgan* 'to descend', *ofātēon* 'to pull out', *ofāweorpan* 'to throw off'

b.  *ūp-ā-*

    *ūpāblāwan* 'to blow up', *ūpābrecan* 'to break out', *ūpābregdan* 'to lift up', *ūpāhebban* 'to raise up', *ūpāhōn* 'to hang up', *ūpālūcan* 'to eradicate', *ūpārīsan* 'to rise up', *ūpāspringan* 'to spring up', *ūpāstīgan* 'to rise', *ūpātēon* 'to draw up', *ūpāweallan* 'to well up', *ūpāwegan* 'to lift up'

c.  *ūt-ā-*

    *ūtāberstan* 'burst out', *ūtābrecan* 'break out', *ūtādelfan* 'dig out', *ūtādrīfan* 'drive out', *ūtāfaran* 'to go out', *ūtāflōwan* 'to flow out', *ūtāscēotan* 'to pierce out', *ūtāslēan* 'to strike outwards', *ūtāslīdan* 'to slip forwards', *ūtāspīwan* 'to spew forth', *ūtātēon* 'to draw out', *ūtāwindan* 'to fall out'

With this evidence, de la Cruz (1975: 75) underlines the telic function performed by the pure prefixes in instances like *āsingan* 'sing to an end'/*singan* 'sing', *beswǣlan* 'scorch'/*swǣlan* 'burn', *ofsceotan* 'shoot down'/*sceotan* 'shoot' and *forgrindan* 'grind to pieces'/*grindan* 'grind'. In this line, Brinton and Closs Traugott (2005: 124) hold that preverbs like *of-*, *ūp-* and *ūt-* *come to be grammaticalized as markers of verbal aspect*. These authors reach the conclusion that *the rise of prepositional verbs is concurrent with the loss of verbal prefixes, which over the OE period had weakened, overextended, and lost information content* (Brinton and Closs-Traugott 2005: 127).

Novo Urraca (forthcoming-b) offers an account of Old English suffixation that includes not only the affixes (including variants) and the category and morphological class of the bases of derivation, but also includes type frequency (the number of different formations with a given suffix, irrespective of the number of textual occurrences of each formation) and patterns of recursivity in which a certain suffix is found. Novo Urraca (forthcoming-b) also distinguishes between suffixes proper and suffixoids, or elements whose status as free forms (lexemes) or bound forms (morphemes) casts some doubts. As regards the suffixes found in noun formation, the inventory includes (capitals are used as in the original) -Ð (variants *-oð, -t, -ða, -ðo, -ðu, -uð*; 163 types, attached to nominal, adjectival and verbal bases: *fǣgð* 'imminent death'), -EL (variants *-ol, -ul*; 88 types; attached to nominal, adjectival and verbal

bases: *wundel* 'wund'), -ELS (24 types, attached to nominal, adjectival and verbal bases: *wæscels* 'bath'), -END (309 types, attached to nominal, adjectival and verbal bases: *blāwend* 'inspirer'), -ERE (258 types, attached to nominal, adjectival and verbal bases: *cunnere* 'tempter'), -ESSE (2 types, attached to nominal bases: *abbodesse* 'abbess'), -ESTRE (51 types, attached to nominal and verbal bases: *fiðelestre* 'female fiddler'), -ETT (34 types, attached to nominal, adjectival and verbal bases: *bærnett* 'burning'), -ICGE (12 types, attached to nominal and verbal bases: *hunticge* 'huntress'), -INCEL (14 types, attached to nominal bases: *byrðincel* 'little burden'), -ING (303 types, attached to nominal, adjectival and verbal bases: *clypping* 'embracing'), -LING (46 types, attached to nominal, adjectival and verbal bases: *hæftnīedling* 'captive'), -NES (1231 types, attached to nominal, adjectival and verbal bases: *gifolnes* 'liberality'), -UNG (762 types, attached to nominal, adjectival, verbal and adverbial bases: *ārweorðung* 'honour'). The suffixoids that take part in noun formation include -DŌM (52 types, attached to nominal and adjectival bases: *dysigdōm* 'ignorance'), -HĀD (44 types, attached to nominal and adjectival bases: *munuchād* 'monastic orders'), -RǢDEN (46 types, attached to nominal, adjectival and verbal bases: *mǣgðrǣden* 'relationship'), -SCIPE (100 types, attached to nominal, adjectival and verbal bases: *hlāfordscipe* 'lordship'), -STAFAS (3 types, attached to nominal and verbal bases: *sorgstafas* 'anxiety').

The inventory of suffixes that turn out adjectives comprises (Novo Urraca forthcoming-b) -ED (attached to 138 bases, attached to nominal, adjectival and verbal bases: *getarged* 'furnished with a shield'), -OL (variants -el, -ul; 72 types, attached to nominal, adjectival, verbal and adverbial bases: *foreðancol* 'prudent'), -ENDE (16 types, attached to nominal and adjectival bases: *gecospende* 'fettered'), -ER (4 types, attached to nominal, adjectival and verbal bases: *dyrneleger* 'adulterous'), -ERNE (10 types, attached to nominal, adjectival and adverbial bases: *westerne* 'western'), -FUL (115 types, attached to nominal, adjectival and verbal bases: *hrēohful* 'stormy'), -IC (4 types, attached to nominal bases: *canonic 2* 'canonical'), -IG (265 types, attached to nominal, adjectival and verbal bases: *swǣpig* 'fraudulent'), -IHT (54 types, attached to nominal, adjectival and adverbial bases: *bȳliht* 'ulcerous'), -ISC (119 types, attached to nominal and adjectival bases: *eorlisc* 'of noble rank'), -LIC (964 types, attached to nominal, adjectival and verbal bases: *mōnelic* 'lunar'), -OÐA (24 types, attached to adjectival bases: *sixteogoða* 'sixtieth'), -OR (12 types, attached to nominal, adjectival and verbal bases: *slǣpor* 'sleepy'), -SUM (31 types, attached to

nominal, adjectival and verbal bases: *friðsum* 'peaceful'), -TIG (5 types, attached to adjectival bases: *ðrītig* 'thirty'), -WEARD (32 types, attached to nominal, adjectival and adverbial bases: *hindeweard* 'slow'). As for the suffixoids, the following can be attached in the formation of adjectives: -BǢRE (37 types, attached to nominal and adjectival bases: *hleahtorbǣre* 'causing laughter'), -CUND (24 types, attached to nominal, adjectival and adverbial bases: *metcund* 'metrical'), -WENDE (6 types, attached to nominal and adjectival bases: *lāðwende* 'hateful'), -FÆST (67 types, attached to nominal, adjectival and verbal bases: *samodfæst* joined together'), -LĀC (31 types, attached to nominal, adjectival and verbal bases: *drȳlāc* 'sorcery'), -LĒAS (124 types, attached to nominal and adjectival bases: *mǣðlēas* 'rapacious'), -WEARD (45 types, attached to nominal, adjectival and adverbial bases: *līnenweard* 'clad in linen'), -WELLE (3 types, attached to nominal and adjectival bases: *rūmwelle* 'spacious'), -WĪS (20 types, attached to nominal, adjectival, verbal and adverbial bases: *getælwīs* 'skilled in arithmetic'), -WIST (9 types, attached to nominal, verbal and adverbial bases: *loswist* 'destruction').

In verb formation, the following suffixes can be found (Novo Urraca forthcoming-b): -CIAN (7 types, attached to nominal, adjectival and verbal bases: *tamcian* 'to tame'), -ERIAN (13 types, attached to nominal, adjectival and verbal bases: *stamerian* 'to stammer'), -ETTAN (72 types, attached to nominal, adjectival and verbal bases: *plicettan* 'to play with'), -LIAN (21 types, attached to nominal, adjectival and verbal bases: *corflian* 'to mince'), -NIAN (31 types, attached to nominal, adjectival and verbal bases: *gestaðolfæstnian* 'to make firm'), -SIAN (29 types, attached to nominal, adjectival and verbal bases: *grimsian* 'to rage'). The only suffixoid of verb formation is -LǢCAN (33 types, attached to nominal, adjectival and verbal bases: *gemetlǣcan* 'to moderate').

In the formation of adverbs by means of suffixes, the following elements appear (Novo Urraca forthcoming-b): -A (8 types, attached to nominal and adjectival bases: *gēara* 'formerly'), -AN (19 types, attached to adjectival and adverbial bases: *norðan 1* 'from the north'), -E (161 types, attached to nominal and adjectival bases: *grīmme* 'savagely'), -ES (56 types, attached to nominal, adjectival, verbal and adverbial bases: *ūpweardes* 'upwards'), -INGA (32 types, attached to nominal, adjectival, verbal and adverbial bases: *nīwunga* 'newly'), -UNGA (15 types, attached to nominal, adjectival, verbal and adverbial bases: *fullunga* 'fully'), -LĪCE (713 types, attached to nominal, adjectival, verbal and adverbial bases: *hīwisclīce* 'familiarly').

The only suffixoid of adverb formation is -MǢLUM (30 types, attached to nominal, verbal and adverbial bases: *æcermǣlum* 'by acres').

To finish up the part devoted to affixation, Lacalle Palacios (2013) and Novo Urraca (forthcoming-b) identify instances of the simultaneous attachment of a prefix and a suffix, or parasynthesis. Lacalle Palacios (2013) finds instances with the prefix un- and the suffix -e such as *ungebierde* 'beardless' (<*beard* 'beard'), *unoferfēre* 'impassable' (<*oferfēran* 'to cross, pass along') and *unsamwrǣde* 'contrary' (*samwrǣdness* 'union'); with the prefix un- and the suffix -en like *unbefliten* 'undisputed' (<*geflit* 'a fan to clean corn'), *unāhladen* 'unexhausted' (<*āhladan* 'to draw out'), *unforspornen* 'not hindered' (<*gespurnan* 'to spurn, reject'), *unforburnen* 'unburnt' (<*forbeornan* 'to burn') and *unwunden* 'not wound' (<*wundian* 'to wound'); with the prefix un- and the suffix -ful such as *ungetingful* 'not eloquent' (*getinge* 'eloquent'), *ungewitful* 'unwise' (*gewitt* 'intellect, sense'), *unstydful* 'inconstant' (*standan* 'to stand firm, remain') and *unsefful* 'senseless' (<*sefa* 'mind'); and with the prefix un- and the suffix -ig, as in *unforrotiendig* 'incorruptible' (<*forrotian* 'to decay, putrefy'), *unscǣððig* 'innocent' (<*sceaðan* 'to injure, hurt'), *unscamig* 'unashamed' (*scamu* 'shame'), *untēorig* 'untiring' (*tēorian* 'to tire'), *untrymig* 'infirm' (<*trum* 'firm') and *unslǣpig* 'sleepless' (<*slǣp* 'sleep').

Parasynthesis also takes place with the prefix ge- and the suffix -ed in the following cases (Novo Urraca forthcoming-b): *beard* 'beard' > *gebearded* 'having a beard', *beard* 'beard' > *geberbed* 'vermiculatus, barbed; bordered', *bōsm* 'bosom, breast, womb' > *gebēsmed* 'bellied (of sails)', *bōsm* 'bosom, breast, womb' > *gebōsmed* 'bosomed, bent, crooked', *ciele* 'coolness, cold,' > *gecilled* 'made cool', *cosp* 'fetter, bond' > *gecosped* 'fettered', *crog* 'saffron' > *gecroged* 'saffron-hued', *dǣrst* 'leaven' > *gedǣrsted* 'leavened, fermented', *glōf* 'glove, pouch' > *geglōfed* 'gloved', *hefe* 'weight, burden' > *gehefed* 'weighed down', *gehror* 'calamity, plague, ruin' > *gehriered* 'destroyed', *hūs* 'house; temple,' > *gehūsed* 'furnished with a house', *hylc* 'bend, turn; unevenness' > *gehylced* 'bent, curved, bandy; bent apart', *laur* 'laurel' > *gelaured* 'laurel-flavoured', *leger* 'lying, illness' > *gelegered* 'confined to bed', *lād* 'course' > *geocled* 'a measure of land', *gerǣw* 'arranged in rows' > *gerǣwed* 'arranged in rows', *targe* 'small shield, buckler' > *getarged* 'furnished with a shield', *tōð* 'tooth, tusk' > *getēðed* 'toothed', *winter* 'winter' > *gewintred* 'grown up, adult; aged', *wīr* 'wire, metal thread, wire-ornament' > *gewīred* 'made of wire; ornamented'

Turning to compounding, Kastovsky (1992a) distinguishes the category of the resulting element and the semantic function of the first element (adjunct) with respect to the second (base).

According to Kastovsky (1992a), nominal compounding can be broken down into six main types Noun + Noun, Noun (genitive) + Noun, Adjective + Noun, Verb (verbal stem) + Noun, Past Participle + Noun and Adverb + Noun.

There are three types of noun + noun compounds, depending on the relation between the two parts: additive, copulative and rectional compounds. Additive compounds are those that present the semantic-morphological structure 'something consisting of X and Y, as in '*aðunswerian* 'son-in-law and father-in-law' and *suhtorgefædran* 'nephew and uncle'. Copulative compounds may be paraphrased by means of a construction with 'to be', as in *eorforswin* 'pig (*swin*) which is a boar (*eofor*)'. Copulative compounds admit further sub-division between attributive and subsumptive compounds. The difference between them is that in attributive compounds the first element attributes a specific property to the base, as *cilforlamb* 'ewelamb', *cnihtcild* 'boy', *cucealf* 'heifer-calf', *fearhryðer* 'bull', *mægðmann* 'maiden', *gummann* 'man', *wifmann* 'woman', *assmyre* 'she-ass', *gatbucca* 'billy-goat', *olfendmyre* 'camel', or *rahdeor* 'roebuck'; whereas in subsumptive compounds the first constituent denotes a subclass of the base, as in the case of *colmase* 'coal-tit', *goldfinc* 'goldfinch', *ælepute* 'eel-pout', *sperewyrt* 'spearwort', *ederbeam* 'cedar', *cirisbeam* 'cherry-tree' and *marmanstan* 'marble'. The third type of compounds within the pattern noun + noun is that of the rectional compounds, which do not admit a paraphrase with 'to be'. Rectional compounds may be synthetic (with a deverbal first element) or regular (pure nominal compounds). Synthetic compounds have an agentive base and fall into two types: those in which the first elements denotes the goal, the place or the instrument, as in *blodlætere* 'blood-letter', *eorðbuend* 'earth-dweller', *reordberend* 'speech bearer' and *sweordbora* 'sword-bearer'; and those in which the first element expresses the agent, the goal, the place or the time of the action, as in *eorðbeofung* 'earthquake', *feaxfallung* 'shedding of hair', *hancred* 'cockcrow', *hlafordswicung* 'treachery of a lord' and *sæebbing* 'ebbing of the sea'. Pure nominal compounds can be broken down into those whose base represents an agent, while the adjunct is a goal, place, instrument, time or the activity itself, as in *broðorbana* 'fraticide', *dureweard* 'janitor', *æcermann* 'ploughman', *gathryde* 'goathered', *sæfisc* 'seafish', *sæmann* 'seaman', *hereflyma* 'deserter', *sweordfreca* 'a

warrior who uses his sword', *nihthræfen* 'night raven', *ceapmann* 'merchant' and *fæstingmann* 'retainer'; those whose base refers to and object affected by an implied action or being in some state or position, while the adjunct specifies an agent, source, material, place, time, instrument or the action itself, as in *beobræd* 'honey', *smiðbelg* 'bellows', *sweostormsunu* 'sister's son', *fotspor* 'footprints', *hwætmelo* 'wheatflour', *arfæt* 'bronze vessel', *sigelean* 'reward for victory', *heafodwærc* 'headache', *æfensteorra* 'evening star', *sumorbæte* 'summer heat', *rædhors* 'riding-horse', *bletsingboc* 'benedictional', *eringland* 'arable land'; those whose base is part of the first element, as in *bordrima* 'edge of a plank', *cawelstela* 'cabbage-stem', *earlæðða* 'earlobe', *earmsceanca* 'arm-bone', *hearpestreng* 'harpstring'; those whose base is a place to which the first element is related as object or action, as in *sealtfast* 'salt-cellar', *beorsele* 'beer-hall', *ealubus* 'alehouse', *melcingfæt* 'milkpail', *witungstow* 'place of punishment', *rædinsceamol* 'lectern', *eardungstow* 'dwelling-place, tabernacle'; those whose base represents an instrument, while the first element is an object or action related to it, as in *blæstbelg* 'bellows', *breostbeorg* 'breastplate', *fiscnett* 'fishing-net', *fugellim* 'birdlime', *snidisen* 'lancet', *blæshorn* 'trumpet', *ðrawing-spinel* 'curling-iron', *writing-feðer* 'quill' and *bræding-ðanne* 'frying-pan'; those whose base represents a time, while the adjunct refers to an action related to it, as in *hærfestmonað* 'harvest-month', *sædtime* 'sowing-time', *clænsungdæg* 'day for purging'; and those whose base functions as intensifier and has partially or totally lost its literal meaning, thus *firenðearf* 'dire distress', *firensynn* 'great sin', *mægenbyrðen* 'huge burden', *mægenfultum* 'great help', *ðeodbealu* 'great calamity' and *ðeodwiga* 'great warrior'.

The second pattern of nominal compounds, noun (genitive) + noun, comprises five subtypes, including the days of the week, *Sunnandæg* 'Sunday', *Monandæg* 'Monday', *Tiwesdæg* 'Tuesday', *Sæter(n)(es)dæg* 'Saturday'; some formations that express a temporal relationship between the constituents, like *gebyrdetid* 'time of birth', *restedæg* 'rest day', *uht(an)tid* 'time of dawn' or *sunnansetlgong* 'sunset'; some nouns denoting persons, like c*ynnesmann* 'kinsman', *landesmann* 'native', *rædesmann* 'counsellor', *ahtmann* 'farmer', *gatahierde* 'goatherd' or *oxanbyrde* 'herdsman'; place names such as *cyn(in)gestun* 'Kingston'; and, finally, plant names, as in *dægeseage* 'daisy' and *oxan-slyppe* 'oxlip'.

The rest of the patterns include a non-nominal first element. The third pattern within the nominal compounds is adjective + noun, in such a way that the relationship

between the adjunct and the base is one of attribution. This pattern is very productive and includes instances like *cwilc-seolfor* 'mercury', *ealdfæder* 'ancestor', *efenniht* 'equinox', *gyldenbeag* 'golden crown', *haligdæg* 'holy day', *heahbeorg* 'high mountain', *surmeolc* 'sour milk' or *wildgos* 'wild goose'.

In the compounds that correspond to the pattern verb (verbal stem) + noun, the base is considered an argument of the verbal adjunct. The adjunct can be either a weak or a strong verb. The pattern can be subdivided into six categories defined by the semantic function performed by the element to the right, including verb + agent/subject as in *wigmann* 'warrior', *ridwiga* 'mounted soldier' and *spyremann* 'tracker'; verb + object as in *fealdestol* 'folding-stool' and *bærnelac* 'burnt offering', *tyrngeat* 'turnstile'; verb + locative as shown by *bæchus* 'bakery', *ærneweg* 'racecourse' and *writbred* 'writing-tablet'; verb + instrumental as in *bærnisen* 'branding iron', *scearseax* 'razor' and *hwetestan* 'whetstone'; verb + temporal as in *restedæg* 'rest day'; and verb + cause structure, illustrated by the pairs *spiwdrenc/wecedrenc* 'emetic' and *fielleseocness/fiellewære* 'epilepsy, falling sickness'. Another pattern displaying a verbal element to the left is past participle + noun, represented by *bahuvrihi* or exocenctric compounds such as *broden-*, *sceaden-*, *wunden-mæl* 'damascened sword', *nægledcnearr* 'nail-fastened vessel' and *etenlæs* 'pasture'.

The last pattern of nominal compounding described by Kastovsky (1992a) is that of adverb + noun, in which two subtypes can be distinguished. These compounds may be formed by an adverb and a basic or derived noun, as happens in *oferealdormann* 'chief officer' and *oferbiterness* 'excessive bitterness'; or by a derivative from a verbal compound, as in *oferleornes* 'transgression' (< *oferleoran* 'transgress'), *ofersceawigend* 'overseer, bishop' (< *ofersceawian* 'superintend').

Within adjectival compounds, Kastovsky (1992a) identifies patterns of noun + adjective, adjective + adjective, noun/adjective + present participle and noun/adjective + past participle and adverb + adjective. The pattern noun + adjective can be found in instances like *eagsyne* 'visible to the eye', *ellenrof* 'famed for strength', *æcræftig* 'learned in the law', *blodread* 'blood-red', *dæglang* 'all day long', *hunigswete* 'sweet as honey', *hetegrim* 'hateful', *modseoc* 'sick with regard to the heart, sick at heart', *ferhðgleaw* 'prudent', *ferðwerig* 'soul-weary', *modglæd* 'joyful', *leoðuwac* 'flexible, *earmstrang* 'strong of arm'. Instances of the pattern adjective + adjective include compounds such as *nearofah* 'difficult and hostile', *earmcearig* 'poor and sorrowful'

*brunwann* 'dusky', *deorcegræg* 'dark grey', *blæbæwen* 'light blue', *heardsælig* 'unhappy', *ealmihtig* 'almighty', *felafæcne* 'very treacherous', *efeneald* 'of equal age', *healfdead* 'half-dead', *widmære* 'far-famed', *gearosnotor* 'very skilful', *clængeorne* 'yearning after purity', *ellorfus* 'ready to depart', *druncengeorn* 'drunken', *deopðancol* 'contemplative', *fæstgangol* 'steady, faithful', *hearmcwidol* 'evil-speaking', *earfoðrime* 'hard to enumerate', *eaðbede* 'easy to be entreated', *eaðbylige* 'easily irritated', *eaðcnæwe* 'easy to recognise', *eaðgesyne* 'easily seen' and *felaspræce* 'talkative'. The pattern noun/adjective + present participle produces compounds such as *hunigflowende* 'flowing with honey', *blodiernende* 'having an issue of blood', *ealodrincende* 'beer-drinking', *bord-/lind-hæbbende* 'shield-bearing', *rihtfremmende* 'acting rightly', *bencsittende* 'sitting on a bench', *foldbuende* 'earth-inhabiting', *anbuende* 'dwelling alone', *feorbuende* 'dwelling far off', *grambycgende* 'hostile', *fulstincende* 'foul-smelling', *welwyrcende* 'doing good' and *widferende* 'travelling far'. The instances of noun/adjective + past participle include *bearneacnod* 'pregnant', *cerlboren* 'low-born', *cifesboren* 'bastard', *windfylled* 'blown down by the wind', *beaghroden* 'adorned with rings', *goldhlæden* 'adorned with gold', *handgewriðen* 'hand-woven', *æhtboren* 'born in bondage', *heofoncenned* 'heaven-born', *æwumboren* 'legally born', *wundor-agræfn* 'wondrously engraved', *æðelboran* 'of noble birth', *dierneforlegen* 'adulterous', *ealdbacen* 'stale', *heahgetimbrad* 'high-built', *healfbrocen* 'half-broken' and *fullmannod* 'fully peopled'. The pattern adverb + adjective can be found in instances such as *ærboren* 'earlier born', *eftboren* 'born again', *forecweden* 'aforesaid', *foremanig* 'very many', *forðsnotor* 'very wise', *ingemynde* 'well-remembered', *oferhangen* 'covered', *ofereald* 'very old', *samodfæst* 'joined together', *ðurhsyne* 'transparent', *ðurhlæred* 'thoroughly learned', *upheah* 'uplifted' and *wiðermede* 'antagonistic'.

Finally, two main groups of verbal compounds have been identified by Kastovsky (1992a): verbal derivatives from nominal compounds like *gecynehelmian* 'crown' from *cynehelm* 'crown' and the pattern *Adverb/adposition + Verb*. The second group, can be further divided into two types when the first element is an adpostion: in separable compounds the particle may be separated from the verb by the negative particle or other elements and can be placed after the verb, as in *forðtobrenganne* 'bring forth'; in inseparable compounds the adpostion cannot be separated from the verbal part of the compound, as in *to oferfeohtanne* 'conquer'.

### 2.6.3. Lexical functions

Vea Escarza (forthcoming-b) analyses the Old English nouns and adjectives derived by prefixation and suffixation by means of a structural-functional model that consists of thirty-three lexical functions that explain the semantic relations that hold between bases and derivatives. The structural basis of this study is provided by paradigmatic morphology (as reviewed above) while the functional foundations of the analysis draw on the theories of Functional Grammar (Dik 1997a, 1997b), Functional Discourse Grammar (Hengeveld and Mackenzie 2008) and Role and Reference Grammar (Foley and Van Valin 1984; Van Valin and LaPolla 1997; Van Valin 2005).

The starting point of Vea Escarza´s (forthcoming-b) research is the model of paradigmatic morphology put forward by Pounder (2000), in which the relationship between derivatives and bases of derivation is explained by means of lexical functions. Pounder (2000), in a diachronic study in German adjectives, distinguishes some functions that, according to Vea Escarza (forthcoming-b), are directy applicable to Old English, including REL(ative)('X'), as in REL('SWǢP'): *swǣpig* 'fraudulent'; EX(origin)('X'), as in EX('LĀR'): *lārdōm* 'teaching, instruction'; LIKE(similarity)('X'), as in LIKE('WUDU'): *wudiht* 'thick (with trees), garden-like'; DIM(inutive)('X'), as in DIM('SCIP'): *scipincel* 'little ship'; I(dentity)('X'), as in I('SPRǢC'): *onsprǣc* 'speech, discourse'; PEJ(orative)('X'), as in PEJ('DǢD 1'): *misdǣd* 'misdeed'; INTENS(ifier)('X'), as in INTENS('MIHT 1'): *eallmiht* 'omnipotence'; and DIST(ributive)('X'), as in DIST('WEG'): *halfweg* 'half-way'.

Vea Escarza (forthcoming-b) finds that some functions distinguished by Pounder (2000) are not relevant for Old English. Moreover, Pounder's (2000) distinction between primary and secondary functions does not hold for Old English. In Pounder's (2000) model of paradigmatic morphology, secondary functions *modify word-formation meanings rather than constituting word-formation meaning on their own* (Pounder 2000:109). However, in Old English some secondary functions apply to underived lexical items, as in PEJ('X'): *mistīd* 'wrong time' (< TĪD 'time'); and some primary functions apply to derivatives, as in I('X') < EX('X'): *līgetung* 'lightning' < *līget* 'lightning' (< LĪEG 'fire') (Vea Escarza forthcoming-b).

The rest of the inventory of lexical functions is found by Vea Escarza (forthcoming-b) in three theoretical models that share a functional view of the structure and use of language, Functional Grammar (Dik 1997a, 1997b), Functional

Discourse Grammar (Hengeveld and Mackenzie 2008) and Role and Reference Grammar (Foley and Van Valin 1984; Van Valin and LaPolla 1997; Van Valin 2005).

From Functional Grammar, Vea Escarza (forthcoming-b) takes the taxonomy of basic semantic categories proposed by Lyons (1995: the Individual, which is a first-order entity that can be located in space and evaluated in terms of its existence; the State-of-Affairs, which is a second-order entity that can be located in both time and space and evaluated in terms of its reality; and the Propositional Content, a third-order entity that assigns a mental construct that can be located neither in space nor in time, but can be evaluated in terms of its truth. Dik (1997a) adds entities from zero and fourth order: properties or relations (zero order entitities) and speech acts (fourth-order entities). On the basis of this enlarged taxonomy of basic semantic categories, Vea Escarza (forthcoming-b) distinguishes between WITHENT(ity)('X') and WITHPROP(erty)('X'), as specifications of the function WITH('X'), and the function PRED(icative)('X') for deverbal nominalizations with embedded predications.

Vea Escarza (forthcoming-b) draws on Functional Discourse Grammar for the enlargement of the semantic taxonomy proposed by Lyons (1995). Hengeveld and Mackenzie (2008) distinguish the following semantic categories: Property, Individual, State-of-affairs, Propositional Content, Location, Time, Episode, Manner, Reason and Quantity. The distinction between Property and Individual justifies Vea Escarza´s (forthcoming-b) lexical functions PROP('X') and ENT('X'), as well as the derived functions WITHPROP('X') and WITHENT('X'). The semantic category Individual is the basis of the lexical function COM(itative)('X'). Location motivates a figurative (LOC(ative)('X')) and a non-figurative lexical function LIKE(LOC(ative)('X')). Similarly, Time justifies two functions, TEMP(oral)('X') and LIKE(TEMP(oral)('X')). Furthermore, State-of-affairs is the basis for the lexical function PRED('X'). Finally, the semantic category Quantity motivates the function MASS(ive)('X'), which designates uncountable quantities.

The distinction made in Role and Reference Grammar between the semantic macroroles ACTOR and UNDERGOER is the basis for some functions identified in the framework proposed by Vea Escarza (forthcoming-b), such as PAT(ient)('X'), which accounts for the first argument of intransitives and the second argument of transitives. The adjectival counterpart is the lexical function STA(tive)('X'). Vea Escarza (forthcoming-b) also defines the lexical functions EFF(ector)('X') for the

unmarked first argument of activities and AG(ent)('X') for the prototypical agentive (conscious, animate, human) of a prototypical transitive.

With the addition of the functions discussed above, Vea Escarza (forthcoming-b) proposes the following inventory for the analysis of the prefixation and suffixation of Old English nouns and adjectives:

ABST('X'): 'Abstract', found in nouns with nominal base whose meaning becomes less concrete, as in *cildhād* 'childhood' (< CILD 'child')$_N$;

AG('X'): 'Agent', found in nouns with verbal base that are agents of the action of the verb, as in *gefestre* 'a giver' (< GIEFAN 'to give')$_V$;

AUGM('X'): 'Augmentative', found in nouns whose referent becomes increased, as is the case with *sinhere* 'huge army' (< HERE 'army')$_N$;

COM('X'): 'Comitative', found in nouns that involve company or association, such as *samwist* 'living together' (< WIST 'being')$_N$;

COUNTFACT('X'): 'Counterfactual', found in adjectives with verbal bases that convey a meaning of reversal of the verbal base like *unwemme* 'unblemished' (< (GE)WEMMAN 'to defile')$_V$;

DIM('X'): 'Diminutive', found in nouns which denote a reduced size of the referent, as in *hūsincel* 'small house' (< HŪS 'house')$_N$;

DIST('X'): 'Distributive', found in nouns and adjectives to denote the scaling of the referent by an amount or number such as *sescle* 'sixth part' (< SIEX 'six')$_{Num}$;

EFF('X'): 'Effector', found in nouns with mainly verbal base. It denotes a predication of the verbal base half way between what the functions AG('X') and PAT('X') describe, as in *feohtling* 'fighter' (< (GE)FEOHTAN 'to fight')$_V$;

ENT('X'): 'Entity', found in nouns, expresses an entity (concrete and identifiable in space and time), as in *grafet* 'trench' (< GRAFAN 'to dig')$_V$;

EX('X'): 'Origin', present in both nouns and adjectives. This function defines 'X' as the origin, which can be local, causal, material, etc, like, for instance, in *bīleofa* 'support' (< LĪF 1 'life')$_N$;

FEM('X'): 'Feminine', found in nouns when a nominal base changes its gender to feminine, as in *abbodesse* 'abbess' (< ABBOD 'abbot')$_N$;

I('X'): 'Identity', found in nouns and adjectives when the base of derivation and the derivative are partial synonyms, as in *wēsten 2* 'waste' (< WĒSTE 'waste')$_{Adj}$;

INTENS('X'): 'Intensifier', found in adjectival predicates whose properties become more intense, as is the case with *forheard* 'very hard' (< HEARD 1 'hard')$_{Adj}$;

LIKE('X'): 'Similarity', found in adjectives that take a characteristic of 'X' to establish a comparison, like *buclic* 'like a goat' (< BUCCA 'goat')$_N$;

LIKE(LOC('X')): 'Figurative locative', found in nouns and adjectives that convey a figurative sense of location like *inhold* 'loyal in heart' (< (GE)HEALDAN 'to hold')$_V$;

LIKE(TEMP('X')): 'Figurative temporal', found in nouns. This function involves a figurative sense of time, as displayed by *edcierr* 'return' (< CIERR 'turn')$_N$;

LOC('X') 'Locative', present in both categories. It expresses concrete location, as in *ofdæl* 'inclined downwards' (< DÆL 'dale')$_N$;

MAGN('X'): 'Magnifier', present in nouns to denote a higher rank than that of the referent, as is the case with *foresetl* 'chief seat' (< SETL 'seat')$_N$;

MASS('X'): 'Massive', found in nouns. This function is used to denote a pluralization or collectivization of the referent of the base, as can be seen in *fiscað* 'fishing' (< FISC 'fish')$_N$;

MIN('X'): 'Minimiser', present in nouns. It denotes a lower rank than that of the referent, as in *dōcincel* 'bastard' (< DŌC 'bastard son')$_N$;

MIT('X'): 'Mitigator', found in adjectives whose characteristics become diminished, as happens in *healfsoden* 'half-cooked' (< (GE)SĒOÐAN 'to boil')$_V$;

OPP('X') 'Oppositive', found in nouns and adjectives to convey the meaning of the opposite of the entity or property expressed by the base, as can be seen in *unwrǣste* 'feeble' (< WRǢSTE 'vigorously')$_{Adv}$;

PART('X'): 'Partitive', present in nouns to indicate that a part of a larger amount is referred to, as in *healfweg* 'half-way' (< WEG 'way')$_N$;

PAT('X'): 'Patient', found in nouns that convey the meaning of the patient of a stative verb, as is the case with *behealdend* 'spectator' (< BEHEALDAN 'to observe')$_V$;

PEJ('X') 'Pejorative', found in nouns and in adjectives when the meaning of the base is evaluated negatively *like misdǣd* 'misdeed' (< DǢD 1 'deed')$_N$;

PRED('X'): 'Predicative', present in nouns. This function expresses the objective type of deverbal predications, as can be seen in *begīmen* 'attention' (< BEGĪMAN 'to look after')$_V$;

PRIV('X'): 'Privative', found in both categories. This function denotes the absence of a property or entity, as in *ǣgȳpe* 'without skill' (< GĒAP 1 'intelligent')$_{Adj}$;

PROP('X'): 'Property', found in nouns, expresses an abstract property, as is displayed by *ielden* 'delay' (< EALD 'old')$_{Adj}$;

REL('X'): 'Relative' is found in adjectives. It assigns a reference relation to the meaning of the base, as in *wrǣstlic* 1 'pertaining to wrestling' (< (GE)WRǢSTAN 'to wrest')$_V$;

STA('X'): 'Stative' is found in adjectives and expresses a property derived from a verbal base, as in *slipor* 'slippery' (< SLĪPAN 'to slip')$_V$;

TEMP('X'): 'temporal', found in both nouns and adjectives. It expresses a temporal reference. It can be seen in *foremearcod* 'before mentioned' (< (GE)MEARCIAN 'to define')$_V$;

WITHENT('X'): 'With entity', found in adjectives to define the possession of an entity, which is concrete. This is the case with *hrōffæst* 'with a firm roof' (< HRŌF 'roof')$_N$;

WITHPROP('X'): 'With property, found in adjectives that enjoy a property, which is abstract, as can be seen in *rūmwelle* 'spacious' (< (GE)RŪM 1 'roomy')$_{Adj}$.

## 2.7. Concluding remarks

The set of lexical functions presented in the preceding section has been applied to the derived nouns and adjectives of Old English, which leaves the class of verbs pending for future analysis. This is the starting point of this undertaking. As the class of verbs is semantically different from the nominal categories, this chapter has revised the two theoretical concepts necessary for a semantic analysis of verbs, troponymy and *Aktionsart*. With these descriptive and theoretical foundations, the following chapter discusses the implementation of the semantic analysis of Old English verbs into a semantic map of the derivational paradigms of Old English that have a verbal base.

# Chapter 3

# Methodology of analysis

## 3.1. Introduction

After the presentation of the theoretical and descriptive aspects relevant for an analysis of the semantics of the verbal lexical paradigms of Old English that has been done in chapter 2, chapter 3 is concerned with the implementation of such an analysis in a semantic map. Therefore, the central part of this chapter deals with the methodology of analysis. Afterwards, the data of analysis are presented in detail. The methodology of analysis must answer the following questions: What aspects of the theoretical framework are applied to the analysis? What are the differences beween the use of theoretical notions and terms made in this work and standard use? What additional theoretical notions or terms are required to carry out the analysis? How can such theoretical notions and terms be represented in a semantic map? These aspects are discussed in section 3.2, which deals with the form and function of sematic maps in linguistic analysis and section 3.3., which presents the principles of analysis, including general principles and specific principles specifying the application of troponymy and *Aktionsart*, and section 3.4., which describes the visual representation of troponymy and *Aktionsart* in a semantic map. The data of analysis, both the bases and the derivatives of the lexical paradigms from the verbal class in Old English, are described and explained in section 3.5. To close this chapter, some concluding remarks are made in section 3.6.

## 3.2. Semantic maps in linguistic analysis

According to Levshina (forthcoming) *a semantic map is a graphical representation of functions of linguistic constructions, unto which linguistic forms from one or different languages can be mapped*. For de Haan (2004) semantic maps are used to avoid terminological multiplication and for a better representation of linguistic data. Since the first work on semantic maps (Anderson 1982, 1986), no agreement has been reached on the architecture of this kind of graphical representation. In de Haan´s (2004) words, semantic maps help linguists *to come to grips with the complex interactions of semantic meanings in the world's languages* and constitute *a representation that is the sum total of the semantic possibilities of the category under investigation*. Before going into the details of the model, the foundations of semantic maps can be found in the studies by Croft (2003) and Haspelmath (2003). The basic idea is that similarity is expressed by closeness in representational space. Closeness is also represented by means of a straight connecting line. The simplest semantic maps

are monodimensional, but bidimensional semantic maps are also used. In general, the length of the connecting lines is not significant, nor the spatial orientation. Semantic maps comprise categories and relations. The semantic map of the instrumental and related functions proposed by Haspelmath (2003: 16) illustrates what has just been said.



| recipient | beneficiary | cause |
|-----------|-------------|-------|
| (co-agent) | | |

conjunctive   comitative   instrumental   passive   source

**Fig. 12:** *Instrumental and related functions*
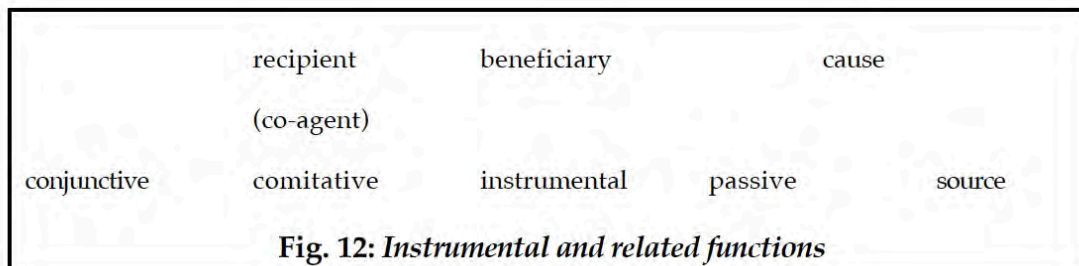
Figure 1: The semantic map of the instrumental and related functions (Haspelmath 2003: 16).

Haspelmath (2003) finds several advantages of the semantic map model. Semantic maps ensure cross-linguistic comparison, describe grammatical meanings in a very concrete way, do not presuppose that the correct semantic analysis has been found, avoid homonymy claims, do not require the identification of a prototype and, above all, *not only provide an easy way to formulating and visualizing differences and similarities between individual languages, but they can also be seen as a powerful tool of discovering universal semantic structures* (Haspelmath 2003: 20).

Although hybrid approaches occur, there are two fundamental classes of semantic maps (Levshina forthcoming). Firstly, a 'classical map' (van der Auwera 2013), 'first generation map' (Sansò 2009), or 'connectivity map' (van der Auwera 2013) is a semantic map that consists of a network of nodes connected between links. These nodes denote the functions and serve as point of cross-linguistic comparison among words, constructions or grammatical categories. To draw a classical semantic map, functions are identified and presented as nodes. Then, a spatial outline is configured in such a way that Croft's (2001) Semantic Map Connectivity Hypotheis is satisfied. This hypothesis is also known as the Adjacency or Contiguity Principle and stipulates that if two functions are conveyed by one form in one or more languages, the consequent nodes must be connected. Figure 2 (from Levshina forthcoming) illustrates the concept of connectivity map.
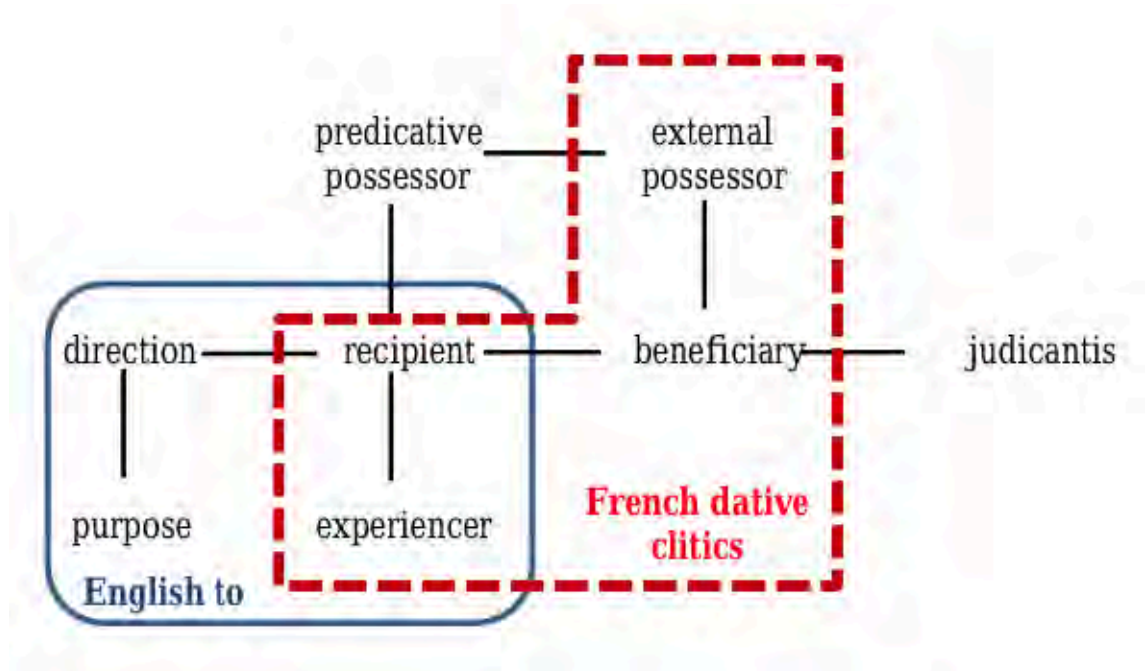
Figure 2: A map of dative functions from Haspelmath (2003), in Levshina (forthcoming).

As Levshina (forthcoming) remarks, most classical semantic maps are usually non-hierarchical because they do not display hyponymy relations. There are exceptions, like the semantic map of causation shown in figure 3.
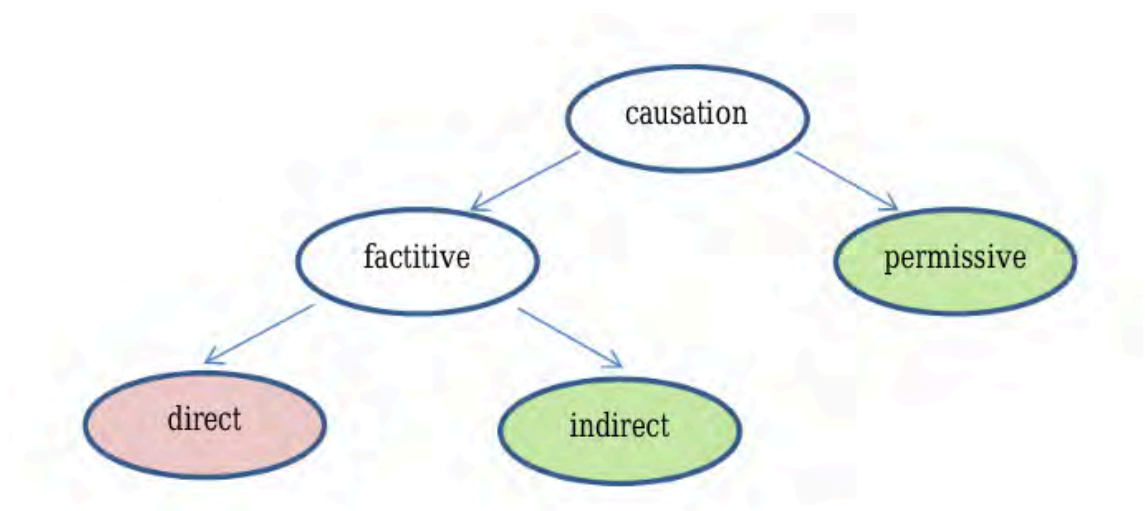


Figure 3: A hierarchical sematic map of causation (from Levshina forthcoming).

Barðdal (2007) draws on Croft (2001) and Haspelmath (2003) for the idea that items with the same grammatical behaviour are adjacent to each other in conceptual space

and items with different behaviour are distant from each other. Since Barðdal (2007) discusses the ditransitive construction and all the items share the same grammatical behaviour, they cannot be arranged on the basis of this criterion. Barðdal (2007) arranges the lexical items according to the semantic similarities found across these items, as can be seen in figure 4.

| transfer along a path | | | |
|---|---|---|---|
| giving | future transfer | | |
| lending | bringing | | |
| sending | obtaining | | |
| instrument of | creation | | |
| sending | communicated | mental activity | |
| paying | message | | |
| constraining | enabling | owning | |
| | hindrance | utilizing | |

Figure 4: The semantic map of the ditransitive dative-accusative construction in Icelandic (from Barðdal 2007).

François (2008) also draws lexical semantic maps in order to represent polysemy, so that the diagram shows all the attested meanings as well as the most likely connections between them, as can be seen in figure 5, which presents a semantic map for BREATHE:
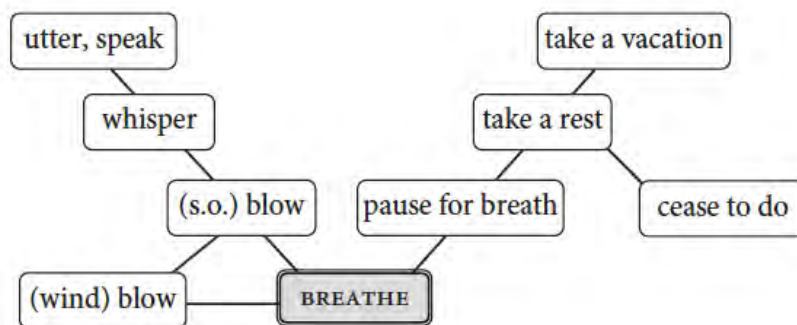


Figure 5: A semantic map for BREATHE (François 2008: 185).

Gaume, Duvignau and Vanhove (2008) incorporate graph theory to the methodology of the semantic maps. Graphs are mathematical structures that represent relations between objects. A graph consist of nodes (vertices or points) which are connected by edges (arcs or lines). Graphs may be undirected, if there is no difference made by the direction of the edge, or directed, when the direction of the edge draws a difference between the two nodes. A graph may be binary, if a maximum of two edges stem from a node, or non-binary, if more than two edges can stem from a node. In Gaume, Duvignau and Vanhove (2008), the vertices represent the lexical units of a language and the edges depend on the different relations, which fall under three types: syntagmatic relations of coocurrence (an edge is created between two words if they are found near each other in a large corpus); paradigmatic relations, notably synonymy, as in WordNet (a graph is drawn in which two vertices are linked by an edge if there is synonymy between the two words; and semantic proximity relations, which may apply both on the syntagmatic and the paradigmatic axis (an edge is created between two words when one is found in the definition of the other in a dictionary). For instance, figure 6 shows the graph for the verb ECORCER 'to bark'.
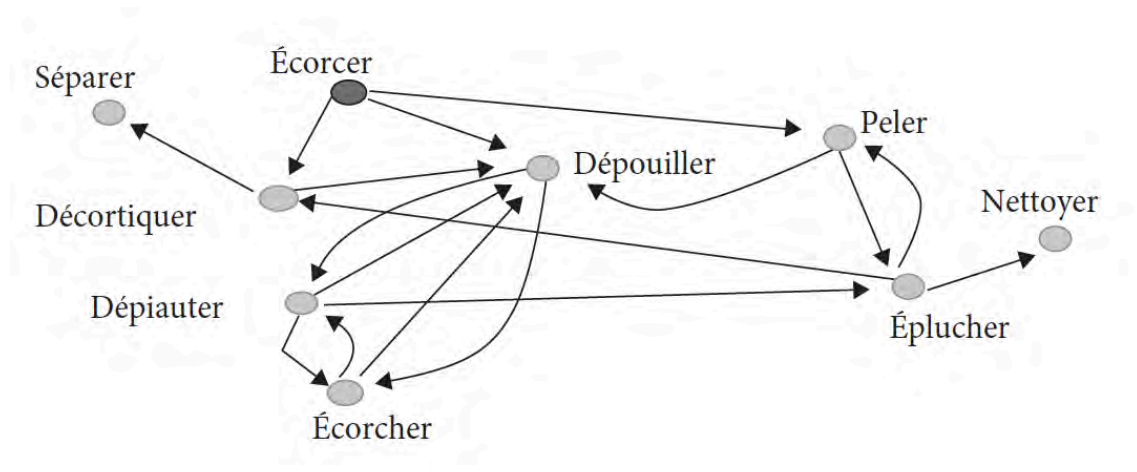


Figure 6: The graph for the verb ECORCER 'to bark' (Gaume, Duvignau and Vanhove 2008: 241).

