# The Morphological Structure of Old English Complex Nouns 

Roberto Torre Alonso<br>Universidad de La Rioja<br>roberto.torre@unirioja.es

This journal article takes issue with the morphological structure of complex nouns in Old English. This stage of the language is characterised by a rich morphology and, with most of its lexemes being morphologically complex, Old English provides a fertile field of study for the kind of analysis here undertaken. The present study analyses the interaction between affixation, compounding, zero-derivation and inflection in terms of the feeding of the morphological processes, that is, the successive order in which they appear, thus allowing for the establishment of regular patterns of noun formation and generalizations on lexical creation. Overall, 119 different word structures have been identified, depending on the type and number of morphological processes involved. The conclusion is reached that non-basic nouns in Old English contain up to six levels of complexity, with the bulk of the formations consisting of three and four levels, that is, with three or four derivational steps taking place.

Keywords: Old English; morphology; word-formation; word structure; process feeding; nouns

La estructura morfológica de los nombres complejos en el inglés antiguo

Este artículo se ocupa de la estructura de los nombres complejos del inglés antiguo. Este estadio de la lengua se caracteriza por su rica morfología, y dado que la mayor parte del léxico de este periodo es morfológicamente complejo, el inglés antiguo se muestra como un campo de estudio adecuado para el tipo de análisis que aquí se presenta. El presente estudio analiza la interacción entre los procesos derivativos de afijación, composición, derivación cero $y$ flexión en términos de alimentación de procesos, es decir, el orden sucesivo en el que éstos aparecen, lo que permite establecer patrones en la formación de sustantivos y generalizaciones respecto de la creación léxica. En total se han identificado 119 estructuras diferentes, que se distribuyen en seis niveles de complejidad morfológica. La mayor parte de los predicados estudiados, no obstante, contienen tres o cuatro niveles de complejidad, esto es, su derivación requiere tres o cuatro pasos.

Palabras clave: Inglés antiguo; morfología; formación de palabras; estructura de la palabra; alimentación de procesos; nombres

## 1. Aims and data

This journal article engages in the morphological structure of Old English complex nouns. ${ }^{1}$ By complex I mean nouns that have been derived lexically by means of wordformation processes, such as those in example (1):
(1)
a. gang 'journey' (gangan)
b. bīnama 'pronoun' (nama)
c. dēorling 'favourite' (dēore)
d. wīgmann 'warrior' (wīg, mann)

These examples illustrate the derivational processes that turn out the complex nouns under scrutiny in this work: gang 'journey' is a zero-derivative of gangan 'to go', bīnama 'pronoun' constitutes a prefixation on nama 'name', dēorling 'favourite' results from the attachment of a suffix to the base dēore 'dear' and, finally, the compound wigmann 'warrior' combines wigg 'fight' and mann 'man'. Whereas the input to the derivational processes in (1) consists of basic (underived) terms exclusively, the input to the process offered by (2) is complex (already derived):
(2)
a. ungesibsumnes 'quarrelsomeness' (ungesibsum)
b. dyrneforlegernes 'fornication' (dyrneforleger)
c. eftācennednes 'regeneration' (ācennednes)

In effect, the bases to which the noun-forming suffix -nes is attached constitute the output of previous word-formation processes. For instance, ungesibsum, the base of derivation of ungesibsumnes 'quarrelsomeness', results from the previous derivation of gesib from sib, gesibsum from gesib and ungesibsum from gesibsum, that is, the formation of the derivative requires four derivational steps. In the light of these examples, the analysis of complex nouns that is carried out in this article focuses on the interaction of morphological processes in recursive formations such as those in (2). The aim of the analysis is to ascertain the degree of complexity displayed by Old English nouns as well as the interaction of morphological processes that causes such complexity. In this respect, this article takes its starting point from Martín Arista's (2008) analysis of the relative ordering of morphological processes in Old English word-formation, which demonstrates that there is no lexical integrity in this stage of the English language.

The evidence gathered in this research has been retrieved from the lexical database of Old English Nerthus (www.nerthusproject.com). Nerthus is mainly based on Clark Hall's (1996) A Concise Anglo-Saxon Dictionary and, regarding specific questions, on Bosworth and Toller's (1973) An Anglo-Saxon dictionary as well as Sweet's (1976) The student's dictionary of Anglo-Saxon. It includes 13,670 non-basic nouns. Of these, 4,084 are affixed ( 1,025 by prefixation and 3,059 by suffixation), and 8,347 are compounds,

[^0]while 1,239 nouns have been created by means of zero-derivation. I have also identified a total of 167 nouns that are the result of productive inflection.