Of the two main types of semantic maps mentioned above, all the types discussed so far belong to the first type, the classical semantic map. As for the 'proximity map' (van der Auwera 2013) or 'second generation map' (Sansò 2009), it is a map that shows data points, especially instances from an experimental stimuli or a corpus and denote a specific situation. The distance or proximity between the data points

represents the different relationships. These maps are also known as probabilistic or statistical semantic maps and are generated at the hand of multivariate statistical methods. An illustration of this type of map is provided in figure 7.
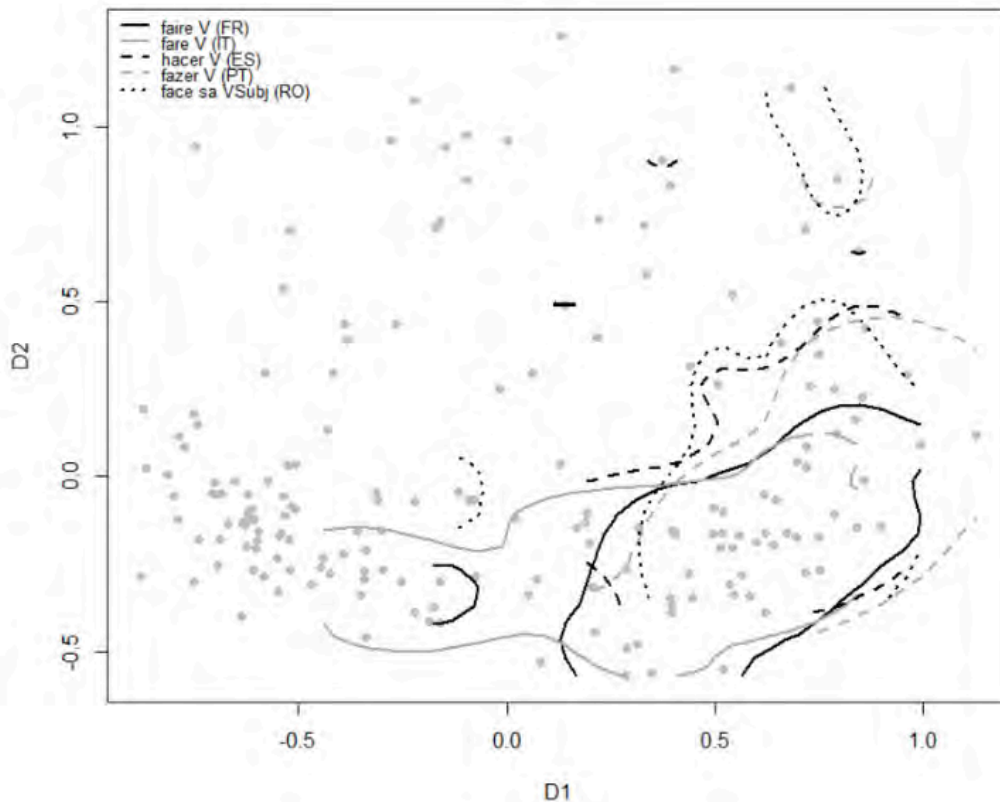


Figure 7: A probabilistic semantic map of analytic causatives in Romance (from Levshina forthcoming).

To finish up this review of semantic maps, it must be noted that different views have been held as regards the relationship between semantic maps and cognitive-semantic analyses. In Croft's (2001: 287) words, *semantic maps depict the geography of the human mind, which can be read in the facts of the world's languages in a way that the most advanced brain scanning techniques cannot ever offer us*. Croft (2001) argues that semantic maps depict the universal conceptual space that belongs to the speakers' mental representation. In this line, Haspelmath (2003) holds that semantic maps can be taken as a straightforward representation of the relationships meanings established in the speakers' mind. However, other linguists, such as Cristofaro (2010), claim that instead of individual knowledge at the synchronic level, semantic maps represent diachronic evolution.

### 3.3. Principles of analysis

The principles governing this analysis can be divided into general principles and specific principles, the latter specifying the application of troponymy and *Aktionsart* as reviewed in chapter 2. They are presented in turn in sections 3.3.1. and 3.3.2.

### 3.3.1. General principles of analysis

Beginning with the general principles of analysis, they can be formulated as follows.

Firstly, in language, form cannot be dissociated from meaning, in such a way that function (or meaning) has priority over form.

Secondly, the lexicon is organized into lexical paradigms that comprise a lexemic base of derivation and all the derivatives that share the lexeme in question. Along with morphological relatedness, holding between the input and the output of derivational processes, another type of relatedness can be identified in lexical paradigms, to wit semantic relatedness.

Thirdly, morphological relatedness in a lexical paradigm is motivated by semantic relatedness or, put in another way, the derivational processes perform the function of providing the required meanings.

In the fourth place, although morphological relatedness is secondary with respect to semantic relatedness, the lexical paradigms gathered on the basis of derivation provide the evidence used in the analysis which, moreover, is fully organized and explicitly ranked.

In the fifth place, when the focus is put on the verbal component of lexical paradigms, that is to say, the basic strong verb and the derived strong and weak verbs, troponymy can provide an explanation for the relations of semantic relatedness that hold in the paradigm, while *Aktionsart* can explain aspects associated with the relationship beween semantics, syntax and even morphology.

In the seventh place, *Aktionsart* relations can be identified not only between the different versions of a given verb but also between different verbs, which are usually related to each other by a derivational process.

Finally, given that language is a complex network of relations that hold between related nodes, a semantic map that incorporates graph theory can adequately represent the complexities of troponymy and *Aktionsart* in lexical paradigms. As the lexical paradigms that they are meant to represent, the semantic maps used in this analysis are hierarchical. The graph is of the directed type, from more basic to less

basic morphological and semantic nodes. The graph is non-binary, in such a way that more that two edges can stem from a given node.

### 3.3.2. Specific principles of analysis

The specific principles that govern the application of troponymy to this framework of analysis can be given as follows.

In this thesis, in the same manner as in WordNet, the analysis is organized by means of synsets, or unordered sets of cognitive synonymys (Cruse 1986), which work as building blocks and that, by means of conceptual-semantic relations, allow us to build a network hierarchy where the semantic and syntactic characteristics of each verbal paradigm are explicit and presented visually in a principled way. Nevertheless, unlike WordNet, this thesis focuses on verbal paradigms. Therefore, this study concentrates on verbs and conceptual relations link words belonging to this part of speech. Synsets are associated via the conceptual relationships of synonymy, antonymy or opposition, troponymy, -troponymy, backward presupposition and cause. Since they are based on WordNet criteria, the application and formalization of these six relations requires some explanation.

In this semantic analysis, entailment is a basic concept. As in WordNet *a proposition P entails a proposition Q if and only if there is no conceivable state of affairs that could make P true and Q false* (Miller et al. 1993: 45). Nevertheless, mental associations and semantic worlds are far from prescriptive or restricted. That is why I have preferred to consider the more generalized definition of entailment as the relation established between two verbs $V_1$ and $V_2$ when the sentence someone $V_1$ logically implies the sentence someone $V_2$. For example, saying that a person is dreaming entails that that very person is sleeping but a state of affairs can be conceived of in which a participant dreams without sleeping, as in day-dreaming. Similarly, eating may entail biting, so that you need to tear the food with your teeth before swallowing it. Nevertheless, we should not forget that there also exists liquid food. Finally, to drop a glass to the floor may entail its breaking but this is not always the case. All this considered, entailment is here considered as a logical relation between two different verbs, a logical association.

As regards the six relations considered in my analysis, the direction of the arrows in the diagrams show the direction of the entailment in the unilateral relations of troponymy, - troponymy, backward presupymy and cause. On the other hand,

synonymy and opposition are mutually entailing and, therefore, no entailment direction can be applied. Throughout the analysis I have come upon some cases where a pair of synets can be associated by means of backward presupposition as well as opposition such as tie/untie, roll/unroll or sleep/awake. In this case, since it is more detailed and allows signalling the direction of entailment, the relation adopted is that of backward presupposition.

Further remarks on the specific principles of analysis relating to troponymy are made in section 3.4 because they have to do with the drawing of the semantic map.

The specific principles governing the application of *Aktionsart* to this analytical framework can be rendered as follows.

In this thesis, each synset displays a predicative mode, which goes far beyond the classification made in WordNet in terms of events and states. To carry out the syntactic analysis, I opt for the typology of *Aktionsart* types of Role and Reference Grammar (Van Valin and LaPolla 1997; Van Valin 2005; Pavey 2010; Van Valin 2014) because it represents a richer framework comprising more types (including non-causative and causative versions) and, moreover, lexical rules that relate the different versions of *Aktionsart* types.

The application of the *Aktionsart* types of Role and Reference Grammar to this analysis can be described as follows.

As regards the spontaneous classes, the class of states is defined by the features [+static], [-dynamic], [-telic], [-punctual]. Representative examples include states or conditions such as *be broken, be shattered*, *be dead, be dirty, be angry* and *be afraid;* existence verbs such as *exist*, *be* and *live*; pure location verbs like *be at home*, *be under the table* and *be in the box*; perception verbs such as *see*, *hear*, *smell* and *taste*; cognition verbs like *know*, *believe* and *ignore*; desire verbs like *want*, *desire, wish* and *need*; propositional attitude verbs such as *consider, estimate* and *hold an opinion*; possession verbs like *have*, *own* and *possess*; internal experience verbs like *feel*, *sense and fear*; emotion verbs like *love*, *hate*, *dislike* and *envy*; attributive and identificational expressions like *be short*, *be tall*, *be fat, be a policeman* and *be a doctor;* and specificational and equational verbs and expressions like *be the president* and *equate*.

The class of activities is defined by the features [-static], [+dynamic], [-telic], [-punctal]. Some examples of this category includes motion verbs such as *walk*, *march*, *run and orbite;* verbs for static motion such as *spin, shiver* and *shake;* light and

sound emission verbs like *shine*, *cry and squeak*; performance verbs such as *sing, dance, swim* and *bounce a ball*; consumption verbs such as *eat*, *drink* and *partake*; creation verbs like *write*, *paint*, c*ompose*, *cook*, *knit* and *sew*; directed perception verbs like *hear* (intentionally), *watch*, *listen to* and *look at*; use verbs like *use, employ* and *enjoy;* and the verb *do* denoting the unspecified action. Furthermore, the verbs of saying such as *speak say*, *talk*, *discuss* are considered an important activity verb subclass. Nevertheless, Van Valin and LaPolla (1997) classify the verb *tell* as a causative accomplishment because of its telicity and the inherent causative aspect it presents. Thus, verbs which share these aspects with *tell* are also considered as causative accomplishments in this analysis, including *make known*, *inform* and *declare*. Because of the analogy with the verbs of saying, verbs denoting the sounds emitted by animals, such as *meow*, *roar* and *crow* are also considered activities. Verbs representing bodily noises such as *cough* and *sneeze* are equally considered activities. Finally, throughout the analysis I have come across verbal constructions such as *make a hollow noise*, *make a sharp and explosive sound* and *make a noise* or *crash* that, although they specify that the emission is a singular noise, are equally considered as activities.

The class of achievements represents punctual changes of state or onsets of activity with the following features: [-static], [-dynamic], [+telic], [+punctual]. Some examples of achievements include *pop*, *explode*, *shatter* and *burst* (intransitive versions). On its side, the class of accomplishments comprises non-punctual changes of state or onsets of activity with the following features: [-static], [-dynamic], [+telic], [-punctual]. As has been noted in the literature, the distinction between achievements and accomplishment is not perfectly clear-cut. Whereas certain verbs are always punctual or always durative, many verbs encode state of affairs that may be almost instantaneous but need not to be. Some other verbs are even neutral as this feature is concerned and the classification under achievement or accomplishment may be dependent on the context of the verb. As Van Valin and LaPolla (1997) explain, since the unmarked member of a privative opposition comprises a much greater range than the marked counterpart, my decision is to classify under accomplishments all these verbs which can display both features and the context or absence of context does not restrict their interpretation. Moreover, all those verbs that can take longer in prepositional phrases than *in the blink of an eye*, *in a fraction of a second*, or *in an instant* will be also considered as accomplishments. Some examples of

accomplishment include *melt*, *freeze*, *dry*, *recover*, *break*, *open*, *close*, *redden* (intransitive versions), *get sick*, *get cold*, *learn*, *master*, *die*, *arrive* and *begin*.

The class of semelfactives depicts non-static, punctual events which often imply repetition, are not temporally bounded and do not present a result state. The following features characterize them: [-static], [+ -dynamic], [-telic], [+punctual]. Some examples of semelfactive verbs include *flash*, *tap*, *clap*, *glimpse* and *catch sight*.

The class of active accomplishments describes accomplishment uses of activity verbs. They comprise an activity predicate of motion, consumption or creation plus a change of state, which turns it telic. In this manner, the terminal point is reached when the distance is covered or the entity is created or consumed. The features presented by this class are: [-static], [+dynamic], [+telic], [-punctual]. Most active accomplishments are activities to which a goal is added, a path or distance is covered, an entity is created or some specific quantity of something is consumed. Some examples include *run to the park*, *walk to the shore*, *paint a picture*, *write a poem*, *eat a sandwich* or *drink a glass of beer*. However, some verbs are lexically active accomplishments in their own such as *go*, *come* and *devour*.

In spite of the richness and applicability of the *Aktionsart* classes of Role and Reference Grammar, I have come across some verbs that do not correspond to any of the classes presented above. The reason may be that the amount and diversity of verbs under analysis raise more questions than *ad hoc* examples. To fill this gap, a new *Aktionsart* class is proposed, namely the class of unbounded processes. The class of unbounded processes is defined by the features [-static], [-dynamic], [-telic], [-punctual]. Verbs such as *grow*, *flourish*, *diminish*, *decrease*, *increase*, *swell*, *deteriorate*, *whither* and *pine* (all intransitive) exhibit processes of change which are not delimited by a discrete beginning or end, in such a way that the process goes on for a very long time or indefinitely (trees can grow for hundreds of years, civilizations flourish for centuries, rocks get eroded thoughout milenia, etc.). The verbs classified under this category are similar to accomplishments in that they represent non-punctual processes; nevertheless, this category includes the feature [-telic].

With the addition of this new *Aktionsart* class, the correspondence between spontaneous and causative versions is as shown in figure 8:

| | |
|---|---|
| State | *The treasure is intact* |
| Causative state | *The warriors kept the treasure intact* |

| | |
|---|---|
| Activity | *The soldiers marched in the park.* |
| Causative activity | *The sergeant marched the soldiers in the park.* |
| Achievement | *The balloon popped.* |
| Causative achievement | *The cat popped the balloon.* |
| Semelfactive | *The pencil tapped on the table.* |
| Causative semelfactive | *The teacher tapped the pencil on the table.* |
| Accomplishment | *The ice melted.* |
| Causative accomplishment | *The hot water melted the ice.* |
| Unbounded process | *The cathedral is deteriorating* |
| Causative unbounded process | *The passing of time deteriorates the cathedral* |
| Active accomplishment | *The soldiers marched to the park.* |
| Causative active accomplishment | *The sergeant marched the soldiers to the park.* |

Figure 8: Causative versions of *Aktionsart* classes, including unbounded processes.

As noted in Van Valin and LaPolla (1997), causative classes present causative paraphrases displaying the same number of NPs as the original sentence, as in *The passing of time causes the cathedral to deteriorate* (causative unbounded process, like *The passing of time deteriorates the cathedral*) and *The sergeant caused the soldiers to march to the park* (causative active accomplishment, like *The sergeant marched the soldiers to the park*).

Special attention is given in this analysis to causative accomplishments. This class shows a specific result state that involves a process prior to attaining the result state. Some examples are *tell, show*, *give, donate*, *close* (transitive), *break* (transitive), *murder* and *kill*. In general, my analysis follows Van Valin (2014) as regards the characteristics of every class in the taxonomy. Nevertheless, there is an important point of disagreement regarding the nature of the causative states and causative accomplishments. In Van Valin 2014 (as in previous works by this author), causative states include examples such as *scare*, *frighten* or *upset*. Nevertheless, all these causative verbs involve a process in the subject affected by these emotions that has been disregarded until now. My point is that if someone or something upsets a person, this person undergoes an inner process prior to the change of state, the process of becoming upset. Therefore, since accomplishments involve processes which give way to a new state, these verbs must be considered as causative accomplishments and not as mere causative states. As an illustration of this point, consider some spontaneous

accomplishments like *get angry* or *get depressed*, which initiate a process which results in a change of state. Thus, to *irritate*, *annoy*, or *cast down* must be considered as causative accomplishments, as well as *scare*, *frighten*, *upset* and all causatives sharing these characteristics. On the other hand, *preserve*, *keep safe* and *conserve* are considered as causative states given that there is no process of change involved, the causative agent causes an entity or person to remain in the same state as it was previously.

Finally, an essential aspect to consider, although it has been previously noted in the review of the literature, is the possibility of verbs to be classified under more than one *Aktionsart* type. First of all, polysemous verbs have multiple meanings and therefore can present different characteristics. Secondly, the distinction between the basic lexical meaning of a verb and the meaning a verb acquires in a particular clause or context cannot be disregarded. Furthermore, as I have already explained, verbs and verbal constructions must be considered in the context of the the paradigm to which they belong, which ultimately determines the meanings of its members.

Regarding *Aktionsart*, further remarks on the specific principles of analysis are made in section 3.4 because they have effects on the design of the semantic map.

## 3.4. Drawing the semantic map

The main methodological decision reached with respect to the semantic map has to do with the steps of the analysis. In the first step, the analytical model is applied to each of the lexical paradigms of Old English strong verbs. The first step also includes the selection of the verbal derivatives of the strong verb base out of all the derivatives from the paradigm. In the second step, after discussing the results of the analysis, a generalization is made concerning troponymy and *Aktionsart*, in such a way that a semantic map is drawn for these phenomena. The semantic maps of the lexical paradigms are presented in chapter 4, whereas the results of analysis and the general sematic map follow in chapter 5.

Before dealing with the actual drawing of the semantic map, it is necessary to explain the differeces between the mainstream methodology of semantic maps and the way in which this type of visual representation is used in this work.

Although in this thesis the semantics map model is applied to the analysis of one language, the methodology of sematic maps is, more frequently, the following, as de Haan (2004) explains: an exponent of a linguistic category in a given language can

be mapped onto a semantic map and thus be compared to the same category in other languages.

In a similar way, semantic maps have been used mainly to represent linguistic phenomena on the synchronic axis, although they can also predict change on the diachronic axis (de Haan 2004). Semantic maps have been applied to living languages more often than to historical languages.

A further difference between this application of the semantic map and other works is that semantic maps frequently display categories rather than tokens of the categories in question and relations. In this thesis, the semantic map of troponymy and *Aktionsart* is a generalization of the semantic maps of all the lexical paradigms based on strong verbs, in such a way that the maps of individual paradigms present tokens and relations and the semantic maps of troponymy and *Aktionsart* comprise categories and relations between these categories.

Finally, as Levshina (forthcoming) remarks, most classical semantic maps are usually non-hierarchical because they do not display hyponymy relations. The map that is aimed in this study is hierarchical from two perspectives: from the point of view of troponymy, more general meanings are more central in the representation than less general meanings; from the point of view of *Aktionsart*, basic *Aktionsart* types are more central in the representation than derived *Aktionsart* types. In this sense, this approach goes, to a certain extent, in the line of Barðdal (2007), who deals with items that share the same grammatical behaviour and arranges them according to their semantic similarities. This approach follows François (2008) more closely, because this author draws lexical semantic maps with the connections between the attested meanings. In the analysis carried out in this thesis, the study of such connections is restricted to troponymy and *Aktionsart*. Therefore, of the three types of relations that hold in a lexical network according to Gaume, Duvignau and Vanhove (2008), syntagmatic relations of coocurrence, paradigmatic relations, notably synonymy and semantic proximity relations, this analysis focuses above all on the third type, since if verbal troponymy holds between two verbs, one should expect that one verb is found in the definition of the other.

This said, the first step of the analysis requires the identification of the lexical paradigms and the selection of the verbs within such paradigms. A total of 328 lexical paradigms of strong verbs have been retrieved from the lexical database of Old English *Nerthus* (Martín Arista et al. 2016). It has been necessary to revise and update

some paradimgs as well as to check all the meanings provided by *Nerthus*. This task has been accomplished with the help of the revised meaning definitions of the Old English lexicon provided by Martín Arista and Mateo Mendaza (2013) and the studies in homonymy by Vea Escarza and Tío Sáenz (2014) and Tío Sáenz and Vea Escarza (2015).

As in the lexical database of Old English *Nerthus*, numbered predicates are used to indicate different morphological class, or different variants, for predicates otherwise equal. For instance, *ābūtan* 1 'on, about, around, on the outside, round about' is an adposition and *ābūtan* 2 'about, nearly', an adverb. Similarly, *andfenge* 1 'acceptable, agreeable, approved, fit, suitable' belongs to the class of the adjective, whereas *andfenge* 2 'undertaker, helper, receptacle' belongs to the category of nouns. As regards the difference of morphological class, *besēon* 1 'to see, look, look round', for example, is a Class V strong verb, whereas *besēon* 2 'to suffuse' is a Class I strong verb. Similarly, *byrðre* 1 'bearer, supporter' is a masculine noun whereas *byrðre* 2 'child-bearer, mother' is feminine. As for variants, two or more predicates receive a different number if they have different spelling variants, as is the case with *fōdder* 1 'fodder, food; darnel, tares', with variants *fōddor* 1, *fōddur* 1, *fōter* and *fōdor*; *fōdder* 2 'case, sheath', with variants *fōddor* 2 and *fōddur* 2; and *fōdder* 3 'hatchet', with variants *fōddor* 3 and *fōddur* 3.

For example, the lexical paradigm BELGAN consists of the primitive verb (strong, class IIIb) itself, *(ge)belgan* 'to be or become angry; to provoke, offend, irritate, anger, make angry, incense' and its derivatives. The primitive thus defined subsumes the underived *belgan* as well as the derived *gebelgan*, between which it is difficult to draw a distinction as to their meanings, so that dictionaries often include both the derived and the underived within the same headword entry. This paradigm includes the masculine nouns *ǣbylga* 'anger', *gebelg* 'anger, offence; arrogance' and *ǣbylgð* 'indignation, anger, wrath; offence, wrong, fault, injury, scandal'; the feminine nouns *ābolgennes* 'irritation, exasperation', *ǣbylgnes* 'anger, offence, indignation, wrath, scandal' and *belgnes* 'injustice, injury'; as well as the neuter noun *ǣbylg* 'anger'. Once the nouns (and the members of other non-verbal classes in other lexical paradigms) have been put aside, the data of analysis for the lexical paradigm of BELGAN comprise, along with the primitive verb, the derived strong verbs *ābelgan* 1 'to anger, make angry, irritate; to incense; to offend, vex, distress, hurt; to be angry with' and *forbelgan* 'to get angry; to be enraged'; and the derived weak verbs

*geābilgian* 'to offend, make angry, exasperate' weak, *gebylgan* 'to provoke, anger, make angry; to cause to swell' weak and *ābylgan* 'to irritate, provoke, offend, anger, vex' weak.

Then, the lexical paradigms of the Old English strong verb primitives are represented in semantic maps, or independent diagrams in the form of semantic-syntactic networks. In the semantic map of each paradigm, meanings have been assembled into synsets, unordered sets of cognitive synonymys. The primitive is placed in the centre of the diagram, and the synsets resulting from the different meanings of the primitive verb have been associated to it by means of a simple line. Next, the synsets obtained from the meanings of the derivatives have been connected to the synsets of the primitive and among them by means of the six conceptual-semantic relations of synonymy, opposition, troponymy, -troponymy, backward presupposition and cause. The semantic map of the lexical paradigm of BELGAN has the form shown in figure 9.
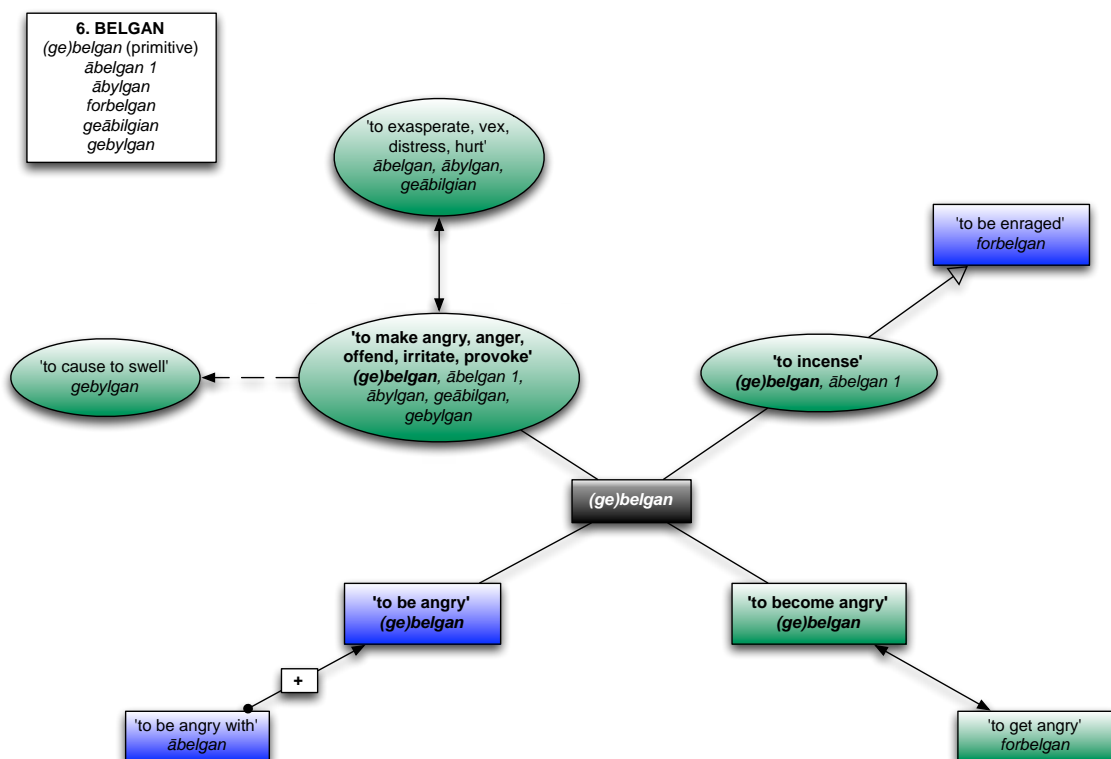


Figure 9: The semantic map of the lexical paradigm of BELGAN.

As can be seen in figure 9, the different meanings of the primitive are represented in bold typeface. Then, the synsets derived from the meanings of the derivatives of *(ge)belgan* are connected with the synsets of the primitive via the corresponding conceptual-semantic relation. Together with the Present Day English meaning, each synset shows the Old English verb or verbs of the Old English paradigm that convey those meanings. The Old English verbs are written in italics. If it is the case that any of the derivatives of the primitive also includes one or more of the meanings of the primitive verb, the Old English derivative is incorporated into the corresponding synset or synsets of the primitive. In this example, *ābelgan* 1*, ābylgan, geābilgan* and *gebylgan,* among their meanings, include 'to make angry, anger, offend, irritate and provoke' and therefore belong in this synset. Similarly, the Old English derivative *ābelgan* 1 presents the meaning 'to incense' and this is the reason why it is included into this synset of the primitive *(ge)belgan*.

The synsets of the primitive draw on the translation of the predicates provided by *Nerthus*. If it is the case that a derivative conveys a meaning that is synonymous to one of the primitive synsets, this is not included into the synset of the primitive, but related to it via the conceptual-semantic relation of synonymy. This can be illustrated by means of the synsets 'to become angry' (belonging to the primitive) and 'to get angry' (belonging to one of the derivatives) in the example above.

In the semantic map, the direction of the arrow marks the direction of the entailment, while the various conceptual relations are depicted by means of different types of figures, lines and arrows in the following way.

As synonymy is symmetrical, it is represented by two arrows, as can be seen in figure 10.
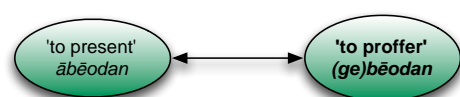


Figure 10: The representation of synonymy in the semantic map.

It is sometimes the case that although the relationship established is one of synonymy, some meaning specification is conveyed by one of the synsets. Then, the basic synset is understood as the origin and, consequently, the arrow goes in this direction. Furthermore, a symbol '+' stands for the meaning specification, which is usually

marked by a preposition, an object, a circumstance or a force. This is illustrated in figure 11.
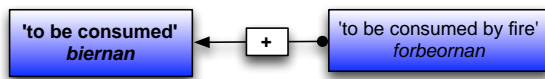


Figure 11: The representation of meaning specifications in the semantic map.

As is the case with synonymy, opposition is symmetrical or mutually entailing. It is represented as can be seen in figure 12.



Figure 12: The representation of opposition in the semantic map.

As in synonymy, one of the opposite synsets can add a meaning specification. It is also represented by the symbol '+'. The basic synset is equally understood as the origin, in such a way that an arrow substitutes one of the 'x' in order to indicate the direction of the entailment.

Troponymy is represented as can be seen in figure 13, with a broken line and an arrow that indicates that the relationship is not symmetrical.



Figure 13: The representation of troponymy in the semantic map.

As in synonymy and opposition, if it is the case that some meaning specification is conveyed by the entailed synset, the symbol '+' is included in the representation.

The same holds for – troponymy, in figure 14, although a dotted line is used.
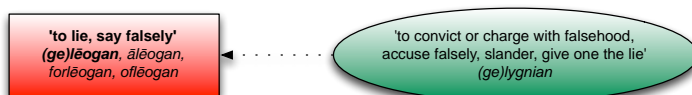
Figure 14: The representation of – troponymy in the semantic map.

Backward presupposition is represented as in figure 15. Again, the relation is not symmetrical.
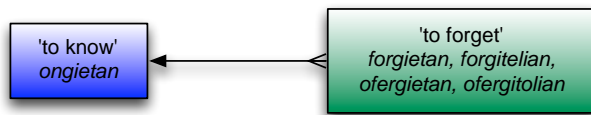


Figure 15: The representation of backward presupposition in the semantic map.

Finally, cause is represented as shown in figure 16. The arrow, as in the previous relations, marks the lack of symmetry of the relationship.
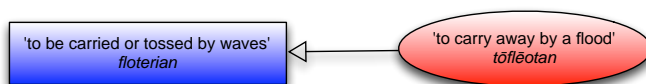


Figure 16: The representation of cause in the semantic map.

As regards the syntactic analysis, spontaneous synsets are framed in a rectangular figure, whereas induced or causative synsets are framed in an oval or circular one. If the oval or circle is sorrounded by a broken line, this means that the synset shows a permissive kind of causality, some examples include 'to let go by default', 'to allow to come, not to exclude' and 'to permit'. When no spontaneous or induced sense is found in the synset, an octagon frames it. The octagon figure encloses those synsets of the primitive verb that adopt diverse senses, including spontaneous and induced, in order to establish different relationships with other synsets. When the synset adopts different senses, but all of them are spontaneous or all of them are induced, the octagon figure is not used, and the synset is framed by the corresponding figure.

The colour of the figures represents the different kinds of spontaneous or induced *Aktionsart* types of every synset: states are coloured in blue, activities in red, accomplishments in green, achievements in yellow, unbounded processes are coloured in purple, semelfactives in pink and active accomplishments, since they are comprised of an activity plus and accomplishment, are coloured both in red and green. The absence of colour in the synset indicates that none of these categories is attributed to the predicate either because it is a synset of the primitive that establishes different

relations adopting diverse senses characterized by different *Aktionsart* types; or because no specific *Aktionsart* type can be attributed to it, as in synsets such as 'to allure, entice, attract' which are merely causative; but the nature of the causativity cannot be predicted: 'to permit' which depicts a permissive causality but, once again, the nature of the permissive causality cannot be determined; or 'order, command, decree' which are causative, but since the order is not specified the colour cannot be attributable. A verb predicate such as *order to run* stands for a causative activity, whereas *order to stop* represents a causative accomplishment, for instance.

Apart from all the *Aktionsart* types considered, throughout this analysis I have also come across counterfactual verbs such as *misfōn* 'to fail to take', *foregān* 1 'to abstain from, not to do' or *mishealdan* 'not to keep'. Although these verbs do not represent any of the types of the *Aktionsart* taxonomy, they are analysed together with their paradigms and represented in grey colour in the diagrams. It is important to note that the verb 'to happen' and its semantic derivatives such as *oferbecuman* 'to supervene', or *tōfaran* 'to pass off' do not correspond to any *Aktionsart* type considered in the taxonomy either and are represented in orange colour.

Finally, the points developed in the methodology are illustrated with the paradigm of ÐĪNAN, which is presented with its semantic map in figure 17.
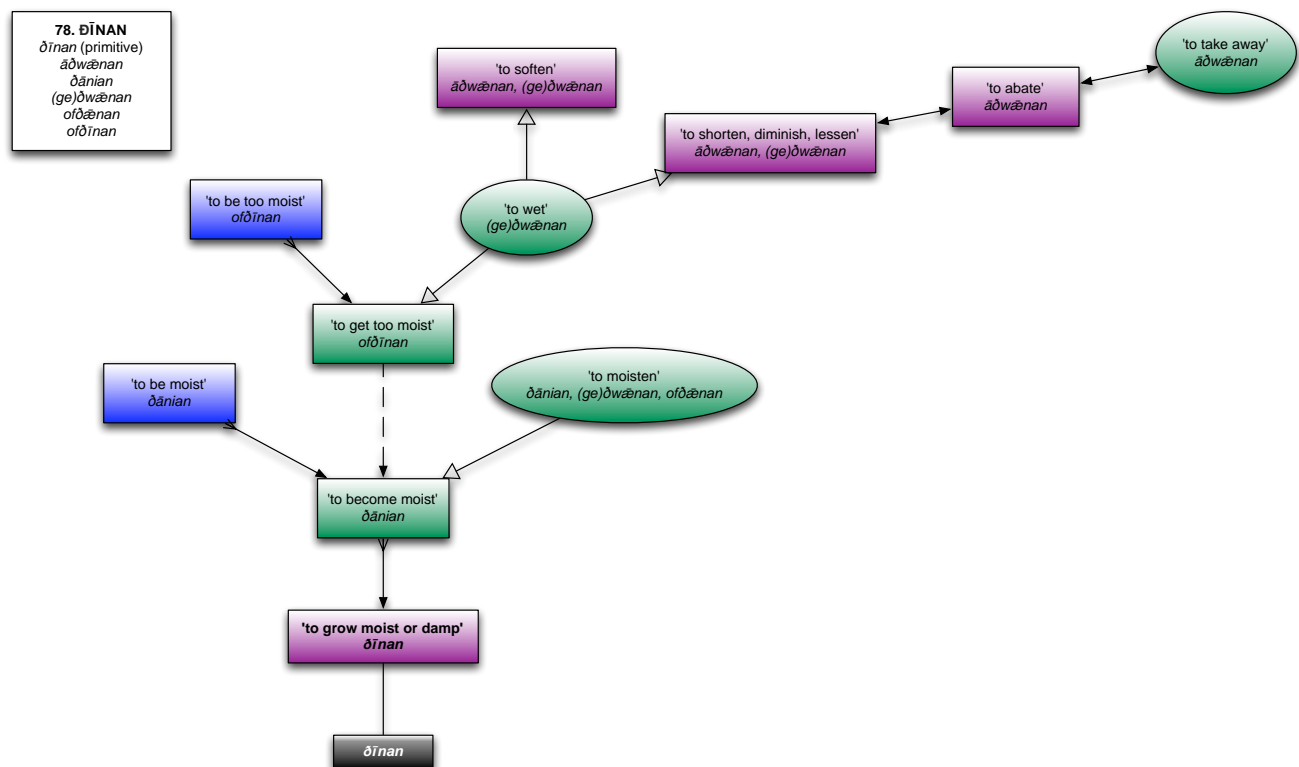
Figure 17: The semantic map of ÐĪNAN.

As can be seen in figure 17 it is sometimes the case that a polysemous verb or verb phrase establishes two or more relationships with different meanings. This happens to 'to abate' in the example above. In *āðwǣnan* 'to abate' stands for (a) 'to grow gradually less' and (b) 'to take away (a quantity) from another quantity'. Then, the synset shows the verb predicate that is related to the more central meaning, in this case, 'to grow gradually less'. Nevertheless, the semantic relation that it establishes with the synset 'to take away' is considered from the perspective of the meaning in (b).

## 3.5. The Data

The data of analysis have been retrieved from the lexical database of Old English *Nerthus* (Martín Arista et al. 2016) and comprise 328 lexical primes and 1181 verbs that belong to the lexical paradigms based on the 328 lexical primes. All in all, 1509 verbs have been analysed. All strong verb lexical primes have been included in the data, while the figure of 1181 verbs represents about 1/5 of the verbs filed in the database *Nerthus*. Within these, the majority are strong verbs derived from strong verbs, as in the set of derivatives of *drīfan* 'to drive', which includes the strong verbs *ādrīfan* 'to drive', *bedrīfan* 'to beat', *eftādrīfan* 'to reject', *eftfordrīfan* 'to drive away', *fordrīfan* 'to sweep away', *framādrīfan* 'to remove', *framādrȳfan* 'to drive away', *indrīfan* 'to ejaculate', *oferdrīfan* 'to overcome', *onwegādrīfan* 'to drive away', *tōdrīfan* 'to scatter', *ðurhdrīfan* 'to drive through', *ūtādrīfan* 'to drive out', *ūtdrīfan* 'to expel' and *wiðdrīfan* 'to repel'. The reason why there are more strong than weak verbs is that weak verbs are derived from nouns (as in *cuss* 'kiss' > *cyssan* 'to kiss') and adjectives (*eald* 'old' > *ieldan* 'to delay') and, therefore, they belong in the lexical paradigms of these categories. This does not mean that there are not weak verbs in the lexical paradigms based on strong verbs. They come from the strong verb itself or from nouns or adjectives based on the strong verb, as in the group of class 1 weak verbs *ādrǣfan* 'to drive away', *fordrǣfan* 'to compel', *tōdrǣfan* 'to scatter', *ūtādrǣfan* 'to drive out', which derive from the class 1 weak verb *drǣfan* 'to drive', which, in turn, derives from the noun *drāf* 'action of driving' which, ultimately, derives from the strong verb *drīfan.*

By lexical paradigm, the verbs analysed to draw the semantic map of troponymy and *Aktionsart* are the following:

### 1. ACAN

*acan* (primitive) 'to ache, suffer pain, pain'

### 2. ĀGAN

*āgan* (primitive) 'to own, possess, have; to obtain; to have control over; to take charge of; to give; to deliver; to restore; to owe, have to pay'

*āgnettan* 'to appropriate, usurp'

*(ge)āgnian* 'to own, possess; to inherit; to appropriate, arrogate, usurp; to make over (to); to adopt; to enslave'

### 3. BACAN

*bacan* (primitive) 'to bake'

*ābacan* 'to bake'

### 4. BANNAN

*(ge)bannan* (primitive) 'to order, command; to summon; to proclaim; to call together'

*ābannan* 'to convoke; to summon; to summon to battle; to order, command; to publish, announce, proclaim'

*(ge)bēnsian* 'to pray, supplicate, implore'

### 5. BĒATAN

*(ge)bēatan* (primitive) 'to beat, pound, strike, dash; to thrust; to hurt, injure; to lash; to tramp, tread, trample, beat with the feet'

*ābēatan* 'to strike, beat; to break to pieces; to make to fall'

*(ge)bēotian* 'to promise, vow; to threaten'

*ofbēatan* 'to beat to pieces; to beat to death; to kill'

*tōbēatan* 'to beat to pieces; to destroy by beating'

### 6. BELGAN

*(ge)belgan* (primitive) 'to be angry; to become angry; to provoke, offend, irritate, anger, make angry; to incense'

*ābelgan* 1 'to anger, make angry, irritate; to incense; to offend, vex, distress, hurt; to be angry with'

*ābylgan* 'to irritate, provoke, offend, anger, vex'

*forbelgan* 'to get angry; to be enraged'

*geābilgian* 'to offend, make angry, exasperate'

*gebylgan* 'to provoke, anger, make angry; to cause to swell'


## 7. BELLAN

*bellan* (primitive) 'to make a hollow noise; to bellow; to grunt; to roar; to bark'


## 8. BĒODAN

*(ge)bēodan* (primitive) 'to order, command, decree; to summon, bid; to declare, inform, announce, proclaim; to offer; to give, grant, surrender; to behave; to collect; to threaten; to exact; to inspire; to bode; to proffer'

*ābēodan* 'to order, command, direct; to summon, call out; to announce, proclaim, declare; to relate; to present; to offer; to bid'

*(ge)bodian* 'to tell, make known, announce, proclaim, publish; to preach; to foretell, prophesy; to promise'

*forbēodan* 'to forbid, prohibit, suppress; to restrain; to refuse; to annul; to repeat'

*forebodian* 'to announce, declare'

*misbēodan* 'to do wrong to, offend, injure, abuse; to ill-use; to announce wrongly'

*onbēodan* 'to order, command; to tell, announce, declare, proclaim, send word; to bid'


## 9. BEORCAN

*beorcan* (primitive) 'to make a sharp explosive sound; to bark'

*borcian* 'to bark'


## 10. BEORGAN

*beorgan* (primitive) 'to save, secure; to deliver; to spare, avoid, abstain; to protect, guard, preserve, shelter, defend; beware of; to fortify'

*onbyrgan* 2 'to be surety'


## 11. BERAN

*(ge)beran* (primitive) 'to bear, carry, bring; to produce, bring forth; to carry out; to offer; to take away; to extend; to be situated by birth; to wear; to endure, suffer; to support; to sustain'

*ābǣran* 'to disclose, bring to light'

*āberan* 'to bear, carry, bring; to endure, suffer; not to give way under trial, suffering, etc.; to take away, remove; to reveal; to bear with, tolerate, restrain oneself; to bear (a child); to bring forth, bring to light; to do without; to be under an obligation for an imposition, etc.'

*birilian* 'to draw; to bear'

*borettan* 'to move to and fro, brandish'

*byrdian* 'to bear'

*byrelian* 'to give to drink; to serve, pour out'

*forberan* 1 'to abstain from, forbear, refrain, restrain; to suffer, endure; to tolerate; to humour'

*foreberan* 'to prefer'

*forbyrdian* 'to wait for; to endure; to forbear'

*forðberan* 'to produce, bring forth; to bear or carry forth'

*geandbyrdan* 'to oppose, bear or strive against; to resist; to violate'

*geedbyrdan* 'to regenerate; to cause to be born again'

*gebǣran* 'to bear, bear or conduct oneself, behave, fare'

*onberan* 'to carry off, plunder; to weaken, enfeeble; to diminish, impair; to destroy; to be situated, lie'

*tōberan* 'to carry; to carry off; to remove; to purloin; to separate, scatter, dissipate; to distract; to destroy; to swell; to be separate'

*ymbberan* 'to surround'


12. BERSTAN

*(ge)berstan* (primitive) 'to break, crack; to dash, crash; to fall; to resound; to fail; to escape; to burst'

*āberstan* 'to burst; to burst out, break out; to be broken; to break away, escape'

*forberstan* 'to break; to burst asunder; to vanish; to fail; to let go by default'

*forðberstan* 'to burst or break forth'

*tōberstan* 'to go to pieces, shatter; to break in two; to be rent asunder, burst apart; to cause to burst apart; to break out'

## 13. BĪDAN

*(ge)bīdan* (primitive) 'to live; to stay, remain, continue, abide; to carry; to wait for, await; to expect; to look for; to delay; to meet with; to find; to experience, endure, undergo, to obtain, attain, reach; to possess'

*ābīdan* 'to abide; to wait; wait for, await; to expect; to remain; to remain behind; to delay; to survive'

*(ge)anbidian* 'to wait; to wait for, await; to expect; to stay, abide'

*oferbīdan* 'to survive, outlast, outlive'

*onbīdan* 'to remain, abide; to wait; to wait for, await; to expect; to attend upon'

## 14. BIDDAN

*biddan* (primitive) 'to ask, require; to pray; to entreat, beseech; to order, command; to bid'

*ābǣdan* 'to force, compel; to restrain, ward off; to force out; to wring, extract; to demand, require, exact; to take a toll'

*ābedecian* 'to discover, disclose, uncover; to find hidden, detect; to get by asking'

*ābiddan* 'to ask for, request, demand, require; to entreat; to pray, pray for, pray to; to obtain; to get by asking; to call out (an army)'

*bādian* 'to seize; to take by way of a pledge or fine'

*(ge)bǣdan* 'to force, compel, constrain, press; to impel, urge; to afflict, oppress; to require, solicit, exact; to defile something'

*bedecian* 'to beg'

*gebedian* 'to pray; to worship'

*gebiddan* 'to ask; to beg; to pray; to worship, adore'

## 15. BIERNAN

*biernan* (primitive) 'to burn; to be on fire; to be consumed; to give light'

*ābeornan* 'to take fire; to burn'

*(ge)bærnan* 'to burn; to burn up, consume; to set on fire, kindle (fire); to light; to expose to the action of heat; to cause to give light (lamp); to cauterize'

*brinnan* 'to burn'

*forbærnan* 'to consume, burn up; to cause to burn'

*forbeornan* 'to burn; to be consumed by fire'

*onbærnan* 'to heat; to set on fire, ignite, kindle, inflame; to light; to burn; to inspire'

*onbeornan* 'to set fire to, kindle, inflame'

## 16. BINDAN

*(ge)bindan* (primitive) 'to bind, tie, tie up, fasten, fetter; to restrain; to deceive; to adorn'

*(ge)bendan* 'to bind, bend, fetter, put in bonds'

*forbindan* 'to bind or tie up, muzzle'

*onbindan* 1 'to loosen, untie, unbind, disclose; to release, set free'

*unbindan* 'to unbind, untie, loosen; to free or release from a bond; to pay'

*ymbbindan* 'to bind round or about'

## 17. BĪTAN

*(ge)bītan* (primitive) 'to bite; to tear; to cut; to wound; to dash down'

*ābītan* 'to bite in pieces; to lacerate with the teeth; to gnaw; to mangle; to tear to pieces; to consume, eat up, devour; to taste, partake of'

*forbītan* 'to bite to pieces, destroy by biting'

*onbītan* 1 'to taste of, partake of, feed upon'

## 18. BLANDAN

*(ge)blandan* (primitive) 'to mix, blend, mingle; to colour; to stain; to corrupt; to infect; to prepare with harmful ingredients'

*blendan 2* 'to mix'

*onblandan* 'to mingle, intermingle; to infect'

## 19. BLĀWAN

*(ge)blāwan* (primitive) 'to blow; to inflate; to breath, aspire; to be blown; to sound; to flame'

*āblāwan* 'to blow; to blow away; to breathe upon; to swell, puff up; to blow up'

*blæstan* 'to blow; to belch forth; to rush'

*forblāwan* 'to blow; to inflate; to blow away'

*forðblæstan* 'to blow forth; to put out; to burst out'

*forðblāwan* 'to blow forth; to belch out'

*onblāwan* 'to blow on or into; to breathe into, inspire; to inflate; to puff up'

*tōblāwan* 'to blow to pieces; to blast; to blow away, scatter; to inflate, to puff up, distend, swell; to cause the breast to swell with emotion'

*wiðblāwan* 'to blow away, strain at'


## 20. BLĪCAN

*blīcan* (primitive) 'to shine, gleam, glitter; to twinkle, sparkle; to appear; to dazzle'

*āblīcan* 'to shine, glitter; to be white; to astonish, amaze; to appear'

*āblycgan* 'to shine; to grow pale; to be white; to get dismayed; to get astonished, amazed, get affected by wonder; to get affected by fear; to make afraid'

*bliccettan* 'to glitter; to quiver'

*blician* 'to shine'


## 21. BLINNAN

*(ge)blinnan* (primitive) 'to cease, leave off; to rest from; to lose; to desist, forfeit, give up; to be vacant (bishopric)'

*āblinnan* 'to cease, stop, leave off; to desist; to fail; (of things) to come to an end'


## 22. BLŌTAN

*blōtan* (primitive) 'to sacrifice, kill for a sacrifice'

*(ge)blētsian* 'to ordain; bless, consecrate, hallow, call holy; to give thanks; to adore, extol; to sign with the cross; to prosper; to favour, benefit; to pronounce or make happy'

*onblōtan* 'to offer, sacrifice; to kill a victim'


## 23. BLŌWAN

*(ge)blōwan 1* (primitive) 'to blow, flower, bloom, blossom, flourish'


## 24. BRECAN

*(ge)brecan* (primitive) 'to break; to tear; to crush; to shatter; to burst, spring out, burst forth; to break up; to destroy, demolish; to bruise, injure; to curtail; to oppress; to violate; to tame, capture (city), subdue; to press, urge, force; to interrupt, break into; to storm; to break or crash through, to intersect; to retch; to make a noise or crash; to sail'

*ābrecan* 'to break; to break up, break to pieces, break down, break off; to separate forcibly; to destroy; to assault; to vanquish, to take by storm'

*bræclian* 'to make a noise; to crackle; to rattle; to resound'

*breahtmian* 'to make a noise; to creak; to whizz; to resound'

*broccian* 'to tremble'

*(ge)brocian* 'to molest, to afflict, injure, hurt; to oppress; to vex; to blame; to break up'

*forbrecan* 'to break; to break in pieces; to bruise; to crush; to destroy; to violate'

*oferbrecan* 'to transgress, infringe, violate'

*tōbrecan* 'to break; to break in pieces, break up; to shatter; to wreck, destroy, ruin; to crush; to overthrow; to annul; to diffuse; to break through; to violate, infringe; to interrupt, put to an end to; to force'

*wiðerbrocian* 'to oppose, be against or adverse to'


## 25. BRĒOÐAN

*brēoðan* (primitive) 'to decay; to waste away'

*ābrēoðan* 'to decay, deteriorate, degenerate; to fail, fall away; to come to nought, to destroy'


## 26. BRĒOTAN

*brēotan* (primitive) 'to break; to bruise; to hew down; to demolish, destroy; to kill'

*ābrēotan* 'to break; to destroy; to deteriorate; to bruise; to kill; to fail'

*ābrȳtan* 'to destroy'

*(ge)brȳtan* 'to break; to crush, pound; to destroy; to bruise'

*forbrītan* 'to break in pieces, smash, crush; to bruise'

*tōbrȳtan* 'to break in pieces, crush; to destroy; to make contrite, crush with feelings of sorrow; to bruise'


## 27. BRĒOWAN

*(ge)brēowan* (primitive) 'to brew'


## 28. BRINGAN

*(ge)bringan* (primitive) 'to bring; to bear, carry; to lead; to produce, bring forth; to offer, present; to adduce'

*(ge)brengan* 1 'to bring; to bear, carry; to lead; to produce, bring forth; to adduce'

*forðbrengan* 'to produce, bring forth; to accomplish, fulfil; to adduce quote'

*forðgebrengan* 'to bring forth; to bring forward; to make known'

*gebringan* 'to bring; to conduct, convey, lead; to bring; to carry, bear (something), convey; to impact; to bestow; to adduce; to produce; to happen; to cause (something), bring about; to bring together'

*inbrengan* 'to bring in; to present'

## 29. BRŪCAN

*brūcan* (primitive) 'to enjoy; to use; to possess; to bear, brook; to partake, eat; to spend, wear; to cohabit with; to discharge, pass'

*ābrūcan* 'to eat, partake of'

*(ge)brȳcian* 'to use; to enjoy; to profit, benefit; to do good'

*(ge)brȳcsian* 'to use; to enjoy; to profit, benefit'

*forbrīcan* 'to consume, use up; to destroy'

*ðurhbrūcan* 'to enjoy thoroughly'

## 30. BŪAN

*(ge)būan* (primitive) 'to live, dwell, inhabit, stay, abide; to lie (of land); to cultivate'

*(ge)bōgian* 'to dwell, inhabit; to occupy land; to possess'

## 31. BŪGAN

*(ge)būgan* 1 (primitive) 'to bend; to turn; to stoop; to bow, bow down; to submit, give way; to turn towards; to turn away; to revolt; to retire, depart; to flee; to join; to go over to, convert; to sink'

*ābūgan* 'to bend, curve; to turn; to bow, do reverence; to submit; to turn oneself, deviate, swerve, turn from; to turn to; to withdraw, retire; to be humble; to incline'

*ābȳgan* 'to bend; to bend down; to bow; to deflect; to convert; to reduce, subdue, bring low'

*(ge)bīegan* 'to bend; to turn; to bow, bow down; to crush; to incline, recline; to turn back; to press down, depress, subdue, bring under, humble, humiliate, abase, subject; to inflect or decline a part of speech; to persuade; to convert; to settle'

*forbīgan* 'to bend down, bow down; to depreciate, humiliate, humble, abase, degrade, destroy; to pass by, avoid'

*forbūgan* 'to bend from; to refrain from, decline, avoid, shun, eschew; to escape, flee from; to hold down'

*gebēagian* 'to crown; to set a garland on'

*onbīgan* 'to subdue, subjugate; to cause to bend'

*onbūgan* 'to bend; to bow, bend in reverence; to incline; to deviate; to agree with; to submit, yield to'

*oferbūgan* 'to avoid, shun'

## 32. CALAN

*calan* (primitive) 'to be cold; to become cold'

*ācalan* 'to become frost-bitten; to die of cold'

## 33. CEORFAN

*(ge)ceorfan* (primitive) 'to cut, tear; to cut off, cut out; to cut down; to slay; to behead; to engrave, carve'

*āceorfan* 'to cut off, cut away; to cut down, hew down; to cut to pieces'

*corflian* 'to mince'

*forceorfan* 'to cut down; to cut off; to divide; to carve out'

*tōceorfan* 'to cut; to cut to pieces, cut up; to cut in two; to cut away, cut off'

*ymbceorfan* 'to circumcise'

## 34. CĒOSAN

*(ge)cēosan* (primitive) 'to choose, select, elect, decide; to accept, approve; to prove, test, try; to seek out'

*ācēosan* 'to choose, select, elect, pick out'

*foregecēosan* 'to choose beforehand'

*wiðcēosan* 'to reject'

## 35. CĒOWAN

*(ge)cēowan* (primitive) 'to chew, gnaw; to eat; to consume'

*tōcēowan* 'to bite to pieces; to chew, masticate; to eat'

*forcēowan* 'to bite or chew off'

## 36. CIMBAN

*cimban* (primitive) 'to join'

## 37. CĪNAN

*cīnan* (primitive) 'to gape, yawn; to crack; to break into chinks'

*tōcīnan* 'to break into chinks, split, cleave asunder; to splinter; to crack'


## 38. CLĀWAN

*clāwan* (primitive) 'to claw'

*clāwian* 'to claw, scratch'


## 39. CLĒOFAN

*clēofan* (primitive) 'to cleave, split, separate'

*āclēofan* 'to split, cleave'

*tōclēofan* 'to divide, split; to cleave asunder'


## 40. CLĪFAN

*clīfan* (primitive) 'to cleave; to adhere'

*cleofian* 'to adhere, stick; to cleave'

*(ge)clifian* 'to adhere, stick; to cleave'

*tōclifrian* 'to tear to pieces; to scratch'


## 41. CLIMBAN

*climban* (primitive) 'to climb'

*clymmian* 'to climb, ascend'


## 42. CLINGAN

*clingan* (primitive) 'to wither; to pine, shrink; to cling; to stick close'

*āclingan* 'to wither'

*clengan* 'to adhere; to remain; to exhilarate'

*forclingan* 'to shrink up; to wither'


## 43. CNĀWAN

*(ge)cnāwan* (primitive) 'to know; to perceive; to acknowledge; to declare'

*ācnāwan* 'to know, understand; to recognise'

*gecnāwan* 'to know, be acquainted with, understand; to recognise, identify, perceive; to ascertain; to acknowledge; to declare; to make known'

*oncnāwan* 'to know, understand; to observe, identify, recognise, perceive; to acknowledge; to disclose; to confess'

*tōcnāwan* 'to know, understand; to acknowledge; to distinguish, discern; to recognise'

## 44. CNEDAN

*cnedan* (primitive) 'to mix, mingle; to knead; to spread'

## 45. CRĀWAN

*(ge)crāwan* (primitive) 'to crow'

## 46. CRĒODAN

*crēodan* (primitive) 'to crowd; to press; to drive'

## 47. CRĒOPAN

*(ge)crēopan* (primitive) 'to creep, crawl'

*ācrēopian* 'to creep, crawl'

## 48. CRIMMAN

*(ge)crimman* (primitive) 'to put in, insert; to stuff, cram'

*ācrammian* 'to cram, fill'

*ācrimman* 'to cram, stuff'

*(ge)crammian* 'to cram, stuff'

## 49. CRINGAN

*(ge)cringan* (primitive) 'to fall; to sink; to yield; to die'

## 50. CUMAN

*(ge)cuman* (primitive) 'to go; to come; approach; to get to, come to, arrive; attain; to come together, assemble; to recover; to depart; to escape from; to become, get converted'

*ācuman* 'to come, come from; to bring; to bear, endure, withstand, support; to get to or from, reach'

*ancuman* 'to come; to arrive'

*forcuman* 'to come before; to prevent; to harass; to destroy; to wear out; to reject; to seize; to get hold of; to obtain; to overcome, conquer; to surpass'

*oferbecuman* 'to supervene'

*ofercuman* 'to overcome, subdue, compel; to conquer; to obtain; to attain, come upon; to reach; to overtake'


## 51.CUNNAN

*(ge)cunnan* (primitive) 'to know, be or become acquainted with; to be thoroughly conversant with; to know how to, be able to, can; to have power; to express (thanks); to have carnal knowledge'

*ācunnian* 'to try, test; to prove; to ascertain by trial; to experience'

*ācȳðan* 'to show, reveal; to proclaim, announce; to prove, confirm'

*(ge)cȳðan* 'to tell, relate, declare, report, make know, inform, announce, proclaim, give notice; to show, reveal, manifest; to confess; to testify; to prove; to perform, practise, exercise; to make celabrated, renowned, famed'

*(ge)cūðian* 'to become known; to take knowledge of; to regard'

*(ge)cunnian* 'to search into, seek for, explore, investigate, inquire; to try to know; to attempt; to ascertain; to try, test; to prove; to experience; to afflict, vex'

*forcȳðan* 'to reprove, refute; to rebuke'

*forecȳðan* 'to make known beforehand, foretell, predict, prophesy'

*forðcȳðan* 'to declare, announce, pronounce'

*ofercȳðan* 'to bring stronger testimony than another'

*oncunnan* 'to know; to reproach, accuse, blame'

*oncȳðan* 'to make known, announce'


## 52. CWEÐAN

*(ge)cweðan* (primitive) 'to say; to tell, pronounce; to call, name; to speak; to proclaim, declare, announce; to order, give orders; to propose, offer; to agree, settle; to consider, regard'

*ācweðan* 'to say; to tell, declare; to utter, express; to speak out; to answer, respond; to reject; to banish'

*cwiddian* 'to speak, say, talk, discuss, report; to make claim against'

*forcweðan* 'to speak ill; to abuse; to refuse, reject; to censure, reprove, rebuke; to boast'

*forecweðan* 'to predict, foresay; to preach'

*miscweðan* 'to speak amiss or incorrectly; to speak ill; to curse'

*oncweðan* 'to answer, reply; to resound, echo; to protest'

*tōcweðan* 'to forbid, prohibit, interdict'

*wiðcweðan* 'to speak against; to contradict, gainsay, oppose, resist; to reply; to deny, renounce; to reject, refuse; to not allow'

*wiðercweðan* 'to withstand, resist'

*wiðercwiddian* 'to murmur'


## 53. CWELAN

*cwelan* (primitive) 'to die'

*ācwelan* 'to die, perish'

*ācwellan* 'to kill, destroy'

*ācwylman* 'to kill, slay'

*ācwylmian* 'to suffer; to be tormented'

*(ge)cwellan* 'to kill, murder, execute'

*(ge)cwielman* 'to afflict, torment; to punish; to mortify; to destroy, kill'

*cwylmian* 'to suffer; to kill; to torment, crucify'

*tōcwylman* 'to afflict grievously, torment'


## 54. CWĪNAN

*cwīnan* (primitive) 'to waste or dwindle away'

*ācwīnan* 'to disappear, become extinct; to waste or dwindle away, decline; to go out (of fire)'


## 55. CWINCAN

*cwincan* (primitive) 'to disappear, vanish; to decrease'

*ācwencan* 'to extinguish, quench; to put out'

*ācwincan* 'to vanish; to become extinguished or quenched; to be eclipsed'

*cwencan* 'to extinguish, quench'


## 56. CWOLSTAN

*cwolstan* (primitive) 'to swallow'

*forcwolstan* 'to swallow down'

## 57. DĒAGAN

*dēagan* (primitive) 'to color, dye'

*dīgan* 'to dye'

*(ge)dēagian* 'to colour, dye'


## 58. DELFAN

*delfan* (primitive) 'to delve, dig, excavate, burrow; to extract by digging, dig out; to bury'

*ādelfan* 'to dig, excavate, delve; to pick out; to dig out'

*fordelfan* 'to delve; to destroy by digging'


## 59. DEORFAN

*(ge)deorfan* (primitive) 'to labour, exert oneself, do hard work; to perish, be wrecked, be destroyed; to be in peril'

*(ge)dyrfan* 'to afflict, injure; to imperil, endanger; to molest'


## 60. DRǢDAN

*drǣdan* (primitive) 'to fear, dread'

*ondrǣdan* 'to fear, dread, be afraid'


## 61. DRAGAN

*(ge)dragan* (primitive) 'to drag, draw; to go; to extend, protract'

*ādragan* 'to draw out'


## 62. DRĒOGAN

*(ge)drēogan* (primitive) 'to do, perform, act; to labour, work; to commit, perpetrate; to fulfill, accomplish, finish; to take part in; to conduct; to pass life, lead (a certain) life; to experience, bear, suffer, endure, dree, sustain, tolerate; to fight, do battle, wage war; to be busy, be employed; to enjoy'

*ādrēogan* 'to do, act, perform; to carry out; to practise; to bear, endure, suffer; to bear with, tolerate; to live; to pass or spend time'

*drohtian* 'to live, continue, lead a life; to behave, conduct oneself; to carry out a practice; to associate with, dwell or keep company with; to converse'

*ðurhdrēogan* 'to accomplish, carry through; to perform; to pass (time); to work through'

## 63. DRĒOPAN

*(ge)drēopan* (primitive) 'to drop; to drip'

*ādrēopan* 'to drip; to drop'

*drēopian* 'to drop, trickle; to drip'

*drȳpan* 'to drop, cause to fall in drops; to drip; to moisten'

## 64. DRĒOSAN

*(ge)drēosan* (primitive) 'to fall; to fall down, fail; to fall to pieces; to fall together; to disappear; to sink; to become weak, droop; to perish, come to an end, die; to fall in battle; to rush'

*ādrēosan* 'to decline; to fall; to fall to pieces; to fail; to vanish'

*ādrysnan* 'to repress, extinguish'

*drēorigian* 'to be; to become sad or dreary'

*drūsan* 'to drowse; to become low, slow or inactive; to sink'

*(ge)drysnan* 'to quench, extinguish, put out'

*gedrysnian* 'to disappear, vanish; to quench, put out, extinguish'

*tōdrēosan* 'to decay; to perish; to be destroyed; to fall away'

## 65. DREPAN

*(ge)drepan* (primitive) 'to strike; to kill; to overcome'

## 66. DRĪFAN

*(ge)drīfan* (primitive) 'to drive, conduct; to force, impel; to drive away, expel; to chase, hunt, pursue; to thrust; to act impetuously, rush with violence; to carry on, prosecute, follow up; to do; to practise, exercise; to undergo, suffer; to carry out; to speak of, bring up, trot out; to agitate'

*ādrǣfan* 'to drive away, shut out, expel'

*ādrīfan* 'to drive; to cause to move; to drive away, drive off, drive out, expel; to pursue; to follow up; to chase (mental); to pierce, stake; to stake out'

*(ge)drǣfan* 'to drive; to drive out; to push, urge; to trouble'

*drȳfan* 'to disturb, vex, trouble; to afflict; to excite, stir up'

*fordrǣfan* 'to drive; to compel'

*fordrīfan* 'to drive away, eject, expel, sweep away, banish; to force, compel, impel; to overtask, to overtax'

*oferdrīfan* 'to overcome, defeat: to dispense; to cover; to refute; to confute; to repel; to outvote'

*tōdrǣfan* 'to separate, disperse, scatter; to expel, dispel, drive away, out or apart'

*tōdrīfan* 'to separate, disperse, scatter; to repel, drive away; to destroy'

*wiðdrīfan* 'to repel, drive off'


## 67. DRINCAN

*(ge)drincan* (primitive) 'to drink, imbibe, absorb; to swallow up; to quench thirst; to be entertained'

*ādrencan* 'to plunge under; to submerge, immerse, drown'

*ādrincan* 'to be immersed, sunk, drowned; to be extinguished; to be quenched by water; to drink up; to quench thirst'

*drencan* 'to give drink; to make drunk, intoxicate; to drench, saturate, soak; to submerge; to plunge; to drown, sink'

*(ge)druncnian* 'to be drunk; to get drunk; to drown, sink'

*fordrencan* 'to make drunk, inebriate, intoxicate'

*fordrincan* 'to make drunk, inebriate; to be drunk'

*ofdrincan* 'to intoxicate'

*oferdrencan* 'to overdrench; to make drunk, inebriate, intoxicate'

*oferdrincan* 'to drink too much; to get drunk'

*ondrencan* 1 'to intoxicate, inebriate; to fill with water'

*ondrincan* 'to drink'

*ondrucnian* 'to become intoxicated, get drunk'


## 68. DRĪTAN

*gedrītan* (primitive) 'to defecate'


## 69. DŪFAN

*(ge)dūfan* (primitive) 'to dive, sink, duck'

*ādȳfan* 'to overpower with sound; to render inaudible'

*(ge)dȳfan* 'to dip; to plunge, immerse'

*gedūfan* 'to plunge, dive, duck, sink; to be drowned'

## 70. DUGAN

*dugan* (primitive) 'to avail; to be worth; to be able, capable of, competent or good for anything, be fit; to thrive; to be strong; to be good; to be virtuous; to be kind; to be honest; to be bountiful; to be liberal'

*gedīgan* 'to endure, carry through, survive; to overcome, pass through, escape; to endure, tolerate; to profit, benefit, do good'


## 71. DURRAN

*durran* (primitive) 'to dare, venture; to presume'

*gedyrstigian* 'to dare, presume'


## 72. DWELAN

*dwelan* (primitive) 'to err; to be led into error'

*ādwellan* 'to seduce, lead into error, lead astray; to wander; to hinder'

*dwellan* 'to prevent; to hinder, delay; to deceive, mislead, lead astray; to err; to be lead astray, wander; to continue, remain; to dwell'

*(ge)dwolian* 'to deceive, lead astray, seduce; to err, make mistake; to go astray, wander (out of the way), stray; to prevent, hinder'


## 73. DWĪNAN

*dwīnan* (primitive) 'to dwindle, fade or pine away, waste away, languish; to disappear'

*ādwīnan* 'to dwindle, waste away; to vanish away'

*fordwīnan* 'to vanish; to dwindle away'


## 74. ÐĒON

*(ge)ðēon* 1 (primitive) 'to be great; to become great; to prosper, flourish, thrive, succeed; to excel; to grow, increase; to grow up; to ripen; to lengthen (of days)'

*foreðēon* 'to excel, surpass'

*forðēon* 1 'to oppress, crush'

*geðingan* 'to grow; to thrive; to become excellent'

*oferðēon* 'to surpass, excel'

*onðēon* 'to be useful; to succeed, prosper'

## 75. ÐĒOTAN

*ðēotan* (primitive) 'to roar, howl; to sound forth; to resound; to murmur'

*ðoterian* 'to cry, howl; to lament, wail'


## 76. ÐERSCAN

*(ge)ðerscan* (primitive) 'to thrash (corn); to strike, beat, flog, pound, batter; to scourge'

*āðerscan* 'to thresh out; to spoil'

*(ge)ðryscan* 'to press, afflict; to oppress, depress, press or weigh down'

*ofðryscan* 'to repress; to beat down; to suppress'

*tōðerscan* 'to dash or knock to pieces'


## 77. ÐICGAN

*(ge)ðicgan* (primitive) 'to take, receive, accept; to consume; to partake of, take food, eat, drink, taste'

*āðecgan* 'to consume; to take food; to oppress'

*ðecgan* 'to take, receive, accept; to consume; to eat, drink'

*ofðecgan* 'to consume; to destroy'


## 78. ÐĪNAN

*ðīnan* (primitive) 'to grow moist or damp'

*āðwǣnan* 'to diminish, lessen, abate, shorten; to take away; to soften'

*ðānian* 'to moisten; to be moist; to become moist'

*(ge)ðwǣnan* 'to soften; to wet; to moisten'

*ofðǣnan* 'to moisten'

*ofðīnan* 'to get too moist; to be too moist'


## 79. ÐINDAN

*ðindan* (primitive) 'to swell; to swell up; to melt, pass away; to be angry'

*āðindan* 'to increase, swell, puff up, inflate; to pass away, melt'

*forðindan* 'to swell up'

*tōðindan* 'to swell up; to inflate, puff up, grow big; to be arrogant; to swell with pride'


## 80. ÐRĀWAN

*(ge)ðrāwan* (primitive) 'to throw; to turn, curl; to twist; to rack, torture'

*āðrāwan* 'to twist; to twine; to curl; to throw forth; to spill'

## 81. ÐRĒOTAN

*ðrēotan* (primitive) 'to vex; to weary'

*āðrēotan* 'to wear; to irk; to be tiresome to; to dislike, loathe; to disgust, displease'

*āðrīetan* 'to weary; to loathe'

*ðrīetan* 'to weary; to press, force, urge'


## 82. ÐRINGAN

*(ge)ðringan* (primitive) 'to press; to squeeze; to advance, press forward; to force; to crowd, throng; to oppress; to rush on, hasten; to pinch (with cold); to gain (by force)'

*āðringan* 'to crowd or press out, urge out; to rush forth; to break out'

*ofðringan* 'to crowd, throng; to press upon'

*tōðringan* 'to drive or press asunder, scatter by pressure'


## 83. ÐRINTAN

*ðrintan* (primitive) 'to swell'

*āðrintan* 'to swell up'


## 84. ÐURFAN

*ðurfan* (primitive) 'to need, want, be needy; to owe, be required, must, be under obligation, be bound to, be compelled; to have occasion to; to be good for; to be of use'

*(ge)ðearfan* 'to be need or in want; to starve'

*geðearfian* 'to impose necessity'

*ðorfan* 'to need'


## 85. ÐWĒAN

*(ge)ðwēan* (primitive) 'to wash; to cleanse; to anoint'

*āðwēan* 'to wash; to cleanse; to baptize; to anoint'

*onðwēan* 'to wash, cleanse by washing'


## 86. ÐWERAN

*(ge)ðweran* (primitive) 'to stir, churn, twirl; to beat or mix together; to soften, render malleable; to forge'

*āðweran* 'to shake, churn; to stir up'


## 87. ĐWĪNAN

*ðwīnan* (primitive) 'to lessen, decrease, dwindle; to be reduced'

*tōðwīnan* 'to vanish away, disappear; to burst'

*āðwīnan* 'to dwindle away; to vanish'


## 88. ĐWĪTAN

*ðwītan* (primitive) 'to cut; to cut off, cut out; to whittle'

*āðwītan* 'to disappoint'


## 89. ĒACAN

*ēacan* (primitive) 'to be increased, enlarged, augmented'

*ætȳcan* 'to add, increase, augment'

*ēacian* 'to increase'

*(ge)ēacnian* 'to add, increase, augment; to be enlarged; to become pregnant, conceive; to bring forth, produce'

*(ge)īecan* 'to add, increase, enlarge, augment, prolong, eke; to carry out, fulfil'

*tōætȳcan* 'to increase'

## 90. ĒADAN

*ēadan* (primitive) 'to give, concede, grant'

*(ge)ēadigan* 'to bless; to call blessed, count fortunate; to make happy, to enrich'


## 91. ETAN

*(ge)etan* (primitive) 'to eat; to feed; to consume, devour; to eat together'

*āetan* 'to consume, devour; to eat'

*ættan* 'to eat up, consume'

*ettan* 'to graze'

*(ge)fretan* 'to eat; to consume, devour; to break'

*frettan* 'to consume, eat, up, devour; to feed upon'

*ðurhetan* 'to eat through; to consume; to eat out'

*offrettan* 'to eat up, devour'

## 92. FARAN

*(ge)faran* (primitive) 'to go; to set forth; to proceed; to wander; to travel; to arrive, reach by going; to be, exist; to happen; to act; to fare; to be current; to depart; to die, defunct; to get on, obtain, succeed; to undergo, suffer; to carry out, execute; to complete; to accomplish'

*fēran* 1 'to go; to march; to set out, depart; to make a journey, travel; to sail; to come; to behave, act'

*(ge)ferian* 'to move; to carry, bear; to conduct, convey, lead; to bring; to depart; to go, betake oneself to; to be versed in'

*forfaran* 'to go or pass away, perish; to lose; to run, destroy; to obstruct, intercept, blockade; to go before'

*forfēran* 'to go or pass away, perish, die; to depart'

*forferian* 'to let die'

*forðfaran* 'to go forth, depart; to die'

*(ge)forðfēran* 'to go forth, depart; to die'

*(ge)forðgefēran* 'to go forth, depart; to die'

*forðgefaran* 'to go forth, depart; to die; to go by, pass'

*fyrdian* 'to march; to go on an expedition; to be at war'

*gefǣran* 'to lead; to bring'

*gefēran* 'to go; to march; to depart; to travel; to fare; to sail; to traverse; to come; to get to a place; to happen; to effect, bring about; to accomplish, attain, succeed; to gain, obtain; to suffer, undergo, experience; to bring; to bear; to be derived'

*gefērscipian* 'to unite, accompany'

*misfaran* 'to err; to go wrong or astray; to transgress; to fare badly, have ill success'

*misfēran* 'to err; to do wrong, go astray; to transgress'

*offaran* 'to intercept; to overtake; to attack; to fall upon'

*offēran* 'to overtake (an enemy)'

*offerian* 'to bear or carry off'

*tōfaran* 'to separate, disperse, scatter; to depart, go away, part; to go off separately; to pass off; to disappear; to become extinct'

*tōfēran* 'to separate, disperse, deal out; to go in different directions; to go off separately; to disturb'

*tōferian* 'to disperse, scatter; to carry in different directions; to remove, get rid of; to put off; to digest'

## 93. FEALDAN

*(ge)fealdan* (primitive) 'to fold up; to wrap, wrap up, roll up; to roll about; to join, attach closely; to involve, implicate (oneself in sth), entangle'

*gefildan* 'to fold up'

*onfealdan* 'to unfold; to unwrap'

*unfealdan* 'to unfold; to unroll; to open; to explain, unfold by narrating'

*(ge)twifealdan* 'to double'

## 94. FEALLAN

*(ge)feallan* (primitive) 'to fall; to stumble; to perish, fall, die; to overthrow; to be ruined; to decline, decay; to fail; to inflict (on), attack; to flow; to reach by falling; to cause by falling'

*āfeallan* 1 'to fall or tumble down; to decline, decay, fall off, sink; to fall sick; to be destroyed'

*āfyllan* 2 'to cast or drive out; to subvert, overturn, overthrow, abolish; to cause to fall; to cause to stumble; to demolish; to kill, slay'

*fealletan* 'to fall down'

*forfeallan* 'to overwhelm; to destroy by falling'

*(ge)fyllan* 2 'to cause to fall, throw down, fell, cut down, cast down; to cause to stumble; to defeat; to destroy; to strike down; to kill'

*tōfeallan* 'to fall or break to pieces, fall apart; to fall off, fall away; to collapse; to demolish, destroy'

*offeallan* 'to cut off; to fall upon; to kill by falling; to destroy; to end; to be lost to, fall away from'

*offyllan* 'to strike down; to kill by falling; to destroy'

## 95. FEOHTAN

*(ge)feohtan* (primitive) 'to fight, combat, make war; to contend, strive, struggle; to win; to obtain by fighting'

*āfeohtan* 'to fight, fight against; to attack, assail; to destroy; to tear or pluck out'

*oferfeohtan* 'to conquer, vanquish'

*wiðfeohtan* 'to rebel; to fight against; to contend with'

## 96. FĒOLAN

*(ge)fēolan* (primitive) 'to be joined to; to cleave, adhere, stick to; to proceed; to persist, persevere in; to come; to enter, pass into, penetrate; to pass through; to pass over; to betake oneself to; to undergo; to reach'

*ætfyligan* 'to adhere, stick to, cling to; to cleave'

*felan* 'to stick, adhere'

*wiðfēolan* 'to apply oneself to'

## 97. FĒOGAN

*fīgan* (primitive) 'to be an enemy; to become an enemy; to be at enmity'

*gefēogan* 'to hate; to persecute'

## 98. FINDAN

*(ge)findan* (primitive) 'to find; to meet with, come upon; to imagine; to devise, invent, contrive; to discover; to obtain by search or study; to recover; to consider, decide, determine; to show, inform; to dispose; to arrange, order, provide'

*āfandian* 'to try, test, prove; to find out; to experience'

*āfindan* 'to find; to find out, discover, detect; to feel, experience'

*(ge)fandian* 'to try, attempt, test, prove, tempt; to provoke; to explore, examine, seek, search out; to experience; to visit'

*fundian* 'to tend to; to intend; to endeavor, strive after; to desire, wish for, aspire to; to hasten; to go; to set out; to go forward'

*oferfindan* 'to put to the proof, make trial of'

*onfindan* 1 'to perceive, notice; to learn; to experience, suffer, feel; to meet with; to find out, discover, detect; to be aware of; to come across, meet with; to get, obtain'

## 99. FLĒAN

*flēan* (primitive) 'to flay, pull off the skin'

*āflēan* 'to strip off, flay'

## 100. FLĒOGAN

*(ge)flēogan* (primitive) 'to fly; to fly over; to flee, take to flight'

*āflīegan* 'to expel, drive away, put to flight'

*fligan* 'to put to flight'

*flogettan* 'to flutter; to be uncertain, vacillate, waver'

*forflȳgan* 'to put to flight'

*tōflēogan* 'to be dispersed; to fly asunder, fly apart, fly to pieces; to crack'


## 101. FLĒON

*(ge)flēon* (primitive) 'to flee, escape; to fly from; to put to flight; to avoid; to fly; to conquer'

*āflēon* 'to fly; to flee away; to escape'

*āflīeman* 'to expel, drive away, banish; to disperse, scatter; to rout, cause to flee'

*(ge)flīeman* 'to drive away, banish, exile; to cause to flee; to put to flight, rout'

*forflēon* 'to flee from; to avoid, evade; to escape'

*tōflēon* 'to flee away'


## 102. FLĒOTAN

*flēotan* (primitive) 'to float; to swim; to sail; to drift; to flow; to skim'

*āflēotan* 'to skim'

*floterian* 'to fly, flutter, flicker; to be disquiet or troubled; to float; to be carried or tossed by waves'

*flotian* 'to float'

*tōflēotan* 'to float in different directions; to be dispersed by water; to carry away by a flood'


## 103. FLĪTAN

*(ge)flītan* (primitive) 'to dispute, quarrel; to strive, contend, fight; to rebel'

*oferflītan* 'to overcome, beat; to confute'

*wiðflītan* 'to contend with'


## 104. FLŌWAN

*flōwan* (primitive) 'to flow, stream; to issue; to become liquid, melt; to abound'

*āflōwan* 'to flow from; to flow away; to pass away'

*fleswian* 'to profess to do something; to dissemble'

*forðflōwan* 'to flow forth'

*geflōwan* 'to overflow'

*tōflōwan* 'to disperse, spread; to flow down, flow to; to ebb; to melt; to pour in; to distract, wander, take different directions; to be dissipated, be split, be separated, scattered; to render useless; to bring to nothing'


## 105. FNĒOSAN

*fnēosan* (primitive) 'to sneeze'

*fnǣran* 'to breath heavily; to snort'

*fnǣrettan* 'to breath heavily; to make a loud sound with the breath; to snort; to neigh'

*fnǣstian* 'to breathe hard, pant'

*fnesan* 'to breathe hard, gasp, pant'

*fnēsan* 'to breathe hard, pant, gasp'

*gefnēsan* 'to sneeze'


## 106. FŌN

*(ge)fōn* (primitive) 'to take, catch, seize, grasp; to capture, arrest, make prisoner; to entrap; to receive, accept; to assume; to undertake; to meet with, encounter; to bring; to carry'

*āfōn* 'to take; to receive; to seize, lay hold of; to hold up; to support'

*forefōn* 'to take before; to anticipate, prevent'

*forfōn* 'to seize, clutch; to arrest; to anticipate, forestall, prevent; to surprise; to forfeit'

*gefangian* 'to join, fasten'

*misfōn* 'to make a mistake; to fail to take; to be deceived'

*oferfōn* 'to seize; to take prisoner'

*onfōn* 2 'to take, take hold of; to receive, accept; to stand sponsor; to harbour; to favour unrighteously; to begin, undertake, undergo; to conceive; to allow to come, not to exclude'

*wiðfōn* 'to grasp at, seize on, clutch, lay hold on'

*ymbfōn* 'to surround, encompass, embrace, envelope; to seize, grasp, clasp; to conceive, comprehend'


## 107. FRĒOSAN

*(ge)frēosan* (primitive) 'to freeze'

## 108. FRIGNAN

*(ge)frignan* (primitive) 'to ask, inquire; to consult; to learn by inquiry, find out; to hear of'

*fricgan* 'to ask, question, inquire; to investigate, seek after; to find out; to learn; to get information of'

*(ge)fricgan* 'to ask, question, inquire; to find out; to seek after, investigate; to learn by asking or inquiry; to get information of, hear of'

*gefrāgian* 'to learn by asking or inquiry'

*gefrægnian* 'to ask, inquire, question, ask for information; to make famous'


## 109. GALAN

*(ge)galan* (primitive) 'to sing; to sing charms, practise incantation; to call, cry, scream; to enchant'

*āgalan* 'to sing, chant'

*ongalan* 'to charm; to recite (a charm)'


## 110. GANGAN

*gangan* (primitive) 'to go; to go on foot, walk; to turn out'

*āgangan* 'to go; to go by; to pass; to happen, occur, befall, come to pass; to grow; to approach; to lose strength; to come forth'

*foregān* 1 'to excel, stand out; to precede, go before; to pass over; to abstain form, not to do'

*forgangan* 'to pass, pass over; pass by; pass away; to precede, go before; to abstain from, neglect; to lose'

*forgān* 1 'to pass, pass over; to pass by; to pass away; to abstain from, neglect; to lose'

*foregangan* 1 'to pass, pass over; to pass by; to pass away; to abstain from, neglect; to lose'

*foregān* 2 'to go before, precede; to project; to stand out'

*forðgangan* 'to go forth; to proceed; to go before, precede'

*forðgān* 'to go forth; to proceed, advance, go on; to go by; to pass by; to precede; to succeed'

*(ge)gān* 'to GO; to come; to move, proceed, advance; to traverse; to walk; to depart, go away; to happen, take place, turn out; to pass, elapse (of time); to be current (of coinage); to apply to; to betake oneself to; to attain; to reach; to extend'

*gengan* 'to go; to pass'

*gegangan* 'to go; to proceed; to walk; to depart; to come, arrive; to happen, take place, befall; to observe; to pass over; to subdue; to practise, exercise, go over; to accomplish, effect; to acquire, obtain'

*gegān* 'to go; to proceed; to walk; to depart, pass away; to pass over; to happen; to get, gain, acquire; to do, perform; to subdue; to observe; to practise, exercise; to accomplish, effect; to pass, elapse'

*ofergangan* 1 'to pass off or away; to pass over, pass across, traverse, cross; to pass beyond'

*ofergān* 1 'to traverse, pass over, pass across, cross; to pass away, pass off; to pass beyond'

*ofgān* 'to demand, require, exact, exhort; to obtain, attain, acquire, gain; to start from, begin'

*tōgān* 'to go to; to go into; to part, go away, depart; to separate, part; to disperse; to happen, come to pass'

*tōgangan* 'to go away, part; to pass away'

*tōgengan* 'to separate, go different ways'

*wiðgangan* 1 'to pass away; to vanish, disappear; to withdraw, go off; to fail'


## 111. (GE)CENNAN

*(ge)cennan* (primitive) 'to produce, create, bring forth, beget; to declare; to prove; to give forth (a statement); to make known, clear; to show oneself; to assign, attribute, nominate; to give; to choose out; to conceive'

*ācennan* 'to produce, bring forth, beget; to attribute to, assign; to renew'

*cinnan* II 'to generate, procreate'

*forcinnan* 'to repudiate; to destroy'

*geedcennan* 'to create; to revive, regenerate, requicken'

*oncennan* 'to bear; to bring forth'


## 112. (GE)FĒON

*(ge)fēon* (primitive) 'to be glad; to rejoice, exult; to take, seize'

*gefægnian* 'to be glad; to rejoice, exult; to make a movement that expresses joy; to fawn; to applaud; to be delighted with; to welcome, receive with pleasure'

*onfægnian* 'to show gladness; to fawn on'

## 113. (GE)LĒORAN

*(ge)lēoran* (primitive) 'to go; to depart; to emigrate; to pass; to pass away, die, cease to exist; to pass over; to vanish'

*ālēoran* 'to go or flee away, depart; to pass away'

*foregelēoran* 'to pass away'

*forðgelēoran* 'to pass forth; to pass away, die; to depart'

*oferlēoran* 'to pass, pass over or by; to pass away; to transgress; to prevaricate; to abandon'

*oflēoran* 'to pass away'

## 114. (GE)LĪÐAN

*(ge)līðan* (primitive) 'to move; to go, go to; to proceed; to advance; to travel; to sail; to come'

*ālǣdan* 'to lead; to withdraw; to lead away; to conduct; to carry or bear off; to bring; to grow; to come forth; to be produced'

*forlǣdan* 'to seduce; to mislead, lead astray; to bring out, to lead forth; to bring forth, produce'

*forlīðan* 'to suffer shipwreck'

*forðgelǣdan* 'to lead forth; to bring forth, produce; to cause to grow; to conduct'

*(ge)lǣdan* 'to lead, guide, conduct, convoy; to take; to carry, bring, convey; to derive; to bring forth, produce; to pass; to lead (life); to do; to perform; to take part in; to place, lay; to grow, spread; to sprout forth; to cause to move; to lift; to deal with, treat'

*gelīðan* 'to arrive; to come to land, reach port'

*mislǣdan* 'to mislead, lead astray'

*oferlǣdan* 'to cover, draw over; to oppress; to carry across; to translate'

## 115. (GE)LŪCAN

*(ge)lūcan* (primitive) 'to close, shut up; to lock, shut up; to conclude, enclose; to fasten; to interlock; to intertwine; to twist, wind'

*unlūcan* 'to unlock; to unclose, open; to unfold, reveal, disclose'

## 116. (GE)RĪPAN

*(ge)rīpan* (primitive) 'to reap; to cut corn'

*repan* 'to reap'

*rīpian* 'to ripen, mature; to grow old'

## 117. (GE)RĪSAN

*(ge)rīsan* (primitive) 'to rise; to stand up; to be proper, suit, be fit'

*ārǣran* 'to raise, lift up; to cause to grow; to build, erect, set up, establish; to create; to spread, disseminate; to excite; to exalt, extol; to disturb, upset; to rear (swine)'

*ārǣsan* 'to rush'

*ārīsan* 'to arise; to get up; to spring up; to rise, ascend; to mount up; to originate; to come forth, spring from'

*rǣran* 'to rear, raise, elevate, lift up, move from a lower to a higher position; to build, set up, establish; to create; to begin; to give rise to; to offer a prayer; to do, commit; to exalt, promote; to excite, arouse, rouse, stir up'

*rǣsan* 'to rush, hasten; to move violently or impetuously; to enter on rashly, rush (into anything); to assault, attack; to press; to force one's way'

## 118. (GE)TĒON 1

*(ge)tēon* 1 (primitive) 'to draw, tug; to pull; to row (boat); to draw or bind together; to take; to withdraw; to allure, entice, attract; to lead; to induce; to bring; to produce, bring forth; to arrogate; to restrain; to go, betake oneself to; to roam; to bring up; to educate; to dispute; to string up; to play (instrument)'

*ātēon* 'to pull or draw out, pluck; to remove; to lead out; to protract; to move; to journey; to roam; to use, employ, apply; to dispose of, treat, deal with'

*ātyhtan* 'to attract, allure, entice; to incite; to be attentive; to produce; to stretch, extend'

*foretācnian* 'to foreshow'

*foreteohhian* 'to foreordain, destine'

*fortēon* 'to mislead, lead astray; to seduce; to draw over; to cover over, obscure; to draw away; to gripe'

*fortogian* 'to contract'

*fortyhtan* 'to seduce; to lead astray; to draw away'

*forðātēon* 'to produce, bring forth; to draw forth'

*ofertēon* 'to cover, draw cover; to finish, bring to an end'

*oftēon* 'to take away, withdraw; to withhold, deny, keep back'

*ontēon* 'to extract, pull out; to withdraw; to draw; to pull; to untie; to asume, undertake'

*(ge)tīeman* 'to vouch to warranty'

*(ge)tācnian* 'to mark; to indicate, express, point out; to make a mark upon something; to instruct; to betoken; to denote, signify, represent, symbolise; to portend; to demonstrate, show, prove; to witness; to seal'

*(ge)tǣcan* 'to show, present, demonstrate; to teach, instruct, train; to appoint, assign; to prescribe, enjoin, impose; to warn; to persuade; to indicate, signify; to transfer, translate; to send; to declare'

*(ge)tǣcnan* 1 'to mark by a token; to mark out; to point out; to shew, present; to make known; to appoint; to prescrib; to denote, designate'

*teohhian* 'to determine, decree; to think, suppose, consider, judge, estimate, intend, propose; to assign, appoint'

*tīeman* 'to engender, beget, to bring forth, bear a child, have offspring, to propagate; to call as witness, vouch to warranty; to go to; to lead to'

*togian* 1 'to drag, draw, tug'

*tōtēon* 'to pull or tear to pieces, draw asunder, rend, pull apart; to destroy; to pull away; take to oneself, claim for oneself'

*(ge)tyhtan* 'to stretch; to draw; to pull; to incite, exhort, provoke, prompt, suggest, instigate, urge, seduce, persuade, solicit; to invite; to lead astray; to bring to the mind; to talk over; to instruct, teach, train; to attract'

*wiðtēon* 'to take away, withdraw, draw back; to restrain'

*ðurhtēon* 1 'to carry out, accomplish, perform, fulfill, effect, perpetrate; to undergo, go through; to continue, carry on; to finish; to afford'


119. (GE)WEFAN

*(ge)wefan* (primitive) 'to weave'

*āwefan* 'to weave'

*wǣfan* 'to wrap up; to clothe'

*webbian* 'to weave, contrive; to devise'

*wefan* 'to weave; to plan, arrange, devise, contrive; to construct; to put together'

*ymbwǣfan* 'to clothe, wrap round'


120. GELAN

*gelan* (primitive) 'to pour'

*tōgelan* 'to diffuse, spread a fluid'


## 121. GĒOTAN

*(ge)gēotan* (primitive) 'to pour; to pour forth, shed, flow, gush; to cast, found; to flood, overwhelm'

*āgēotan* 'to pour out or forth, shed; to strew, spill; to melt, found; to destroy; to deprive of; to consume'

*āgitan* 'to find, find out, discover; to get; to take away; to know; to understand; to consider'

*āgītan* 'to waste; to destroy; to seize; to take away'

*gētan* 1 'to destroy; to kill'

*ofergēotan* 'to pour upon; to cover by pouring; to flood, suffuse, overwhelm'

*ofgēotan* 'to moisten, steep, soak, souse; to quench, put out a fire; to pour out'

*ongēotan* 'to infuse, impregnate'

*tōgēotan* 'to spread, diffuse; to pour away; to spill; to exhaust'

*ðurhgēotan* 'to pour over; to cover by pouring; to fill, impregnate, saturate; to imbue, inspire'


## 122. GETINGAN

*getingan* (primitive) 'to press against, throng'


## 123. GIEFAN

*giefan* (primitive) 'to give; to bestow; to allow; to grant, confer; to commit, entrust; to devote; to give in marriage; to release'

*āgiefan* 'to give, impart; to deliver; to give back, return, render, restore; to pay what is due; to pay; to leave, give up, abandon; yield'

*āgifian* 'to bestow; to grant'

*forgiefan* 'to give, grant, bestow, supply; to allow, permit; to forgive, overlook, remit; to give up, leave off; to give in marriage'

*pifian* 'to give; to bestow, present, endow, bestow gifts; to glorify'

*(ge)gifian* 'to give; to deliver, hand over; to present, bestow gifts upon, endow; to glorify'

*giftian* 'to marry; to give a woman in marriage'

*ofgiefan* 'to leave, abandon, quit, give up, desert; to resign'

*ongifan* 'to give back; to forgive, pardon'

## 124. GIELDAN

*(ge)gieldan* (primitive) 'to yield; to render, reward, requite, restore; to pay, pay for; to serve; to worship; to sacrifice to; to punish'

*āgeldan* 1 'to punish'

*angildan* 1 'to pay for; to repay; to atone for'

*āgieldan* 'to pay; to pay back; to repay, render, restore, requite; to compensate, reward; to offer up; to offer oneself; to perform; to allow, permit'

*forgieldan* 'to pay for; to reward, indemnify, render, requite; to forfeit; to pay double (as penalty); to give; to give up; to make good'

*ongieldan* 'to pay for (a penalty), be punished for; to atone for; to undergo; to pay; to offer; to give an offering'

## 125. GIELLAN

*giellan* (primitive) 'to sound; to sing; to yell, shout; to chirp'

## 126. GIELPAN

*gielpan* (primitive) 'to boast; to praise, applaud; to exult, glory; to desire earnestly'

*agilpan* 'to exult, glory; to boast'

*forgielpan* 'to boast of; to trumpet forth'

## 127. GIETAN

*gietan* (primitive) 'to get, obtain, take'

*forgietan* 'to forget; to neglect'

*forgitelian* 'to forget'

*ofergietan* 'to forget; to disregard, neglect'

*ofergitolian* 'to forget; to be forgetful of'

*ongietan* 'to seize, grasp; to feel; to perceive, see; to hear, learn; to know, understand; to recognize; to distinguish; to consider; to judge; to experience; to find out, discover; to know carnally'

## 128. GĪNAN

*gīnan* 1 (primitive) 'to yawn'

*āgānian* 'to gape, yawn'

*gānian* 'to yawn; to gape, open'

*ginian* 'to yawn, gape; to utter a sound'

*tōgǣnan* 'to say, utter, pronounce; to affirm'

*tōgīnan* 'to be opened; to split; to slip; to gape, yawn'


## 129. GINNAN

*ginnan* (primitive) 'to begin; to attempt; to try hard, endeavour'

*onginnan* 'to begin, undertake, set about, set to work; to attempt; to endeavour, try hard; to attack, assail; to act, proceed; to act strenuously'


## 130. GLǢDAN

*glǣdan* (primitive) 'to cause to slip or totter'


## 131. GLĪDAN

*glīdan* (primitive) 'to fall; to glide, slide, slip; to pass away; to vanish; to glide away'

*āglīdan* 'to glide, slip; to stumble'

*gliddrian* 'to be unstable, totter; to slip'

*tōglīdan* 'to glide away; to fall to pieces, fall asunder; to collapse; to be dispersed, dissipated, dispelled; to disappear, vanish; to pass away, slip away; to split; to slip'


## 132. GLŌWAN

*glōwan* (primitive) 'to glow'


## 133. GNAGAN

*gnagan* (primitive) 'to bite, gnaw'

*forgnagan* 'to gnaw or eat up'


## 134. GNĪDAN

*gnīdan* (primitive) 'to rub; to rub or grind together; to break, crumble, comminute'

*āgnīdan* 'to rub off'

*forgnīdan* 'to beat into pieces; to break into pieces; to crush; to rub or grind together; to dash or throw down'

*hundían* 'to rub'


## 135. GRAFAN

*grafan* (primitive) 'to dig, delve; to carve, grave, chisel'

*āgrafan* (prefixed) 'to carve, engrave, inscribe, hew, sculpture; to emboss'


## 136. GRĒOSAN

*grēosan* (primitive) 'to frighten'


## 137. GRĒOTAN

*grēotan* (primitive) 'to lament; to cry, weep'

*grētan* 'to lament, bewail, deplore, bemoan; to weep'


## 138. GRIMMAN

*grimman* (primitive) 'to be fierce, rage; to make angry; to hasten'

*grimsian* 'to be cruel or fierce, rage'


## 139. GRINDAN

*(ge)grindan* (primitive) 'to grate, scrape; to grind or rub together, gnash; to sharpen; to grind to powder; to oppress; to crush'

*forgrindan* 1 'to grind down, pulverize; to crush, mangle; to ruin, destroy, consume'

*ongrindan* 'to smile; to show the teeth; to grind with the teeth'


## 140. GRĪPAN

*(ge)grīpan* (primitive) 'to take, seize, get hold of, lay hold of; to grasp; to snatch; to apprehend; to obtain, acquire; to attack, assail'

*āgrāpian* 'to handle; to grasp tightly'

*forgrīpan* 'to seize; to grasp; to attack, assail; to overwhelm; to take before, pre-occupy'

*gegrǽppian* 'to seize'

*(ge)grippan* 'to seize; to obtain'

*wiðgrīpan* 'to grapple with, seize on'


## 141. GRĪSAN

*grīsan* (primitive) 'to shudder; to be frightened'

*āgrīsan* 'to quake, shudder; to fear, dread'


## 142. GRŌWAN

*(ge)grōwan* (primitive) 'to grow; to flourish; to spring, sprout, germinate, produce, bear (of soil); to grow together, unite by growing; to increase'

*āgrōwan* 'to cover; to grow under; to grow over'

*forgrōwan* 'to grow to excess or fullness'

*ofergrōwan* 'to overgrow; to occupy with (its) growth (of a tree)'


## 143. GYRRAN

*gyrran* (primitive) 'to sound; to chatter; to gnash; to snarl, grunt; to grate; to creak'

*gyrretan* 'to roar'


## 144. HĀTAN

*(ge)hātan* 1 (primitive) 'to order, direct, command; to bid, summon; to promise, vow; to call, summon, name; to be called'

*āhātan* 'to call, name'

*(ge)andettan* 'to confess; to acknowledge; to give thanks, praise; to promise, vow'

*foregehātan* 'to order; to promise; to invite'

*forhātan* 'to renounce, forswear; to declare criminal, outlaw, proscribe'