Given these aims and data, the article is organised as follows. Section 2 sets the terminological question of recursivity proper vs. process feeding and deals with some further methodological aspects of this research. Section 3 focuses on the feeding of morphological processes and the explanation of the different levels of morphological complexity that arise in the derived nouns of Old English. Section 4 presents the main conclusions of the study and, to round off, the appendix includes each of the structures identified, along with a sample word and the formal notation of its internal structure.

## 2. Research methodology

According to Martín Arista (2009), the defining properties of derivational morphology in a structural-functional framework include the possibility of applying derivational rules to previously derived inputs (recursivity) and the change in lexical category of some outputs of derivational processes with respect to the inputs (recategorization). Recursivity and recategorization, in this view, draw a distinction between inflectional morphology, which cannot apply recursively or change the category of the input to inflectional processes and derivational morphology. In this article I am concerned with the latter property, which deserves some attention in this methodological section.

In general, recursivity means rule repetition. More technically, a recursive rule reduces complex instances to basic instances of a phenomenon, in such a way that the rule is applied inside the rule. Considered from the perspective of the process for which the recursive rule accounts, a process is recursive if a step of the process requires the repetition of the step in question so that the required output of the process is turned out. In morphology, compounding illustrates the concept of recursive process neatly: by root compounding we get bank employee out of bank and employee and, by means of repeated application of the rule of root compounding, we produce bank employee payroll from bank employee and payroll. In affixation, happy plus -ness yield happiness, which, by prefixation of un-, produces unhappiness. These examples raise a question central to the study of morphological recursivity that can be stated in the following terms: how restrictive must the definition of morphological process be in order to speak of recursivity proper? In other words, does unhappiness involve recursivity? If recursivity is understood as repetition of a rule, unhappiness is not recursive because prefixation and suffixation are not governed by the same rules, neither are they subject to the same restrictions. Moreover, how are instances of affixed compounds such as anti-spyware to be handled? What is at stake here is whether the term morphological recursivity is understood in a wide sense, in terms of which any non-basic input to a derivational process represents an instance of recursivity, or in a narrow sense, which requires that a given process feeds the same process, as in instances of compounding feeding compounding such as bank employee payroll and affixation feeding affixation such as unhappiness, but not in affixation feeding compounding, for instance in antispyware. To solve this question I align myself with the functional school of linguistics regarding the functional identity of affixation and compounding as far as the lexeme
status of derivational affixes (Mairal Usón and Cortés Rodríguez 2000-2001) and the functional equivalence of derivation and compounding (Martín Arista 2008) are concerned. The solution that is advanced here is based on a distinction between general processes and specific processes. There is just one general process, namely lexical creation. The major specific processes of word-formation in Old English include zeroderivation, affixation and compounding. Affixation, in turn, can be broken down into prefixation and suffixation.

At this point, the concept of zero-derivation also requires some explanation. As I see it, zero-derivation operating on stems is probably an even more generalised phenomenon in Old English than Kastovsky (1968) suggests. Zero-derivation is an integral part of any analysis of Old English word-formation. In this respect, González Torres (2009, 2010) excludes zero-derivation proper from her study and leaves aside the instances of what she calls derivation by inflectional means, as in drinca 'drinker' from drincan 'drink'. The analysis of zero-derivation offered by Pesquera Fernández (2009) focuses on the phonological motivation of morphosyntactic alternations thus taking a different line than is pursued here. Martín Arista (forthcoming a) offers a typology of zero-derivation phenomena in Old English that includes: (i) zero derivation with explicit inflectional morphemes and without explicit derivational morphemes, as in rīdan 'to ride' > rīda 'rider'; (ii) zero derivation without explicit or implicit morphemes, either inflectional or derivational, as in bīdan 'to delay' > bīd 'delay'; (iii) zero derivation without inflectional or derivational morphemes but displaying ablaut, as in drīfan 'to drive' >drāf 'action of driving'; and (iv) zero derivation with ablaut and formatives that can no longer be considered productive affixes, such as $-m$ in flēon 'to fly' > flēam 'flight'. In general, there is consensus regarding the fact that the change from stem-formation to word-formation is over by the end of the Old English period. Zero-derivation is of paramount importance in the period of stem-formation but loses weight and ultimately disappears. In this sense, Kastovsky (2006: 165) states that nominal and adjectival inflection as well as denominal and deadjectival derivation in Old English were predominantly word-based, but González Torres (2009) has shown convincingly that the existence of more than one base available for the formation of a significant number of nouns goes in the direction of variable bases produced by inflectional processes and made ready for derivation. In other words, Kastovsky (2006) might overestimate the importance of word-formation with the corresponding underestimation of stem-formation in the period. For all the reasons just given, zero-derivation will be considered along with the other specific processes of wordformation in this work, the whole inventory including zero-derivation, affixation and compounding.