*onhātan* 'to promise'


## 145. HEALDAN

*(ge)healdan* (primitive) 'to hold, keep, grasp; to guard, defend, preserve, protect; to maintain, support, uphold; to retain; to contain; to possess; to restrain, curb, withhold; to last; to inhabit; to control, rule, govern, reign; to compel; to take care; to cherish, foster; to observe, regard; to do; to practise, fulfill; to pay; to celebrate; to go; to proceed; to treat; to behave to, bear oneself; to keep in mind; to hold fast; to confine, lock up, detain'

*āhealdan* 'to hold, keep'

*forhealdan* 'to hold improperly; to rebel against; to keep too long; to forsake, fall away from; to let go; to disregard, neglect; to misuse, abuse a privilege; to defile, pollute'

*forðhealdan* 'to keep up, maintain; to hold to; to follow out; to observe'

*mishealdan* 'not to keep; to neglect; to slight a person'

*oferhealdan* 'to overcome, overtake; to delay to do, hold over; to neglect'

*ofhealdan* 'to retain; to withhold, keep back'

*ymbhealdan* 'to encompass'


## 146. HĒAWAN

*(ge)hēawan* (primitive) 'to cut off; to hew; to hack; to gash; to kill; to make by hewing; to smite; to deal blows, strike'

*āhēawan* 'to cut or hew off; to cut wood into planks; to plane'

*forhēawan* 'to cut or hew in pieces; to kill; to slaughter'

*tōhēawan* 'to cut or hew to pieces'


## 147. HEBBAN

*(ge)hebban* (primitive) 'to heave; to raise, lift, mount; to elevate, exalt, extol; to set up, institute'

*āhebban* 'to raise, erect, exalt, heave or stir up; to take away, remove; to support, uphold; to leaven, ferment'

*āhefegian* 'to make sad or heavy, oppress; to become heavy; to weigh down, burden'

*(ge)hefigian* 'to make heavy; to afflict, vex, oppress, grieve, weary; to become heavy, depressed or weakened; to be oppressed or burdened; to grow worse, aggravate'

*oferhebban* 'to omit, pass over; to neglect; to exalt; to uplift'

*onhebban* 'to raise up, erect, lift up, exalt; to leaven; to begin, take up; to take away, remove'


## 148. HELAN

*(ge)helan* (primitive)  'to cover; to hide, conceal'

*āhelian* 'to cover; to hide, conceal'

*forhelan* 'to cover over, hide, conceal; to protect'

*forhelian* 'to cover; to clothe; to hide'

*geholian* 'to get, obtain'

*(ge)helian* 'to cover; to cover over, hide, conceal'

*oferhelian* 'to cover over, conceal'

*unhelian* 'to uncover, reveal'

## 149. HELPAN

*(ge)helpan* (primitive) 'to help, aid, support, succour, assist; to preserve; to cure, amend; to do good, benefit, be of use, avail, profit'

*āhelpan* 'to help, assist, support'


## 150. HĒOFAN

*hēofan* (primitive) 'to lament, mourn, grieve, wail; to be sorry for'

*hēofian* 'to lament, mourn, wail, bewail'


## 151. HLADAN

*(ge)hladan* (primitive) 'to load, burden, lade, freight; to heap up; to draw water; to take in water'

*āhladan* 'to draw or lead out; to draw forth; to exclude'

*forhladan* 'to exhaust'

*onhladan* 'to discharge, unload'

*tōhladan* 'to disperse, scatter, disband; to destroy'


## 152. HLĒAPAN

*āhl(ge)hlēapan* (primitive) 'to go; to run; to leap, jump, spring; to dance; to mount'

*ēapan* 'to leap or spring up'

*hlēapettan* 'to skip; to leap up; to jump about'


## 153. HLĒOTAN

*(ge)hlēotan* (primitive) 'to get; to obtain or receive by lots; to cast lots; to allot'

*hlytman* 'to allot; to decide by lot'

*tōhlēotan* 'to divide into lots'


## 154. HLĪDAN

*hlīdan* (primitive) 'to come forth; to spring up; to cover with a lid'

*onhlīdan* 'to open, unclose, reveal; to disclose; to appear'

*gehlidian* 'to cover with a lid'

*tōhlīdan* 'to split, split asunder, spring apart, crack; to break, burst; to open; to gape, yawn'

## 155. HLIEHHAN

*(ge)hliehhan* (primitive) 'to laugh; to laugh at, deride, scorn; to rejoice'

*āhliehhan* 'to laugh at, deride; to exult'

*hleahtrian* 'to laugh to scorn; to deride'


## 156. HLĪFAN

*hlīfan* (primitive) 'to stand out prominently; to tower up'

*āhlēfan* 'to pull or pluck out'

*forðhlīfian* 'to appear; to stand out, be prominent'

*hlīfian* 'to stand out prominently, rise high; to tower up; to overhang'

*oferhlīfan* 'to rise high above, overtop; to tower over or up; to exceed, surpass, excel'


## 157. HLĪGAN

*hlīgan* (primitive) 'to attribute (to); to give one glory or reputation for anything'


## 158. HLIMMAN

*hlimman* (primitive) 'to sound; to resound; to clang, clash; to roar; to rage'

*hlemman* 'to cause to sound; to clash'

## 159. HLŌWAN

*hlōwan* (primitive) 'to make a loud noise; to low; to roar, bellow'

*āhlōwan* (prefixed) 'to roar or bellow again'


## 160. HNĪGAN

*hnīgan* (primitive) 'to bow down; to bend, incline; to fall; to decline, descend, sink'

*āhnīgan* 'to fall down; to bow down; to empty oneself'

*(ge)hnǣgan* 1 'to bend or bow down; to curb, subdue, vanquish; to humble, humiliate, cast down'

*(ge)hnigian* 'to bow or bend down (the head)'

*onhnīgan* 'to bend down, bow; to press down; to worship'


## 161. HNĪTAN

*hnītan* (primitive) 'to strike; to thrust; to butt; to gore; to encounter, knock, come into collision with'

*gehnǣstan* 'to contend with'

*hnātan* 'to strike together, clash'

*ofhnītan* 'to kill by butting, to gore to death'

## 162. HŌN

*hōn* 1 (primitive) 'to hang; to suspend; to crucify; to put on (clothes)'

*āhangian* 'to hang'

*āhōn* 'to hang; to suspend; to crucify'

*(ge)hangian* 'to hang; to be suspended, depend; to be attached; to hold fast, cling to; to lean over'

*oferhōn* 'to hang with something so as to cover an object'

*onhōn* 'to suspend; to hang; to crucify'

*ymbhōn* 'to surround; to clothe, drape; to deck'

## 163. HRĒODAN

*hrēodan* (primitive) 'to adorn'

*onhrēodan* 'to adorn'

## 164. HRĒOSAN

*(ge)hrēosan* (primitive) 'to fall; to fall down; to sink; to glide away; to fail; to go to ruin; to rush, attack'

*āhrēosan* 'to rush; to fall; to fall down; to perish; to be destroyed'

*āhrȳran* 'to destroy; to cause to fall'

*hreran* 'to fall'

*tōhrēosan* 'to fall to pieces; to decay, rot away; to go to ruin'

*ofhrēosan* 'to cover, bury; to fall down; to fall headlong; to overwhelm'

*onhrēosan* 'to attack, fall or rush upon, assail'

## 165. HRĒOWAN

*(ge)hrēowan* (primitive) 'to repent, rue, be penitent; to cause sorrow, grieve, distress, vex, make sorry'

*hrēowian* 'to repent'

*(ge)hrēowsian* 'to feel sorrow, be grieve or repent, lament for; to do penance'

*ofhrēowan* 'to cause grief or pity; to feel grief or pity'

## 166. HRIMPAN

*hrimpan* (primitive) 'to twist, coil; to wrinkle, rumple; to contract'


## 167. HRĪNAN

*(ge)hrīnan* (primitive) 'to touch, strike; to seize, take hold of, lay hold of, reach'

*āhrīnan* 'to touch; to handle'

*onhrīnan* 1 'to touch; to lay hold of'


## 168. HRŌPAN

*hrōpan* (primitive) 'to cry out, shout, scream; to clamour; to make a noise; to howl; to proclaim'

*hrēpan* 'to call, cry out'


## 169. HWELAN

*hwelan* (primitive) 'to roar, bellow; to rage'

*onhwelan* 'to resound; to bellow back'


## 170. HWEORFAN

*(ge)hweorfan* (primitive) 'to turn; to change; to move; to go; to come; to go away, depart; to proceed; to go or wander about; to return, turn back; to die; to exchange; to be converted; to pass as property; to fall as a lot; to roar'

*āhweorfan* 'to turn; to convert; to turn away, turn aside, avert; to turn over'

*āhwierfan* 'to turn away avert; to turn from'

*edhwierfan* 'to return, retrace one's steps'

*forhweorfan* 'to pass away, come to an end; to be destroyed'

*forhwierfan* 'to change, transform; to remove; to turn aside; to transfer; to pervert, deprave'

*forðwyrftan* 'to cut off, cut down'

*gehwyrftnian* 'to tear'

*hwearfian* 'to turn, roll or toss about, revolve; to change; to move; to wander; to pass by'

*hwearftlian* 'to wander, rove, move about; to revolve, turn or roll round; to be tossed'

*(ge)hwierfan* 'to change, convert; to turn, revolve; to transfer; to exchange; to go; to depart; to return; to go on, proceed'

*onhweorfan* 1 'to change; to turn; to reverse'

*onhwerfan* 'to change; to turn; to invert; to transpose; to turn round'

*tōhweorfan* 'to separate; to disperse, scatter; to go away, part'

*tōhwyrfan* 'to overturn'


## 171. HWŌSAN

*hwōsan* (primitive) 'to breathe hard, wheeze; to cough'


## 172. IERNAN

*(ge)iernan* 1 (primitive) 'to move rapidly, haste; to flow; to spread; to pursue; to cause to move rapidly; to turn; to grind; to pass; to elapse; to run'

*āiernan* 'to pass over; to run out or away; to run over; to go; to pass by'

*(ge)ærnan* 1 'to run; to race, gallop; to ride; to run for, reach by running; to reach by galloping, gallop up to something or somewhere'

*ofirnan* 'to overtake; to tire with running'

*oniernan* 'to open; to pour forth; to give way, yield'

*tōiernan* 'to run to; to run about; to run together; to wander about; to flow away, disperse'

*ymbiernan* 'to surround, go round; to run around'


## 173. LĀCAN

*lācan* (primitive) 'to move up and down, swing, wave about; to jump; to leap; to fly; to play; to play (instrument); to fight, contend; to delude, trick'

*(ge)edlǣcan* 'to repeat, renew'

*forlācan* 'to seduce; to mislead, deceive; to betray'

*gelācian* 'to give, bestow, present, accompany with gifts'

*lǣcan* 'to move quickly, rise, spring up, leap; to flare up'

*leccan* 2 'to blame, find fault with'

*ōleccan* 'to soothe, gratify, please; to treat gently; to charm, allure; to flatter; to fawn upon, caress, pay court to; to propitiate; to be submissive'

*onlæccan* 'to reproach, blame'


## 174. LǢTAN

*(ge)lǣtan* (primitive) 'to let, allow, permit; to remain; to leave behind, bequeath; to depart from; to let alone; to think; to consider, estimate, regard as, suppose; to leave undone; to cause to do; to conduct oneself, behave; to treat; to set free, assert; to profess, pretend, make as if; to assign, allot, commit, entrust; to let go; to forsake, give up, desist; to dismiss; to suffer; to make; to have; to get; to emit; to appear'

*ālǣtan* 'to leave, renounce, resign, give up; to let go; to lose; to allow, let; to forgive, pardon, remit; to deliver up, release; to return'

*anforlǣtan* 'to let go; to leave alone; to abandon, forsake, relinquish, surrender; to lose; to omit, neglect; to excuse, pardon, remit; to loose, release; to let, allow, permit; to give, grant'

*forlǣtan* 'to let, allow, permit; to give, grant; to suffer; to lose; to surrender, leave, quit, abandon, relinquish; to neglect; to excuse, pardon, remit; to loose, release'

*(ge)lettan* 'to let; to hinder; to impede; to oppress, offend; to delay, cause to be slow; to stop'

*oflǣtan* 'to let go; to give up, lay aside; to leave behind; to flow'

*onlǣtan* 'to release; to relax; to permit, let a thing go on; to continue; to forbear; to relinquish; to let alone'

*tōlǣtan* 'to disperse; to let go; to release; to cause to go; to relax'


## 175. LĒAN

*lēan* 2 (primitive) 'to reproach, blame, find fault with; to disapprove, scorn'

*forlēan* 'to blame much, reprehend strongly'


## 176. LĒODAN

*lēodan* (primitive) 'to grow; to spring up; to spring from; to descend'

*ālēodan* 'to grow; to spring up'


## 177. LĒOGAN

*(ge)lēogan* (primitive) 'to lie, say falsely; to tell a lie; to play false, deceive, betray; to belie; to feign; to be in error; to make a mistake'

*ālēogan* 'to lie; to deceive; to belie, deny; to be false to; to leave unfulfilled'

*forlēogan* 'to lie; to slander; to accuse falsely; to prejure oneself'

*(ge)lygnian* 'to give one the lie, convict or charge with falsehood'

*oflēogan* 'to lie; to be false'

## 178. LĒON

*(ge)lēon* (primitive) 'to give; to lend, grant for a time'

*ālǣnan* 'to lend; to grant; to lease'

*ālēon* 'to lend; to give up'

*(ge)lǣnan* 'to give; to lend; to grant; to lease'

*onlǣnan* 'to lend; to grant; to let, lease; to release, relax; to continue'

*onlēon* 1 'to give; to bestow, grant; to lend'


## 179. LESAN

*lesan* (primitive) 'to gather, lease, collect; to select, pick; to glean'

*ālesan* 'to choose, select, excerpt, pick out'


## 180. LICGAN

*(ge)licgan* (primitive) 'to be situated, have a position, remain; to be at rest; to lie postrate; to lie; to lie low; to lie dead; to yield; to subside; to cease; to fail; to fall; to extend; to lead; to go; to flow, run; to belong to, appertain to; to border; to exist; to dwell, reside'

*ālecgan* 'to put, lay, place, deposit; to give up, abandon, lay aside; to cease from; to destroy; to abolish, put down, suppress; to conquer, overcome, overthrow; to diminish, allay; to impose, inflict upon; to put off'

*ālicgan* 'to cease; to yield; to be subdued; to fail; to perish; to confine; to be at an end; to come to an end'

*forlecgan* 'to cover up'

*forlicgan* 'to commit adultery; to commit fornication, lie; to fail; to lapse; to be neglected; to screen (a thief), to defend'

*forligrian* 'to fornicate'

*(ge)lecgan* 'to put, place, lay, set, deposit; to prostrate; to arrange, dispose, to put before; to attach, annex; to bury; to submit; to impose; to go, betake oneself; to cast down; to lay low, kill, slay; to establish'

*oferlecgan* 'to place over, lay over, above or upon something; to overburden; to cover; to oppress'

*oflecgan* 'to lay down; to cover'

*oflicgan* 'to oppress; to hurt by lying upon; to overlay'

*tōlicgan* 'to lie; to run in different directions; to part, separate, divide'

*wiðlicgan* 'to oppose, resist, object'

*ymblicgan* 'to surround, encompass, enclose; to lie about or along'


## 181. LĪFAN

*līfan* (primitive) 'to remain'


## 182. LIMPAN

*(ge)limpan* (primitive) 'to happen, occur, take place, befall; to exist; to be made or produced; to belong to, pertain, belong or be assigned to, fall to; to affect, concern; to suit, befit; to come upon'

*ālimpan* 'to happen, occur, befall'

*mislimpan* 'to go wrong, turn out unfortunately'


## 183. LINNAN

*linnan* (primitive) 'to cease from; to leave off, desist; to yield up; to part from; to lose'

*ālynnan* 'to release, loose, let go, deliver; to free from'

*oflinnan* 'to cease, stop, desist, leave off'

*tōlynnan* 'to take away'


## 184. LŪCAN

*lūcan* (primitive) 'to pull up; to pull out, pluck out'

*ālūcan* 'to separate; to withdraw, pull out, take away; to pluck up'

*tōlūcan* 'to tear to pieces, wrench asunder, pull apart; to dislocate; to root out; to destroy'


## 185. LŪTAN

*(ge)lūtan* (primitive) 'to bend; to bow; to stoop; to recline; to fall down before one; to decline; to approach an end'

*ālūtan* 'to bend down; to incline; to bow down'

*forðlūtan* 2 'to fall forwards; to lean forwards; to fall down'

*gelūtan* 'to bow; to entreat'

*(ge)lūtian* 'to hide, skulk; to lie hide, be concealed, lurk, be latent'

*lītan* 'to bend, incline; to cause to bow'

*lytigian* 'to feign; to act cunningly or crookedly'

*onlūtan* 'to bend down; to bow; to incline'

## 186. MAGAN

*magan* (primitive) 'to be able; to have permission or power; may (because a thing is possible); to be competent or efficacious; to be strong; to be in good health'

*magian* 'to be strong; to prevail'

*mægenian* 'to gain strength'

## 187. MĀWAN

*māwan* (primitive) 'to mow'

*āmāwan* 'to mow, cut off'

## 188. MELCAN

*(ge)melcan* (primitive) 'to milk'

*āmelcan* 'to milk'

*(ge)meolcian* 'to milk, give milk; to suckle'

## 189. MELTAN

*(ge)meltan* 1 (primitive) 'to consume by fire, burn up; to melt; to become liquid; to be dissolved; to digest'

*āmeltan* 'to melt'

*āmyltan* 'to melt'

*formeltan* 'to dissolve; to melt away, liquefy; to become liquid; to burn up'

*(ge)mientan* 'to melt; to become liquid; to soften; to digest; to purge, refine; to exhaust'

## 190. METAN

*metan* (primitive) 'to measure; to estimate; to compare; to assign, mete out; to traverse, pass over; to mark off'

*āmetan* 'to measure; to estimate; to form, make; to plan; to assign, mete out; to bestow, grant'

*gemætgian* 'to control, regulate, moderate, temper, allay; to order, govern; to consider, meditate, deliberate, measure, weigh in mind; to prepare, manage properly, dispose'

*(ge)metgian* 'to control, regulate, govern; to moderate; to consider, deliberate, meditate upon, measure in the mind; to assign due measure; to order, dispose, prepare; to temper, allay'

*tōmetan* 'to mete out; to measure out'

*wiðmetan* 'to compare, liken to'

*wiðermetan* 'to compare'


## 191. MĪÐAN

*mīðan* (primitive) 'to hide, conceal, dissemble; to keep to oneself; to remain concealed; to avoid, forbear, shun; to refrain from'


## 192. MĪGAN

*(ge)mīgan* (primitive) 'to make water; to water'


## 193. MUNAN

*(ge)munan* (primitive) 'to remember; to remind; to think, consider, meditate; to think about; to be mindful of; to be careful; to mention; to record'

*āmanian* 'to demand, require, exact'

*foremanian* 'to forewarn'

*manetian* 'to admonish, reprove'

*(ge)manian* 'to bring to mind, remember; to remind; to advise, warn; to suggest; to instigate, exhort; to teach, instruct; to ask, claim, demand; to admonish; to prompt'

*(ge)myndgian* 'to remember; to be mindful of; to remind, recall, recollect; to intend; to mention; to commemorate; to impel, exhort; to warn; to demand payment'

*mynegian* 'to remember; to be mindful of; to remind, recall; to intend; to mention; to commemorate; to impel, exhort; to warn, admonish; to demand payment'

*mynian* 'to intend, direct oneself towards an object; to be impelled'

*(ge)myntan* 'to determine, resolve; to mean, intend, purpose; to destine; to think; to suppose; to bring forth; to give up to'

*ofmanian* 'to exact a fine or due'

*ofmunan* 'to remember, recall to mind, recollect'

*onmunan* 'to esteem, mind, think or consider worthy or entitled; to care for; to wish; to remember; to remind'

## 194. MURNAN

*murnan* (primitive) 'to care, regard, reck; to be anxious, feel anxious; to be sad; to be fearful; to hesitate; to sorrow, lament, bemoan; to mourn; to long after'

## 195. NĒOSAN

*nēosan* (primitive) 'to search, seek, inspect; to find out; to go to; to come to; to visit; to attack'

## 196. NĒOTAN

*nēotan* (primitive) 'to use; to employ, have the use of, enjoy, have the benefit of'
*(ge)notian* 'to enjoy; to use, consume; to employ; to discharge an office'
*nyttian* 'to use; to enjoy; to eat'

## 197. NESAN

*(ge)nesan* (primitive) 'to escape from; to survive; to be saved; to be preserved'
*ānerian* 'to save; to rescue; to deliver'
*(ge)nerian* 'to save; to rescue; to liberate, set free; to defend, protect, preserve; to take away; to deliver'

## 198. NIMAN

*(ge)niman* (primitive) 'to take; to get, obtain; to receive, accept, take; to assume, undertake, adopt; to keep, hold; to seize; to catch; to remove, take away; to suffer, experience; to carry, bear; to deduce, infer; to go, betake oneself; to move; to proceed, get on; to develop, flourish; to take place, occur; to understand, comprehend, apprehend; to give; to deliver, hand over; to include; to promote; to grasp, appropriate; to tolerate; to bring'
*āniman* 'to take; to accept; to retain; to take away, remove, deprive of'
*fornǣman* 'to consume; to be afflicted or worn out'
*forniman* 'to take away, deprive of; to seize; to plunder, ransack; to devastate; to destroy; to consume, waste, devour; to annul; to disfigure, deform; to overcome'
*genǣman* 'to take away'
*oferniman* 'to seize; to take away, carry off; to take by surprise, come over; to take by violence; to violate; to ravish'
*ofniman* 'to fail'
*tōniman* 'to separate, divide; to take to pieces; to take away'

## 199. NĪPAN

*(ge)nīpan* (primitive) 'to grow dark, obscure; to rise as a cloud'


## 200. NUGAN

*genugan* (primitive) 'to suffice, not to lack'

*genōgian* 'to be abundant; to multiply'

*genyhtsumian* 'to suffice; to abound'

*ofergenihtsumian* 'to superabound'


## 201. PLEGAN

*plegan* (primitive) 'to move rapidly; to move about sportively; to exercise; to occupy or busy oneself; to play; to divert; to amuse oneself; to dance; to play with a person; to play with a toy; to frolic; to mock; to strive after; to play (for something); to contend, fight; to play on an instrument; to clap the hands, applaud; to cohabit'

*plēon* 'to risk, adventure oneself; to expose to danger'

*plicettan* 'to expose to danger; to play with'

*plihtan* 'to imperil, bring danger upon an object, compromise'

## 202. RǢDAN

*(ge)rǣdan* (primitive) 'to advice, counsel; to persuade; to ask advice, consult, look to; to discuss, debate, deliberate; to plot, design; to equip; to provide for; to bring; to deliver; to help; to decide, determine, resolve after deliberation; to have an idea; to guess; to forebode; to direct, guide, rule, govern; to have control over; to possess; to arrange, put in order; to read; to explain; to decree'

*ārǣdan* 'to determine; to prepare, appoint, settle, fix, arrange; to decide; to take counsel; to guess, conjecture; to interpret; to utter; to read'

*āredian* 'to make ready, arrange; to provide, furnish; to carry out, execute, make, devise; to find out, hit upon; to understand'

*forrǣdan* 'to betray; to plot against; to deprive by treachery; to wrong, injure; to condemn'

*oferrǣdan* 'to read over; to read through; to peruse; to consider; to infer'

*radian* 'to hasten; to be quick; to come quickly; to do quickly; to do diligently; to put briefly; to prosper, further; to provide, furnish'

*wiðrǣdan* 'to act against; to be an antidote'

## 203. RĀWAN

*gerāwan* (primitive) 'to arrange in line'


## 204. RECAN

*(ge)recan* (primitive) 'to move; to go; to proceed; to carry; to bring, convey'


## 205. RĒOCAN

*rēocan* (primitive) 'to reek; to stink; to emit vapour, steam or smoke'

*(ge)rēcan* 1 'to expose to smoke or steam; to fumigate; to steam, smoke; to cause to emit smoke; to burn incense'


## 206. RĒODAN

*rēodan* (primitive) 'to redden; to stain with blood; to wound; to kill'

*ārēodian* 'to put to shame; to blush, redden; to stain'

*āryderian* 'to blush, be ashamed'

*rēadian* 'to be red; to become red'

*rēodian* 1 'to be red; to become red'

*rudian* 'to be ruddy'


## 207. RĒOFAN

*rēofan* (primitive) 'to rend, rive; to break'


## 208. RĒOTAN

*rēotan* (primitive) 'to weep, shed tears; to wail; to mourn, lament'

*wiðrēotan* 'to abhor; to clamour against; to resist'


## 209. RĪDAN

*rīdan* (primitive) 'to RIDE; to move about; to swing, rock; to float; to sail; to chafe (of letters)'

*ārīdan* 'to ride'

*forrīdan* 'to ride before; to intercept'

*ofrīdan* 'to overtake by riding'

*gerīdan* 'to ride; to occupy, seize, take possession of, reach or obtain by riding; to ride up'

## 210. RĪNAN

*rīnan* (primitive) 'to RAIN; to send down; to fall like rain'

*gerīnan* 'to rain on; to wet with rain'

*regnian* 1 'to rain; to cause rain to fall'

## 211. RINNAN

*(ge)rinnan* 1 (primitive) 'to run; to flow'

*ārinnan* 'to run out; to pass away, disappear'

*gerennan* 'to coagulate'

*gerinnan* 1 'to run together; to blend; to coagulate, congeal; to condense; to come together, congregate'

*tōrinnan* 'to run in different directions; to disperse'

## 212. RĪPAN

*gerīpan* (primitive) 'to rob, spoil'

*ārȳpan* 'to tear off, rip; to strip'

*gerȳpan 1* 'to rob, plunder, spoil'

## 213. RŌWAN

*(ge)rōwan* (primitive) 'to go by water; to row; to sail; to swim'

## 214. SACAN

*sacan* (primitive) 'to struggle, strive, fight, contend; to disagree, wrangle; to act in opposition; to discuss; to dispute; to accuse, blame; to bring a suit; to lay claim to; to refuse, deny'

*andsacian* 'to dispute; to strive against; to deny, refuse; to gainsay; to forsake; to abjure'

*foresacan* 'to forbid'

*forsacan* 'to object to; to oppose; to refuse, reject, deny; to give up, renounce, forsake'

*ofsacan* 'to deny a charge'

*onsacan* 'to dispute; to contradict; to contest; to refute, deny, refuse; to strive against; to attack; to resist, repel; to excuse oneself, exculpate; to renounce'

*sacian* 'to strive; to wrangle, brawl'

*wiðersacian* 'to renounce; to be apostate; to become apostate; to blaspheme'

*wiðsacan* 'to renounce, abandon, forsake, give up; to deny, refuse, reject, decline; to withhold; to oppose; to strive against; to declare hostility'


## 215. SĀWAN

*(ge)sāwan* (primitive) 'to sow; to strew seed; to implant; to disseminate; to originate; to do an action which produces a result'

*āsāwan* 'to sow'

*ofersāwan* 'to oversow'

*sǣdian* 'to sow, provide seed for land'

*tōsāwan* 'to spread, disperse, scatter; to disseminate opinions; to distribute favours; to sow dissension; to scatter seed; to sow broadcast'


## 216. SCACAN

*scacan* (primitive) 'to shake, quiver; to flee, go forth, depart; to hurry off; to move quickly; to be flung; to be displaced by shaking; to pass, proceed; to weave, brandish'

*āsceacan* 'to remove; to shake off; to depart, flee, desert, forsake; to shake; to brandish'

*ofscacan* 'to shudder; to shake with fear'

*onsceacan* 'to remove; to shake off; to shake'

*tōsceacan* 'to shake to pieces, shake violently; to disperse, drive asunder; to drive away; to shake off'


## 217. SCAFAN

*(ge)scafan* (primitive) 'to shave; to scrape; to plane; to shred; to polish'

*āsceafan* 'to shave, shave off'


## 218. SCĒADAN

*(ge)scēadan* (primitive) 'to divide, separate, part; to arrange; to discriminate, discern; to decide, determine, decree, appoint; to differ; to be distinguished; to scatter, shed; to expound; to write down; to deprive of'

*āscēadan* 'to separate, disjoint, dissociate, exclude; to distinguish; to make distinct; to cleanse, purify, make clear'

*forscēadan* 'to disperse, scatter; to condemn, damn'

*tōgescēadan* 'to separate things; to expound, interpret'

*tōscēadan* 'to separate, divide, part; to scatter; to differ; to distinguish, discern, discriminate, set a variance; to decide; to utter, express, discuss'


## 219. SCELFAN

*scelfan* (primitive) 'to shake, quiver; to totter'

*āscylfan* 'to destroy, throw down'


## 220. SCEORFAN

*sceorfan* (primitive) 'to bite; to gnaw; to scarify'

*forsceorfan* 'to bite; to gnaw; to eat up'

*(ge)scearfian* 'to cut off; to scrape; to shred'

*scearflian* 'to scrape; to cut into shreds'


## 221. SCĒOTAN

*(ge)scēotan* (primitive) 'to shoot; to cast or hurl missiles; to hit, strike; to push, press forward; to move quickly, run, rush, plunge; to pay; to contribute; to refer to, appeal to (law), fall to; to assign, allot; to happen, occur, befall; to thrust, send forth, dart'

*āscēotan* 'to shoot; to strike; to fall; to drop out; to move rapidly; to make prominent; to thrust out; to eviscerate'

*forscēotan* 'to anticipate, come before, prevent, forestall; to advance money; to shoot before'

*forscyttan* 'to prevent, obviate; to shoot before; to discharge; to exclude; to pay off; to shut to; to bolt'

*ofscēotan* 'to wound; to hit; to shoot down; to kill'

*ofscotian* 'to shoot; to wound with an arrow or spear; to kill with an arrow or spear'

*onscēotan* 'to open'

*(ge)scotian* 'to shoot; to shoot a weapon at a person; to hurl a javelin; to move rapidly'

*scottettan* 'to move about quickly; to dance; to leap'

*scyttan* 'to bolt; to shut to; to cause rapid movement; to discharge (a debt), pay off'

*tōscēotan* 'to disperse (hurriedly), rush in different directions; to spring apart, scatter'

*unscyttan* 'to undo; to unbolt, to unshoot'

## 222. SCIELLAN

*sciellan* (primitive) 'to sound; to make a noise'

*onscilian* 'to resound; to echo'

*scyllan* 'to cause to sound; to sound loudly, resound'

## 223. SCIEPPAN

*(ge)scieppan* (primitive) 'to shape; to form, make, create; to order, destine; to arrange; to adjudge; to assign'

*āscieppan* 'to make, create, originate; to determine; to give, assign, appoint'

*forscieppan* 'to change, transform, deform'

*scypian* 'to take shape'

## 224. SCIERAN

*(ge)scieran* (primitive) 'to cut; to hew; to cleave; to cut or shave hair, shear; to receive tonsure'

*āscirian* 'to separate, divide, part, sever; to cut off; to remove, deprive of; to rob; to set free; to arrange; to destine'

*forscirian* 'to separate, set apart'

*tōscirian* 'to separate, divide, part, detach; to distribute; to allot a share; to distinguish'

*scearian* 'to grant; to allot'

*(ge)scirian* 'to ordain, appoint; to count, number, reckon; to allot; to provide, assign, bestow, grant, dispense; to separate, divide, mark off'

*scorian* 'to refuse, reject an offer, repudiate; to jut out, project'

*(ge)scyrdan* 'to harm, hurt, injure; to destroy'

*wiðsceorian* 'to refuse'

## 225. SCĪNAN

*scīnan* (primitive) 'to shine; to flash; to be resplendent'

*āscīnan* 'to shine forth; to radiate, beam; to be clear or evident'

*oferscīnan* 'to illuminate, cover with light; to excel (in brightness)'

*(ge)scīnan* 'to shine; to flash; to illuminate; to be resplendent'

*scīnefrian* 'to glitter'

*ymbscīnan* 'to shine round; to surround with brightness'

## 226. SCĪTAN

*scītan* (primitive) 'to shoot (of a plant), flourish'

## 227. SCREPAN

*screpan* (primitive) 'to scrape, scratch; to prepare'

*āscrepan* 'to clear away, cast out; to scrape'

*scrapian* 'to scrape'

## 228. SCRĪÐAN

*scrīðan* (primitive) 'to go; to move; to glide; to wander, go hither and thither, go about'

*forðscrīðan* 1 'to depart'

*tōscrīðan* 'to disperse, flow apart'

*ymbscrīðan* 'to revolve about, go round'

*ðurhscrīðan* 1 'to consider, examine, go through a subject, pry into'

## 229. SCRĪFAN

*(ge)scrīfan* (primitive) 'to prescribe, ordain, decree; to judge, deem, adjudge, have regard to; to allot; to assign, appoint; to impose (punishment); to hear confession, shrive; to receive absolution; to be troubled about, care for; to censure, reprehend'

*forscrīfan* 'to decree; to condemn, doom, proscribe'

## 230. SCRIMMAN

*scrimman* (primitive) 'to shrink, contract; to draw up'

*scremman* 'to cause to stumble; to put a stumbling-block in a person's way'

## 231. SCRINCAN

*(ge)scrincan* (primitive) 'to shrink, contract; to wither; to shrivel up; to dry up; to pine away; to become weak'

*āscrencan* 'to displace; to supplant; to cause to stumble, trip up'

*āscrincan* 'to shrink; to shrivel up'

*forscrencan* 'to cast down; to supplant; to overcome, vanquish; to dry up'

*forscrincan* 'to dry up; to wither away, shrink up; to dwindle away'

*(ge)screncan* 'to cause to fall, throw down; to cause to stumble, trip up; to lay a stumbling-block in a person's way; to deceive, ensnare; to supplant'

## 232. SCŪFAN

*scūfan* (primitive) 'to push, shove, thrust; to urge, impel; to push out; to expel; to deliver up; to display; to move to; to go'

*āscūfan* 'to drive out or away, repel, expel, banish; to overthrow; to shove; to give up; to remove'

*forscūfan* 'to drive away; to drive to destruction; to cast down'

*scofettan* 'to drive hither and thither'

*tōscūfan* 'to disperse, scatter, push apart; to incite, impel; to remove, do away'

*tōscyftan* 'to divide, distribute'

*wiðscūfan* 'to refute; to repel, thrust or push back, drive away'

## 233. SEALTAN

*sealtan* (primitive) 'to salt'

*(ge)syltan* 'to salt; to season'

## 234. SĒCAN

*(ge)sēcan* 1 (primitive) 'to seek, search for, look for; to inquire, enquire about; to try, aim at; to long for, wish, desire; to visit; to go or come to; to move; to approach; to attain to, get; to attack; to go to war; to resort to; to afflict, beset; to invade; to follow, pursue, persecute; to proceed; to appoint, dispose; to ask for; to strive after, try'

*āsēcan* 'to seek; to search out; to examine, explore; to ask, demand, require; to penetrate; to search through; to select'

*onsēcan* 'to require, exact'

*foresēcan* 2 'to afflict; to punish; to attack; to seek with hostile intent'

*forsēcan* 1 'to afflict; to attack; to punish'

*ofersēcan* 'to overtax, press too hard'

*ðurhsēcan* 'to make search for; to seek out; to inquire thoroughly into, search through; to examine'

## 235. SĒOCAN

*sēocan* 1 (primitive) 'to be ill; to fall ill'

*(ge)sīclian* 'to sicken, become ill; to become weak; to be infirm'

## 236. SĒOÐAN

*(ge)sēoðan* (primitive) 'to seethe, boil; to cook in a liquid; to be troubled in mind; to brood; to afflict, disturb, reduce by pain or disease; to feed a person with hopes'

*āsēoðan* 'to boil, seethe; to scorch; to refine, purify; to try, examine'

*forsēoðan* 'to wither; to consume by affliction; to boil away'

*tōsēoðan* 'to boil to pieces'


## 237. SĒON

*(ge)sēon* (primitive) 'to see; to look, behold, observe; to perceive, discern; to understand; to know; to inspect; to visit; to experience, suffer; to appear; to seem'

*āsēon* 1 'to look at or upon, behold'

*foresēon* 'to foresee; to despise'

*forsēon* 'to renounce, reject, despise, scorn; to be ashamed of; to overlook'

*forðgesēon* 'to see forth, onward, or in front'

*ofersēon* 'to see; to observe; to overlook, neglect; to survey; to despise'

*ofsēon* 'to see; to observe, behold'

*onsēon* 1 'to see; to behold; to look on, regard; to take notice of'

*ymbsēon* 1 'to behold; to look round'

*ðurhsēon* 'to look or see through, examine; to see into, penetrate with the sight; to penetrate'


## 238. SĒON 1

*sēon* 1 (primitive) 'to strain, filter; to run; to ooze, trickle, drop, drip'

*āsēon* 2 'to strain'

*seohhian* 'to filter, strain'

*ðurhsēon* 'to strain through'


## 239. SĪCAN

*sīcan* (primitive) 'to sigh; to groan; to yearn for, long for'

*āsīcan* 1 'to sigh'

*onsīcan* 'to sigh, to groan'

*sicettan* 'to sigh, mourn; to groan'

## 240. SĪGAN

*(ge)sīgan* 1 (primitive) 'to sink; to set (of the sun); to descend, decline; to fall, fall down; to move; to go; to advance, move towards a point; to ooze; to run as matter; to strain, filter, act as a filter; to approach'

*āsīgan* 'to decline; to sink; to go down; to fall down'

*onsǣgan* 'to postrate; to cause to sink down'

*onsīgan* 'to descend; to decline; to sink; to approach; to impend; to assail'

*tōsīgan* 'to fall to pieces; to decay; to get worn out; to be threadbare'


## 241. SINCAN

*(ge)sincan* 1 (primitive) 'to sink; to become submerged; to subside; to digest easily; to act as an aperient'

*āsencan* 'to sink; to immerse'

*āsincan* 'to sink down; to fall to pieces'

*forsencan* 'to drop, let fall; to reject'

*(ge)sencan* 'to sink; to plunge, immerse, submerge, drown; to flood with water'


## 242. SINGAN

*(ge)singan* (primitive) 'to sing; to chant, intone; to celebrate in song; to read; to recite, narrate, relate musically or in verse; to write; to compose verses; to crow; to sing (of birds); to sound, resound; to ring; to clank'

*āsingan* 'to sing; to sing out; to compose; to deliver (a speech), recite verses'


## 243. SITTAN

*(ge)sittan* 1 (primitive) 'to sit, sit down; to be seated; to recline; to lean; to rest, remain, continue, stay; to be situated; to settle; to encamp; to dwell, inhabit, reside, sojourn; to occupy; to possess; to lie in wait; to besiege, invest; to preside over; to perch, roost; to ride'

*āsettan* 'to set, put, place, plant, set up; to store up; to establish; to erect, build; to appoint; to design; to take away; to transport oneself over; to cross; to apply; to fix'

*āsittan* 'to settle; to dwell together; to starve out; to run aground'

*foregesettan* 'to place before, precede; to propose; to prefer; to shut in'

*foresettan* 'to place before, precede; to propose; to prefer; to close in, shut in'

*foresittan* 'to preside; to sit before or in front'

*forsǣtian* 'to surround; to beset; to catch by lying in ambush, take by surprise;'

*forsettan* 1 'to hedge in; to oppress; to repress'

*forsittan* 'to injure; to neglect; to besiege; to fail; to diminish'

*forðasettan* 'to set forth; to make; to appoint'

*ofersettan* 'to set over; to overcome; to oppress'

*ofersittan* 'to occupy; to sit upon; to possess; to take possession of; to abstain from, refrain, desist, forbear'

*ofsetnian* 'to besiege; to encompass'

*ofsettan* 'to afflict, overwhelm, press hard, oppress; to beset'

*ofsittan* 'to repress, press down; to oppress; to occupy; to sit upon; to besiege; to check; to hedge in'

*onsettan* 'to impose; to oppress; to bear down'

*orsetnian* 'to besiege, beset'

*onsittan* 1 'to occupy; to seat oneself in; to oppress'

*sǣtian* 'to lie in; to wait for; to plot against; to waylay'

*sessian* 'to subside; to grow calm'

*setlan* 'to settle; to seat; to place, put; to set (the sun)'

*(ge)settan* 'to set, place, put, plant, lay, deposit; to cause to take a certain position; to occupy; to be situated; to set down; to put down; to establish, settle, confirm; to fix, implant, ordain; to assign; to appoint; to make, create, form; to prepare; to set off; to build, erect; to abate, subside, sink; to compose, write, set down; to lay in wait; to garrison a place with; to possess; to expose; to allay; to institute, base, found'

*tōsettan* 'to set things apart; to dispose'

*tōsittan* 'to be separated, be placed apart; to sit at a distance from one another'

*unsettan* 'to displace; to take down'

*wiðsettan* 'to withstand, oppose, resist; to condemn'

*ymbsettan* 'to surround, set round, encompass; to beset; to plant with something'

*ymbsittan* 'to surround, set round; to besiege, invest; to be around or neighbouring; to reflect upon; to sit at council'


244. SLǢPAN

*(ge)slǣpan* (primitive) 'to sleep; to lie with a person; to be benumbed, motionless, inactive; to die, rest in the grave'

*āslǣpan* 'to begin to sleep; to dream; to slumber; to be sleepy; to fall asleep; to be paralysed or benumbed'

*onslǣpan* 'to sleep; to fall asleep; to go to sleep'

*slāpian* 'to become sleepy; to cause to sleep'

*slēpan* 'to sleep'


## 245. SLĒAN

*(ge)slēan* (primitive) 'to strike, smite; to strike down; to beat; to quell; to win, conquer; to stamp, coin (money); to forge (weapons); to make a mark, sound or signal by a stroke; to throw, cast; to sting (snake); to pitch (tent); to strike across a country or into a path, dash, rush; to come quickly; to slay, kill; to break'

*āslēan* 'to strike; to beat; to hammer; to paralyse; to make way; to cut; to erect'

*forslēan* 'to break; to cut through; to strike with violence; to smite; to kill, slay; to destroy, lay waste; to condemn'

*oferslēan* 'to reduce, subdue, overcome'

*ofslēan* 'to cut off; to strike down; to injure, wound by a blow; to kill, slay'

*slæhtan* 'to strike, smite; to slay'

*slecgettan* 'to palpitate, throb; to beat'

## 246. SLĪDAN

*slīdan* (primitive) 'to slide, slip, glide; to fall; to fall down; to fail; to err, make a mistake; to lapse; to pass away; to be transitory, unstable or perishable'

*āslīdan* 'to slide, slip; to fall into sin; to lapse; to relapse; to be hurt or destroyed'

*slidrian* 'to slip, slide; to slither'


## 247. SLĪÐAN

*slīðan* (primitive) 'to harm, hurt, wound, damage; to destroy'

*sliðan* 'to harm, hurt, wound, damage, injure; to destroy'


## 248. SLĪFAN

*slīfan* 1 (primitive) 'to slive'

*tōslīfan* 'to split, cut to pieces, cleave'


## 249. SLINCAN

*slincan* (primitive) 'to slink, crawl, creep'

## 250. SLĪTAN

*(ge)slītan* (primitive) 'to tear, slit, split, rend to pieces, cleave; to break; to irritate, wound; to bite; to sting; to shiver; to consume; to waste; to destroy; to carp at backbite; to divide'

*āslītan* 'to cut off; to cleave, slit, rive; to destroy'

*forslītan* 'to consume, devour; to tear with the teeth'

*ofslītan* 'to bite; to wound by a bite'

*tōslītan* 'to separate, scatter; to break; to tear to pieces, tear asunder, rend, cleave; to destroy; to wound; to bite; to interrupt; to distract; to be different'


## 251. SLŪPAN

*slūpan* (primitive) 'to slip; to glide; to move softly'

*āslūpan* 'to escape; to disappear, slip off or away'

*onslūpan* 'to unloose, untie'

*slīpan* 'to slip; to glide'

*slȳpan* 'to slip; to put something on or off'

*tōslūpan* 'to slip away; to fall to pieces; to dissolve, melt; to be undone or loosed, be relaxed; to get powerless or paralysed'


## 252. SMĒOCAN

*smēocan* (primitive) 'to emit smoke, smoke; to fumigate'

*smīcan* 'to emit smoke, smoke; to fumigate'

*smocian* 'to emit smoke, smoke; to fumigate'


## 253. SMEORTAN

*smeortan* (primitive) 'to smart, burn'


## 254. SMĪTAN

*smītan* (primitive) 'to smear, daub, smudge; to soil, pollute, defile'

*ofersmītan* 'to oversmear with something'

*(ge)smittian* 'to smear; to befoul, pollute, infect; to defile'


## 255. SMŪGAN

*smūgan* (primitive) 'to creep; to crawl; to move gradually'

*āsmēagan* 'to examine, investigate; to trace out, devise, elicit; to think, meditate, consider, ponder; to judge, deem; to look for; to demand'

*āsmūgan* 'to investigate'

*foresmēagan* 'to think beforehand, premeditate'

*(ge)smēagan* 'to think, consider, reflect, ponder, deliberate, meditate on; to examine; to penetrate; to scrutinize, look closely into, discuss, inquire, search; to seek an opportunity'

*tōsmēagan* 'to consider; to examine; to inquire'

## 256. SNĪÐAN

*(ge)snīðan* (primitive) 'to cut; to make an incision; to cut off, amputate; to cut stone, hew; to slay, kill; to mow, reap; to cut hair; to lance'

*āsnīðan* 'to cut off, cut away, amputate'

*gesnīðan* 'to lie down'

*ofsnīðan* 'to cut off; to kill by cutting; to slaughter'

*(ge)snǣdan* 1 'to cut; to slice; to slop off; to cut; to lop or prune braches of tress, snathe; to trim or hew stones'

*tōsnīðan* 'to cut up, cut in pieces, cut asunder; to cut in two; to cut off, amputate'

*ymbsnīðan* 'to circumcise'

## 257. SPANAN

*(ge)spanan* (primitive) 'to draw on; to persuade, seduce, allure, entice, lure, decoy, attract; to mislead; to incite, instigate, induce; to urge'

*āspanan* 'to allure, seduce, persuade, entice; to induce; to insinuate, introduce secretly; to urge'

*forspanan* 'to mislead, lead astray; to seduce, entice; to lure to evil, lead astray'

*forspennan* 'to seduce, allure, entice'

## 258. SPANNAN

*(ge)spannan* (primitive) 'to join, attach, fasten, link; to join in matrimony; to harness or yoke oxen; to attack; to span, clasp'

*āspannan* 'to unbind, unclasp'

*unspannan* 'to open, disclose, speak; to open the mind; to open, unloose, release, unfasten, unbind, unclasp'

*ymbspannan* 'to embrace; to span or clasp round'


## 259. SPINNAN

*(ge)spinnan* (primitive) 'to spin; to twist, writhe'

*āspinnan* 'to spin'


## 260. SPĪWAN

*spīwan* (primitive) 'to spew; to vomit, spit, spit up; to spit out, spit'

*āspīwan* 'to spew up, vomit'

*spiwian* 'to spew; to vomit, spit up'


## 261. SPŌWAN

*(ge)spōwan* (primitive) 'to prosper, thrive; to be successful; to avail; to help, profit; to succeed'

*āspēdan* 'to prosper; to survive, scape; to speed'

*forspēdian* 'to speed forward; to prosper'

*gespēdsumian* 'to prosper; to succeed'

*(ge)spēdan* 'to prosper; to succeed; to speed'


## 262. SPRECAN

*(ge)sprecan* (primitive) 'to speak; to say, utter; to make a speech; to converse; to declare; to tell off; to agree; to settle'

*āsprecan* 'to speak; to speak out'

*foresprecan* 1 'to speak out; to be surety for, intercede for; to answer for'

*forsprecan* 'to speak in vain or negatively; to denounce; to state amiss; to deny; to lose (a case)'

*gesprecan* 'to agree; to settle; to speak, talk; to converse; to address, accost'

*ofersprecan* 'to say too much; to be abusive'

*onspreccan* 'to enliven'

*twisprecan* 'to murmur'

*wiðsprecan* 'to contradict, gainsay; to converse; to revile; to speak against; to speak with'

*ymbsprecan* 'to speak about'

## 263. SPRINGAN

*(ge)springan* (primitive) 'to spring; to burst forth, rise; to fly; to jump; to leap, bound; to spread; to grow; to be diffused; to want, lack'

*āsprengan* 'to cause to spring; to fling out'

*āspringan* 'to spring up or forth, arise, originate, be born; to break forth; to spread; to fail, diminish, dwindle; to cease; to lack, run out'

*onspringan* 'to originate, spring forth, rise; to burst forth or asunder'

*sprangettan* 'to quiver, palpitate'

*(ge)sprengan* 'to scatter, strew, sprinkle, sow; to spring; to break; to burst; to split; to crack; to apply a clyster'

*tōspringan* 'to spring apart, spring asunder, fly to pieces, burst open; to crack'

## 264. SPRŪTAN

*sprūtan* (primitive) 'to sprout'

*āspryttan* 'to sprout or bring forth'

*āsprūtan* 'to sprout or break forth'

*spryttan* 'to sprout, spring, germinate, come forth; to put forth a shoot; to bring forth fruit'

## 265. SPURNAN

*(ge)spurnan* (primitive) 'to strike against; to kick, spurn; to reject; to tread upon; to perch; to stumble'

*andspurnan* 'to strike against; to stumble against'

*spearnlian* 'to spurn, kick, strike out with the feet; to sprawl'

*spornettan* 'to spurn, kick, strike with the feet'

## 266. STÆPPAN

*(ge)stæppan* (primitive) 'to step; to go; to advance, proceed'

*forestæppan* 1 'to prevent, forestall; to go before, precede, excel'

*ofstæppan* 'to trample upon'

*onstæppan* 'to go; to walk'

## 267. STANDAN

*(ge)standan* (primitive) 'to occupy a place; to remain, last, abide, continue; to stand firm, stand still, stand, be upheld, to be fixed as a law or regulation; to stand up; to reside; to be valid; to be, exist; to take place; to oppose, assail, attack; to oppress; to resist attack; to reprove; to stop; to cease to move; to appear, arise; to come; to be present to; to come upon (of fear); to urge; to seize'

*anstandan* 'to stand against, resist, withstand; to be firm or steadfast; to dwell, inhabit'

*āstandan* 'to stand up, rise, rise, up, get up; to continue, persist, insist; to support, endure'

*āstundian* 'to take upon oneself'

*forestandan* 'to lead, preside; to excel; to prevail against'

*forstandan* 'to help, aid; to resist, withstand; to oppose; to prevent, hinder; to benefit, avail; to understand; to signify; to be equal to; to stand up for; to defend, protect'

*ofergestondan* 'to stand over or above'

*oferstandan* 'to stand or be over or above'

*ofstandan* 'to continue, persist, remain; to stop in a place; to restore, make restitution'

*onstandan* 'to consist of or in; to continue, persist, insist; to approach; to apply oneself to'

*tōstandan* 'to stand apart, be distant, stand aloof; not to be forthcoming; to differ, be different, be discordant; to be put off, not to occur'

*wiðerstandan* 'to withstand, resist'

*wiðstandan* 'to withstand, resist; to oppose; to be hostile; to obstruct, prevent; to be a hindrance; to stand off, keep away, be absent; to be lacking'

*ymbstandan* 'to stand about or around; to surround'

*ðurhstandan* 'to continue, persist'


## 268. STEALDAN

*stealdan* (primitive) 'to own, possess'


## 269. STELAN

*(ge)stelan* (primitive) 'to steal; to rob'

*forstalian* 'to steal away'

*forstelan* 'to deprive, rob; to steal'

*stalian* 'to go stealthily; to steal upon a person'

*(ge)stalian* 'to steal'


## 270. STENAN

*stenan* (primitive) 'to cause to sound; to sound loudly, make a loud noise; to groan; to roar; to clash; to rattle'

*stunian* 'to make a loud sound, resound; to roar; to crash; to dash, impinge'

*wiðstunian* 'to dash against'


## 271. STEORFAN

*steorfan* (primitive) 'to die'

*āsteorfan* 'to die'

*āstyrfan* 'to kill, slay, cause death, destroy'

*stirfan* 'to kill'


## 272. STĪGAN

*(ge)stīgan* (primitive) 'to move; to go; to reach; to go up, rise, ascend, scale; to go down, descend; to mount'

*āstǣgan* 'to go up, ascend; to mount up; to embark'

*āstīgan* 'to go; to come; to proceed, step; to rise, ascend; to mount, climb; to go down into, descend'

*āstigian* 'to ascend; to mount'

*forestīgan* 'to go before; to excel'

*oferstīgan* 1 'to scale; to mount; to rise above; to overcome, surmount, surpass, excel, transcend, exceed'

*ofstīgan* 'to descend; to ascend; to depart'


## 273. STINCAN

*(ge)stincan* (primitive) 'to smell; to stink; to exhale, emit a smell or vapour; to sniff; to rise (of dust, vapour, etc.)'

*(ge)stencan* 'to stink'

*tōstincan* 'to distinguish by smell'


## 274. STINGAN

*stingan* 1 (primitive) 'to sting; to pierce, stab, thrust; to push through; to exercise authority, thrust one's self into the affairs of another'

*āstingan* 'to bore out; to thrust or pierce out; to stab'

*ofstingan* 'to pierce; to stab (to death); to wound by a thrust; to kill by a thrust'

*onstingan* 'to be angry with'

*tōstingan* 'to pierce; to prick to pieces; to thrust in'


## 275. STREGDAN

*stregdan* (primitive) 'to spread, extend, strew, sprinkle; to lay in order; to scatter; to disperse'

*āstregdan* 'to scatter, strew, sprinkle'

*forstregdan* 'to destroy'

*onstregdan* 'to sprinkle'

*strēgan* 'to strew'

*tōstregdan* 'to disperse, dissipate; to scatter, distract; to destroy'


## 276. STRĪCAN

*(ge)strīcan* (primitive) 'to pass lightly over the surface, stroke; to rub, smooth, wipe; to make a stroke; move, go; to run; to strike'

*āstrīcan* 'to strike severely'

*strācian* 'to stroke'

*stroccian* 'to stroke'

*ymbstrīcan* 'to smooth or rub round'


## 277. STRĪDAN

*strīdan* (primitive) 'to stride; to rob, pillage; to mount a horse; to get by force'


## 278. STRŪDAN

*(ge)strūdan* (primitive) 'to spoil, ravage, destroy; to defraud; to plunder, pillage'

*(ge)strūdian* 'to plunder'

*gestrȳdan* 'to deprive, rob'


## 279. SŪGAN

*sūgan* (primitive) 'to suck; to suck in, fall in as the cheeks when sucking; to have hiccough'

*āsūcan* 'to suck, drain; to consume'

*socian* 'to soak; to steep; to lie in a liquid'

*forsūcan* 'to suck up or in'

*(ge)sȳcan* 1 'to suckle, cause to suck; to wean'


## 280. SŪPAN

*(ge)sūpan* (primitive) 'to take (fluid) into the mouth, drink; to sup, sip; to absorb; to suck; to swallow; to taste'

*soppian* 'to sop, soak'

*sypian* 1 'to absorb, drink in, take in moisture'


## 281. SWĀPAN

*(ge)swāpan* (primitive) 'to sweep; to swing; to rush (of wind); to drive; to wrap; to take possession of'

*āswāpan* 'to sweep away; to clean; to remove'

*forswāpan* 'to sweep away; to drive off'

*tōswāpan* 'to disperse; to sweep apart or away'

*ymbswāpan* 'to sweep round; to clothe, envelop, wrap round'


## 282. SWEFAN

*swefan* (primitive) 'to sleep; to slumber; to rest; to sleep in death; to cease'

*āswebban* 'to soothe, appease, lull, set at rest; to destroy, put to death'

*forswefian* 1 'to perish; to kill'

*geswefian* 'to lull, appease; to cause or put to sleep'

*geswefnian* 'to dream; to appear in a dream'

*onswebban* 'to put to sleep; to bury'

*(ge)swebban* 'to put or send to sleep; to lull; to kill, put to death'

*swefian* 'to move'


## 283. SWELAN

*swelan* (primitive) 'to burn; to be burnt up, perish with heat; to inflame (of wound)'

*forswǣlan* 'to burn, inflame; to burn up; to consume; to injure with heat, scorch; to destroy with heat'

*forswelan* 'to burn up; to kindle'

*(ge)swǣlan* 'to light, kindle, burn'


## 284. SWELGAN

*(ge)swelgan* (primitive) 'to swallow; to drink; to absorb, imbibe (wisdom), take in the mind; to consume, devour, engulf; to incorporate; to accept'

*forswelgan* 'to swallow up, consume, devour; to absorb'

*ofswelgan* 'to swallow up, devour'

*swolgettan* 'to gargle, wash the throat; to take into the throat; to swallow'


## 285. SWELLAN

*(ge)swellan* (primitive) 'to swell'

*āswellan* 'to swell'

*tōswellan* 'to swell out; to grow big'


## 286. SWELTAN

*(ge)sweltan* (primitive) 'to die, perish; to die of or from something; to be no longer conscious or under the action of something'

*āsweltan* 'to die'

*forsweltan* 'to disappear, perish, die'


## 287. SWEORCAN

*(ge)sweorcan* (primitive) 'to darken; to become dark or overcast; to be obscured; to be troubled, gloomy or sad; to become troublesome or grievous; to become angry; to fall out (of mind)'

*āsweorcan* 'to fail, languish, droop'

*forsweorcan* 'to be very dark; to grow dark or obscure; to darken, obscure'

*swearcian* 'to become dark; to grow dark; to grow faint, languish; to make troubled or dismay; to become troubled, dismay'

*tōsweorcan* 'to make dark; to obscure'


## 288. SWEORFAN

*(ge)sweorfan* (primitive) 'to file or grind away; to wipe, rub or polish off; to scour'

*āsweorfan* 'to rub off, polish; to file off'

*forsweorfan* 'to cleanse; to polish; to demolish, destroy, wipe out; to grind away'


## 289. SWERIAN

*swerian* (primitive) 'to swear, make or take an oath; to swear in (to an office); to speak, talk'

*(ge)andswarian* 'to answer, respond'

*andswerian* 'to answer'

*āswerian* 'to swear'

*foreswerian* 'to declare before, swear before'

*forswerian* 'to swear falselly, perjure'

*ofswerian* 'to abjure, deny on oath'


## 290. SWĪCAN

*(ge)swīcan* (primitive) 'to move about, wander; to move away, depart, escape; to desist from, cease from, leave off; to yield, give way; to fail, fall short; to deceive; to turn traitor; to retire, withdraw; to relinquish, abandon, desert; to stop, leave off'

*āswīcan* 'to abandon, desert; to deceive, betray; to irritate, offend, provoke'

*(ge)ǣswician* 'to offend; to deceive; apostatize; to desert'

*swician* 'to wander; to depart; to turn; to deceive, cheat; to be treacherous, cheat; to give offense, blaspheme; to be offended'


## 291. SWĪFAN

*swīfan* (primitive) 'to move in a course; to revolve; to sweep; to wend; to take part, intervene'

*āswīfan* 'to wander, stray'

*onswīfan* 'to swing, turn; to put aside; to turn aside, divert, push off'

*tōswīfan* 'to separate; to move off in different directions'


## 292. SWIMMAN

*(ge)swimman* (primitive) 'to swim; to float'

*swemman* 'to cause to swim; to bathe, wash'

## 293. SWINCAN

*(ge)swincan* (primitive) 'to labour, toil, travail, work with effort; to strive, struggle; to be in trouble, difficulty or distress; to languish'

*āswencan* 'to afflict, trouble, vex'

*(ge)swencan* 'to afflict, distress, fatigue, trouble, vex, torment, oppress, harass, mortify; to chasten'

## 294. SWINDAN

*swindan* (primitive) 'to vanish; to consume; to languish, pine or waste away, grow languid; to be consumed'

*āswindan* 'to fade away, dissolve; to languish, pine, decay, to shrink; to become weak; to enervate; to perish'

## 295. SWINGAN

*swingan* (primitive) 'to swinge, beat, strike, smack; to whip, scourge, flog; to give a blow with the hand; to chastise, afflict; to swing oneself; to strike; to dash; to beat the wings'

*āswengan* 'to swing or shake off; to cast forth'

*āswingan* 'to scourge'

*ofswingan* 'to scourge to death'

*swengan* 'to shake, cause to swing; to shatter; to fling; to rush, cause rapid movement; to dash; to strike; to fly out'

*tōswengan* 'to drive or dash asunder, drive apart; to dispel, destroy'

## 296. SWŌGAN

*swōgan* (primitive) 'to sound; to roar; to howl; to rustle; to whistle; to rattle; to rush; to invade; to enter with force, move with violence'

*āswēgan* 'to resound; to intone; to thunder'

*āswōgan* 'to rush into; to cover over, invade, overrun, choke'

*oferswōgan* 'to cover thickly; to choke'

*swēgan* 'to sound, make a noise; to roar; to crash; to signify, import; to rush'

## 297. TACAN

*tacan* (primitive) 'to take, seize'

## 298. TELDAN

*(ge)teldan* (primitive) 'to spread a covering'

*teldian* 'to spread (tent, awning, net, snare, etc...); to set (trap); to entrap'

## 299. TĒON 1

*tēon* 1 (primitive) 'to accuse; to censure; to procceed against successfully'

*ontyhtan* 'to incite, instigate, urge, impel'

*tēonian* 'to irritate, annoy, vex; to provoke; to slander, calumniate; to insult, reproach; to revile'

*tihtan* 1 'to accuse, charge a person with an offence'

*tihtlian* 'to accuse, charge'

*tihtan* 2 'to exhort'

## 300. TERAN

*(ge)teran* (primitive) 'to tear, rend; to bite; to lacerate'

*āteran* 'to tear away'

*tōteran* 'to tear to pieces; to cut out; to lacerate, harass; to bite; to destroy'

## 301. TREDAN

*(ge)tredan* (primitive) 'to tread; to tread down; to step on, tread upon, step upon, walk upon; to enter upon; to roam through; to press with the foot; to hold the foot on something'

*ātredan* 'to extract; to extort; to tread'

*ātreddan* 'to search out, investigate, examine, explore'

*fortredan* 'to tread down, tread under foot; to tread upon; to trample on'

*fortreddan* 'to tread down, destroy by treading'

*tōtredan* 'to tread to pieces, trample upon'

*treddan* 'to tread on; to tread upon foot; to trample, trample upon; to examine, investigate'

*treddian* 'to tread, step, walk'

*ofertredan* 'to trample upon; to tread under foot'

*oftredan* 'to tread down; to trample upon, injure by treading; to destroy by treading'

*oftreddan* 'to tread to death'

## 302. TWINGAN

*twingan* (primitive) 'to press, force'


## 303. UNNAN

*(ge)unnan* (primitive) 'to give, concede, bestow, grant; to allow, consent; to be glad to see; to wish, desire'

*ofunnan* 'to deny, refuse to grant; to envy, begrudge'


## 304. WACAN

*wacan* 1 (primitive) 'to originate, arise, spring; to be born; to awake'

*āwacan* 'to awake; to originate, arise, spring forth; to be born'

*āwacian* 'to awake; to make gentle, appease, mollify'

*āweccan* 'to awake; to rouse, incite, stir up, call forth; to excite; to raise up children; to beget'

*āwæcnian* 'to awake, revive; to originate, arise, spring; to be derived'

*oferwacian* 'to watch over, act as a guard'

*onwacan* 'to awake, cease to sleep; to arise, spring; to be born; to be derived'

*onwæcnan* 1 'to awake; to arise, spring; to be born; to be roused, be raised'

*tōweccan* 'to wake (trans.) up, arouse, stir up; to excite'

*wacian* 'to watch; to remain or keep awake, not to sleep; to watch, be awake or active, be alert, be on guard; to open (the eye); to keep a vigil for prayer or religious observance'

*(ge)wæccan* 'to watch, wake'

*wæcnan* 'to waken; to arise, spring, come into being, come forth; to be born'

*(ge)weccan* 'to wake, waken; to awaken, arouse, recall, kindle, stir up; to produce, bring forth, give life or rise to; to encourage, exhort, stimulate, enliven, refresh, excite; to move, set in motion'

*wreccan* 1 'to arouse, awake; to raise, lift up; to undertake, take up'

*ðurhwacian* 'to keep vigil, continue watching'


## 305. WADAN

*(ge)wadan* (primitive) 'to move, go, proceed, advance, pass; to wade; to traverse; to go through, strive; to pervade'

*onwadan* 'to enter, penetrate into; to attack; to occupy; to invade; to seize, take possession of'

## 306. WASCAN

*wascan* 1 (primitive) 'to wash, cleanse; to bathe; to lave'

*āwascan* 'to wash, bathe; to immerse'

## 307. WĀWAN

*wāwan* 'to blow (of wind)'

## 308. WEALCAN

*(ge)wealcan* (primitive) 'to revolve, turn over, move round; to roll; to toss; to fluctuate; to consider, reflect; to scheme; to discuss; to deal with; to go, traverse; to press'

*onwealcan* 'to roll; to roll round'

*(ge)wealcian* 'to roll up, muffle up; to curl (with a curling-iron)'

## 309. WEALDAN

*(ge)wealdan* (primitive) 'to control, rule, direct, wield power, determine, govern, regulate, command, ordain; to have power or dominion over; to possess, have at command, be master of; to cause, bring about; to author; to have power to do; to be able to'

*geonwealdian* 'to have dominion over; to exercise authority'

*oferwealdan* 'to control, rule over; to get the better of'

*wealdian* 'to rule, command'

## 310. WEALLAN

*weallan* (primitive) 'to flow, well, bubble forth, spring out; to swarm; to boil; to rage; to heave; to be hot; to burn; to blaze; to be fervent or strongly moved; to turn, roll'

*āweallan* 'to boil or bubble up; to well; to break forth, spring; to stream or gush forth, issue; to swarm with; to be hot; to burn; to rage'

*āwyllan* 2 'to boil; to cause to bubble; to reduce by boiling'

*forweallan* 'to boil away'

*oferwillan* 'to boil; to overboil; to boil down; to boil over'

*onwyllan* 'to cause to boil; to inflame, cause passion or emotion; to be violent'

*(ge)weallan* 'to be agitated; to rage; to torment; to agitate, toss; to be hot; to boil, seethe, bubble, foam; to be ferment'

*wilmian* 'to rage'

*wyllan* 1 'to boil'

## 311. WEAXAN

*(ge)weaxan* (primitive) 'to wax, grow, increase; to be produced; to prosper, flourish; to grow in honour; to become powerful; to take shape'

*āweaxan* 'to grow, wax; to arise, come forth'

*forweaxan* 'to progress; to overgrow; to swell; to be overgrown'

*tōweaxan* 'to grow apart (in a scattered way)'

*ymbweaxan* 'to surround, grow round'

*forðweaxan* 'to grow forth; to break forth, burst forth'

*oferweaxan* 'to overgrow, overspread'

## 312. WEGAN

*(ge)wegan* (primitive) 'to move; to go, proceed; to bear, carry; to bring; to transport; to support, sustain; to cause; to wear; to weigh; to measure; to have a feeling'

*āwecgan* 'to move; to shake; to remove; to undermine'

*āwegan* 'to lift up; to carry off or away; to weigh, consider; to weigh out, estimate; to consider, estimate; to put away, renounce'

*tōwegan* 'to disperse, scatter, dispel'

*wagian* 'to move; to wag, shake; to wave; to swing, move backwards and forwards; to totter'

*wecgan* 'to wag, agitate, shake; to move; to drive hither and thither; to be moved'

## 313. WEORÐAN

*(ge)weorðan* (primitive) 'to be; to be done, be made; to become, come to be, turn to, turn into, come, get; to happen, take place, come to pass, befall; to arise; to settle, agree; to get on with; to please; to think of; to occur to; to grow'

*āweorðan* 'to pass away, vanish, cease to be; to become insipid; to become worthless'

*forweorðan* 'to vanish; to become nothing, perish, pass away, die; to deteriorate; to sicken'

*forwyrdan* 'to corrupt; to destroy'

*georwyrðan* 'to dishonour, defame, disgrace'

*gewyrðan* 'to estimate, value, appraise'

*(ge)unweorðian* 'to slight, treat with contempt, dishonour, disgrace; to become dishonoured; to become worthless; to become vile'

*(ge)weorðian* 'to distinguish; to value, esteem; to dignify, celebrate, reward, ennoble, adore, honour, distinguish; to praise, treat with reverence or respect; to attend to, care about, heed; to value, set a price on; to adorn, deck, decorate; to enrich, make worthy'

## 314. WEORPAN

*(ge)weorpan* 1 (primitive) 'to throw, cast, fling; to throw upon; to cast out, drive out or away; to open; to sprinkle; to hit; to charge with, accuse of'

*āweorpan* 'to throw; to take away, cast away, reject, renounce; to divorce; to trouble; to cast down; to cast out, expel; to degrade'

*āwyrpan* 'to recover from illness'

*forweorpan* 'to throw, cast; to cast away, reject, drive off; to squander'

*oferweorpan* 1 'to overthrow; to assault; to throw upon; to sprinkle; to fall down'

*ofweorpan* 'to kill by casting (stones, missiles, etc.)'

*ofworpian* 'to kill by casting (stones, etc. )'

*onweorpan* 'to turn or throw aside'

*tōweorpan* 'to disperse; to throw in different directions; to throw away, throw out; to throw down; to cast down; to scatter; to dissipate, dissolve; to break in pieces; to overthrow, demolish, destroy; to blot out; to put an end to; to put down; to make void'

*(ge)wierpan* 'to get better; to recover from illness'

*ymbweorpan* 'to surround; to throw round'

*(ge)edwyrpan* 'to revive, recover; to become better; to amend'

*wiðweorpan* 'to reject, repudiate'

*worpian* 'to throw, cast; to pelt'

## 315. WĒPAN

*(ge)wēpan* (primitive) 'lament, mourn, wail, bewail, weep, deplore; to be grieved at; to complain'

*wōperian* 'to lament, weep, wail'

## 316. WĪCAN

*(ge)wīcan* (primitive) 'to retire, give way; to yield; to fall down; to depart'

*āwācian* 'to grow weak; to languish, fall, decline, lapse; to fail; to fall away; to desist from, abstain; to appease, mollify; to relax; to be indolent; to belittle'

*āwǣcan* 'to weaken, fatigue'

*wācian* 'to be weak; to become weak; to lose energy; to waver, be cowardly, want resolution or courage; to flinch; to fail; to be not able to endure; to languish; to become poor or mean'

*(ge)wǣcan* 'to weaken; to afflict, oppress, trouble, vex; to affect; to weary; to exhaust'

*onwǣcan* 'to weaken; to soften, mollify; to shake (a resolution)'

*onwīcan* 'to give away, yield; to retreat'


## 317. WĪGAN

*wīgan* (primitive) 'to fight; to do battle, make war'

*oferwīgan* 'to overcome in fight; to conquer'

*wīgian* 'to fight'


## 318. WINNAN

*winnan* (primitive) 'to labour, toil; to trouble oneself; to suffer from; to undergo; to resist; to oppose, contradict; to fight, struggle, contend; to rage; to strive, endeavour; to get, attain; to win; to be ill'

*āwinnan* 'to labour; to strive; to contend; to gain; to overcome; to endure'

*gewinnan* 'to obtain, gain; to fight, contend; to conquer; to win; to bear, endure, suffer; to perform with effort, strive; to be ill'

*wiðerwinnan* 'to oppose, resist, revolt'

*wiðwinnan* 'to fight or strive against; to oppose, resist'

*oferwinnan* 'to overcome; to vanquish, conquer, subdue; to contend with'

*onwinnan* 'to attack, assail'


## 319. WITAN

*(ge)witan* (primitive) 'to know, have knowledge; to understand; be aware of or conscious of; to be wise or in one's senses; to show respect or honour; to learn'

*forewitan* 'to foreknow'

*forewītegian* 'to foresay, prophesy'

*forðwīsian* 'to direct; to guide forth'

*miswissian* 'to mislead'

*(ge)wissian* 'to guide, direct; to instruct; to rule, govern; to command; to show, point out; to declare, make known, to inform'

*(ge)wīsian* 'to show; to instruct, teach; to direct; to guide, lead; to point out'

*(ge)wītegian* 'to predict, prophesy; to declare, make known'

*writan* 'to make certain, to inform'

## 320. WĪTAN

*(ge)wītan* (primitive) 'to reproach, blame, accuse, impute'

*edwitan* 'to reproach; to blame; to upbraid'

*edwītan* 'to reproach; to blame, upbraid; to revile'

*(ge)wītnian* 'to afflict; to torment, torture; to chastise, punish'

## 321. WLĪTAN

*wlītan* (primitive) 'to look, gaze, observe'

*(ge)ungewlitigian* 'to deprive of beauty; to disfigure'

*(ge)unwlitegian* 'to transform; to unform; to disfigure, destroy the beauty of; to become disfigured'

*wlātian* 1 'to look, gaze, behold'

*(ge)wlitigian* 'to beautify, adorn; to grow beautiful; to become beautiful; to form, fashion'

*ymbwlātian* 'to look about; to observe, contemplate'

*ðurhwlītan* 'to look through, see'

## 322. WRECAN

*wrecan* (primitive) 'to impel, press, push, drive; to advance; to express in words, utter; to recite; to impress; to inlay; to practise, carry on; to carry out, execute; to punish; to avenge, take vengeance, revenge, wreak'

*āwrecan* 'to drive away; to thrust out; to pierce, strike; to utter; to relate, recite, sing; to punish; to avenge'

*forwracnian* 'to be an exile'

*forwrecan* 'to carry away, drive out, banish, expel; to drive forth'

*oferwrecan* 'to overwhelm'

*tōwrecan* 'to disperse, drive asunder, scatter, dissipate'

*wracian* 'to be in exile; to travel; to wander; to carry on, prosecute'

*wracnian* 'to be wanderer; to traveler; to be pilgrim'


## 323. WRĒON

*(ge)wrēon* (primitive) 'to cover; to clothe; to envelop; to spread over; to protect, defend; to hide, conceal; to bind (a book)'

*unwrēon* 'to uncover, disclose; to expose, reveal, discover, make known to open; to explain'

*āwrēon* 'to open, uncover, disclose; to reveal, discover'

*oferwrēon* 'to cover, veil; to overspread; to hide, conceal; to clothe'

*wrīga* 'to cover'


## 324. WRĪDAN

*wrīdan* (primitive) 'to grow, thrive, flourish; to be productive'

*āwrīdian* 'to originate, spring; to descend'

*gewrīðan* 'to grow, thrive, flourish'

*wrīdian* 'to grow, flourish; to spring up; to be productive'


## 325. WRĪÐAN

*(ge)wrīðan* (primitive) 'to tie, fasten, fetter, bind; to bandage, bind up; to wrap, wrap around; to give a curved form; to twist; to connect; to restrain, prevent; to tormen, vex'

*āwrīðan* 1 'to turn; to wind; to bind up; to unbind, loosen'

*forwrīðan* 'to bind up; to stanch'

*gewriðelian* 'to bind together'

*onwrīðan* 'to release from a covering; to unbind; to unwrap'

*tōwrīðan* 'to twist apart; to distort'

*unwriðan* 'to untwist; to unbind'


## 326. WRINGAN

*wringan* (primitive) 'to wring, twist; to squeeze together; to squeeze out moisture'

*āwringan* 'to wring; to squeeze out, express'


## 327. WRĪTAN

*(ge)wrītan* (primitive) 'to write; to compose; to be the author of; to draw; to engrave, incise; to bestow or convey by writing'

*āwrītan* 'to write down; to copy, transcribe; to describe; to compose; to mark; to inscribe, carve; to draw, delineate'

*forwrītan* 'to cut in two; to proscribe, banish'

*miswrītan* 'to write incorrectly'

*tōwrītan* 'to describe'

*writian* 2 'to draw a figure; to write; to compose'

*ymbwrītan* 'to circumscribe; to score or cut round'


328. WRŌTAN

*wrōtan* (primitive) 'to root up'


## 3.6. Concluding remarks

This chapter has unfolded the methodology of analysis required for the representation of the relations of troponymy and *Aktionsart* in a semantic map of the lexical paradigms of Old English based on strong verbs. The primitive and derived verbs listed in section 3.5 are represented in such semantic maps in the next chapter.

# Chapter 4

# The semantic maps of the verbal paradigms of Old English

## 4.1. Introduction

The analytical part of this dissertation is presented in chapter 4. In the first place, this chapter offers the semantic maps of the 328 lexical paradigms of Old English that are based on strong verbs. In section 4.3, the results of the semantic map analysis are presented and discussed by semantic relation (troponymy, -troponymy, synonymy, backward presupposition, cause and opposition) and also with respect to *Aktionsart*. These relations are considered from the perspective of semantic inheritance. By way of conclusion, a summary of the results is presented in section 4.4.

## 4.2. The semantic maps

The analysis of this undertaking has been carried out with a view to drawing a semantic map of each of the 328 lexical paradigms of Old English that, according to the lexical database of Old English *Nerthus* (Martín Arista et al. 2016), are based on a strong verb. Together with the lexical primes that motivate the paradigms, another 1181 derived verbs have been analysed.

As has been explained in the preceding chapter, the semantic maps resulting from this analysis are semantic-syntactic networks. For each paradigm, meanings have been assembled into synsets. The primitive is placed in the centre of the diagram and the synsets resulting from the different meanings of the primitive verb have been linked to it. Then, the synsets obtained from the meanings of the derivatives are linked to the synsets of the primitive and among them by means of the conceptual-semantic relations of troponymy, -troponymy, synonymy, backward presupposition, cause and opposition. Moreover, synsets display its corresponding *Aktionsart* type conforming to the taxonomy of *Aktionsart* types described in the methodology: states, activities, accomplishments, achievements, unbounded processes, semelfactives, active accomplishments, causative states, causative activities, causative accomplishments, causative achievements, causative unbounded processes, causative semelfactives and causative active accomplishments.

The semantic maps can be seen in the enclosed CD-ROM. They have been saved as independent files that can be opened with Adobe Acrobat Reader.

## 4.3. Semantic inheritance in the lexical paradigm

The analysis of the relations of troponymy, -troponymy, synonymy, backward presupposition, cause and opposition, as well as *Aktionsart*, represented by means of

the semantic maps allows us to take a step forward with respect to the observation of semantic relatedness in the lexical paradigms. Indeed, the perspective adopted in previous chapters has been intuitive or, at least, dependent on derivational morphology. That is to say, morphologically related words that belong to the same lexical paradigm, thus sharing the form and meaning of the base of derivation, are also semantically related. It is necessary, however, to determine what kind of semantic relations hold in the lexical paradigm. The whole set of semantic relations holding in the lexical paradigm constitute a network of semantic inheritance, in which it is possible to distinguish, on the one hand, how new meanings diverge from the original meaning and, on the other, what the nature of the divergence is in terms of meaning specification with respect to more basic verbs.

In the following subsections, the semantic relationships which display temporal inclusion (troponymy and – troponymy) are considered in the first place. Special attention is paid to troponymy, given its relevance for *Aktionsart* types. Then, the results found in the semantic relationships that do not entail temporal inclusion are discussed, to wit, presuppostion and cause. Finally, the results of the analysis of synonymy and opposition are presented.

### 4.3.1. Troponymy

Troponymy represents a special case of entailment where pairs are temporally co-extensive. Troponymy relates synset pairs in which one denotes a particular manner of the other. In the semantic maps, a synset $S_1$ denotes a specific manner of a more general synset $S_2$. The analysis shows that the relationship of troponymy is normally established between two synsets sharing the same *Aktionsart* type. Out of a total number of 739 pairs of synsets associated via troponymy, 681 share the same *Aktionsart* type. They are classified according to the *Aktionsart* types involved in the association as: state — ➤ state (48 instances); activity — ➤ activity (216 instances), accomplishment — ➤ accomplishment (63 instances), achievement — ➤ achievement (5 instances), unbounded process — ➤ unbounded process (11 instances), active accomplishment — ➤ active accomplishment (9 instances), causative activity — ➤ causative activity (62 instances), causative accomplishment — ➤ causative accomplishment (258 instances), causative unbounded process — ➤ causative unbounded process (4 instances) and plain causative — ➤ causative (5 intances). This is to say, 92.15% of the total number of synsets associated

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by means of troponymy share the same *Aktionsart* type. The following examples illustrate this point:

(1)

*ĀGAN*: *(ge)āgnian* 'to inherit' — ➤ *āgan* 'to obtain';

*BĒODAN*: *misbēodan* 'to announce wrongly' — ➤ *(ge)bēodan*, *ābēodan*, *(ge)bodian*, *forebodian*, *onbēodan* 'to declare, inform, announce, proclaim';

*BERSTAN*: *tōberstan* 'to break in two' — ➤ *(ge)berstan*, *forberstan* 'to break, crack';

*CWEÐAN*: *wiðercwiddian* 'to murmur' — ➤ *(ge)cweðan*, *cwiddian* 'to speak';

*DEORFAN*: *(ge)dyrfan* 'to molest' — ➤ *(ge)dyrfan* 'to injure';

*ÐRĀWAN*: *āðrāwan* 'to throw forth' — ➤ *(ge)ðrāwan* 'to throw';

*ÐURFAN*: *(ge)ðearfan* 'to starve' — ➤ *ðurfan* 'to want, be needy';

*ÐWĒAN*: *āðwēan* 'to baptize' — ➤ *(ge) ðwēan*, *āðwēan* 'to cleanse';

*FEALDAN*: *unfealdan* 'to explain, unfold by narrating' — ➤ *onfealdan*, *unfealdan* 'to unfold';

*FRIGNAN*: *(ge)fricgan*, *gefrāgnian* 'to learn by asking' — ➤ *fricgan* 'to learn';

*(GE)LĪÐAN*: *(ge)lǣdan* 'to lift' — ➤ *(ge)lǣdan* 'to cause to move';

*GINNAN*: *onginnan* 'to act strenuously' — ➤ *onginnan* 'to act, proceed';

*GRŌWAN*: *āgrōwan*, *ofergrōwan* 'to grow over, overgrow' — ➤ *(ge)grōwan* 'to grow';

*MELTAN*: *(ge)meltan* 1, *formeltan* 'to consume by fire, burn up' — ➤ *(ge)mieltan* 'to exhaust';

*MUNAN*: *āmanian* 'to require, exact' — ➤ *(ge)manian*, *mynegian*, *(ge)myndgian*, *(ge)myntan* 'to prompt, instigate, impel, exhort, bring forth';

*NUGAN*: *ofergenihtsumian* 'to superabound' — ➤ *genōgian*, *genyhtsumian* 'to abound, be abundant';

*SPŌWAN*: *forspēdian* 'to speed forward' — ➤ *āspēdan* 'to speed'.

On the other hand, only 58 out of the 738 pairs of synsets associated via troponymy display different *Aktionsart* types (7.85%). The explanation for this divergence can be sought in four directions. Firstly, it is sometimes the case that the meaning specification of the synset₁ (or entailing synset) conveys a divergence of *Aktionsart* type with the more general synset₂ (or entailed synset). Secondly, the complex

structure of some of the Old English verbs found in the paradigms of the Old English strong verbs results in atypical troponymy associations. Thirdly, the semantic proximity both between active accomplishments of consumption and causative accomplishments of destruction and between active accomplishments of creation and causative accomplishments of formation or configuration may cause troponymy associations. Finally, figurative meanings can also give rise to troponymy associations involving different *Aktionsart* types.

Beginning with meaning specification, it has been found throughout this research that this specification in the synset$_1$ may sometimes bring about a change of the features characterizing the more general synset$_2$. Thus, nine instances have turned up in which this specification entails the addition of the feature [+ punctual] in the synset$_1$. Three different associations have been found: causative achievement — ➤ causative accomplishment (2 instances), achievement — ➤ accomplishment (5 instances) and semelfactive — ➤ activity (2 instances). They can be seen in the following example.

(2)

a.    Causative achievement — ➤ causative accomplishment
      *BIERNAN*: *(ge)bærnan* 'to cauterize' — ➤ *biernan, ābeornan, (ge)bærnan, brinnan, forbeornan, onbærnan* 'to burn';
      FEALLAN: *offeallan* 'to cut off' — ➤ *offeallan* 'to end'.

b.    Achievement — ➤ accomplishment
      *FLĒOGAN*: *tōflēogan* 'to fly apart, fly asunder, fly to pieces' — ➤ *tōflēogan* 'to crack';
      *(GE)RĪSAN*: *ārīsan* 'to spring up' — ➤ *ārīsan, rǣran* 'to originate, begin, arise';
      *SPRINGAN*: *(ge)sprengan* 'to burst' — ➤ *(ge)sprengan* 'to break';
      *WEAXAN*: *forðweaxan* 'to burst forth, break forth' — ➤ *āweaxan* 'to arise, come forth';
      *WRĪDAN*: *wrīdian* 'to spring up' — ➤ *āwrīdian* 'to originate'.

c.    Semelfactive — ➤ activity
      *HNĪGAN*: *onhīgan, (ge)hnigian* 'to bow, bend down, bow or bend down (the head)' — ➤ *onhnīgan* 'to worship';
      *SCĪNAN*: *scīnefrian* 'to glitter' — ➤ *scīnan, (ge)scīnan* 'to shine'.

Another sort of troponymy relationship between synsets exhibiting different *Aktionsart* types is created by the addition of the [+ telic] feature in the synset$_1$. Throughout the analysis I have come upon 17 instances, which are classified according to the *Aktionsart* types involved in the association as: active accomplishment — ➤ activity (10 instances), accomplishment — ➤ unbounded process (2 instances) and causative accomplishment — ➤ causative activity (5 instances). They are presented in example (3):

(3)

a.  Active accomplishment — ➤ activity

BĪTAN: *ābītan* 'to consume, eat up, devour' — ➤ *ābītan, onbītan* 1 'to partake of, to taste, to taste of, feed upon';

BRŪCAN: *ðurhbrūcan* 'to enjoy thoroughly' — ➤ *brūcan, (ge)brȳcian, (ge)brȳcsian* 'to enjoy';

BRŪCAN: *forbrīcan* 'to consume, use up' — ➤ *brūcan, (ge)brȳcian, (ge)brȳcsian* 'to use';

CWOLSTAN: *forcwolstan* 'to swallow down' — ➤ *cwolstan* 'to swallow';

DRINCAN: *ādrincan* 'to drink up' — ➤ *(ge)drincan, ondrincan* 'to drink, imbibe, absorb';

(GE)RĪSAN: *rǣsan* 'to rush into anything, enter on rashly' — ➤ *ārǣsan, rǣsan* 'to rush';

GNAGAN: *forgnagan* 'to gnaw or eat up' — ➤ *gnagan* 'to gnaw';

HLĒAPAN: *ēapan, hlēapettan* 'to lead up, spring up' — ➤ *āhl(ge)hlēapan* 'to leap, jump, spring';

NĒOTAN: *(ge)notian* 'to consume' — ➤ *nyttian* 'to eat';

RǢDAN: *oferrǣdan* 'to read through' — ➤ *(ge)rǣdan, ārǣdan* 'to read'.

b.  Accomplishment — ➤ unbounded process

ÐRINTAN: *āðrintan* 'to swell up' — ➤ *ðrintan* 'to swell';

GRŌWAN: *forgrōwan* 'to grow to excess or fullness' — ➤ *(ge)grōwan* 'to grow'.

A similar case is that represented by the following examples, in which a causative accomplishment results from the causative activity of synsets$_2$ in a particular manner. This can be seen in example (4):

(4)     Causative accomplishment — → causative activity

*SĒOÐAN*: *forsēoðan* 'to boil away' — → *(ge)sēoðan*, *āsēoðan* 'to boil, seethe';

*SĒOÐAN*: *tōsēoðan* 'to boil to pieces' — → *(ge)sēoðan*, *āsēoðan* 'to boil, seethe';

*WEALLAN*: *forweallan* 'to boil away' — → *āwyllan* 2, *onwyllan* 'to cause to bubble, cause to boil';

*WEALLAN*: *oferwillan* 'to boil down' — → *āwyllan* 2, *onwyllan* 'to cause to bubble, cause to boil';

*WEALLAN*: *āwyllan* 2 'to reduce by boiling' — → *āwyllan* 2, *onwyllan* 'to cause to bubble, cause to boil'.

Apart from the addition of the [+punctual] or [+telic] feature to the synset$_1$, the analysis evinces nine instances of troponymy associations involving different *Aktionsart* types derived from the specification of the synset$_2$. Both causative accomplishments and causative activites can entail a troponymy relation with plain causatives. The entailed synsets in this category are specified by a particular manner in the synset$_1$ giving way to different causative *Aktionsart* types. This is shown in example (5):

(5)

a.      Causative accomplishment

*BĒATAN*: *(ge)bēotian* 'to threaten' (causative accomplishment) — → *(ge)bēatian* 'to thrust';

*(GE)TĒON* 1: *(ge)tǣcan* 'to warn' (causative accomplishment) — → *oftēon* 'to keep back, withhold, deny';

*METAN*: *gemǣtgian*, *(ge)metgian* 'to moderate, temper, allay' (causative accomplishment) — → *gemǣtgian*, *(ge)metgian* 'to control, govern, regulate'.

b.      Causative activity

*BIDDAN*: *ābǣdan* 'to force out' (causative activity) — ➤ *ābǣdan*, *(ge)bǣdan* 'to force, compel, press, constrain';

*ÐRINGAN: āðringan* 'to crowd, press out, urge out' — ➤ *(ge)ðringan* 'to press'.

One instance has also been found of a troponymy association comprised of an entailing accomplishment and an entailed activity. It is shown in example (6).

(6)     Accomplishment — ➤ activity

*FŌN*: *forefōn* 'to take before' — ➤ *forefōn*, *forfōn* 'to anticipate, prevent, forestall'.

Finally, instances have been found where a causative accomplishment entails an accomplishment. The specific manner denoted by the entailing synsets$_1$ of the more general synsets$_2$ conveys this shift from the accomplishment *Aktionsart* type to causative accomplishment, as can be seen in example (7).

(7)     Causative accomplishment — ➤ accomplishment

*BIDDAN*: *ābǣdan*, *bādian* 'to seize, wring, extract' — ➤ *ābiddan* 'to obtain';

*BIDDAN*: *ābǣdan*, *bādian* 'to take by way of a pledge or fine, to take a toll' — ➤ *ābiddan* 'to obtain';

*SITTAN*: *āsettan* 'to take away' — ➤ *ofersittan* 'to take possession of'.

Throughout this analysis I have come across 18 complex verbal structures establishing a troponymy relationship with more simple synsets which do not present the same *Aktionsart* type. Of these, 17 consist of a causative accomplishment entailing synset and an activity entailed synset, the remaining one comprising an accomplishment entailing synset and an activity entailed synset. This can be seen in example (8):

(8)

*BĒATAN*: *ofbēatan* 'to beat to death' — ➤ *(ge)bēatan*, *ābēatan* 'to beat, strike, pound, dash';

*BĒATAN*: *ofbēatan*, *tōbēatan* 'to beat to pieces, destroy by beating' — ➤ *(ge)bēatan*, *ābēatan* 'to beat, strike, pound, dash';

*BĪTAN*: *ābītan*, *forbītan* 'to bite to pieces, to bite in pieces, destroy by beating' — ➤ *(ge)bītan* 'to bite';

*CĒOWAN*: *forcēowan* 'to chew off' — ➤ *(ge)cēowan*, *tōcēowan* 'to chew, gnaw';

*CĒOWAN*: *tōcēowan* 'to bite to pieces' — ➤ *forcēowan* 'to bite';

*DELFAN*: *fordelfan* 'to destroy by digging' — ➤ *delfan*, *ādelfan*, *fordelfan* 'to     delve, dig, excavate, burrow';

*ÐERSCAN*: *tōðerscan* 'to dash or knock to pieces' — ➤ *(ge)ðerscan* 'to strike, pound, batter, beat, flog';

*ÐERSCAN*: *ofðyrscan* 'to beat down' — ➤ *(ge)ðerscan* 'to strike, pound, batter, beat, flog';

*ÐRINGAN*: *āðringan* 'to scatter by pressure' — ➤ *(ge)ðringan* 'to press';

*GNĪDAN*: *āgnīdan* 'to rub off' — ➤ *gnīdan*, *gnuddian* 'to rub';

*HNĪTAN*: *ofhnītan* 'to kill by butting, gore to death' — ➤ *hnītan* 'to gore';

*RĪDAN*: *gerīdan* 'to seize, take possession of, reach or obtain by riding' — ➤ *rīdan*, *ārīan*, *gerīdan* 'to ride';

*SCACAN*: *āsceacan*, *onsceacan*, *tōsceacan* 'to shake off' — ➤ *scacan*, *āsceacan*, *onsceacan* 'to shake, quiver';

*SCACAN*: *tōsceacan* 'to shake to pieces' — ➤ *scacan*, *āsceacan*, *onsceacan* 'to shake, quiver';

*SCĒOTAN*: *ofscēotan* 'to shoot down' — ➤ *āscēotan*, *(ge)scotian*, *ofscotian* 'to shoot';

*SWINGAN*: *āswengan* 'to swing or shake off' — ➤ *swingan* 'to swing oneself';

*SWINGAN*: *sypian* 1 'to scourge to death' — ➤ *swingan, āswingan* 'to ship, scourge, swinge, flog';

*WEORPAN*: *ofweorpan*, *ofworpian* 'to kill by casting (stones, missiles, etc.)' — ➤ *(ge)weorpan 1*, *āweorpan*, *forweorpan*, *worpian* 'to cast, throw, fling'.


These pairs of synsets associated by means of troponymy do not represent typical cases of troponymy. It is important to have in mind the complexity of certain Old English verbs as well as to contextualize them in order to carry out the analysis.

Additionally, syntax may sometimes blur the identification of a given semantic association. In this respect, whereas *BĒATAN*: *ofbēatan* 'to beat to death' is easily identifiable as a particular manner of *(ge)bēatan*, *ābēatan* 'to beat, strike, pound, dash', the identification of *DELFAN*: *fordelfan* 'to destroy by digging'  as a troponym of *delfan*, *ādelfan*, *fordelfan* 'to delve, dig, excavate, burrow' may be not so immediate. As a matter of fact, *fordelfan* 'destroy by digging' is not so different from 'to dig to destruction'.

Furthermore, all causative accomplishment entailing synsets in this category are causative verbs, which embed an activity. These causative entailing synsets are comparable to spontaneous active accomplishment in the sense that all of them result in an accomplishment by means of an activity. On the other hand, these entailing synsets include a [+dynamic] feature derived from the specification of the activity that gives rise to the accomplishment. Then, the difference between these entailing verbs and active accomplishment verbs lies in the fact that whereas active accomplishments are spontaneous, these entailing verbs are causative. Nevertheless, entailing verbs under this category are definitely not causative active accomplishments such as 'to march the soldiers to the park', 'to make someone paint a portrait' or 'to make someone eat an apple'. Therefore, as regards the assignment of *Aktionsart* type in complex verbs, this analysis has given priority to the result depicted by the verb rather than to the activity that gives rise to such a result. This question is raised again in the section of further research in chapter 5.

Another aspect of troponymy involving different *Aktionsart* types that deserves attention is the semantic proximity both between active accomplishments of consumption and causative accomplishments of destruction and between active accomplishments of creation and causative accomplishments of formation or configuration. The literature reviewed in chapter 2 considers three classes of active accomplishment: active accomplishments of motion, active accomplishments of creation and active accomplishments of consumption. Two points are worth making in this respect. Firstly, active accomplishments of creation and consumption seem to imply an inherent causativity, that is, 'to paint a portrait' not only depicts the accomplishment of an activity but is also associated with the creation of an entity different from the subject that performs the action, thus *it causes a portrait to be created* (causative aspect). Similarly, 'to eat an apple' causes the subsequent disappearance of the apple. Nevertheless, Van Valin and Lapolla (1997) reject the

causative aspect of active accomplishments and hold that causative classes can be differentiated from the non causative ones because of the existence of a causative paraphrase which presents the same number of NPs as the original sentence. Consider in this respect an active accomplishment of creation like *Mattew painted a portrait* and the causative corresponding sentence *Mattew caused a portrait to be painted*, as well as an active accomplishment of consumption like *Peter devoured the apples* and the corresponding causative sentence *Peter caused the apples to be devoured*. Secondly, if creation and consumption are considered as subclasses of active accomplishment, it is advisable to consider the inclusion of active accomplishments of destruction and configuration or to reconsider the whole category instead. This question is raised again in the section discussing future research in chapter 5.

Throughout this research, I have come across three examples in which this semantic proximity is noticeable. They are given in example (9).

(9)

*BRUCAN*: *forbrīcan* 'to consume, use up' — ➤ *forbrīcan* 'to destroy';

*ĐICGAN*: *(ge)ðicgan*, *āðecgan*, *ðecgan* 'to consume' — ➤ *ofðecgan* 'to destroy'. In this manner, 'to consume something' is a particular manner of 'putting an end to, extinguish, or doing away with something';

*SCIERPAN: (ge)scieppan* 'to change, transform, deform' — ➤ *(ge)scieppan*, *āscieppan* 'to make, create, form'. Likewise, 'to change, transform, deform' is a particular manner of 'forming something'.

Finally, the analysis evinces two instances of figurative associations within troponymy involving different *Aktionsart* types, in which this association derives from the figurative sense of one of the synsets involved, as can be seen in (10):

(10)

a.   State — ➤ active accomplishment

*SĒON*: *ðurhsēon* 'to see into, penetrate with the sight' — ➤ *ðurhsēon* 'to penetrate'.

b.   Activity — ➤ accomplishment

*LŪTAN*: *gelūtan* 'to entreat' — ➤ *(ge)lūtan* 'to stoop'.