Specific processes of derivation are accounted for by rules, which can be broken down into word-formation rules and redundancy rules. While this typology is generally accepted in the fields of lexicology and word-formation, it is adapted to the study of a historical language in the following way (Caballero González et al. 2004-2005; Torre Alonso et al. 2008; Martín Arista 2010a, forthcoming c, d): word-formation rules are fully operational in a synchronic analysis whereas redundancy rules capture morphological relations no longer accountable for by word-formation rules. In Stark's (1982) terminology, word-formation rules explain what is productive in synchronic analysis and redundancy rules, on the other hand, explain what is recoverable in diachronic analysis.

An important difference between redundancy rules and word-formation rules is that the latter apply gradually, whereas the former do not. This distinction raises the issue of graduality. The transformational school has assumed some sort of graduality understood as "one affix, one rule" (Aronoff 1976: 89) in a parallel with the binarity principle governing $X^{\prime}$-syntax. In a similar vein, the Adjacency Condition (Siegel 1979) stipulates that in determining whether an affix can be attached to a complex word, the only relevant information is provided by the most recently attached element by means of a morphological rule. Williams (1981), as Spencer (1991: 187) notes, replaces the Adjacency Condition with the Atom Condition, which predicts that affixation processes can be sensitive only to the most recently attached morpheme. Although in a more indirect way than Aronoff (1976), Siegel (1979) and Williams (1981) also impose a graduality constraint on word-formation processes. In the specific area of Old English word-formation, Martín Arista (forthcoming b) has demonstrated that the derivation is gradual except in some instances of parasynthesis that basically comprise frequent affixes such as ge- and un- and, above all, adjectival derivatives. ${ }^{2}$ Consequently, theoretical and descriptive reasons advise a gradual analysis of the processes that turn out morphologically complex nouns in Old English.

A gradual analysis of the formation of complex nouns calls for the following steps. All predicates (lexemes) must be ascribed to a lexical category and classified as basic or non-basic. Basic predicates do not undergo any derivational processes. Within nonbasic predicates, a further distinction has to be made between non-recursive predicates (those which undergo a single derivational process of affixation, compounding or zeroderivation), and recursive predicates (those which undergo a derivational process that puts an end to the derivation, i.e. terminal process, preceded by another process that does not put an end to the derivation, i.e. non-terminal process). Non-terminal processes may be derivational, but also inflective, as in the inflection of drincan 'drink' for the past participle (druncen) as a prerequisite for obtaining druncennes 'drunkenness' by means of suffixation. Non-terminal and terminal processes are represented as shown by (3), which is based on Torre Alonso et al. (2008). (3a) represents the pre-terminal processes previous to the application of the terminal processes unfolded in (3b):
(3)
a. $\left[[\bar{a}]_{\mathrm{Af}}[\operatorname{sendan}]_{\mathrm{v}}\right]_{\mathrm{V}} \quad \bar{a} s e n d a n ~ ' t o ~ s e n d ~ f o r t h ' ~$ [\{drincan $\left.\}_{V}\{\text { drunken }\}_{V}\right]_{\text {Adj }}$ druncen 'drunk'
b. [[in] $\left.]_{\mathrm{af}}[\text { āsendan }]_{\mathrm{v}}\right]_{\mathrm{v}} \quad$ ināsendan 'to send in' $\left[[\text { druncen }]_{\text {Adj }}[\text { nis }]_{A f}\right]_{\mathrm{N}}$ druncenis 'drunkenness'

This formalism calls for some further comment. Square brackets represent derivational processes, while curly brackets are used to account for inflections. Another relevant notation property is that both the terminal and non-terminal process make use of a metalanguage, rather than the actual realizations of the predicate. At this point it must be stressed that the use of metalanguage in terminal derivational chains makes it

[^1]necessary to consider as prefixed bases some elements that lose their prefixation throughout the lexical creation processes. In the process of the identification of the bases of the complex words in Old English (and the adjuncts in the case of compounds) the loss of the prefix ge- throughout the derivations is not relevant for the research. However, when identifying the internal structure of the complex word, the situation is different, and some questions must be set beforehand.