Table 1 tabulates the results found as regards the semantic relation of troponymy in the lexical paradigms of Old English strong verbs.

| **Troponymy** | |
|---|---|
| **Troponymy: same *Aktionsart*** | |
| State — → state | 48 |
| Activity — → activity | 216 |
| Accomplishment — → accomplishment | 63 |
| Achievement — → achievement | 5 |
| Unbounded process — → unbounded process | 11 |
| Active accomplishment — → active accomplishment | 9 |
| Causative activity — → causative activity | 62 |
| Causative accomplishment — → causative accomplishment | 258 |
| Causative unbounded process — → causative unbounded process | 4 |
| Causative — → causative | 5 |
| **Troponymy: same *Aktionsart* total** | **681** |
| **Troponymy: different *Aktionsart*** | |
| **Meaning specification: Addition of the [+ punctual] feature** | |
| Causative achievement — → causative accomplishment | 2 |
| Achievement — → accomplishment | 5 |
| Semelfactive — → activity | 2 |
| **Meaning specification: Addition of the [+ punctual] feature total** | **9** |
| **Meaning specification: Addition of the [+ telic] feature** | |
| Active accomplishment — → activity | 10 |
| Accomplishment — → unbounded process | 2 |
| Causative accomplishment — → causative activity | 5 |
| **Meaning specification: Addition of the [+ telic] feature total** | **17** |
| **Meaning specification: Other sorts of specification** | |
| Causative accomplishment — → causative | 3 |
| Causative activity — → causative | 2 |
| Accomplishment — → activity | 1 |
| Causative accomplishment — → accomplishment | 3 |
| **Meaning specification: Other sorts of specification total** | **9** |

| | |
|---|---|
| **Meaning specification total** | **35** |
| **Complex OE verbal constructions** | |
| Causative accomplishment — ➔ activity | 17 |
| Accomplishment — ➔ activity | 1 |
| **Complex OE verbal constructions total** | **18** |
| **Semantic proximity between active accomplishments of consumption and creation and causative accomplishments** | |
| Active accomplishment — ➔ causative accomplishment | 2 |
| Causative accomplishment — ➔ active accomplishment | 1 |
| **Semantic proximity between active accomplishments of consumption and creation and causative accomplishments** | **3** |
| **Figurative associations** | |
| State — ➔ active accomplishment: | 1 |
| Activity — ➔ accomplishment: | 1 |
| **Figurative associations total** | **2** |
| **Troponymy: different *Aktionsart* total** | **58** |
| **Troponymy total** | **739** |

Table 1: The semantic relation of troponymy in the lexical paradigms of strong verbs.

### 4.3.2. -Troponymy

Together with troponymy, -troponymy represents a type of entailment with temporal inclusion. However, whereas troponymy involves co-extensiveness, -troponymy represents a special case of entailment where pairs exhibit a proper temporal inclusion. Besides, unlike troponymy, in –troponymy entailment may go in either direction. In this analysis, -troponymy has turned out to be the second least frequent semantic relationship. The total number of pair of synsets associated via –troponymy amounts to 73, all of which are listed and classified below according to the *Aktionsart* types involved in the association. After each category, the number of pair of synsets associated by this relationship is displayed between brackets. This semantic relationship does not present a frequent association of synsets sharing the same *Aktionsart* type and very different combinations of *Aktionsart* types are found in the analysis. However, out of the 73 pairs of synsets associated via –troponymy, 47 present at least an activity, that is a 64.38 % of the total figure. Moreover, the most

frequent association is the one established between an entailing and entailed activity (15 instances, which represent 20.54% of the total). The second most common association is that established by an entailing activity and an entailed state (12 instances), followed by an entailing causative accomplishment and an entailed activity (8 instances).

The most frequent entailing synset A*ktionsart* type correspond to an activity (30 instances), followed by a causative accomplishment (22 instances) and an accomplishment (10 instances). Moreover, 49 entailing synsets correspond to spontaneous classes, whereas 24 belong to causative classes. Regarding the most frequent entailed *Aktionsart* type synset, it is also an activity (32 instances), followed by a state (20 instances) and a causative accomplishment (11 instances). On the other hand, whereas 62 out of the 73 entailed synsets associated via –troponymy correspond to spontaneous classes, only 11 belong to causative classes, all of which qualifying as causative accomplishments. As regards the *Aktionsart* type of the entailing synsets in -troponymy, the analysis turns out 5 states. Entailing states evince 2 different associations, presented in (11):

(11)

a.　　State  · · · · ►  state

　　　　*DRĒOSAN*: *ādrēogan* 'to pass or spend time'  · · · · ►  *(ge)drēogan* 'to pass life, lead (a certain) life';

　　　　*SLĪDAN*: *āslīdan* 'to be hurt or destroyed'  · · · · ►  *slīdan* 'to be transitory, unstable or perishable'.

b.　　State  · · · · ►  activity

　　　　*RǢDAN*: *wiðrǣdan* 'to be antidote'  · · · · ►  *wiðrǣdan* 'to act against';

　　　　*WRECAN*: *wracnian* 'to be traveller or pilgrim'  · · · · ►  *wracian* 'to travel';

　　　　*WRECAN*: *wracnian* 'to be wanderer'  · · · · ►  *wracian* 'to wander'.


Activities represent the most frequent entailing synset in –troponymy, showing 30 instances. Four different combinations can be found in the analysis: activity  · · · · ►  state (12 instances), activity  · · · · ►  activity (15 instances), activity  · · · · ►  accomplishment (1 instance) and activity  · · · · ►  causative accomplishment (2 instances).

(12)

a.    Activity · · · · ► state

*BRECAN*: *(ge)brecan* 'to storm' · · · · ► *wiðerbrocian* 'to be against or adverse to, oppose';

*FARAN*: *offaran* 'to overtake (an enemy)' · · · · ► *fyrdian* 'to be at war';

*FĒOGAN*: *gefēogan* 'to persecute' · · · · ► *fīgan* 'to be at enmity';

*FLĒOTAN*: *flēotan* 'to drift' · · · · ► *floterian* 'to be disquiet or troubled';

*LĒOGAN*: *(ge)lēogan* 'to feign' · · · · ► *ālēogan*, *oflēogan* 'to be false to, be false';

*RǢDAN*: *radian* 'to do quickly' · · · · ► *radian* 'to be quick';

*RǢDAN*: radian 'to hasten' · · · · ► *radian* 'to be quick';

*RĒOTAN*: *wiðrēotan* 'to clamour against' · · · · ► *wiðrēotan* 'to abhor';

*SACAN: andsacian*, *forsacan*, *onsacan* 'to object to, gainsay, contradict' · · · · ► *sacan* 'to disagree';

*SITTAN*: *sǣtian* 'to waylay' · · · · ► *(ge)sittan* 1 'to lie in wait';

*SPRECAN*: *wiðsprecan* 'to revile' · · · · ► *ofersprecan* 'to be abusive';

*STANDAN*: *(ge)standan*, *forstandan*, *wiðstandan* 'to oppose, attack, assail' · · · · ► *wiðstandan* 'to be hostile'.

b.    Activity · · · · ► activity

*BĪTAN*: *ābītan*, *onbītan* 1 'to partake of, to taste, to taste of, feed upon' · · · · ► *(ge)bītan* 'to bite';

*BLĀWAN*: *(ge)blāwan* 'to breathe, aspire' · · · · ► *onblāwan* 'to inspire, breathe into';

*BŪGAN*: *(ge)bīegan* 'to turn back' · · · · ► *forbīgan* 'to pass by';

*CWEÐAN*: *ācweðan*, *oncweðan*, *wiðcweðan* 'to answer, reply, respond' · · · · ► *cwiddian* 'to talk, discuss';

*FEOHTAN*: *āfeohtan* 'to attack, assail' · · · · ► *(ge)feohtan*, *āfeohtan* 'to fight, combat, make war';

*GRĪPAN*: *wiðgrīpan* 'to grapple with' · · · · ► *(ge)grīpan* 'to grasp';

*HEALDAN*: *oferhealdan* 'to overtake' · · · · ► *healdan* 'to proceed';

*RǢDAN*: *oferrǣdan* 'to peruse' · · · · ► *radian* 'to do diligently';

*SLǢPAN*: *āslǣpan* 'to dream' · · · · ► *(ge)slǣpan*, *onslǣpan*, *slēpan* 'to sleep';

*SMŪGAN*: *āsmēagan*, *āsmūgan*, *(ge)smēagan*, *tōsmēagan* 'to investigate, inquire, look closely into, scrutinize, discuss' · · · · ► *āsmēagan*, *(ge)smēagan* 'to deliberate, ponder, think, reflect, meditate, consider';

*SPRECAN*: *foresprecan* 1 'to intercede for, answer for' · · · · ► *gesprecan* 'to address, accost';

*SWEFAN*: *geswefnian* 'to dream' · · · · ► *stefan* 'to sleep';

*SWERIAN*: *ofswerian* 'to abjure, deny an oath' · · · · ► *swerian*, *āswerian* 'to swear, make or take an oath';

*WINNAN*: *onwinnan* 'to attack, assail' · · · · ► *winnan*, *āwinnan*, *gewinnan* 'to fight, struggle, contend';

*WLĪTAN*: *ymbwlātian* 'to look about' · · · · ► *wlītan*, *wlātian 1*, *ymbwlātian* 'to gaze, observe, look'.

c.      Activity · · · · ► accomplishment

*PLEGAN*: *plegan* 'to play' · · · · ► *plēon* 'to adventure oneself'.

d.      Activity · · · · ► causative accomplishment

*CLĪFAN*: *tōclifrian* 'to scratch' · · · · ► *tōclifrian* 'to tear to pieces';

*(GE)WEFAN*: *wefan* 'to construct' · · · · ► *wefan* 'to put together'.


As regards the number of instances of entailing synsets, accomplishments are the third *Aktionsart* type in frequence according to the data of analysis. It evinces 10 instances that fall into the following types: accomplishment · · · · ► state (1 instance), accomplishment · · · · ► activity (5 instances), accomplishment · · · · ► unbounded process (3 instances) and accomplishment · · · · ► causative accomplishment (1 instance). They are presented in example (12):


(12)

a.      Accomplishment · · · · ► state

*ÐĒON*: *forðēon* 1 'to crush' · · · · ► *foreðēon*, *oferðēon* 'to surpass'.

b.      Accomplishment · · · · ► activity

*BLĪCAN*: *āblycgan* 'to get affected by fear, get dismayed' · · · · ► *bliccetan* 'to quiver';

*IERNAN*: *ofirnan* 'to tire with the running' · · · · ► *(ge)iernan 1*, *(ge)ærnan 1* 'to run';

*LICGAN*: *forlicgan* 'to commit adultery' · · · · ► *forlicgan*, *forligrian* 'to fornicate, to commit fornication';

*SĒCAN*: *āsēcan*, *ðurhsēcan* 'to search out, seek out' · · · · ► *(ge)sēcan* 1, *āsēcan* 'to search for, look for, seek';

*SWEFAN*: *geswefnian* 'to appear in a dream' · · · · ► *geswefnian* 'to dream'.

c.   Accomplishment · · · · ► unbounded process

*BLĪCAN*: *āblycgan* 'to get affected by fear, get dismayed' · · · · ► *āblycgan* 'to   grow pale';

*FEALLAN*: *āfeallan* 1 'to fall sick' · · · · ► *(ge)feallan, āfeallan* 1 'to decline, decay, sink';

*WEORÐAN*: *forweorðan* 'to sicken' · · · · ► *forweorðan* 'to deteriorate'.

d.   Accomplishment · · · · ► causative accomplishment

*SACAN*: *wiðersacian* 'to become apostate' · · · · ► *andsacian*, *forsacan*, onsacan, *wiðsacan, wiðersacian* 'to renounce, give up, abandon, forsake'.


The only instance of achievement entailing synset found in the analysis is given in example (13).


(13)   Achievement · · · · ► unbounded process

     *BLĪCAN*: *āblycgan* 'to get astonished, amazed, get affected by wonder'

         · · · · ► *āblycgan* 'to grow pale'.


The only instance of semelfactive entailing synset is the following:


(14)   Semelfactive · · · · ► causative accomplishment

     *GRINDAN*: *ongrindan* 'to smile' · · · · ► *ongrindan* 'to show the teeth'.


Only 2 entailing active accomplishment synsets are found in the analysis: active accomplishment · · · · ► state (1 instance) and active accomplishment · · · · ► active accomplishment (1 instance). They can be seen in example (15).


(15)

a.   Active accomplishment · · · · ► state

     *RǢDAN*: *radian* 'to come quickly' · · · · ► *radian* 'to be quick'.

b. Active accomplishment · · · · ► active accomplishment

*FINDAN*: *(ge)fandian* 'to visit' · · · · ► *fundian* 'to go'.

Regarding causative entailing synsets, the analysis turns out two instances of causative activity entailing synsets, which correspond to causative activity · · · · ► activity (1 instance) and causative activity · · · · ► causative accomplishment (1 instance). They are given in example (16).

(16)

a. Causative activity · · · · ► activity

*WEGAN*: *āwegan* 'to lift up' · · · · ► *(ge)wegan* 'to support, sustain'.

b. Causative activity · · · · ► causative accomplishment

*SCŪFAN*: *tōscūfan* 'to push apart, scatter, disperse' · · · · ► *tōscyftan* 'to divide, distribute'.

Finally, the second most frequent entailing synset is that of causative accomplishments. It turns out 22 instances and presents the following combinations: causative accomplishment · · · · ► state (4 instances), causative accomplishment · · · · ► activity (8 instances), causative accomplishment · · · · ► accomplishment (2 instances), causative accomplishment · · · · ► semelfactive (2 instances) and causative accomplishment · · · · ► causative accomplishment (6 instances). This can be seen in example (17).

(17)

a. Causative accomplishment · · · · ► state

*LĀCAN*: *ōleccan* 'to pay court to' · · · · ► *ōleccan* 'to be submissive';

*RǢDAN*: *radian* 'to put briefly' · · · · ► *radian* 'to be quick';

*SACAN*: *wiðsacan* 'to declare hostility' · · · · ► *sacan* 'to disagree';

*SWĪCAN*: *(ge)swīcan*, *āswīcan*, *(ge)ǣswician*, *swician* 'to deceive' · · · · ► *swician* 'to be treacherous'.

b. Causative accomplishment · · · · ► activity

*BLŌTAN*: *onblōtan* 'to offer' · · · · ► *(ge)blētsian* 'to adore, extol';

*GIELDAN*: *angildan* 1, *ongieldan* 'to atone for' · · · · ► *forgieldan* 'to make good';

*LĀCAN*: *ōleccan* 'to pay court to' ···· ► *ōleccan* 'to treat gently';

*LĒOGAN*: *(ge)lygnian* 'to convict or charge with falsehood, accuse falsely, slander, give one the lie' ···· ► *(ge)lēogan, ālēogan, forlēogan, oflēogan* 'to lie, say falsely';

*RǢDAN*: *forrǣdan* 'to betray' ···· ► *wiðrǣdan* 'to act against';

*RǢDAN*: *forrǣdan* 'to wrong, injure' ···· ► *wiðrǣdan* 'to act against';

*RǢDAN*: *forrǣdan* 'to condemn' ···· ► *wiðrǣdan* 'to act against';

*WRITE*: *āwrītan* 'to write down' ···· ► *(ge)wrītan, writian* 2 'to write'.

c.     Causative accomplishment ···· ► accomplishment

*BŪGAN*: *(ge)bīegan* 'to settle' ···· ► *onbūgan* 'to agree with';

*GIEFAN*: *giefan, forgiefan* 'to give in marriage' ···· ► *giftian* 'to marry'.

d.     Causative accomplishment ···· ► semelfactive

*BLŌTAN*: *(ge)blētsian* 'to bless, consecrate, hallow, call holy' ···· ► *(ge)blētsian* 'to sign with the cross';

*BLŌTAN*: *(ge)blētsian* 'to ordain' ···· ► *(ge)blētsian* 'to sign with the cross'.

e.     Causative accomplishment ···· ► causative accomplishment

*BLŌTAN*: *blōtan, onblōtan* 'to sacrifice, kill for a sacrifice' ···· ► *onblōtan* 'to kill a victim';

*BLŌTAN*: *blōtan, onblōtan* 'to sacrifice, kill for a sacrifice' ···· ► *(ge)blētsian* 'to bless, consecrate, hallow, call holy';

*(GE)LĪÐAN*: *oferlǣdan* 'to translate' ···· ► *(ge)lǣdan* 'to place, lay';

*(GE)RĪSAN*: *rǣran* 'to offer a prayer' ···· ► *ārǣran* 'to extol';

*GRINDAN*: *ongrindan* 'to grind with the teeth' ···· ► *ongrindan* 'to show the teeth';

*LĀCAN*: *ōleccan* 'to pay court to' ···· ► *gelācian* 'to bestow, present, give, accompany with gifts'.

All things considered, the analysis shows that activities are the most frequent *Aktionsart* type in this semantic relationship. Moreover, regarding the frequency of spontaneous and causative *Aktionsart* types in –troponymy, spontaneous classes are more common than their causative counterparts, causative accomplishments and causative activities being the only causative *Aktionsart* types which present instances of this semantic association. Furthermore, the examples involving causative activities

are very scarce. The data results of the analysis of the semantic relation -troponymy are presented in table 2.

| - Troponymy | |
| --- | --- |
| **State** · · · · ► **X** | |
| State · · · · ► state | 2 |
| State · · · · ► activity | 3 |
| **State** · · · · ► **X total** | **5** |
| **Activity** · · · · ► **X** | |
| Activity · · · · ► state | 12 |
| Activity · · · · ► activity | 15 |
| Activity · · · · ► accomplishment | 1 |
| Activity · · · · ► causative accomplishment | 2 |
| **Activity** · · · · ► **X total** | **30** |
| **Accomplishment** · · · · ► **X** | |
| Accomplishment · · · · ► state | 1 |
| Accomplishment · · · · ► activity | 5 |
| Accomplishment · · · · ► unbounded process | 3 |
| Accomplishment · · · · ► causative accomplishment | 1 |
| **Accomplishment** · · · · ► **X total** | **10** |
| **Achievement** · · · · ► **X** | |
| Achievement · · · · ► unbounded process | 1 |
| **Achievement** · · · · ► **X total** | **1** |
| **Semelfactive** · · · · ► **X** | |
| Semelfactive · · · · ► causative accomplishment | 1 |
| **Semelfactive** · · · · ► **X total** | **1** |
| **Active accomplishment** · · · · ► **X** | |
| Active accomplishment · · · · ► state | 1 |
| Active accomplishment · · · · ► active accomplishment | 1 |
| **Active accomplishment** · · · · ► **X total** | **2** |
| **Causative activity** · · · · ► **X** | |
| Causative activity · · · · ► activity | 1 |
| Causative activity · · · · ► causative accomplishment | 1 |

| | |
|---|---|
| **Causative activity** · · · · ► **X total** | **2** |
| **Causative accomplishment** · · · · ► **X** | |
| Causative accomplishment · · · · ► state | 4 |
| Causative accomplishment · · · · ► activity | 8 |
| Causative accomplishment · · · · ► accomplishment | 2 |
| Causative accomplishment · · · · ► semelfactive | 2 |
| Causative accomplishment · · · · ► causative accomplishment | 6 |
| **Causative accomplishment** · · · · ► **X total** | **22** |
| **-Troponymy total** | **73** |

Table 2: The semantic relation of -troponymy in the lexical paradigms of strong verbs.

### 4.3.3. Backward presupposition

Unlike the types of entailment discussed above, the verbs associated by backward presupposition do not exhibit temporal inclusion, in such a way that two synsets (or rather the states or events that they refer to) take place sequentially and the entailed synset precedes in time the entailing synset. The total number of pairs of synsets associated by this conceptual-semantic relationship in the analysis is 186. Out of the 186 pairs of synsets associated by means of backward pressuposition, 168 involve *Aktionsart* types of at least one state or change of state, that is a 90.32% of the total number. The most frequent *Aktionsart* type of entailing synsets has turned out to be a causative accomplishment (58 instances), followed by a state (43 instances) and an accomplishment (35 instances). On the other hand, the most frequent entailed synsets has turned to be an accomplishment (50 instances), followed by an activity (48 instances), followed by a state (35 instances). The most frequent association corresponds to an entailing state and an entailed accomplishment (27 instances), followed by an entailing and entailed causative accomplishment (24 instances) and an entailing causative accomplishment and an entailed activity (17 instances). Finally, whereas spontaneous *Aktionsart* types are present in 123 entailing synsets, there are only 63 causative entailing synsets. Moreover, out of the 63 causative entailing synsets, whereas 58 are causative accomplishments, only 3 are causative activities, 1 is a causative achievement and 1 is a causative unbounded process. On the other hand, whereas 154 entailed synsets present spontaneous *Aktionsart* types, only 32 present causative *Aktionsart* types. Furthermore, out of the 32 causative *Aktionsart* types,

whereas 27 are causative accomplishments, only 3 examples of causative activities and 2 instances of causative active accomplishments are found in the analysis.

All the pairs of synsets involving backward presupposition are listed below. They are classified according to the *Aktionsart* types involved in the association.

The second most frequent *Aktionsart* type of entailing synsets in backward pressuposition is that of states. It produces 43 instances with 5 different associations: state ⟩—➤ state (7 instances), state ⟩—➤ activity (4 instances), state ⟩—➤ accomplishment (27 instances), state ⟩—➤ unbounded process (4 instances) and state ⟩—➤ active accomplishment (1 instance). They are displayed in example (18).

(18)

a.    State ⟩—➤ state

*CUNNAN*: *(ge)cūðian* 'to regard' ⟩—➤ *(ge)cunnan, oncunnan* 'to know, be acquainted with';

*(GE)TĒON 1*: *ðurhtēon* 1 'to undergo' ⟩—➤ *ðurhtēon 1* 'to afford';

*GĒOTAN*: *āgitan* 'to consider' ⟩—➤ *āgitan* 'to know';

*GIETAN*: *ongietan* 'to consider' ⟩—➤ *ongietan* 'to know';

*MUNAN: onmunan* 'to wish' ⟩—➤ *onmunan* 'to think or consider worthy or entitled, esteem';

*STANDAN*: *onstandan* 'to consist of or in' ⟩—➤ *(ge)standan* 'to be, exist';

*STANDAN*: *āstandan* 'to support, endure' ⟩—➤ *(ge)standan* 'to be, exist'.

b.    State ⟩—➤ activity

*CUNNAN*: *(ge)cunnan* 'to know how to, be able, can' ⟩—➤ *(ge)cȳðan* 'to perform, practice, exercise';

*DŪFAN*: *gedūfan* 'to be drowned' ⟩—➤ *(ge)dūfan, gedūfan* 'to dive, sink, duck';

*(GE)LĪÐAN: forlīðan* 'to shuffer shipwreck' ⟩—➤ *(ge)līðan* 'to sail';

*HLĪFAN*: *oferhlīfan* 'to tower over' ⟩—➤ *oferhlīfan* 'to rise high above, overtop'.

c.    State ⟩—➤ accomplishment

*BERSTAN*: *āberstan* 'to be broken' ⟩—➤ *(ge)berstan, forberstan* 'to break, crack';

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*BERSTAN tōberstan* 'to be rent asunder' ⊱⟶ *(ge)berstan, forberstan* 'to break, crack';

*CNĀWAN*: *(ge)cnāwan, ācnāwan, gecnāwan, oncnāwan, tōcnāwan* 'to know' ⊱⟶ *gecnāwan* 'to ascertain';

*DRĒOPAN*: *(ge)drēopan, ādrēopan, drēopian, drȳpan* 'to drip' ⊱⟶ *drȳpan* 'to moisten';

*DRĒOSAN*: *tōdrēosan* 'to be destroyed' ⊱⟶ *(ge)drēosan, ādrēosan* 'to fall to pieces';

*DRĒOSAN*: *drēorigian* 'to be sad or dreary' ⊱⟶ *drēorigian* 'to become sad or dreary';

*DRĒOSAN*: *drūsan* 'to drowse' ⊱⟶ *drūsan* 'to become low, slow or inactive';

*DRINCAN*: *ādrincan* 'to be quenched by water' ⊱⟶ *ondrencan* 1 'to fill with water';

*DRINCAN*: *(ge)druncnian, fordrincan* 'to be drunk' ⊱⟶ *(ge)druncnian, oferdrincan, ondruncnian* 'to get drunk, to become intoxicated';

*GĒOTAN*: *āgitan* 'to know' ⊱⟶ *āgitan* 'to find out, discover, find';

*GĒOTAN*: *āgitan* 'to know' ⊱⟶ *āgitan* 'to understand';

*GIETAN: ongietan* 'to know' ⊱⟶ *ongietan* 'to hear, learn';

*GIETAN: ongietan* 'to know' ⊱⟶ *ongietan* 'to see, perceive, understand;

*GLĪDAN*: *tōglīdan* 'to be dispersed, dissipated, dispelled' ⊱⟶ *glīdan, tōglīdan* 'to vanish';

*HEBBAN*: *(ge)hefigian* 'to be oppressed or burdened' ⊱⟶ *āhefegian, (ge)hefigian* 'to become heavy, depressed or weakened';

*HLĪFAN*: *forðhlīfian* 'to stand out' ⊱⟶ *forðhlīfian* 'to appear';

*HWEORFAN*: *forhweorfan* 'to be destroyed' ⊱⟶ *forhweorfan* 'to come to an end';

*LICGAN*: *ālicgan* 'to be at an end' ⊱⟶ *ālicgan, forlicgan* 'to come to an end, lapse';

*SACAN*: *wiðersacian* 'to be apostate' ⊱⟶ *wiðersacian* 'to become apostate';

*SĪGAN*: *tōsīgan* 'to be threadbare' ⊱⟶ *tōsīgan* 'to get worn out';

*SITTAN*: *(ge)sittan* 1, *ofersittan, (ge)settan* 'to possess' ⊱⟶ *ofersittan* 'to take possession of';

ÐĪNAN: *ofðīnan* 'to be too moist' ➤—— *ofðīnan* 'to get too moist';

ÐĪNAN: *ðānian* 'to be moist' ➤—— *ðānian* 'to become moist';

SWEFAN: *swefan* 'to sleep in death' ➤—— *forswefian 1* 'to perish';

WACAN: *wacian* 'to be awake or active, be alert, be on guard' ➤—— *wacan 1, āwacan, āwacian, āwæcnian, āweccan, onwacan, onwæcnan 1, wreccan 1* 'to awake';

WACAN: *wacian* 'to remain or keep awake, not to sleep' ➤—— *wacan 1, āwacan, āwacian, āwæcnian, āweccan, onwacan, onwæcnan 1, wreccan 1* 'to awake';

WEAXAN: *weaxan* 'to be produced' ➤—— *āweaxan* 'to arise, come forth'.

d.　　State ➤—— unbounded process

BLĪCAN: *āblīcan* 'to be white' ➤—— *āblycgan* 'to grow pale';

MAGAN: *magan, magian* 'to be strong' ➤—— *mægenian* 'to gain strength';

SĪGAN: *onsīgan* 'to impend' ➤—— *(ge)sīgan 1, onsīgan* 'to approach';

WEAXAN: *forweaxan* 'to be overgrown' ➤—— *forweaxan, oferweaxan* 'to overgrow, overspread'.

e.　　State ➤—— active accomplishment

SITTAN: *(ge)sittan* 1 'to be seated' ➤—— *setlan* 'to seat'.


Regarding entailing synsets involving activities, this analysis has found 33 instances and 7 different combinations have been identified: activity ➤—— state (10 instances), activity ➤—— activity (4 instances), activity ➤—— accomplishment (13 instances), activity ➤—— achievement (1 instance), activity ➤—— active accomplishment (2 instances), activity ➤—— causative accomplishment (2 instances) and activity ➤—— causative active accomplishment (1 instance). They can be seen in example (19):


(19)

a.　　Activity ➤—— state

BŪAN: *(ge)būan* 'to cultivate' ➤—— *(ge)bōgian* 'to possess';

DRĒOGAN: *(ge)drēogan* 'to take part in' ➤—— *drohtian* 'to dwell or keep company with, associate with';

DRĒOGAN: *drohtian* 'to converse' ➤—— *drohtian* 'to dwell or keep company with, associate with';

*FINDAN*: *āfandian*, *(ge)fandian*, *oferfindan* 'to try, attempt, tempt, test, prove, put to the proof, make trial of' ➤⟶ *fundian* 'to desire, with for, aspire to';

*HRĒOWAN*: *(ge)hrēowsian* 'to do penance' ➤⟶ *(ge)hrēowan*, *hrēowian* 'to rue, repent, be penitent';

*MUNAN*: *(ge)myndgian*, *(ge)myntan*, *mynegian*, *mynian* 'to intend, mean, purpose, direct oneself towards an object' ➤⟶ *(ge)munan* 'to be mindful';

*SLǢPAN*: *(ge)slǣpan*, *onslǣpan*, *slēpan* 'to sleep' ➤⟶ *āslǣpan* 'to be sleepy';

*SPRECAN*: *foresprecan 1* 'to answer for' ➤⟶ *foresprecan* 1 'to be surety for';

*WĪCAN*: *wācian* 'to flinch' ➤⟶ *wācian* 'to waver, be cowardly, want resolution or courage';

*WLĪTAN*: *wlītan*, *wlātian* 1, *ymbwlātian* 'to gaze, observe, look' ➤⟶ *ðurhwlītan* 'to see'.

b.     Activity ➤⟶ activity

*FINDAN*: *āfandian*, *(ge)fandian*, *oferfindan* 'to try, attempt, tempt, test, prove, put to the proof, make trial of' ➤⟶ *(ge)findan* 'to devise, invent, contrive';

*(GE)LĪÐAN*: *(ge)līðan* 'to proceed' ➤⟶ *(ge)lǣdan* 'to do';

*(GE)TĒON 1*: *ðurhtēon* 1 'to continue, carry on' ➤⟶ *ātēon* 'to dispose of, treat, deal with';

*HLŌWAN*: *āhlōwan* 'to roar or bellow again' ➤⟶ *hlōwan* 'to roar, bellow'.

c.     Activity ➤⟶ accomplishment

*FARAN*: *gefērscipian* 'to accompany' ➤⟶ *gefērscipian* 'to unite';

*FINDAN*: *(ge)fandian* 'to explore' ➤⟶ *fundian* 'to set out';

*(GE)RĪSAN*: *rǣsan* 'to assault, attack' ➤⟶ *(ge)rīsan*, *ārīsan* 'to rise';

*(GE)TĒON* 1: *ātēon* 'to use, employ, apply' ➤⟶ *(ge)tēon* 1 'to take';

*GINNAN: onginnan* 'to act, proceed' ➤⟶ *ginnan, onginnan* 'to begin';

*HRINAN*: *āhrīnan* 'to handle' ➤⟶ *(ge)hrīnan*, *onhrīnan* 1 'to take hold of, lay hold of, reach';

*MELTAN*: *(ge)mientan* 'to purge' ➤⟶ *(ge)meltan* 1 'to digest';

*SLǢPAN*: *(ge)slǣpan*, *onslǣpan*, *slēpan* 'to sleep' ➤⟶ *āslǣpan* 'to begin to sleep';

*SLǢPAN*: *(ge)slǣpan*, *onslǣpan*, *slēpan* 'to sleep' ⤚⟶ *āslǣpan*, *onslǣpan* 'to fall asleep';

*SLǢPAN*: *(ge)slǣpan*, *onslǣpan*, *slēpan* 'to sleep' ⤚⟶ *slāpian* 'to become sleepy';

*STANDAN*: onstandan 'to apply oneself to' ⤚⟶ *āstundian* 'to take upon oneself';

*SWELGAN*: *(ge)swelgan*, *swolgettan* 'to swallow' ⤚⟶ *swolgettan* 'to take into the throat';

*SWELGAN*: *swolgettan* 'to gargle' ⤚⟶ *swolgettan* 'to take into the throat'.

d.  Activity ⤚⟶ achievement

*LĀCAN*: *lācan* 'to fight, contend' ⤚⟶ *lǣcan* 'to flare up'.

e.  Activity ⤚⟶ active accomplishment

*CUMAN*: *forcuman*, *ofercuman* 'to surpass, overtake' ⤚⟶ *(ge)cuman*, *ācuman*, *ancuman* 'to get to, arrive, come to';

*SLǢPAN*: *(ge)slǣpan*, *onslǣpan*, *slēpan* 'to sleep' ⤚⟶ *onslǣpan* 'to go to sleep'.

f.  Activity ⤚⟶ causative accomplishment

*(GE)RĪPAN*: *(ge)rīpan*, *repan* 'to reap' ⤚⟶ *rīpian* 'to ripen, mature';

*SITTAN*: *āsettan*, *(ge)settan* 'to erect, build' ⤚⟶ *(ge)settan* 'to base, found, institute'.

g.  Activity ⤚⟶ causative active accomplishment

*(GE)TĒON* 1: *(ge)tācnian* 'to witness' ⤚⟶ *tīeman*, *(ge)tīeman* 'to call as witness, vouch to warranty'.


To continue the discussion of this semantic relation, the second most frequent *Aktionsart* type in entailing synsets is that of accomplishments. In this analysis, 35 instances and 6 different associations have been found: accomplishment ⤚⟶ state (11 instances), accomplishment ⤚⟶ activity (13 instances), accomplishment ⤚⟶ accomplishment (2 instances), accomplishment ⤚⟶ achievement (1 instance), accomplishment ⤚⟶ unbounded process (7 instances), accomplishment ⤚⟶ causative active accomplishment (1 instance). They are presented in example (20).

(20)

a.      Accomplishment ➤→ state

*BERAN*: *geandbyrdan* 'to violate' ➤→ *āberan* 'to be under an obligation for an imposition, etc.';

*CALAN*: *ācalan* 'to die of cold' ➤→ *calan* 'to be cold';

*DWELAN*: *dwelan*, *dwellan*, *(ge)dwolian* 'to err' ➤→ dwellan 'to continue, remain, dwell';

*GIETAN*: *ongietan* 'to judge' ➤→ *ongietan* 'to know';

*GIETAN*: *forgietan*, *forgitelian*, *ofergietan*, *ofergitolian* 'to forget' ➤→ *ongietan* 'to know';

*GIETAN*: *ongietan* 'to recognize' ➤→ *ongietan* 'to know';

*GIETAN*: *forgietan*, *forgitelian*, *ofergietan*, *ofergitolian* 'to forget' ➤→ *ofergitolian* 'to be forgetful of';

*GLĪDAN*: *tōglīdan* 'to collapse' ➤→ *gliddrian* 'to be unstable, totter';

*STINCAN*: *tōstincan* 'to distinguish by smell' ➤→ *(ge)stincan* 'to smell';

*WEALDAN*: *oferwealdan* 'to get the better of' ➤→ *(ge)wealdan*, *geonwealdian* 'to have power or dominion over';

*WEORÐAN*: *āweorðan*, *forweorðan* 'to pass away, cease to be, die, perish, become nothing, vanish' ➤→ *(ge)weorðan* 'to be'.

b.      Accomplishment ➤→ activity

*BIDDAN*: *ābedecian*, *ābiddan* 'to get by asking' ➤→ *biddan*, *gebiddan*, *ābǣdan* 'to ask, require';

*BRŪCAN*: *(ge)brȳcian*, *(ge)brȳcsian* 'to profit, benefit' ➤→ *brūcan*, *(ge)brȳclan*, *(ge)brȳcsian* 'to enjoy';

*CUNNAN*: *(ge)cunnan* 'to become acquainted with' ➤→ *(ge)cunnian* 'to explore, investigate, seek for, search into, inquire';

*DRĒOGAN*: *ðurhdrēogan* 'to work through' ➤→ *(ge)drēogan* 'to work, labour';

*DRINCAN*: *(ge)druncnian*, *oferdrincan*, *ondruncnian* 'to get drunk, to become intoxicated' ➤→ *oferdrincan* 'to drink too much';

*FINDAN*: *(ge)findan* 'to obtain by search or study' ➤→ *(ge)fandian* 'to examine, seek, search out';

*FRIGNAN*: *(ge)frignan*, *fricgan*, *(ge)fricgan*, *gefrāgian* 'to learn by inquiry, find out' ➤→ *fricgan*, *(ge)fricgan* 'to seek after, investigate';

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METAN: *metan*, *āmetan*, *gemætgian* 'to estimate' ⤐ *āmetan*, *gemætgian*, *(ge)metgian* 'to measure in the mind, weigh in mind, consider, deliberate, meditate, plan';

MUNAN: *(ge)myntan* 'to determine, resolve' ⤐ *(ge)munan*, *(ge)myntan* 'to think, meditate, consider';

RǢDAN: *(ge)rǣdan*, *ārǣdan* 'to determine, decide, resolve after deliberation' ⤐ *oferrǣdan* 'to consider';

SITTAN: *āsettan* 'to transport oneself over' ⤐ *(ge)settan* 'to set off';

SMŪGAN: *āsmēagan* 'to trace out, elicite, devise' ⤐ *āsmēagan*, *āsmūgan*, *(ge)smēagan*, *tōsmēagan* 'to investigate, inquire, look closely into, scrutinize, discuss';

SMŪGAN: *āsmēagan*, *(ge)smēagan* 'to judge, deem' ⤐ *āsmēagan*, *(ge)smēagan*, *tōsmēagan* 'to examine'.

c. Accomplishment ⤐ accomplishment

FŌN: *forfōn* 'to forfeit' ⤐ *misfōn* 'to make a mistake';

LĀCAN: *(ge)edlǣcan* 'to repeat, renew' ⤐ *lācan* 'to jump'.

d. Accomplishment ⤐ achievement

BIDDAN: *ābedecian* 'to disclose, uncover, discover' ⤐ *ābedecian* 'to find hidden, detect'.

e. Accomplishment ⤐ unbounded process

BRĒOÐAN: *ābrēoðan* 'to come to nought' ⤐ *ābrēoðan* 'to fall away, fail';

CWĪNAN: *ācwīnan* 'to disappear' ⤐ *ācwīnan, cwīnan* 'to waste or dwindle away';

GANGAN: *gangan*, *āgangan*, *(ge)gān*, *gegān*, *gengan*, *gegangan* 'to go' ⤐ *āgangan* 'to lose strength';

SĪGAN: *tōsīgan* 'to get worn out' ⤐ *(ge)sīgan* 1, *āsīgan*, *onsīgan* 'to decline';

SLŪPAN: *tōslūpan* 'to get powerless or paralysed' ⤐ *āslūpan*, *tōslūpan* 'to slip away';

ÐĪNAN: *ðānian* 'to become moist' ⤐ *ðīnan* 'to grow moist or damp';

ÐWĪNAN: *tōðwīnan*, *āðwīnan* 'to vanish, vanish away, disappear' ⤐ *ðwīnan* 'to lessen, decrease, dwindle'.

f. Accomplishment ⤐ causative active accomplishment

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*FŌN*: *(ge)fōn, āfōn, onfōn 2* 'to receive, accept' �435mp;⟶ *onfōn 2* 'to allow to come, not to exclude'.

Only 1 instance of achievement is found in the entailing synsets of backward pressuposition. It is given in example (21).

(21) Achievement ⟼ unbounded process
*BLĀWAN*: *āblāwan, forðblæstan, tōblāwan* 'to blast, burst out, blow up' ⟼ *āblāwan, onblāwan, tōblāwan* 'to distend, swell, puff up'.

Likewise, only 1 instance of unbounded process is found in the entailing synsets of backward pressuposition, presented in example (22).

(22) Unbounded process ⟼ accomplishment
*WRĪDAN*: *wrīdan, gewrīðan, wrīdian* 'to grow, thrive, flourish' ⟼ *āwrīdian* 'to originate'.

As regards entailing synsets involving active accomplishments, the analysis has gathered 10 instances and found 2 distinct combinations: active accomplishment ⟼ activity (8 instances) and active accomplishment ⟼ accomplishment (2 instances). They can be seen in example (23).

(23)
a. Active accomplishment ⟼ activity
*(GE)LĒORAN*: *oferlēoran* 'to abandon' ⟼ *(ge)lēoran, ālēoran, forðgelēoran* 'to depart';
*(GE)LĪÐAN*: *gelīðan* 'to arrive' ⟼ *(ge)līðan* 'to travel';
*(GE)LĪÐAN*: *gelīðan* 'to reach port, come to land' ⟼ *(ge)līðan* 'to sail';
*NĒOTAN*: *(ge)notian* 'to consume' ⟼ *nēotan, (ge)notian, nyttian* 'to use';
*SCEORFAN*: *forsceorfan* 'to eat up' ⟼ *sceorfan, forsceorfan* 'to bite';
*SCRĪÐAN*: *scrīðan* 'to go' ⟼ *forðscrīðan 1* 'to depart';
*SITTAN*: *āsettan, forðasettan, (ge)settan* 'to create, make, form' ⟼ *(ge)settan* 'to prepare';

STĪGAN: *(ge)stīgan, āstīgan* 'to go' ⤃⟶ *ofstīgan* 'to depart'.

b.  Active accomplishment ⤃⟶ accomplishment

FINDAN: *fundian* 'to go' ⤃⟶ *fundian* 'to set out';

SITTAN: *āsettan, forðasettan, (ge)settan* 'to create, make, form' ⤃⟶ *ymbsittan* 'to engage about'.

Regarding the entailing synsets involving causative activities, only three cases have been found in the analysis. They present 2 different associations: causative activity ⤃⟶ activity (2 instances) and causative activity ⤃⟶ causative activity (1 instance). They are shown in example (24).

(24)

a.  Causative activity ⤃⟶ activity

HEBBAN: *āhebban, onhebban* 'to raise up, take up, heave up' ⤃⟶ *āhebban* 'to uphold, support';

MELCAN: *(ge)meolcian* 'to suckle' ⤃⟶ *(ge)meolcian* 'to give milk'.

b.  Causative activity ⤃⟶ causative activity

SŪGAN: *(ge)sȳcan* 1 'to wean' ⤃⟶ *(ge)sȳcan 1* 'to cause to suck, suckle'.

The most frequent *Aktionsart* type of the entailing synsets in backward presupposition is that of causative accomplishments. It exhibits 58 examples and 8 different combinations: causative accomplishment ⤃⟶ state (7 instances), causative accomplishment ⤃⟶ activity (17 instances), causative accomplishment ⤃⟶ accomplishment (4 instances), causative accomplishment ⤃⟶ achievement (2 instances), causative accomplishment ⤃⟶ unbounded process (1 instance), causative accomplishment ⤃⟶ active accomplishment (1 instance), causative accomplishment ⤃⟶ causative accomplishment (24 instances), causative accomplishment ⤃⟶ causative activity (2 instances). They are presented in example (25).

(25)

a.  Causative accomplishment ⤃⟶ state

ĀGAN: *(ge)āgnian* 'to enslave' ⤃⟶ *āgan* 'to have control over';

*(GE)TĒON* 1: *ðurhtēon* 'to effect, perform, carry out, accomplish, fulfill, perpetrate' ⟶ *teohhian* 'to propose, intend';

*HEALDAN*: *forhealdan* 'to fall away from, forsake' ⟶ *forðhealdan* 'to hold to';

*RǢDAN*: 'to carry out, make, execute' ⟶ *(ge)rǣdan* 'to have an idea';

*SCĪNAN*: *oferscīnan, (ge)scīnan* 'to illuminate, cover with light' ⟶ *scīnan, (ge)scīnan* 'to be resplendent';

*SITTAN*: *foresettan, foregesettan, forsǣtian, forsettan* 1, *ofsetnian, ofsittan, ymbsettan,* ymbsittan 'to surround, set round, encompass, shut in, close in, hedge in' ⟶ *ymbsittan* 'to be around or neighbouring';

*WLĪTAN*: *(ge)wlitigian* 'to beautify, adorn' ⟶ *ðurhwlītan* 'to see'.

b.     Causative accomplishment ⟶ activity

BERAN: *byrelian* 'to give to drink' ⟶ *byrelian* 'to pour out, serve';

BERAN: *byrelian* 'to give to drink' ⟶ *(ge)beran* 'to offer';

CUNNAN: *ācunnian, ācȳðan, (ge)cunnian, (ge)cȳðan* 'to prove, confirm, ascertain' ⟶ *ācunnian, (ge)cunnian* 'to try, test, attempt';

FEOHTAN: *oferfeohtan* 'to conquer, vanquish' ⟶ *(ge)feohtan, āfeohtan* 'to fight, combat, make war';

FLĪTAN: *oferflītan* 'to beat, overcome' ⟶ *(ge)flītan* 'to fight, contend, strive';

*(GE)TĒON* 1: *ðurhtēon* 1 'to effect, perform, carry out, accomplish, fulfill, perpetrate' ⟶ *ātēon* 'to dispose of, treat, deal with';

GĒOTAN: *ofergēotan* 'to suffuse, cover by pouring' ⟶ *ofergēotan, ðurhgēotan* 'to pour over, pour upon';

GRĪPAN: *forgrīpan* 'to overwhelm' ⟶ *(ge)grīpan, forgrīpan* 'to attack, assail';

SCĒOTAN: *ofscotian* 'to wound with an arrow or spear' ⟶ *(ge)scotian* 'to shoot a weapon at a person';

SCĒOTAN: *ofscotian* 'to kill with an arrow or spear' ⟶ *(ge)scotian* 'to shoot a weapon at a person';

SCIERAN: *(ge)scirian, tōscirian* 'to distribute, allot' ⟶ *(ge)scirian* 'to count, reckon, number';

SITTAN: *ofersettan* 'to overcome' ⟶ *wiðsettan* 'to oppose';

*SITTAN*: *forsǣtian* 'to take by surprise, catch by lying in ambush' ⤚⟶ *sǣtian* 'to waylay';

*SITTAN*: *(ge)settan* 'to base, found, institute' ⤚⟶ *āsēttan* 'to design';

*SITTAN*: *(ge)settan* 'to confirm' ⤚⟶ *ofsittan* 'to check';

*SLĒAN*: *ofslēan* 'to wound by a blow' ⤚⟶ *(ge)slēan, āslēan, forslēan, slæhtan* 'to smite, strike';

*WĪGAN*: *oferwīgan* 'to conquer, overcome in fight' ⤚⟶ *wīgan, wīgian* 'to do battle, make war, fight'.

c.   Causative accomplishment ⤚⟶ accomplishment

*BRECAN*: *(ge)brecan* 'to capture (city), tame, subdue' ⤚⟶ *ābrecan* 'to vanquish';

*(GE)TĒON*: *ðurhtēon* 1 'to effect, perform, carry out, accomplish, fulfil, perpetrate' ⤚⟶ *ontēon* 'to undertake';

*SĒCAN*: *(ge)sēcan* 1 'to dispose, appoint' ⤚⟶ *āsēcan* 'to select';

*SWEFAN*: *onswebban* 'to bury' ⤚⟶ *forswefian* 1 'to perish'.

d.   Causative accomplishment ⤚⟶ achievement

*ĒACAN*: *(ge)ēacnian* 'to bring forth, produce' ⤚⟶ *(ge)ēacnian* 'to conceive, become pregnant';

*(GE)CENNAN*: *oncennan* 'to bear' ⤚⟶ *(ge)cennan* 'to conceive'.

e.   Causative accomplishment ⤚⟶ unbounded process

*GRŌWAN*: *ofergrōwan* 'to occupy with (its) growth (of a tree)' ⤚⟶ *(ge)grōwan* 'to grow'.

f.   Causative accomplishment ⤚⟶ active accomplishment

*WADAN*: *onwadan* 'to occupy, seize, take possession of' ⤚⟶ *onwandan* 'to invade'.

g.   Causative accomplishment ⤚⟶ causative accomplishment

*BERAN*: *geedbyrdan* 'to cause to be born again' ⤚⟶ *āberan* 'to bear (a child)';

*BINDAN*: *onbindan* 1, *unbindan* 'to unbind, untie, disclose, free or release from a bond, loosen' ⤚⟶ *(ge)bindan, (ge)bendan, forbindan* 'to bind, tie, tie up, fasten, fetter';

*FEALDAN*: *onfealdan, unfealdan* 'to unfold' ⤚⟶ *(ge)fealdan, gefildan* 'to fold up';

*FEALDAN*: *onfealdan* 'to unwrap, unroll' ⟶ *(ge)fealdan* 'to wrap, wrap up, roll up';

*(GE)LŪCAN*: *unlūcan* 'to unlock' ⟶ *(ge)lūcan* 'to lock, shut up';

*(GE)LŪCAN*: *unlūcan* 'to unclose' ⟶ *(ge)lūcan* 'to close, shut up';

*(GE)TĒON* 1: *ontēon* 'to untie' ⟶ *(ge)tēon 1* 'to draw or bind together';

*HELAN*: *unhelian* 'to uncover, reveal' ⟶ *(ge)helan, āhelian, forhelan, forhelian, (ge)helian, oferhelian* 'to hide, conceal';

*HLADAN:* *onhladan* 'to discharge, unload' ⟶ *(ge)hladan* 'to lade, load, burden, freight';

*HLĒOTAN*: *(ge)hlēotan, hlytman* 'to allot' ⟶ *tōhlēotan* 'to divide into lots';

*HLĪDAN*: *onhlīdan* 'to disclose' ⟶ *hlīdan, gehlidian* 'to cover with a lid';

*NĒOTAN*: *(ge)notian* 'to discharge an office' ⟶ *nēotan, (ge)notian* 'to employ';

*RĀEDAN*: *forrādan* 'to deprive by treachery' ⟶ *forrādan* 'to betray';

*SCĒOTAN*: *unscyttan* 'to unbolt' ⟶ *forscyttan, scyttan* 'to bolt';

*SCIERAN*: *(ge)scirian, tōscirian* 'to distribute, allot' ⟶ *āscirian, forscirian, (ge)scirian, tōscirian* 'to separate, divide, part, set apart, sever, detach, mark off';

*SĒOÐAN*: *forsēoðan* 'to consume by affliction' ⟶ *(ge)sēoðan* 'to afflict, disturb';

SPANAN: *āspannan, unspannan* 'to unloose, unbind, release, unclasp, unfasten' ⟶ *(ge)spannan* 'to join, fasten, link';

*TELDAN*: *teldian* 'to entrap' ⟶ *teldian* 'to set (trap)';

*WĪTAN*: *(ge)wītnian* 'to punish, chastise' ⟶ *(ge)wītan, edwitan, edwītan* 'to blame, accuse, impute';

*WLĪTAN*: *(ge)unwlitegian* 'to unform' ⟶ *(ge)wlitigian* 'to form, fashion';

*WRĒON*: *āwrēon, unwrēon* 'to uncover, disclose, open' ⟶ *(ge)wrēon, oferwrēon, wrīga* 'to cover';

*WRĪÐAN*: *unwriðan* 'to untwist, twist apart' ⟶ *(ge)wrīðan* 'to twist';

*WRĪÐAN*: *onwrīðan* 'to unwrap' ⟶ *(ge)wrīðan* 'to wrap, wrap around';

*WRĪÐAN*: *onwrīðan, unwriðan* 'to unbind, loosen' ➤——➤ *(ge)wrīðan* 'to tie, fasten, bind'.

h. Causative accomplishment ➤——➤ causative activity

*DRINCAN: drencan, fordrencan, fordrincan, ofdrincan, oferdrencan, ondrencan* 'to intoxicate, inebriate, to make drunk' ➤——➤ *drencan* 'to give to drink';

*HLADAN*: *forhladan* 'to exhaust' ➤——➤ *āhladan* 'to draw out'.

Regarding entailing synsets involving a causative achievement, only one instance has been found in the analysis, it is presented in example (26).

(26) Causative achievement ➤——➤ causative accomplishment

*BIERNAN: (ge)bærnan* 'to cauterize ➤——➤ *(ge)bærnan* 'to expose to the action of heat'

Entailing synsets involving a causative unbounded process turn out one instance only, which can be seen in example (27).

(27) Causative unbounded process ➤——➤ accomplishment

*WACAN: āweccan, wreccan* 1 'to raise up children' ➤——➤ *āweccan* 'to beget'.

This analysis has shown that this semantic relationship normally involves state or change of state *Aktionsart* types. Moreover, spontaneous types are by far more frequent than their causative counterparts. As regards the causative *Aktionsart* types, the only significant type is that of causative accomplishments, being the examples involving causative activities, causative achievements, causative unbounded processes and causative active accomplishments very scarce. All these aspects are summarized in table 3.

| **Backward presupposition** | |
|---|---|
| **State ➤——➤ X** | |
| State ➤——➤ state | 7 |
| State ➤——➤ activity | 4 |

| | |
|---|---|
| State ➤ accomplishment | 27 |
| State ➤ unbounded process | 4 |
| State ➤ active accomplishment | 1 |
| **State ➤ X total** | **43** |
| **Activity ➤ X** | |
| Activity ➤ state | 10 |
| Activity ➤ activity | 4 |
| Activity ➤ accomplishment | 13 |
| Activity ➤ achievement | 1 |
| Activity ➤ active accomplishment | 2 |
| Activity ➤ causative accomplishment | 2 |
| Activity ➤ causative active accomplishment | 1 |
| **Activity ➤ X total** | **33** |
| **Accomplishment ➤ X** | |
| Accomplishment ➤ state | 11 |
| Accomplishment ➤ activity | 13 |
| Accomplishment ➤ accomplishment | 2 |
| Accomplishment ➤ achievement | 1 |
| Accomplishment ➤ unbounded process | 7 |
| Accomplishment ➤ causative active accomplishment | 1 |
| **Accomplishment ➤ X total** | **35** |
| **Achievement ➤ X** | |
| Achievement ➤ unbounded process | 1 |
| **Achievement ➤ X total** | **1** |
| **Unbounded process ➤ X** | |
| Unbounded process ➤ accomplishment | 1 |
| **Unbounded process ➤ X total** | **1** |
| **Active accomplishment ➤ X** | |
| Active accomplishment ➤ activity | 8 |
| Active accomplishment ➤ accomplishment | 2 |
| **Active accomplishment ➤ X total** | **10** |
| **Causative activity ➤ X** | |

| | |
|---|---|
| Causative activity ⟩→ activity | 2 |
| Causative activity ⟩→ causative activity | 1 |
| **Causative activity ⟩→ X total** | **3** |
| **Causative accomplishment ⟩→ X** | |
| Causative accomplishment ⟩→ state | 7 |
| Causative accomplishment ⟩→ activity | 17 |
| Causative accomplishment ⟩→ accomplishment | 4 |
| Causative accomplishment ⟩→ achievement | 2 |
| Causative accomplishment ⟩→ unbounded process | 1 |
| Causative accomplishment ⟩→ active accomplishment | 1 |
| Causative accomplishment ⟩→ causative accomplishment | 24 |
| Causative accomplishment ⟩→ causative activity | 2 |
| **Causative accomplishment ⟩→ X total** | **58** |
| **Causative achievement ⟩→ X** | |
| Causative achievement ⟩→ causative accomplishment | 1 |
| **Causative achievement ⟩→ X total** | **1** |
| **Causative unbounded process ⟩→ X** | |
| Causative unbounded process ⟩→ accomplishment | 1 |
| **Causative unbounded process ⟩→ X total** | **1** |
| **Backward pressuposition total** | **186** |

Table 3: The semantic relation of backward presupposition in the lexical paradigms of strong verbs.

### 4.3.4. Cause

In a semantic relation of cause, one of the two synset concepts involved is the causative, while the other is called the resultative. As in backward presupposition, the conceptual-semantic relationship of cause is unidirectional and characterized by the lack of temporal inclusion. In this analysis, 224 pairs of synsets are associated via this conceptual-semantic relationship. All the different *Aktionsart* types identified in the analysis are presented below. For the sake of brevity, several examples are introduced to illustrate the association between synsets. Typically, this relationship is initiated by means of a causative *Aktionsart* type. Nevertheless, the analysis evinces 6 special cases in which spontaneous *Aktionsart* types give rise to a cause relationship.

With reference to the *Aktionsart* types, the most frequent association in this semantic relationship is that of a causative accomplishment entailing synset and an accomplishment entailed synset (78 instances), followed by a causative accomplishment entailing synset and a state entailed synset (68 instances) and by a causative activity entailing synset and an activity entailed synset (35 instances). On the other hand, the most frequent entailing synset is one that involves a causative accomplishment (157 instances), followed by a causative activity (39 instances) and an unbounded process (8 instances). Finally, regarding the *Aktionsart* type of entailed synsets, accomplishments are the most frequent (82 instances), followed by states (76 instances) and by activities (36 instances).

Beginning with causative *Aktionsart* type entailing synsets, this analysis has evidenced that the semantic relationship of cause is performed by entailing synsets involving causative *Aktionsart* types in 97.32% of all the cases. Regarding the *Aktionsart* type of the entailing synsets, instances from all the different causative *Aktionsart* types turn up. Firstly, only 2 instances of entailing synsets involving a causative state have been found, which can be seen in example (28).

(28)   Causative state ⟶▷ state
       *(GE)LIÐAN*: *ālǣdan*, *(ge)lǣdan* 'to lead' ⟶▷ *(ge)lǣdan* 'to lead (life);
       *NESAN*: *(ge)nerian* 'to preserve, defend, protect' ⟶▷ *(ge)nesan* 'to be preserved'.

The second most frequent *Aktionsart* type of entailing synsets is that of causative activities, which presents 39 instances with the following associations: causative activity ⟶▷ state (3 instances), causative activity ⟶▷ activity (35 instances) and causative activity ⟶▷ causative accomplishment (1 instance). They are shown in example (29).

(29)

a.     Causative activity ⟶▷ state
       *FLĒOTAN tōflēotan* 'to carry away by a flood' ⟶▷ *floterian* 'to be carried or tossed by waves';

*HWEORFAN*: *hwearfian, hwearftlian, (ge)hwierfan, onhwerfan* 'to turn round, turn or roll round, revolve, roll or toss about' ⟶▷ *hwearftlian* 'to be tossed';

*WRECAN*: *forwrecan* 'to banish' ⟶▷ *forwracnian, wracian* 'to be an exile, to be in exile'.

b.      Causative activity ⟶▷ activity

*BERSTAN*: *forberstan* 'to let go by default' ⟶▷ *(ge)berstan, āberstan* 'to escape';

*BIERNAN*: *ābeornan, (ge)bærnan, forbærnan, onbærnan, onbeornan* 'to cause to burn, set fire to, take fire, inflame, kindle, ignite, set on fire' ⟶▷ *biernan* 'to be on fire';

*FARAN*: *tōfaran, tōfēran, tōferian* 'to separate, disperse, scatter, deal out' ⟶▷ *tōfēran* 'to go in different directions';

*FLĒOGAN*: *āflīegan, fligan, forflȳgan* 'to put to flight, expel, drive away' ⟶▷ *(ge)flēogan* 'to flee, take to flight';

*HLIMMAN*: *hlemman* 'to cause to sound' ⟶▷ *hlimman* 'to sound';

*RĪNAN*: *regnian* 1 'to cause rain to fall' ⟶▷ *rīnan, regnian* 1 'to rain';

*SCĒOTAN*: *scyttan* 'to cause rapid movement' ⟶▷ *(ge)scēotan* 'to move quickly, rush, run, plunge'.

c.      Causative activity ⟶▷ causative accomplishment

*SĒOÐAN*: *(ge)sēoðan, āsēoðan* 'to boil, seethe' ⟶▷ *āsēoðan* 'to refine, purify'.

Causative accomplishment is by far the most frequent *Aktionsart* type, evincing 157 instances. In this analysis, the following associations have been found: causative accomplishment ⟶▷ state (68 instances), causative accomplishment ⟶▷ activity (1 instance), causative accomplishment ⟶▷ accomplishment (78 instances), causative accomplishment ⟶▷ unbounded process (10 instances). They are presented in example (30).

(30)

a.      Causative accomplishment ⟶▷ state

*BELGAN*: *(ge)belgan, ābelgan* 1 'to incense' ⟶▷ *forbelgan* 'to be enraged';

BEORGAN: *beorgan* 'to save, secure' ⟶▷ *onbyrgan* 2 'to be surety';

BIERNAN: *(ge)bærnan*, *forbærnan* 'to burn up, consume' ⟶▷ *biernan* 'to be consumed';

BRECAN: *(ge)brocian* 'to oppress' ⟶▷ *broccian* 'to tremble';

FINDAN: *(ge)findan* 'to inform, show' ⟶▷ *onfindan* 1 'to be aware of';

LǢTAN: *(ge)lettan* 'to offend, oppress' ⟶▷ *(ge)lǣtan*, *forlǣtan* 'to suffer';

LICGAN: *ālecgan* 'to overthrow, conquer, overcome' ⟶▷ *ālicgan* 'to be subdued';

NESAN: *ānerian*, *(ge)nerian* 'to save' ⟶▷ *(ge)nesan* 'to be saved';

RĒODAN: *ārēodian* 'to put to shame' ⟶▷ *āryderian* 'to be ashamed'.

b.　Causative accomplishment ⟶▷ activity

SCELFAN: *āscylfan* 'to throw down' ⟶▷ *scelfan* 'to totter'.

c.　Causative accomplishment ⟶▷ accomplishment

BLĪCAN: *āblycgan* 'to make afraid' ⟶▷ *āblycgan* 'to get affected by fear, get dismayed';

CĪNAN: *tōcīnan* 'to splinter' ⟶▷ *cīnan*, *tōcīnan* 'to break into chinks';

CUNNAN: *(ge)cȳðan*, *oncȳðan* 'to make known' ⟶▷ *(ge)cūðian* 'to become known';

CWELAN: *ācwellan*, *ācwylman*, *(ge)cwellan*, *(ge)cwielman*, *cwylmian* 'to destroy, murder, execute, kill, slay' ⟶▷ *cwelan*, *ācwelan* 'to die';

RǢDAN: *(ge)rǣdan* 'to explain' ⟶▷ *āredian* 'to understand';

SWEORCAN: *swearcian* 'to make or become troubled, dismay' ⟶▷ *(ge)sweorcan* 'to become troublesome or grievous'.

d.　Causative accomplishment ⟶▷ unbounded process

FLŌWAN: *tōflōwan* 'to bring to nothing' ⟶▷ *tōflōwan* 'to ebb';

(GE)RĪPAN *rīpian* 'to ripen, mature' ⟶▷ *rīpian* 'to grow old';

SCRINCAN: *forscrencan* 'to cast down' ⟶▷ *(ge)scrincan* 'to pine away';

SITTAN: *(ge)settan* 'to allay' ⟶▷ *sessian* 'to grow calm';

ÐĪNAN: *(ge)ðwǣnan* 'to wet' ⟶▷ *āðwǣnan*, *(ge)ðwǣnan* 'to soften';

ÐĪNAN: *(ge)ðwǣnan* 'to wet' ⟶▷ *āðwǣnan*, *(ge)ðwǣnan* 'to shorten, diminish, lessen';

WLĪTAN: *(ge)wlitigian* 'to beautify, adorn' ⟶▷ *(ge)wlitigian* 'to grow beautiful'.

Then, entailing synsets involving a causative achievement *Aktionsart* type in this analysis represent 4 instances, all of which are associated with an entailed synset, which designates an achievement. They can be seen in example (31).

(31) Causative achievement ——▷ achievement

    *BERSTAN*: *tōberstan* 'to cause to burst apart' ——▷ *forberstan*, *tōberstan* 'to burst apart, burst asunder';

    *BLĪCAN*: *blīcan* 'to dazzle' ——▷ *āblycgan* 'to get astonished, amazed, get affected by wonder';

    *SPRINGAN*: *(ge)sprengan* 'to apply a clyster' ——▷ *(ge)sprengan* 'to burst';

    *SPRINGAN*: *āsprengan* 'to cause to spring' ——▷ *(ge)springan*, *(ge)sprengan* 'to spring'.

The third most frequent *Aktionsart* type in the entailing synsets is that of causative unbounded processes, of which 8 instances have been found. The following associations turn up: causative unbounded process ——▷ state (1 instance) and causative unbounded process ——▷ unbounded process (7 instances). Several examples are given in example (32).

(32)

a. Causative unbounded process ——▷ state

    *ĒACAN*: *ætȳcan*, *ēacian*, *(ge)ēacnian*, *īecan*, *tōætȳcan* 'to prolong, eke, increase, augment, add' ——▷ *ēacan*, *(ge)ēacnian* 'to be increased, enlarged, augmented'.

b. Causative unbounded process ——▷ unbounded process

    *BLĀWAN*: *forblāwan*, *onblāwan*, *tōblāwan* 'to inflate' ——▷ *āblāwan*, *onblāwan*, *tōblāwan* 'to distend, swell, puff up';

    *(GE)LĪÐAN*: *forðgelǣdan* 'to cause to grow' ——▷ *ālǣdan*, *(ge)lǣdan* 'to grow, spread';

    *HEBBAN*: *(ge)hefigian* 'to aggravate' ——▷ *(ge)hefigian* 'to grow worse';

    *SWEORCAN*: *(ge)sweorcan*, *forsweorcan* 'to darken' ——▷ *forsweorcan*, *swearcian* 'to grow dark or obscure';

    *WĪCAN*: *onwǣcnan* 'to soften' ——▷ *wācian* 'to lose energy'.

Next, only one instance of a causative semelfactive entailing synset has been found in the analysis, which is presented in example (33).

(33)    Causative semelfactive ⟶▷ semelfactive
        *LŪTAN*: *lītan* 'to cause to bow' ⟶▷ *gelūtan*, *onlūtan* 'to bow'.

Regarding entailing synsets, which depict causative active accomplishments, 6 instances have been found in the analysis. All of them are associated with entailed synsets describing active accomplishments. Several examples are given in (34).

(34)    Causative active accomplishment ⟶▷ active accomplishment
        *BŪGAN*: *onbīgan* 'cause to bend' ⟶▷ *(ge)būgan* 1, *ābūgan*, *ābȳgan*, *(ge)bīegan*, *onbūgan* 'to bend';
        *CUMAN*: *ācuman* 'to bring' ⟶▷ *ācuman*, *ancuman* 'to come';
        *(GE)TĒON* 1: *(ge)tǣcan* 'to send, transfer, translate' ⟶▷ *(ge)tēon* 1 'to go, betake oneself to';
        *HEALDAN*: *forhealdan* 'to let go' ⟶▷ *healdan* 'to go';
        *SĪGAN*: *onsǣgan* 'to cause to sink down' ⟶▷ *(ge)sīgan* 1, *āsīgan*, *onsīgan* 'to sink'.

Finally, one example of an entailing synset describing a plain causative has been found in the analysis, which can be seen in example (35).

(35)    Causative ⟶▷ state
        *MUNAN*: *(ge)manian*, *mynegian*, *(ge)myndgian*, *(ge)myntan* 'to prompt, instigate, impel, exhort, bring forth' ⟶▷ *mynian* 'to be impelled'.

As regards the examples of spontaneous *Aktionsart* types in entailing synsets, out of the 224 pairs of synsets associated by means of the semantic relationship of cause, only 6 involve a spontaneous *Aktionsart* type, that is 2.67% of the total number. All the instances are listed in example (36) and categorized according to the *Aktionsart* types involved in the association: activity ⟶▷ accomplishment (3 instances), activity ⟶▷ unbounded process (1 instance), achievement ⟶▷ state (1 instance) and active accomplishment ⟶▷ accomplishment (1 instance).

(36)

a. Activity ⟶ accomplishment

*(GE)RĪSAN: ārǣran, rǣran* 'to erect, set up, establish, build' ⟶

*(ge)rīsan, ārīsan* 'to rise';

*RĪNAN*: *gerīnan* 'to rain on' ⟶ *gerīnan* 'to wet with rain';

*RǢDAN*: *(ge)rǣdan* 'to advice, counsel' ⟶ *ārǣdan* 'to take counsel'.

b. Activity ⟶ unbounded process

*SEOÐAN*: *(ge)sēoðan* 'to cook in a liquid' ⟶ *āsēoðan* 'to whither, scorch'.

c. Achievement ⟶ state

*ĒACAN*: *(ge)ēacnian* 'to conceive, become pregnant' ⟶ *ēacan, (ge)ēacnian* 'to be increased, enlarged, augmented'.

d. Active accomplishment ⟶ accomplishment

*(GE)RĪSAN ārǣran, rǣran* 'to create, do' ⟶ *(ge)rīsan, ārīsan* 'to rise'.

To conclude, 97.32% of the entailing synsets in the semantic relationship of cause involve a causative *Aktionsart* type. Conversely, only a 2.67% of the entailing synsets present a spontaneous class. Moreover, the sum of the three most frequent associations in terms of *Aktionsart* type -causative accomplishment ⟶ accomplishment (78 instances), causative accomplishment ⟶ state (68 instances) and causative activity ⟶ activity (35 instances)- represent 80.80% of the total of pairs of synsets associated by means of this semantic relationship. Finally, entailing synsets describing a causative accomplishment are by far the most frequent, representing 97.32% of the total number of the pairs of synsets associated by means of the relationship of cause. These results are tabulated in table 4.

| Cause: causative *Aktionsart* type entailing synsets | |
|---|---|
| **Causative state ⟶ X** | |
| Causative state ⟶ state | 2 |
| **Causative state ⟶ X total** | **2** |
| **Causative activity ⟶ X** | |
| Causative activity ⟶ state | 3 |
| Causative activity ⟶ activity | 35 |

| | |
|---|---|
| Causative activity ⟶▷ causative accomplishment | 1 |
| **Causative activity ⟶▷ X total** | **39** |
| **Causative accomplishment ⟶▷ X** | |
| Causative accomplishment ⟶▷ state | 68 |
| Causative accomplishment ⟶▷ activity | 1 |
| Causative accomplishment ⟶▷ accomplishment | 78 |
| Causative accomplishment ⟶▷ unbounded process | 10 |
| **Causative accomplishment ⟶▷ X total** | **157** |
| **Causative achievement ⟶▷ X** | |
| Causative achievement ⟶▷ achievement | 4 |
| **Causative achievement ⟶▷ X total** | **4** |
| **Causative unbounded process ⟶▷ X** | |
| Causative unbounded process ⟶▷ state | 1 |
| Causative unbounded process ⟶▷ unbounded process | 7 |
| **Causative unbounded process ⟶▷ X total** | **8** |
| **Causative semelfactive ⟶▷ X** | |
| Causative semelfactive ⟶▷ semelfactive | 1 |
| **Causative semelfactive ⟶▷ X total** | **1** |
| **Causative active accomplishment ⟶▷ X** | |
| Causative active accomplishment ⟶▷ active accomplishment | 6 |
| **Causative active accomplishment ⟶▷ X total** | **6** |
| **Causative ⟶▷ X** | |
| Causative ⟶▷ state | 1 |
| **Causative ⟶▷ X total** | **1** |
| **Causative *Aktionsart* type entailing synsets total** | **218** |
| **Cause: spontaneous *Aktionsart* type entailing synsets** | |
| Activity ⟶▷ accomplishment | 3 |
| Activity ⟶▷ unbounded process | 1 |
| Achievement ⟶▷ state | 1 |
| Active accomplishment ⟶▷ accomplishment | 1 |
| **Spontaneous *Aktionsart* type entailing synsets total** | **6** |
| **Cause total** | **224** |

Table 4: The semantic relation of cause in the lexical paradigms of strong verbs.

## 4.3.5. Synonymy

In this analysis, synonymy represents the most frequent relationship established between synsets. Out of 948 pairs of synsets, 941 share the same *Aktionsart* type. According to the *Aktionsart* type, the analiyisis has evinced the following associations: state ⟷ state (79 instances), activity ⟷ activity (245 instances), accomplishment ⟷ accomplishment (122 instances), achievement ⟷ achievement (13 instances), unbounded process ⟷ unbounded process (30 instances), semelfactive ⟷ semelfactive (3 instances), active accomplishment ⟷ active accomplishment (23 instances), causative state ⟷ causative state (2 instances), causative activity ⟷ causative activity (38 instances), causative accomplishment ⟷ causative accomplishment (342 instances), causative achievement ⟷ causative achievement (2 instances), causative unbounded process ⟷ causative unbounded process (12 instances), causative active accomplishment ⟷ causative active accomplishment (4 instances) and plain causative ⟷ causative (26 instances). Some of them are presented in example (37).

(37)

a.      Same *Aktionsart*

*DRǢDAN*: *drǣdan*, *ondrǣdan* 'to fear, dread' ⟷ *ondrǣdan* 'to be afraid';

*BIDDAN*: *biddan*, *ābiddan* 'to entreat, beseech' ⟷ *bedecian*, *gebiddan* 'to beg';

*DWĪNAN*: *dwīnan* 'to disappear' ⟷ *ādwīnan*, *fordwīnan* 'to vanish, vanish away';

*FINDAN*: *(ge)findan*, *onfindan* 1 'to meet with, to come upon' ⟷ *onfindan* 'to come across';

*HNĪGAN*: *hnīgan*, *āhnīgan*, *(ge)hnǣgan* 1 'to bow down' ⟷ *onhnīgan*, *(ge)hnigian* 'to bow, bend down, bow or bend down (the head)';

*BERAN*: *(ge)beran* 'to extend' ⟷ *tōberan* 'to swell';

*LǢTAN*: *(ge)lettan* 'to cause to be slow, impede' ⟷ *(ge)lettan* 'to delay';

*DRĒOPAN*: *(ge)drēopan*, *ādrēopan*, *drēopian*, *drȳpan* 'to drop' ⟷ *drȳpan* 'to cause to fall in drops'.

b.   Different *Aktionsart* (meaning specification)

BŪGAN: *(ge)bīegan* 'to inflect or decline a part of speech' (active accomplishment) •—[+]→ *forbūgan* 'to decline' (activity);

IERNAN: *(ge)ornan 1*, *tōiernan* 'to run to, reach by running' (active accomplishment) •—[+]→ *(ge)iernan 1*, *(ge)ornan 1* 'to run' (activity);

IERNAN: *(ge)ornan 1* 'to gallop up to something, reach by galloping,' (active accomplishment) •—[+]→ *(ge)ærnan 1* 'to gallop' (activity);

IERNAN: *(ge)ærnan 1* 'to reach by riding' (active accomplishment) •—[+]→ *(ge)ærnan 1* 'to gallop' (activity);

MUNAN: *ofmanian* 'to exact a fine or due' (causative accomplishment) •—[+]→ *āmanian* 'require, exact' (causative);

WRITE: *writian 2* 'to draw a figure' (active accomplishment) •—[+]→ *(ge)wrītan*, *āwrītan* 'to draw' (activity).

The only instance of synonymy involving 2 different *Aktionsart* types found in the analysis is presented in example (38). This exceptional case may be due to the syntactic structure of the meaning definition or the perspective of interpretation.

(38)   Different *Aktionsart*

SWELGAN: *swolgettan* 'to gargle' (activity) ←→ *swolgettan* 'to wash the throat' (causative accomplishment).

The results of the part of synonymy are summarized in table 5.

| Synonymy | |
|---|---|
| **Synonymy: same *Aktionsart*** | |
| State ←→ state | 79 |
| Activity ←→ activity | 245 |
| Accomplishment ←→ accomplishment | 122 |
| Achievement ←→ achievement | 13 |
| Unbounded process ←→ unbounded process | 30 |
| Semelfactive ←→ semelfactive | 3 |
| Active accomplishment ←→ active accomplishment | 23 |

| | |
|---|---|
| Causative state ◄──► causative state | 2 |
| Causative activity ◄──► causative activity | 38 |
| Causative accomplishment ◄──► causative accomplishment | 342 |
| Causative achievement ◄──► causative achievement | 2 |
| Causative unbounded process ◄──► causative unbounded process | 12 |
| Causative active accomplishment ◄──► causative active accomplishment | 4 |
| Causative ◄──► causative | 26 |
| **Synonymy: same *Aktionsart* total** | **941** |
| **Synonymy: different *Aktionsart*** | |
| Meaning specification | 6 |
| Exceptional case of synonymy | 1 |
| **Different *Aktionsart* total** | **7** |
| **Synonymy total** | **948** |

Table 5: The semantic relation of synonymy in the lexical paradigms of strong verbs.


### 4.3.6. Opposition

As is claimed in WordNet, opposition relations are psychologically salient for verbs. In this line, opposition is the most frequent semantic relation in this lexical database, followed synonymy and troponymy. Nevertheless, given that this dissertation analyses the semantic relationships that hold in the lexical paradigms of Old English verbs, the prominence of the different semantic relationships under analysis is different. As regards the six conceptual-semantic relationships connecting synsets, opposition has resulted to be the least frequent. Thus, only 69 pairs of synsets are associated via opposition. Out of them, 51 pairs of synsets share the same *Aktionsart* type while 18 show a different *Aktionsart* mode. Unlike synonymy, which hardly presents examples of pairs of synsets with different *Aktionsart* type, this study has evinced a percentage of 73.91% of pairs of synsets displaying the same *Aktionsart* type, against 26.08% presenting different *Aktionsart* types in the association. Regarding the pairs of synsets that display the same *Aktionsart* type, this analysis has found 51 instances, which can be broken down by *Aktionsart* type as follows: state (4 instances), activity (7 instances), accomplishment (7 instances), unbounded process (1 instance), active accomplishment (2 instances), causative accomplishment (25 instances), causative

unbounded process (1 instance) and causative (4 instances). They can be seen in example (39).

(39)

a.  State

   *STANDAN*: *forstandan* 'to avail' ✶——✶ *wiðstandan* 'to be a hindrance';

   *STANDAN*: *(ge)standan* 'to be present to' ✶——✶ *tōstandan*, *wiðstandan* 'to be distant, stand apart, stand aloof, keep away, be absent';

   STANDAN: *forstandan* 'to be equal to' ✶——✶ *tōstandan* 'to differ, be different, be discordant';

   *UNNAN*: *(ge)unnan* 'to be glad to see' ✶——✶ *ofunnan* 'to envy, bedgrudge'.

b.  Activity

   *BĒODAN*: *(ge)bēodan*, *ābēodan* 'to offer' ✶——✶ *forbēodan* 'to refuse';

   *CUMAN*: *forcuman* 'to prevent' ✶——✶ *ācuman* 'to support';

   *FARAN*: *foregān* 1*, forgangan, forgān* 1*, gegangan* 'to pass, pass over' ✶——✶ *gegangan*, *gegān* 'to observe';

   *HEALDAN*: *healdan* 'to protect, guard, defend, preserve' ✶——✶ *forhealdan* 'to rebel against';

   *SPRECAN*: *(ge)sprecan*, *gesprecan* 'to agree' ✶——✶ *forsprecan*, *wiðsprecan* 'to deny, contradict, gainsay';

   *STANDAN*: *(ge)standan*, *forstandan*, *wiðstandan* 'to oppose, attack, assail' ✶——✶ *forstandan* 'to defend, protect, stand up for';

   *WEORÐAN*: *(ge)unweorðian* 'to slight, treat with contempt' ✶——✶ *(ge)weorðian* 'to praise, exalt, worship, adore, venerate, celebrate, treat with reverence or respect'.

c.  Accomplishment

   *FARAN*: *(ge)faran*, *gefēran* 'to obtain, succeed, get on' ✶——✶ *forfaran* 'to lose';

   *FŌN*: *(ge)fōn* 'to assume' ✶——✶ *forfōn* 'to forfeit';

   *GANGAN*: *forgangan*, *forgān* 1 'to lose' ✶——✶ *gegangan*, *gegān*, *ofgān* 'to acquire, obtain, get, gain, attain';

   *LǣTAN*: *(ge)lǣtan* 'to get' ✶——✶ *ālǣtan*, *anforlǣtan*, *forlǣtan* 'to lose';

   *NIMAN*: *oferniman* 'to carry off' ✶——✶ *ofniman* 'to fail';

*RINNAN*: *tōrinnan* 'to disperse' ✕——✕   *gerinnan* 1 'to condense';

*SPRINGAN*: *āspringan*, *onspringan* 'to arise, originate, be born, spring forth, spring up' ✕——✕   *āspringan* 'to cease'.

d.   Unbounded process

*SPRINGAN*: *(ge)springan* 'to grow' ✕——✕   *āspringan* 'to diminish, dwindle, fail'.

e.   Active accomplishment

*FARAN*: *(ge)faran*, *fēran* 1, *(ge)ferian*, *gefēran* 'to go' ✕——✕   *fēran* 1, *gefēran* 'to come';

*STĪGAN*: *(ge)stīgan*, *āstigan* 'to go' ✕——✕   *āstīgan* 'to come'.

f.   Causative accomplishment

*ĀGAN*: *āgan* 'to give' ✕——✕   *āgnettan*, *(ge)āgnian* 'to arrogate, appropiate, usurp';

*BERAN*: *geedbyrdan* 'to regenerate' ✕——✕   *onberan*, *tōberan* 'to destroy';

*BIDDAN*: *gebedian*, *gebiddan* 'to adore, worship' ✕——✕   *(ge)bǣdan* 'to defile something';

*BŪGAN*: *ābȳgan*, *(ge)bīegan*, *forbīgan*, *fobuūgan*, *onbīgan* 'to abase, degrade, depreciate, humble, humiliate, hold down, crush, bring under, reduce, subjugate, subdue, subject, bring low, press down, depress' ✕——✕   *gebēagain* 'to crown';

*CLINGAN*: *clingan*, *āclingan*, *forclingan* 'to wither' ✕——✕   *clengan* 'to exhilarate';

*CUNNAN*: *ācunnian*, *ācȳðan*, *(ge)cunnian*, *(ge)cȳðan* 'to prove, confirm, ascertain' ✕——✕   *forcȳðan* 'to reprove, refute';

*DRĪFAN*: *(ge)drīfan* 'to thrust' ✕——✕   *oferdrīfan* 'to dispense';

*FARAN*: *(ge)faran* 'to complete, carry out, execute' ✕——✕   *tōferian* 'to put off';

*FLŌWAN*: *flōwan* 'to issue' ✕——✕   *fleswian* 'to dissemble';

*(GE)CENNAN*: *(ge)cennan*, *ācennan*, *geedcennan*, *oncennan* 'to produce, create, bring forth, beget' ✕——✕   *forcinnan* 'to destroy';

*(GE)LĪÐAN*: *(ge)lǣdan* 'to lift' ✕——✕   *oferlǣdan* 'to oppress';

*GĒOTAN*: *ðurhgēotan* 'to saturate' ✕——✕   *āgītan* 'to take away';

*HEBBAN*: *(ge)hebban*, *āhebban* 'to elevate, exalt' ✕—✕ *āhefegian*, *(ge)hefigian* 'to make sad or heavy, make heavy, burden, weigh down, grieve, oppress, vex, afflect, weary';

*HNĪGAN*: *onhnīgan* 'to worship' ✕—✕ *(ge)hnǣgan 1, onhnīgan* 'to humble, humiliate, cast down, press down';

*LICGAN*: *ālecgan* 'to abolish, surpress, put something down' ✕—✕ *(ge)lecgan* 'to establish';

*LICGAN*: *(ge)lecgan* 'to attach, annex' ✕—✕ *tōlicgan* 'to part, separate, divide';

*LINNAN*: *linnan* 'to yield up' ✕—✕ *tōlynnan* 'to take away';

*NESAN*: *(ge)nerian* 'to deliver' ✕—✕ *(ge)nerian* 'to take away';

*SACAN*: *sacan* 'to accuse, blame' ✕—✕ *onsacan* 'to exculpate';

*SCĒOTAN*: *forscyttan*, *scyttan* 'to shut to' ✕—✕ *onscēotan* 'to open';

*SPRECAN*: *wiðsprecan* 'to revile' ✕—✕ *onspreccan* 'to enliven';

*WACAN*: *āweccan*, *(ge)weccan*, *tōweccan* 'to excite, encourage, exhort, stimulate, enliven, refresh' ✕—✕ *āwacian* 'to appease, mollify, make gentle';

*WEORÐAN*: *georwyrðan*, *(ge)unweorðian* 'to dishonour, defame, disgrace' ✕—✕ *(ge)weorðian* 'to honour, adore, celebrate, glorify, distinguish, reward, ennoble, dignigy';

*WEORPAN*: *āweorpan* 'to degrade, debase' ✕—✕ *(ge)edwyrpan* 'to amend';

*WLĪTAN*: *(ge)wlitigian* 'to beautify, adorn' ✕—✕ *(ge)ungewlitigian*, *(ge)unwlitegian* 'to deprive of beauty, destroy the beauty of'.

g. Causative unbounded process

*(GE)TĒON* 1: *ātēon*, *ātyhtan*, *(ge)tyhtan* 'to protract, stretch, extend' ✕—✕ *fortogian* 'to contract'.

h. Causative

*BĒODAN*: *(ge)bēodan*, *ābēodan*, *onbēodan* 'to order, command, decree' ✕—✕ *forbēodan* 'to restrain';

*BIDDAN*: *(ge)bǣdan* 'to force, compel, press, constrain' ✕—✕ *ābǣdan* 'to restrain, ward off';

*CUMAN*: *ofercuman* 'to compel' ✕—✕ *forcuman* 'to prevent';

CWEÐAN: *(ge)cweðan* 'to order, give orders' ✳———✳ *tōcweðan, wiðcweðan* 'to forbid, not allow, prohibit, interdict'.

On the other hand, this analysis has obtained 18 pairs of synsets displaying different *Aktionsart* types. Unlike synonymy, this kind of association is quantitatively significant. Firstly, activities have shown to hold a relation of opposition to accomplishments, active accomplishments and causative accomplishments, as can be seen in example (40). The correspondences that arise include activity ✳———✳ accomplishment (6 instances), activity ✳———✳ active accomplishment (1 instance) and activity ✳———✳ causative accomplishment (2 instances).

(40)

a.    Activity ✳———✳   accomplishment

   *BŪGAN*: *(ge)būgan* 1, *ābūgan* 'to retire, depart' ✳———✳ *(ge)bīegan* 'to settle';

   *CĒOSAN*: *wiðcēosan* 'to reject' ✳———✳ *(ge)cēosan* 'to accept, approve';

   *HĀTAN*: *forhātan* 'to forswear' ✳———✳ *(ge)andettan* 'to acknowledge';

   *HLĪFAN*: *āhlēfan* 'to pull out' (leave, depart) ✳———✳ *forðhlīfian* 'to appear';

   *LICGAN*: *wiðlicgan* 'to oppose, resist, object' ✳———✳ *(ge)licgan, ālicgan* 'to yield';

   *SWEFAN*: *swefian* 'to move' ✳———✳ *swefan* 'to cease'.

b.    Activity ✳———✳   active accomplishment

   *RINNAN*: *tōrinnan* 'to disperse' ✳———✳ *gerinnan* 1 'to come together'.

c.    Activity ✳———✳   causative accomplishment

   *MUNAN*: *āmanian, (ge)manian* 'to claim, demand' ✳———✳ *(ge)myntan* 'to give up to';

   *STANDAN*: *forstandan* 'to help, aid, benefit' ✳———✳ *wiðstandan* 'to prevent, obstruct, hinder'.

Secondly, as far as accomplishments are concerned, apart from the association with activities shown above, the analysis shows associations with achievements and causative accomplishments: accomplishment ✳———✳ achievement (1 instance), accomplishment ✳———✳ causative accomplishment (2 instances). They are listed in example (41).

(41)

a.        Accomplishment ✳——✳   achievement

          *ÐWĪNAN*: *tōðwīnan*, *āðwīnan* ✳——✳   *tōðwīnan* 'to burst'.

b.        Accomplishment ✳——✳   causative accomplishment

          *LICGAN*: *(ge)licgan*, *ālicgan* 'to yield' ✳——✳   *ālecgan* 'to overthrow, conquer, overcome';

          *SITTAN*: *forsittan* 'to fail' ✳——✳   *ofersettan* 'to overcome'.

Thirdly, only two examples involving causative states are found. In both instances, causative states are associated with causative accomplishments, as can be seen in example (42).

(42)    Causative state ✳——✳   Causative accomplishment

        *HEALDAN*: *healdan* 'to protect, guard, defend, preserve' ✳——✳   *forhealdan* 'to defile, pollute';

        *STANDAN*: *forstandan* 'to avail' ✳——✳   *wiðstandan* 'to prevent, obstruct, hinder'.

In the fourth place, apart from being associated with activities, accomplishments and causative states, instances of causative accomplishments have also been found with active accomplishments (1 instance) and causative activities (3 instances). They are given in example (43).

(43)

a.        Causative accomplishment ✳——✳   active accomplishment

          *GĒOTAN*: *ðurhgēotan* 'to saturate' ✳——✳   *tōgēotan* 'to exhaust'.

b.        Causative accomplishment ✳——✳   causative activity

          *BLĀWAN*: *forðblæstan* 'to put out' ✳——✳   *(ge)blāwan* 'to flame';

          *FARAN*: *forfaran*, *offaran*, *tōfēran* 'to blockade, obstruct, intercept, disturb' ✳——✳  *(ge)ferian*, *gefæran* 'to lead, conduct, convey';

          *LǢTAN*: *(ge)lettan* 'to stop' ✳——✳   *onlǣtan* 'to let a thing go on'.

In Wordnet, the great majority of antonymous verbs represent stative or change-of-state verbs. This analysis has evidenced that 55 out of the 69 pairs of synsets associated via opposition involve at least one state or change of state *Aktionsart* type, that is to say, 79.71% of the total figure. All these aspects of the semantic relation of opposition as holding in the lexical paradigms of Old English strong verbs are tabulated in table 6.

| Opposition | |
|---|---|
| **Opposition: same *Aktionsart*** | |
| State ✳——✳  state | 4 |
| Activity ✳——✳  activity | 7 |
| Accomplishment ✳——✳  accomplishment | 7 |
| Unbounded process ✳——✳  unbounded process | 1 |
| Active accomplishment ✳——✳  active accomplishment | 2 |
| Causative accomplishment ✳——✳  causative accomplishment | 25 |
| Causative unbounded process ✳——✳  causative unbounded process | 1 |
| Causative ✳——✳  causative | 4 |
| **Same *Aktionsart* total** | **51** |
| **Opposition: different *Aktionsart*** | |
| Activity ✳——✳  accomplishment | 6 |
| Activity ✳——✳  active accomplishment | 1 |
| Activity ✳——✳  causative accomplishment | 2 |
| Accomplishment ✳——✳  achievement | 1 |
| Accomplishment ✳——✳  causative accomplishment | 2 |
| Causative state ✳——✳  causative accomplishment | 2 |
| Causative accomplishment ✳——✳  active accomplishment | 1 |
| Causative accomplishment ✳——✳  causative activity | 3 |
| **Different *Aktionsart* total** | **18** |
| **Opposition total** | **69** |

Table 6: The semantic relation of synonymy in the lexical paradigms of strong verbs.

## 4.4. Concluding remarks

This chapter has presented the semantic maps of the 328 lexical paradigms of Old English that are based on strong verbs as well as the results of the analysis of the verbs that belong to such lexical paradigms by semantic relation (troponymy, -troponymy, synonymy, backward presupposition, cause and opposition) and also with respect to *Aktionsart*.

To summarize, it must be pointed out, to begin with, that the most frequent semantic relation found in the paradigms is synonymy, followed by troponymy and cause. The least frequent relations are backward presupposition, -troponymy and opposition, as is represented in figure 1.
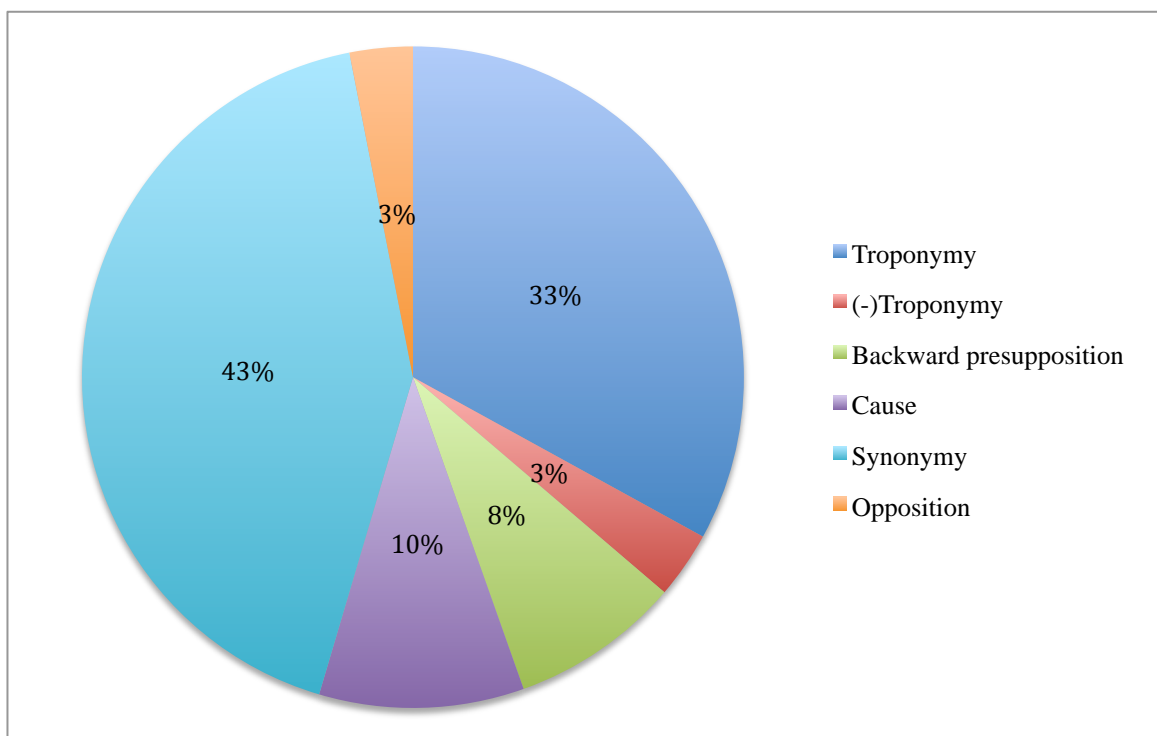


Figure 1. Semantic relations in the lexical paradigms.

Secondly, and regarding the association between *Aktionsart* and semantic relations, synonymy, troponymy and opposition hold between synsets with the same *Aktionsart* in the vast majority of the cases, whereas cause, backward presupposition and -troponymy tend to change the *Aktionsart* type between the two related synsets. This is represented in figure 2.
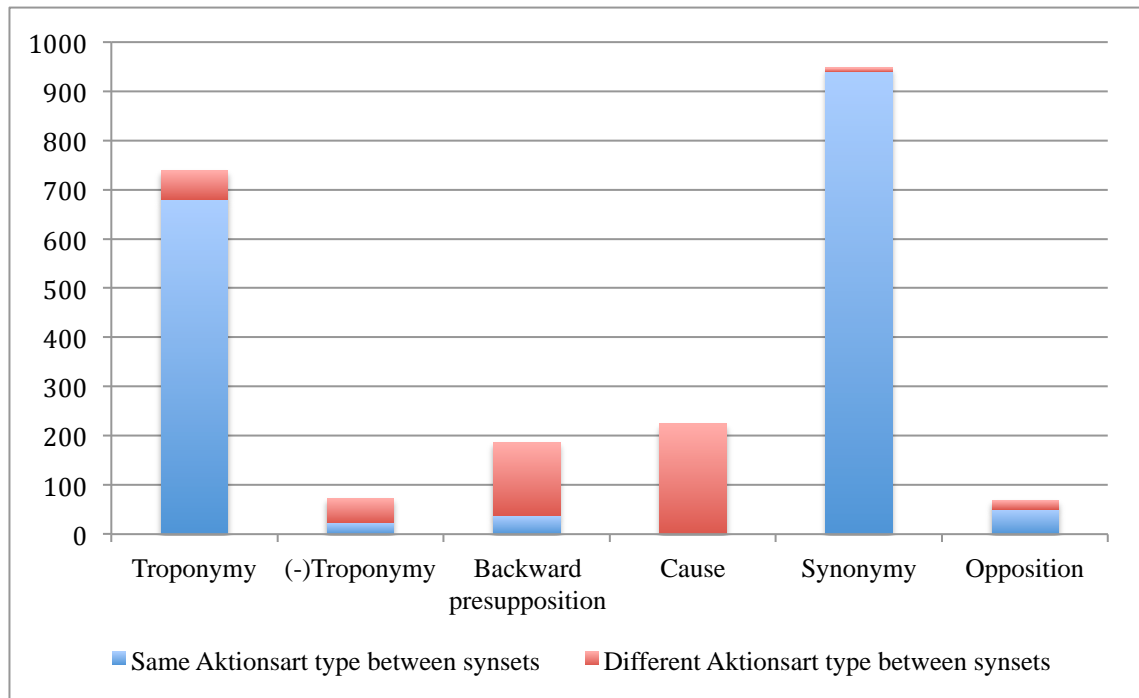
Figure 2. Semantic relations and *Aktionsart*.

In synonymy, the different *Aktionsart* can be the result of meaning specification (far more frequently) or of syntactic structure and meaning interpretation (far less frequently), as is represented in figure 3.
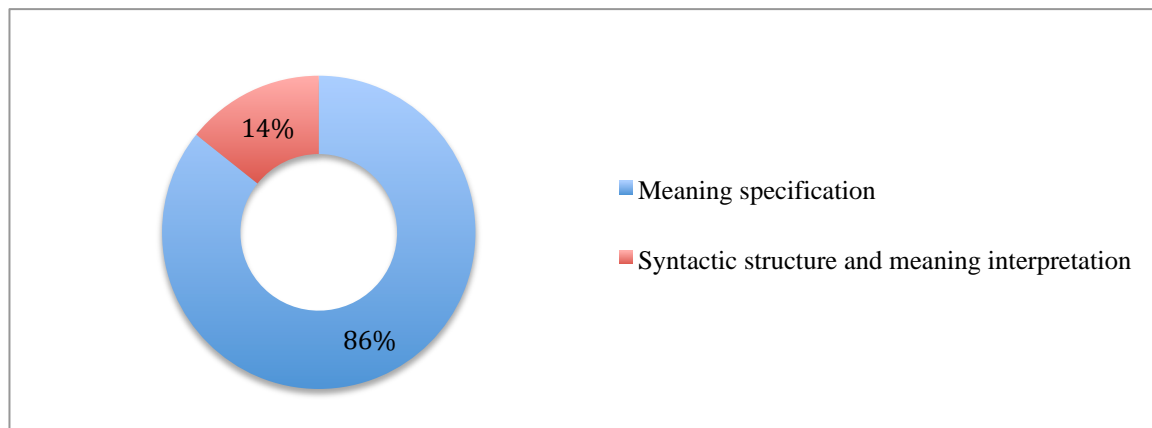


Figure 3. Different *Aktionsart* in synonymy.

The different *Aktionsart* of two synsets related to each other by a relation of troponymy can be due to meaning specification (most frequent cause), complex verbal structures, semantic proximity between both active accomplisments of consumption and causative accomplishments of destruction and active accomplishment of creation

and causative accomplishment of formation or configuration and figurative associations (least frequent cause). This can be seen in figure 4.
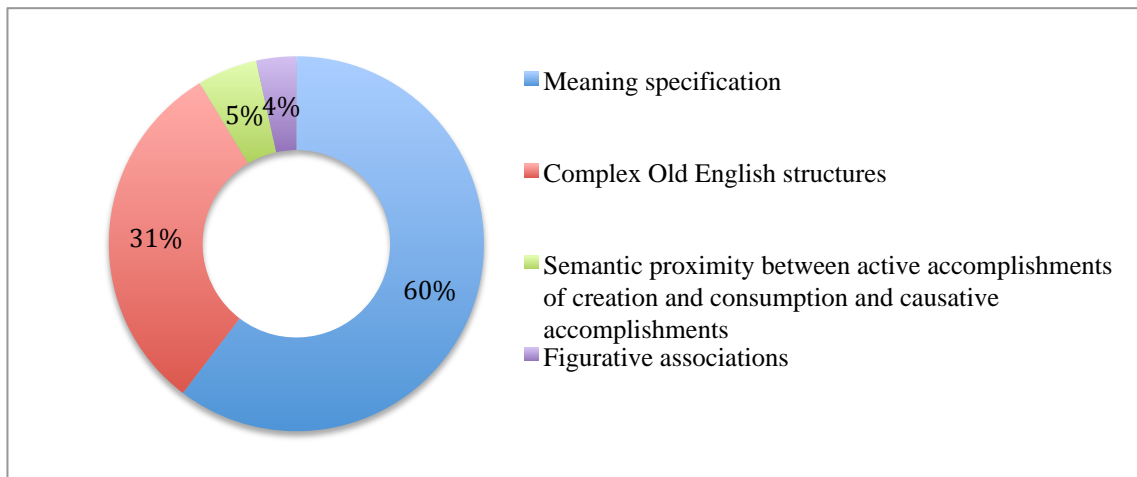


Figure 4. Different *Aktionsart* in troponymy.

In general, spontaneous synsets are more frequent than causative synsets. As regards entailing synsets, however, the total number of spontaneous synsets is 1110 and the total number of causative synsets is 1129. On the other hand, the total number of spontaneous entailed synsets is 1387, whereas the number of causative synsets is 852. It is remarkable the number of causative entailing synsets and spontaneous entailed synsets in cause, as can be seen in figure 5.
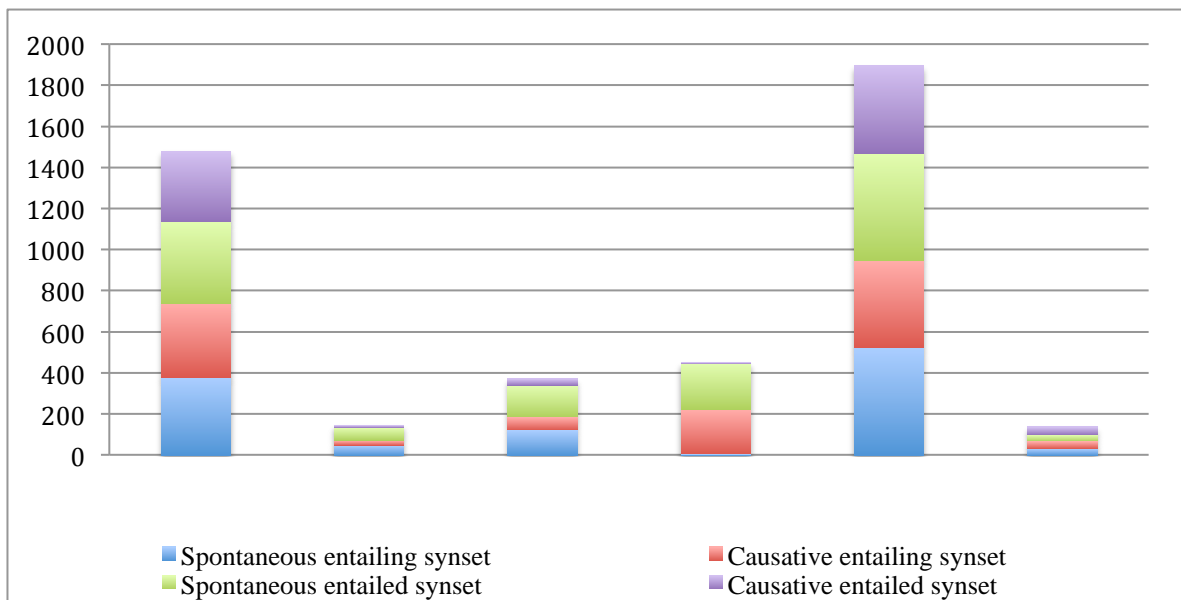


Figure 5. Spontaneous and causative synsets.

To conclude, the presence or state or change of state Aktionsart types in synsets related by the relation of opposition is remarkable, as can be seen in figure 6.



Figure 6. State and change of state with respect to opposition.

At the same time, the presence of activity *Aktionsart* in pairs of synsets related by the relation of - troponymy is also worth taking into account. This is represented by figure 7.



Figure 7. Activity with respect to -troponymy.

# Chapter 5
# Conclusion

## 5.1. Introduction

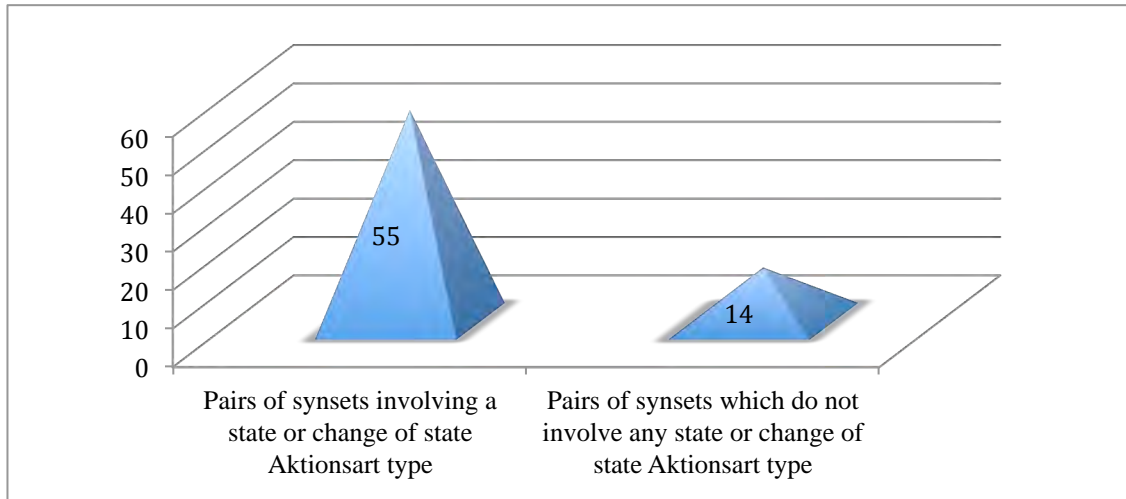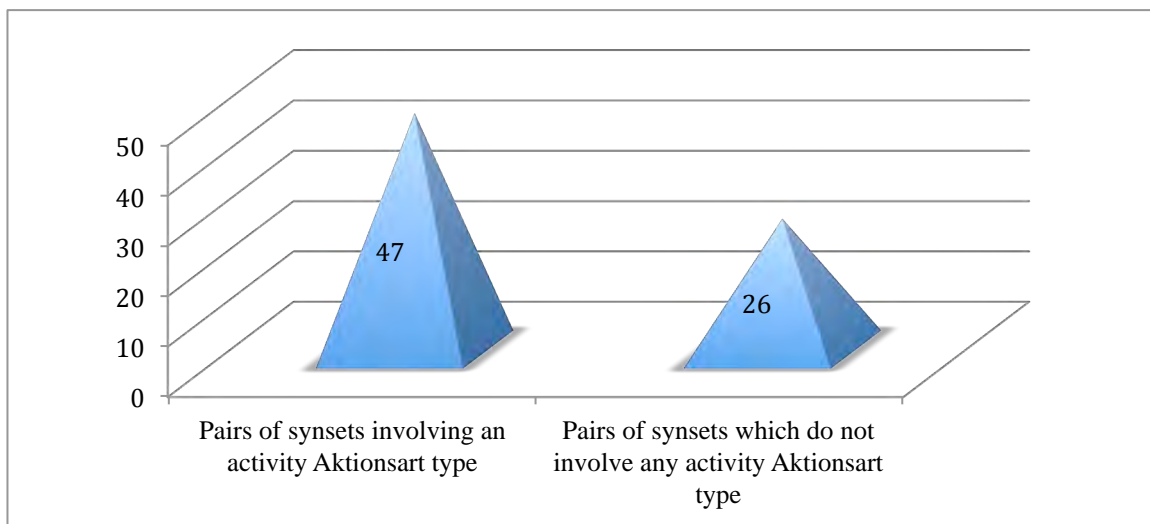This chapter closes this study by summarizing the main findings of the research and its conclusions. Section 5.2 offers a summary of the contents of the previous chapters. Section 5.3 discusses the main problems that have arisen throughout the research, as well as the solutions that have been proposed. Section 5.4 presents the general conclusions of this doctoral dissertation. To conclude, section 5.5 makes some remarks on further lines of research regarding classes different from the strong verb and the *Aktionsart* taxononmy.

## 5.2. General summary

This dissertation has offered a dual analysis of the 328 lexical paradigms of Old English primitive strong verbs. First, the semantic relationships underlying the configuration of these lexical paradigms have been determined. Second, the *Aktionsart* type of the different meanings inside each paradigm has been identified. Both analyses have been carried out with a view to representing these phenomena by means of semantic maps.

Put in another way, the aim of this work was not only to describe the semantic relations that hold in the lexical paradigms of the Old English primitive strong verbs but also to determine the nature and patterns of these semantic relationships in terms of *Aktionsart* types; ultimately, it was also an aim of this work to ascertain to what extent both analyses are interdependent, or if, on the contrary, there is no connection between them.

The adoption of the semantic map methodology in this investigation has allowed to exhaustively combine both analyses into a single network from the core to the periphery of each paradigm. Moreover, the information has been visually provided in a systematic and straightforward manner. As a result, this dissertation has turned out a detail diagram of each paradigm, in which the interdependence of the *Aktionsart* and troponymy analysis has been shown explicitly.

By chapter, the contents of this PhD dissertation can be summarized as follows.

Chapter 2 has reviewed the theoretical and descriptive aspects relevant for an analysis of the semantics of the verbal lexical paradigms of Old English that can be implemented in a semantic map. On the theoretical side, the main aspects of such a review include lexical functions on the syntagmatic and paradigmatic axes of the lexicon, the architecture of FrameNet, with special emphasis on the verbal relation of

troponymy and the typology of *Aktionsart* or the internal aspect of verbs. Since different versions of verbs are derived from one another by means of lexical rules, the position that has been adopted here is that *Aktionsart* distinctions can also relate a given verb to a different one. On the descriptive side, some lexical and semantic aspects of Old English have been reviewed, including the paradigmatic analysis of lexical and morphological relations, the word-formation processes of zero derivation, affixation and compounding and the lexical functions that apply in the derived nouns and adjectives of Old English.

Chapter 3 has addressed the question of the implementation of the analysis of the 328 lexical paradigms of Old English primitive strong verbs in a semantic map. The methodology of analysis has been aimed at specifying the form and function of a semantic map in the context of this study and at selecting the proposals of the literature on troponymy and *Aktionsart* classes. The position adopted on the methodology of the visual representation of troponymy and *Aktionsart* in a semantic map is that the research should consist of two steps. In the first step, the analytical model has been applied to the lexical paradigms of Old English strong verbs (this step has also entailed the identification of the lexical paradigms and the selection of the verbs within such paradigms). In the second step, after discussing the results of the analysis, a generalization can be made regarding troponymy and *Aktionsart*, in such a way that a general semantic map is drawn for these phenomena.

In chapter 4, the semantic maps of the lexical paradigms of Old English based on strong verbs have been presented. The semantic map drawn for each lexical paradigm is a semantic-syntactic network because it displays the semantic relation of troponymy and the semantic-syntactic specification of *Aktionsart* type. In a given map, meanings have been assembled into synsets. The primitive has been placed in the centre of the diagram and the synsets resulting from the different meanings of the primitive and the derived verbs have been linked to the synsets of the primitive and among them by means of the conceptual-semantic relations of troponymy, -troponymy, synonymy, backward presupposition, cause and opposition. The synsets also display its corresponding *Aktionsart* type: states, activities, accomplishments, achievements, unbounded processes, semelfactives, active accomplishments, causative states, causative activities, causative accomplishments, causative achievements, causative unbounded processes, causative semelfactives and causative active accomplishments. Then, the results of this analysis have been presented from the point

of view of semantic inheritance. Indeed, the semantic relations that hold in the lexical paradigm constitute a network of semantic inheritance, in which it is possible to distinguish how new meanings diverge from the original meaning and what type of meaning specification is made with respect to more basic verbs.

## 5.3. Problems and solutions

The first issue of this research is the focus on Present Day English of the theoretical literature that was reviewed for this thesis. In general, no provision is made for earlier stages of the English language such as Old English. Moreover, the examples of semantic relations and *Aktionsart* types provided by the available literature do not cover all the range exhibited by a significant part of the verbal lexicon of a language, such as the one that has been selected as corpus of analysis for this PhD dissertation. For instance, it has been necessary to deal with verbs that express very complex meanings, which are far from the straightforwards examples considered in the literature. Some instances such as *ābannan* 'to summon to battle'; *ofbēatan* 'to beat to death'; *ofbēatan*, *tōbēatan* 'destroy by beating'; *beorcan* 'to make a sharp and explosive sound'; *forberstan* 'to let go by default'; *abædan*, *bādian* 'to take by way of a pledge or fine, to take a toll'; *ābedecian*, *ābiddan* 'to get by asking'; *giftian* 'to give a woman in marriage'; *tōbrȳtan* 'crush with feelings of sorrow'; and *ābītan* 'to lacerate with the teeth' illustrate this point.

To assign *Aktionsart* type to complex verbs I have focused on the result rather than on the process by means of which a given result is obtained. Then, verbs expressing the meaning 'to beat to death', 'to destroy by beating' and 'to get by asking' have been classified as exhibiting the *Aktionsart* type of 'to kill', 'to destroy' and 'to get', respectively. Then, although an additional meaning specification is present in 'to summon to battle', 'to let go by default', 'to take by way of a pledge or fine, take a toll', 'to crush with feelings of sorrow' and 'to lacerate with the teeth', the *Aktionsart* type does not vary from the more simple verbs 'to summon', 'to let go', 'to take', 'to crush' and 'to lacerate'. Finally, expressions such as 'to give a woman in marriage' must be understood against the background of Old English culture. For instance, in the verbal paradigm *BLŌTAN* I have come across verbs such as *onblōtan* 'to kill a victim'; *onblōtan* 'to offer'; *(ge)blētsian* 'to bless, consecrate, hallow, call holy'; and *(ge)blētsian* 'to adore, extol'. Besides the Old English background, the meaning of the verbs *blōtan*, *onblōtan* 'to sacrifice' must be understood with respect to

the framework of 'killing a person or animal in a religious ceremony as an offering to please a god' (Merrian Webster definition).

As far as the conceptual-semantic relations are concerned, the study of the Old English verbal paradigms shows that verbs such as *(ge)bēatan* 'to beat, strike, pound, dash' present derived verbs such as *ofbēatan* 'to beat to death' and *ofbēatan*, *tōbēatan* 'to beat to pieces, destroy by beating'; *(ge)berstan* 'to break, crack' derive in verbs such as *tōberstan* 'to break in two'; and *(ge)feallan* 'to fall' derive in verbs such as *forfeallan* 'to destroy by falling' and *tōfeallan* 'to fall or break to pieces'. Because of the complexity of the Old English vocabulary and particulary, of the Old English verbs at stake, these derivations must be considered from the angle of troponymy. In general, in a typical relation of troponymy both verbs share the same *Aktionsart* type, but this is not always the case for the complexity of the verbal lexicon and the large amount of data under scrutiny. To illustrate this point, in the paradigm *LESAN* the verb *lesan* 'to lease' must be seen as conveying the obsolete meaning 'to glean, gather, collect', while *āspēdan* 'to scape' in the paradigm *SPŌWAN* represents the archaic variant of 'to escape'.

Polysemy has been a recurrent issue throughout the analysis. As regards synsets and given that relations are sometimes established with only a part of the verbs in the synset, some of them have been divided into two or more synsets. In this way, although synsets are unordered sets of cognitive synonyms, the polysemy of some of the verbs within the synsets allows us to establish a new relationship with a different synset. For this reason, it is possible to define a relation of synonymy between two synsets, which otherwise could have been grouped together in one synset. For instance, in the *RĪSAN* paradigm, *ārǣran*, *rǣran* 'to raise' may have been included in the synset *ārǣran*, *rǣran* 'to lift up, elevate, move from a lower to a higher position', but also in the synset *ārǣran*, *rǣran* 'to stir up, arouse, rouse, excite'. However, these synsets do not establish any conceptual-semantic relationship between them. The relationship exclusively emerges from the polysemy of the verb *ārǣran*, *rǣran* 'to raise'. Then, in order to represent this semantic derivation, a new synset has been created for this verb, which defines a relationship of synonymy with the other two synsets. Similarly, in the paradigm *GIETAN* the verb *ongietan* 'to seize, grasp' may have been included in the synset *ongietan* 'see, perceive, understand' nevertheless, but this would have excluded a relationship of troponymy between the synsets *gietan* 'to get, obtain, take' and *ongietan* 'to seize, grasp'. Another example can be seen in the

paradigm *HEBBAN*, where the verb *(ge)hefigian* 'to aggravate' may have been included in the synset *āhefegian*, *(ge)hefigian* 'to make sad or heavy, to make heavy, burden, weigh down, grieve, oppress, vex, afflict, weary', although this would have made it impossible to establish a cause relationship between the synsets *(ge)hefigian* 'to aggravate' and *(ge)hefigian* 'to grow worse'.

Van Valin and LaPolla (1997) and Van Valin (2005) note that, although verbs may present a basic *Aktionsart* type, the addition of prepositional phrases or adverbials, as well as the clause or the context in which they occur may result in a different *Aktionsart* interpretation for the verb. Moreover, the ability of a verb to convey multiple meanings clearly motivates its potential inclusion into more than one *Aktionsart* type. Then, in order to assign an accurate meaning to each verb and overcome the ambiguities caused by polysemy, it has been necessary to check every verb against the context of the paradigm to which it belongs. Put in more technical terms, the semantic analysis cannot be independent from the patterns of semantic inheritance that turn up in the lexical paradigm. To give an example, the paradigm *RĒOTAN* includes the synsets *rēotan* 'to weep, shed tears'; *rēotan* 'to wail'; and *rēotan* 'to mourn, lament'. Whereas the first two synsets are clearly activities as regards the *Aktionsart* type, the latter synset means 'to feel or show sorrow or sadness' and, therefore, can be attributed both the *Aktionsart* type of state and the *Aktionsart* type of activity. Then, the pattern of semantic inheritance, by analogy with the rest of the synsets in the paradigm, indicates that the *Aktionsart* type of activity is preferable.

If the patterns of semantic inheritance of the paradigm do not allow us to specify the precise meaning, I have studied the etymology of the word in order to shed light on the meaning of the word. The example of the paradigm *LESAN* above illustrates this point. Finally, because of the limited information available from some paradigms (they may be very small or include doubtful meanings), or because it has not been possible to trace the etymology of the word, I have found it difficult to delimit a given meaning. When this has been the case, the solution that I have adopted has been provided by Visser (1963-1973), who stresses the process of transitivization through which intransitive verbs go on the diachronic axis, from Old English to Present Day English. In this analysis, consequently, the intransitive is the default choice. To illustrate this point, in the paradigm *GREOSAN*, which consists of the verb *grēosan* 'to frighten' only, which can be defined as 'to cause someone to become afraid' or 'to become afraid', the intransitive meaning has been preferred over the

transitive. Similarly, the paradigm *HRIMPAN* includes the verb *hrimpan* 'to wrinkle, rumple', 'to twist, coil' and 'to contract', both of which have been taken as intransitive in the analysis.

Finally, an issue has arisen that is related to causativity. Consider as illustration the paradigm *FLĒOTAN,* in which there is a cause relationship between the synset *tōflēotan* 'to carry away by a flood' and the synset *floterian* 'to be carried or tossed by waves'. In the same way, in the paradigm *FLŌWAN* there is a cause relationship between the synset *tōflōwan* 'to spread, disperse' and the synset *tōflōwan* 'to take different directions, wander, distract', as well as between *tōflōwan* 'to spread, disperse' and *tōflōwan* 'to be separated, to be dissipated, to be scattered, to be split'. In these case, *tōflēotan* 'to carry away by a flood' and *tōflōwan* 'to spread, disperse' correspond to the causative activity *Aktionsart* type. However, whereas the resultative *tōflōwan* 'to take different directions, wander, distract' conforms to the activity *Aktionsart* type derived from the causative activity, both *floterian* 'to be carried or tossed by waves' and *tōflōwan* 'to be separated, to be dissipated, to be scattered, to be split' belong to the class of states. The solution adopted in this respect is that, whereas 'to take different directions' has been understood as an activity, 'to be scattered' has been considered as a state. Nevertheless, both seem to make reference to the same situation, but seen from different perspectives.

## 5.4. General conclusions

Three types of conclusions can be drawn after this research: theoretical, methodological and descriptive. The theoretical conclusions of this work bear on the typology of *Aktionsart* classes and, by extension, on the applicability of *Aktionsart* to different verbs and the compatibility of troponymy (and the other semantic relations) and *Aktionsart* within the same analysis. The methodological conclusions have to do with the design and implementation of a hierarchical semantic map. Finally, the descriptive conclusions make reference to the results of the analysis of the Old English lexical paradigms based on strong verbs and include the semantic map of troponymy and *Aktionsart* itself. These conclusions are presented in turn.

To begin with, it is necessary to add the *Aktionsart* type of unbounded processes to the typology of Role and Reference Grammar as put forward by Van Valin and LaPolla (1997), Van Valin (2005) and Van Valin (2014). This new class presents the features [-static], [-dynamic], [-telic], [-punctual] and corresponds to

verbs such as *grow*, *flourish*, *diminish*, *decrease*, *increase*, *swell*, *deteriorate*, *whither* and *pine* (all intransitive), which display processes of change not delimited by an inherent end. In this manner, verbs under this category exhibit processes, which can be extended in an indefinite way. They are similar to accomplishments in the sense that they represent non-punctual processes; however, this new category includes the feature [-telic]. As is the case with other *Aktionsart* types, unbounded processes also present a causative version thus the spontaneous unbounded process *The cathedral is deteriorating* as opposed to the causative unbounded process *The pass of time deteriorates the catedral.*

Also with respect to the applicability of the *Aktionsart* types, I have come across counterfactual verbs, like *misfōn* 'to fail to take', *foregān* 1 'to abstain from, not to do' or *mishealdan* 'not to keep', that do not represent any of the internal aspects of the verb as defined in Role and Reference Grammar. It may be possible to account for these verbs by means of the factual verb ('to do', for instance), then assign the corresponding *Aktionsart* and finally add an operator of negation with scope over the verb (Van Valin and LaPolla 1997: 47).

The fact that these two difficulties have arisen when applying the typology of *Aktionsart* of Role and Reference Grammar to this analysis does not mean that such typology has not been suitable for the undertaking. On the contrary, this typology has allowed me to relate derived verbs to primitive verbs on semantic-syntactic grounds. This represents a relative divergence with respect to the *Aktionsart* types as proposed by Van Valin and LaPolla (1997) and subsequent work. In the standard view, lexical rules mainly relate a given version of a certain verb to other versions, as, for instance, in the spontaneous version and the causative version of the same verb.

After the analysis of *Aktionsart* in the verbal paradigms based on the Old English strong verbs, it is possible to draw the conclusion that the *Aktionsart* types can also be applied to relations between different verbs. Moreover, the analysis in terms of *Aktionsart* types is compatible with other semantic analyses like the one of troponymy and the other semantic relations conducted in this PhD dissertation. In this respect, it has been found that synonymy and troponymy hold between synsets with the same *Aktionsart* in the vast majority of the cases, whereas cause, backward presupposition, opposition and -troponymy tend to change the *Aktionsart* type between the two related synsets. The lesson that can be drawn is that there is a higher semantic divergence in pairs of backward presupposition, opposition and -troponymy than in pairs linked by

synonymy and troponymy. In this analysis, such semantic divergence has been couched in terms of meaning specification. As for cause, it is predictable that it changes the *Aktionsart* type because the parameter of causativity is central to the typology of *Aktionsart*, so that a spontaneous and a causative version is defined for each type. It is also worth remarking that state or change of state *Aktionsart* types correlate with pairs of synsets related by the relation of opposition, while activity *Aktionsart* correlate with pairs of synsets related by the relation of troponymy. This probably means that opposition tends to hold between static verbs and that troponymy often links dynamic verbs, but more research is needed on this question.

Regarding the methodological conclusions, they have to do mainly with the design of the semantic map. This work has drawn a semantic map in a way that diverges from most works that use this type of visual representation. It has been shown that semantic maps can be used to deal with one language (rather than for cross-linguistic comparison), to explain historical languages (rather than natural languages) and specific lexical items (rather than classes). The conclusion can be drawn, therefore, that semantic maps represent a more flexible and applicable methodology than previous work suggests and that it is worth exploring these possibilities by means of studies like the one conducted in the PhD dissertation.

Of the available models of semantic map, this research has opted for the connectivity map, with the important difference that a hierarchical map has been preferred. The incorporation of measures on frequency to the generally accepted judgements of co-occurrence (whereby related notions appear close to each other while unrelated notions are far way from each other in the representation) has contributed to the hierarchical organization of the map. Moreover, graph theory has been applied, in such a way that non-binary graphs have been used, in most cases of the directed type. The conclusion in this respect is that graph theory is compatible with the methodology of semantic maps.

The main descriptive conclusion of this work is the semantic map of troponymy and *Aktionsart* in the verbal lexicon of the strong verb paradigms of Old English, which represents a generalization over the semantic maps of the individual derivational paradigms presented in chapter 4. It is given in figure 1.

| T | -T. | B.P. | C. | S. | O. |
|---|---|---|---|---|---|

c. acc.–c. acc.

c. u. p.–c. u. p.

act.–act.
a. acc.–a. acc.

c. acc.-c. acc.
c. act.-c.act.

caus. acc. – acc.

caus. acc. − caus. acc.

c. s.-c.s./c.ach.-c.ach.

caus. acc. − caus. acc.

u.p.-u.p./c.u.p.-c.u.p.

act.– s.

acc. –s./acc.–c. acc./ach.–u.p./sem.–c. acc./a. acc.–s./c. act.-act./c. act.– c.acc.

s–acc.

s.-a.acc./a.-c. a. acc/acc.-ach./acc.-c. a. acc./ach.-u.p./u.p.-acc./c.acc.- a.acc./c.ach.-c.acc./c.u.p.-acc.

c. act.-c. acc./c.u.p.-s./c.sem.-sem/c.-s./act.-u.p./ach.-s./a.acc.-acc.

act. − acc. act.-a.acc./acc.-ach./c.acc.- a.acc.

c. acc.–act.

c. acc.-a. acc./s.– a. acc./act.– acc.

a. acc. − act.   act.-c.acc.

Figure 1: The semantic map of troponymy and *Aktionsart* in the verbal lexicon of the strong verb paradigms of Old English.

The abbreviations used in this map are listed below:

Semantic relations:

B.P.:          Backward presupposition

C.:            Cause

O.:            Opposition

S.:            Synonymy

T.:            Troponymy

-T.:           -Troponymy

*Aktionsart*:

Acc.:           Accomplishment

Ach.:           Achievement

Act.:           Activity

A. acc.:        Active accomplishment

C.:             Causative

S:              State

Sem:            Semelfactive

U. p.           Unbounded process

In the semantic map of verbal troponymy and *Aktionsart* of the verbal lexicon that belongs to the Old English lexical paradigms based on strong verbs the frequency of the semantic relations that have been analysed throughout this dissertation (troponymy, -troponymy, backward presupposition, cause, synonymy and opposition) is directly proportional to the surface occupied by the relation in question. The area corresponding to each relation has been divided on the vertical dimension to separate, also proportionally, the frequency of pairs of synsets sharing the *Aktionsart* type (dotted area) from the pairs of synsets which do not share the *Aktionsart* type (solid area). The semantic relations have been arranged in such a way that those which display temporal inclusion (troponymy and –troponymy) are placed together to the left of the map. Then, placed in the centre of the map, come those relations which do not involve temporal inclusion, backward presupposition and cause. Finally, those relations which are mutually entailing, synonymy and opposition, have been placed at the right of the map. Inside each section, the most and the least frequent type of *Aktionsart* association is exhibited, in such a manner that the bigger letter-size stands for the most frequent type of *Aktionsart* association and the smaller letter-size stands for the least frequent type of *Aktionsart* association. Finally, a hyphen separates the entailing synset (at the left of the hyphen) from the entailed synset (at the right).

## 5.5. Further research

Given these conclusions, two main lines can be pursued in future research. The first has to do with the applicability of the method of this thesis. This semantic map could be applied to the derivational paradigms to which weak verbs belong but it must be borne in mind that such paradigms have nominal and adjectival bases and, therefore, non-verbal semantic relations are likely to hold. This semantic map could also be

applied to the verbal lexicon of other diachronic stages of English although it must be taken into account that the associative lexicon of Old English can be organised by means of derivational paradigms far more easily than the dissociated lexicon of Present-Day English. It should be expected in this respect that most verbal paradigms combined Germanic and Romance verbs and, consequently, that the only pattern of inheritance identifiable in the paradigms was semantic (formal inheritance being preculed by mixed historical origin).

The second line of research that results from this research has to do with the typology of *Aktionsart*. In the first place, it is necessary to apply the new class of unbounded processes to other languages in order to check its typological validity. Secondly, it is necessary to pay more attention to causative verbs that entail an activity, such as *ofbēatan* 'to beat to death', *ofbēatan*, *tōbēatan* 'to beat to pieces, destroy by beating', *fordelfan* 'to destroy by digging', 'to dash or knock to pieces', *ofhnītan* 'to kill by butting, gore to death' and *ofweorpan*, *ofworpian* 'to kill by casting (stones, missiles, etc.)'. Although more research is needed, it might be the case that these verbs constituted active causative accomplishments and could be defined by the features [-static], [+dynamic], [+telic], [-puncutal]. Finally, another aspect that deserves more attention is the semantic proximity between active accomplishments of consumption and causative accomplishments of destruction, and between active accomplishments of creation and causative accomplishments of formation or configuration, as in *BRUCAN*: *forbrīcan* 'to consume, use up' — ➤ *forbrīcan* 'to destroy'; *ÐICGAN*: *(ge)ðicgan*, *āðecgan*, *ðecgan* 'to consume' — ➤ *ofðecgan* 'to destroy' and *SCIERPAN: (ge)scieppan* 'to change, transform, deform' — ➤ *(ge)scieppan, āscieppan* 'to make, create, form'.

# References

Anderson, L. B. 1982. The 'perfect' as a universal and as a language-particular category. In P. J. Hopper (ed.), *Tense-Aspect: Between Semantics & Pragmatics*. Amsterdam: John Benjamins. 227-264.

Anderson, L. B. 1986. Evidentials, paths of change, and mental maps: typologically regular asymmetries. In W. Chafe and J. Nichols (eds.) *Evidentiality: The linguistic encoding of epistemology*. Norwood: Ablex. 273-312.

Bammesberger, A. 1965. *Deverbative jan-Verba des Altenglischen, vergleichend mit den übrigen altgermanischen Sprachen dargestellt*. München: Ludwig-Maximilians Universität.

Bammesberger, A. 1992. The place of English in Germanic and Indo-European. In R. Hogg (ed.), *The Cambridge History of the Engish Language I: The beginnings to 1066*. Cambridge: Cambridge University Press. 26-66.

Barðdal, J. 2007. The semantic and lexical range of the ditransitive construction in the history of (North) Germanic. *Functions of Language* 14/1: 9-30.

Bierbaumer, P. 1975. *Der botanische Wortschatz des Altenglischen Teil I: Laeceboc*. Bern: Peter Lang.

Bierbaumer, P. 1976. *Der botanische Wortschatz des Altenglischen Teil II: Lacnunga, Herbarium Apulien, Peri Didaxeon*. Bern: Peter Lang.

Bierbaumer, P. 1979. *Der botanische Wortschatz des Altenglischen Teil III: Der botanische Wortschatz in altenglischen Glossen*. Bern: Peter Lang.

Brinton, L. and E. Closs Traugott. 2005. *Lexicalization and Language Change*. Cambridge: Cambridge University Press.

Cristofaro, S. 2010. Semantic maps and mental representation. *Linguistic Discovery* 8/1: 35-52.

Croft, W. 2001. *Radical Construction Grammar: Syntactic theory in typological perspective*. Oxford: Oxford University press.

Croft, W. 2003. *Typology and universals*. Cambridge: Cambridge University Press.

Cruse, D. A. 1986. *Lexical semantics*. Cambridge: Cambridge University Press.

de la Cruz, J. 1975. Old English Pure Prefixes: Structure and Function. *Linguistics* 13/145: 47-82.

Dik, S. 1997a (1989). *The Theory of Functional Grammar, Vol. 1: The Structure of the Clause*. Berlin: Mouton de Gruyter.

Dik, S. 1997b. *The Theory of Functional Grammar, Vol. 2: Complex and Derived Constructions*. Berlin: Mouton de Gruyter.

Dowty, D. 1979. *Word Meaning and Montague Grammar*. Dordrecht: Reidel.

Dowty, D. 1991. Thematic proto-roles and argument selection. *Language* 67: 547-619.

Fellbaum, C. 1990. The English verb lexicon as a semantic net. *International Journal of Lexicography* 3: 278-301.

Fellbaum, C. and R. Chaffin. 1990. Some principles of the organization of the verb lexicon. *Proceedings of the 12<sup>th</sup> Annual Conference of the cognitive science society*. Hillsdale: Erlbaum. 420-428.

Fellbaum, C. and G. A. Miller. 1990. Folk Psychology or Semantic Entailment?: A Reply to Rips and Conrad. *Psychological Review* 97: 565-570.

Fellbaum, C. (ed.) 1998a. *WordNet: An Electronic Lexical Database*. Cambridge: MIT Press.

Fellbaum, C. 1998b. A semantic network of English verbs. In Fellbaum (ed.), *WordNet: An Electronic Lexical Database*. 69-104.

Filip, H. 1993 [1999]. *Aspect, Situation Types and Noun Phrase Semantics*. New York/ London: Garland Publishing, Inc. [PhD Thesis 1993].

Foley, W. and R. Van Valin. 1984. *Functional Syntax and Universal Grammar*. Cambridge: Cambridge University Press.

François, A. 2008. Semantic maps and the typology of colexification: Intertwining polysemous networks across languages. In M. Vanhove (ed.), *From Polysemy to Semantic Change*. Amsterdam: John Benjamins. 163-215.

García García, L. 2012. Morphological causatives in Old English: the quest for a vanishing formation. *Transactions of the Philological Society* 110/1: 112-148.

García García, L. 2013. Lexicalization and morphological simplification in Old English jan-causatives: some open questions. *Sprachwissenschaft* 38/2: 245-264.

Gaume, B., K. Duvignau and M. Vanhove. 2008. Semantic associations and confluences in paradigmatic networks. In M. Vanhove (ed.), *From Polysemy to Semantic Change*. Amsterdam: John Benjamins. 233-264.

Geeraerts, D. 2010. *Theories of Lexical Semantics*. New York: Oxford University Press.

González Torres, E. 2010a. The bases of derivation of Old English affixed nouns: status and category. *Studia Anglica Posnaniensia* 46/2: 21-43.

González Torres, E. 2010b. The Continuum Inflection-Derivation and the Old English suffixes -a, -e, -o, -u. *ATLANTIS* 32/1: 103-122.

González Torres, E. 2011. Morphological complexity, recursiveness and templates in the formation of Old English nouns. *Estudios Ingleses de la Universidad Complutense* 19: 45-70.

Green, R., C. A. Bean and S. H. Myaeng (eds.). 2002. *The Semantics of Relationships. An Interdisciplinary Perspective*, *Vol. 3*. Dordrecht: Kluwer.

Guarddon Anelo, M. C. 2009. Un análisis de las propiedades combinatorias de los primitivos semánticos a través de las adposiciones complejas en inglés antiguo. *Revista Española de Lingüística* 39/2: 93-122.

de Haan, F. 2004. On representing semantic maps. Paper presented at the E-MEDL Language documentation conference 2004 (*Workshop on linguistic databases and best practice*).

Haspelmath, M. 2003. The geometry of grammatical meaning: Semantic maps and cross-linguistic comparison. In M. Tomasello (ed.), *The New Psychology of Language*, *Vol. 2.* Mahwah: Lawrence Erlbaum Associates.

Hengeveld, K. and J. L. Mackenzie. 2008. *Functional Discourse Grammar. A typologically-based theory of language structure*. Oxford: Oxford University Press.

Hiltunen, R. 1983. *The Decline of the Prefixes and the Beginnings of the English Phrasal Verb*. Turku: Tutun Yliopisto.

Hinderling, R. 1967. *Studien zu den starken Verbalabstrakten des Germanischen.* Berlin: Walter de Gruyter.

Horgan, D. 1980. Patterns of Variation and Interchangeability in some Old English Prefixes. *Neuphilologische Mitteilungen* 81/2: 127-130.

Jackendof, R. S. 1983. *Semantics and Cognition*. Cambridge: MIT Press.

Jember, G.K., J.C. Carrell, R.P. Lundquist, B. M. Olds and R. P. Jr. Tripp. 1975. *English-Old English, Old English-English Dictionary*. Boulder: Westview Press.

Kastovsky, D. 1968. *Old English Deverbal Substantives Derived by Means of a Zero Morpheme*. Esslingen: Bruno Langer Verlag.

Kastovsky, D. 1971. The Old English Suffix *-ER(E)*. *Anglia* LXXXIX 3: 285-325.

Kastovsky, D. 1986. Deverbal nouns in Old and Modern English: from stem-formation to word-formation. In J. Fisiak (ed.), *Historical Semantics-Historical Word Formation*. Berlin: Mouton de Gruyter. 221-261.

Kastovsky, D. 1989a. Morphophonemic alternations and the history of English: Examples from Old English. In M. Markus (ed.), *Historical English. On the occasion of Karl Brunner's 100th birthday*. Innsbruck: Universität. 112-123.

Kastovsky, D. 1989b. Typological Changes in the History of English Morphology. In U. Fries y M. Heusser (eds.), *Meaning and Beyond. Ernst Leisi zum 70. Geburstag*. Tübingen: Narr. 281-293.

Kastovsky, D. 1990. The typological status of Old English Word Formation. In S. M. Adamson, V. A. Law, N. Vincent and S. Wright (eds.), *Papers from the 5th International Conference on English Historical Linguistics*. Amsterdam: John Benjamins. 205-224.

Kastovsky, D. 1992a. 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.

Kastovsky, D. 1992b. Typological reorientation as a result of level interaction: the case of English morphology. In G. Kellermann y M. D. Morrissey (eds.), *Diachrony within synchrony: Language history and cognition*. Frankfurt am Main: Peter Lang. 411-428.

Kastovsky, D. 1999. Inflectional classes, morphological restructuring and the dissolution of Old English grammatical gender. In B. Unterbeck and M. Rissanen (eds), *Gender in grammar and cognition. Vol. 2: Manifestations of gender*. Berlin: Mouton de Gruyter. 709-727.

Kastovsky, D. 2001. Local and Global-Typological Changes in the History of English: Two Complementary Perspectives. In H. Grabes (ed.), *Innovation and continuity in English studies. A critical jubilee*. Frankfurt am Main: Peter Lang. 275-287.

Kastovsky, D. 2002. The derivation of ornative, locative, ablative privative and reversative verbs in English. A historical sketch. In T. Fanego (ed.), *English Historical Syntax and Morphology*. 99–110.

Kastovsky, D. 2006. Typological Changes in Derivational Morphology. In A. van Kemenade y B. Bettelou Los (eds.), *The Handbook of the History of English*. Oxford: Blackwell publishing. 151-177.

Keller, M. 1967. *The Anglo-Saxon Weapon Names Treated Archaeologically and Etymologically*. Amsterdam: Swets and Zeitlinger.

Köhler, J. J. 1906. *Die altenglischen Fischnamen*. Heidelberg: Carl Winter´s Universitätsbuchhandlung.

Krifka, M. 1992. Thematic relations as links between nominal reference and temporal consitution. In I. Sag and A. Szabolsci, (eds.), *Lexical matters.* Standford: CSLI. 29-54.

Lacalle Palacios, M. 2013. The derivational map of Old English and the limits of gradual derivation. *Revista de Lingüística y Lenguas Aplicadas* 8: 198-213.

Levin, B. 1993. *English Verb Classes and Alternations: A Preliminary Investigation.* Chicago: University of Chicago Press.

Levshina, N. Semantic Map. In P. Karlik (ed.), *New Encyclopedia of Czech Online*. Forthcoming.

Lohmander, I. 1981. *Old and Middle English Words for 'Disgrace' and 'Dishonour'.* Göteburg: Minab.

Low, S. 2001. Approaches to the Old English Vocabulary for 'Mind'. *Studia Neophilologica* 73: 11-22.

Lyons, J. 1977. *Semantic*s. Cambridge: Cambridge University Press.

Lyons, J. 1995. *Linguistic Semantics*. Cambridge: Cambridge University Press.

Martín Arista, J. 2008. Unification and separation in a functional theory of morphology. In R. Van Valin (ed.), *Investigations of the Syntax-Semantics-Pragmatics Interface*. Amsterdam: John Benjamins. 119-145.

Martín Arista, J. 2009. A Typology of Morphological Constructions. In C. Butler y J. Martín Arista (eds.), *Deconstructing Constructions*. Amsterdam: John Benjamins. 85-115.

Martín Arista, J. 2010. Lexical negation in Old English. *NOWELE-North-Western European Language Evolution* 60/61: 89-108.

Martín Arista, J. 2011a. Adjective formation and lexical layers in Old English. *English Studies* 92/3: 323-344.

Martín Arista, J. 2011b. Projections and Constructions in Functional Morphology. The Case of Old English HRĒOW. *Language and Linguistics* 12/2: 393-425.

Martín Arista, J. 2012a. The Old English Prefix Ge-: A Panchronic Reappraisal. *Australian Journal of Linguistics* 32/4: 411-433.

Martín Arista, J. 2012b. Lexical database, derivational map and 3D representation. *RESLA-Revista Española de Lingüística Aplicada* (Extra 1): 119-144.

Martín Arista, J. 2014. Noun layers in Old English. Asymmetry and mismatches in lexical derivation. *Nordic Journal of English Studies* 13/3: 160-187.

Martín Arista, J and M. V. Martín de la Rosa. 2006. Old English Semantic Primes: Substantives, Determiners and Quantifiers. *ATLANTIS* 28/2: 9-28.

Martín Arista, J. and R. Mateo Mendaza. 2013. Outline of a Lexicon of Old English. *Working Papers in Early English Lexicology and Lexicography* 3. Nerthus Project. University of La Rioja.

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. Gonzálvez García (eds.), *Theory and Practice in Functional-Cognitive Space*. Amsterdam: John Benjamins. 229-250.

Martín Arista, J. and R. Vea Escarza. 2016. Assessing the semantic transparency of Old English affixation: adjective and noun formation. *English Studies* 91/1: 61-77.

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].

Mateo Mendaza, R. 2013. The Old English exponent for the semantic prime TOUCH. Descriptive and methodological questions. *Australian Journal of Linguistics* 33/4: 449-466.

Mateo Mendaza, R. The Old English exponent for the semantic prime MOVE. *Australian Journal of Linguistics*. Forthcoming-a.

Mateo Mendaza, R. The search for Old English semantic primes: the case of HAPPEN. *Nordic Journal of English Studies*. Forthcoming-b.

Matzerath, J. 1912. *Die altenglischen Namen der Geldwerte*. Heidelberg: Carl Winter´s Universitätsbuchhandlung.

Mel'čuk, I. 1996. Lexical Functions: A Tool for the Description of Lexical Relations in the Lexicon. In L. Wanner (ed.), *Lexical Functions in Lexicography and Natural Language Processing*. Amsterdam: John Benjamins. 37-102.

Miller, G. A., R. Beckwith, C. Fellbaum, D. Gross and K. Miller. 1993. Introduction to WordNet: An On-line Lexical Database.

Novo Urraca, C. 2015. Old English Deadjectival Paradigms. Productivity and Recursivity. *NOWELE-North-Western European Language Evolution* 68/1: 61-80.

Novo Urraca, C. Morphological relatedness and the typology of adjectival formations in Old English. *Studia Neophilologica*. Forthcoming-a.

Novo Urraca, C. Old English Suffixation. Content and Transposition. *English Studies*. Forthcoming-b.

Novo Urraca, C. and L. Pesquera Fernández. 2015. Alternation vs. Allomorphic Variation in Old English Word-Formation: Evidence from the Derivational Paradigm of Strong Verbs. *Studia Anglica Posnaniensia* 49: 63-82.

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: 517–522.

Ogura, M. 2013. *Words and Expressions of Emotion in Medieval English*. Frankfurt am Main: Peter Lang.

Ojanguren López, A. E. 2014. Alternation vs. Variation in Old English. Methodological and descriptive issues. *Revista de Lingüística y Lenguas Aplicadas* 9: 55-66.

Owen-Crocker, G. 1986. *Dress in Anglo-Saxon England*. Manchester: Manchester University Press.

Pavey, E. 2010. *The Structure of Language: An Introduction to Grammatical Analysis*. Cambridge: Cambridge University Press.

Penttilä, E. 1956. *The Old English Verbs of Vision*. Helsinki: Suomalaisen Kirjallisuuden Kirjapaino Oy.

Pilch, H. 1970. *Altenglische Grammatik. Dialektologie. Phonologie. Morphologie. Syntax*. München: Max Hueber Verlag.

Pounder, A. 2000. *Processes and Paradigms in Word-Formation Morphology*. Berlin: Mouton de Gruyter.

Rappaport Hovav, M. and B. Levin. 1998. Building verb meanings. In M. Butt and W. Geuder (eds.), *The Projection of Arguments*. Stanford: CSLI. 97-134.

Rothstein, S. 2004: *Structuring Events: A Study in the Semantics of Lexical Aspect*. Oxford: Blackwell.

Sansò, A. 2009. How conceptual are semantic maps? *Linguistic Discovery* 8/1: 288-309.

Schabram, H. 1973. *Das altenglische superbia-Wortgut*. Vienna: Wilhelm Braummüller.

Schnepper, H. 2013. *Die Namen der Schiffe und Schiffsteile im Altenglischen - eine kulturgeschichtlichetymologische Untersuchung*. Kiel: H. Fiencke.

Schuldt, C. 1905. *Die Bildung der schwachen Verba im Altenglischen*. Kiel: Verlag von Robert Cordes.

Schwyter, J. R. 1996. *Old English Legal Language - The Lexical Field of Theft*. Gylling: Odense University Press.

Seebold, E. 1970. *Vergleichendes und Etymologisches Wörterbuch der Germanischen Starken Verben*. The Hague: Mouton.

Tenny, C. 1994. *Aspectual roles and the syntax-semantics interface*. Dordrecht: Kluwer.

Thier, K. 2002. *Altenglische Terminologie für Schiffe und Schiffsteile - Archäologie und Sprachgeschichte 500-1100*. Oxford: Archaeopress.

Tío Sáenz, M. and R. Vea Escarza. 2015. Intercategorial Homonymy in Old English. *Working Papers in Early English Lexicology and Lexicography* 5: 1-61.

Torre Alonso, R. 2011a. Affix Combination in Old English Noun Formation: Distribution and Constraints. *RESLA-Revista Española de Lingüística Aplicada* 24: 257-279.

Torre Alonso, R. 2011b. The Morphological Structure of Old English Complex Nouns. ATLANTIS 33/1: 127-146.

Torre Alonso, R. and D. Metola Rodríguez. 2014. Closing suffixes in Old English: A study based on recursive affixation. *Studia Anglica Posnaniensia* 48/2: 27–54.

Trips, C. 2009. *Lexical Semantics and Diachronic Morphology. The Development of -hood, -dom and -ship in the History of English*. Tübingen: Max Niemeyer Verlag.

Van Der Auwera, J. 2013. Semantic maps, for synchronic and diachronic typology. In A. G. Ramat, C. Mauri and P. Molinelli (eds.), *Synchrony and Diachrony: A Dynamic Interface*. Amsterdam: John Benjamins. 153-176.

Van Valin, R. Jr. and R. LaPolla. 1997. *Syntax: structure, meaning and function*. Cambridge: Cambridge University Press.

Van Valin, R. Jr. 2005. *Exploring the syntax-semantics interface*. Cambridge: Cambridge University Press.

Van Valin, R. Jr. 2014. *Exploring the Syntax-Semantic Interface*. Cambridge: Cambridge University Press.

Van Zandt Cortelyou, J. 1906. *Die altenglischen Namen der Insekten, Spinnen und Krustentiere*. Heidelberg: Carl Winter´s Universitätsbuchhandlung.

Vea Escarza, R. 2012. Structural and functional aspects of morphological recursivity: Old English affixal adjectives. *NOWELE: North-Western European Language Evolution* 64/65: 155-179.

Vea Escarza, R. 2013. Old English adjectival affixation. Structure and function. *Studia Anglica Posnaniensia* 48: 5-25.

Vea Escarza, R. and M. Tío Sáenz. 2014. Intracategorial Homonymy in Old English. *Working Papers in Early English Lexicology and Lexicography* 4: 1-46.

Vea Escarza, R. Lexical Functions in a Structural-Functional Framework. An Analysis of the Semantics of Old English Word-Formation. *Selected Papers from the 2014 VCC Symposium*. Forthcoming-a.

Vea Escarza, R. Recursivity and inheritance in the formation of Old English nouns and adjectives. *Studia Neophilologica*. Forthcoming-b.

Vendler, Z. 1957 (1967). *Linguistics in philosophy*. Ithaca: Cornell University Press.

Visser, F. T. 1963-1973. *An Historical Syntax of the English Language. Vol. I*: *Syntactical units with one verb*. Leiden: E. J. Brill.

Voigts, L. 1979. *Anglo-Saxon Plant Remedies and the Anglo-Saxons*. Chicago: University of Chicago Press.

Wanner, L. 1996. Introduction. In L. Wanner (ed.), *Lexical Functions in Lexicography and Natural Language Processing*. Amsterdam: John Benjamins. 1-36.

Weman, B. 1933. *Old English Semantic Analysis and Theory with Special Reference to Verbs Denoting Locomotion*. Lund: Carl Bloms Boktryckeri.

Whitman, C. 1898. *The Birds of Old English Literature*. Illinois: University of Illinois Press.

Whitman, C. 1989. Old English Mammal Names. *The Journal of Germanic Philology* 2/2: 148-198.