In the first place, a derivational process represents one level of complexity. Basic items show no morphological complexity. In the second place, if, as stated above, the loss of an affix has no consequences for the identification of a base as affixed, such a loss is relevant to the analysis of the internal structure of words, in such a way that if the affix is lost, the constituent loses one level of complexity. More specifically, if a predicate is the result of adding ge- to an underived base, and in a second step the structure is suffixed with the corresponding loss of the prefix, the final complex word will be represented as the combination of an underived base plus a suffix and the structure will be described as having one level of complexity. This is the case with the derivatives in (4):
(4)

$$
\begin{array}{ll}
\text { a. ge } \text { e } \partial æ f^{\prime} \text { 'pressure' } & {\left[[\text { ge }]_{A f 1}[\partial \mathrm{r} æ f]_{\mathrm{N}}\right]_{\mathrm{N}}} \\
\text { b. } \partial r æ f t & \text { contentiousness' } \\
{\left[[\partial \mathrm{r} æ]_{\mathrm{N}}[\mathrm{t}]_{\mathrm{Af}} 1\right]_{\mathrm{N}}}
\end{array}
$$

As can be seen in (4), gedrcef 'pressure' is a complex noun made out of a noun plus the prefix ge-. When this complex noun enters a second process of affixation (suffixation with a suffix -t) the prefix is not present. Thus, in the analysis of the complex structure of Dreft 'contentiousness', the prefix ge- is not taken into consideration and, consequently, both the initial prefixed element and the second generation lexeme are analysed as having one level of complexity, with prefixation and suffixation, respectively, as the only morphological processes taking place.

Before discussing the main results obtained from the analysis, two final remarks should be made upon the analytical notation. Consider the examples in (5):
(5)
Inflected adjunct + underived base:
Cristesmæsse 'Christmas' $\left.\left[\left\{\text { Crīst }^{2}\right\}_{N}\{\text { Crīstes }\}_{\mathrm{N}}\right]_{N}[\text { mæsse }]_{N}\right]_{N}$
Prefix + Suffixed base < Compounding:
tōendebyrdnes 'order, series' $\left[[t o ̄]_{\text {Afr }}\left[\left[[e n d e]_{N}[b y r d]_{N}\right]_{N}[\text { ness }]_{A f 1}\right]_{N}\right]_{N}$
Compound base (basic adjunct + zero-derived base) + Suffix:
mancwealmnes 'manslaughter' $\left[\left[[\text { man }]_{N}\left[(\text { cwelan })_{v b}(\text { cwealm })_{N}\right]_{N}\right]_{N}[\text { nes }]_{\text {aft }}\right]_{\mathrm{N}}$

For the sake of clarity, the category of the lexeme has been added at the end of each derivational step. Similarly, the processes of zero-derivation and inflection have been distinguished, with round brackets denoting the former process and curly brackets indicating inflectional derivation. Finally, the order in which derivational processes occur and interact is also represented by means of formal notation. In this description a plus sign (+) represents attachment. It may be of an affix to a base or the joining of two
free predicates. A minor than symbol $(<)$ indicates that the process to the left of the sign occurs after (is fed by) the one to the right of the sign. Between brackets I represent the internal structure of compound elements.

## 3. Morphological process feeding and the structure of Old English nouns

After dealing with the relevant terminological and methodological questions relevant for this study, this section concentrates on the results of the analysis. For a detailed scrutiny of all the evidence furnished for this research, I refer the reader to the appendix.

The data analysed prove the quantitative and qualitative relevance of process feeding for the derivational morphology of Old English. On the qualitative side, all morphological processes play a role in the recursive formations found in Old English lexical creation. On the quantitative side, a significant part of the lexicon of the language constitutes the output of recursive processes of word-formation. As a matter of fact, recursive nounformation outnumbers non-recursive noun-formation, as table 1 shows:

|  | Non-recursive | Recursive |
| :--- | :---: | :---: |
| Prefixation | 217 | 548 |
| Suffixation | 1,010 | 3,059 |
| Compounding | 2,503 | 5,844 |
| Zero-derivation | 357 | 882 |

Table 1. Recursive and non-recursive noun-formation.

Within the realm of affixation, only 217 of the 754 prefixed nouns analysed in this work consist of the combination of a prefix plus an underived base ( $28.7 \%$ ). The situation with suffixation does not differ much from these data. Of the 3,059 suffixed nouns under scrutiny, 1,010 display an underived base ( $33 \%$ ). Within compounding, the number of compounds made by the addition of two basic predicates is 2,503 , just above $1 / 4$ of the total $(26.7 \%)$. That is, the attachment of an affix to underived bases or the combination of two basic predicates to form a compound is rather limited when compared with the number of elements in which at least two derivational processes take place.

These recursive nouns can be grouped around 119 different morphological structures, which suggests that lexical creation at this stage of the English languange is relatively unconstrained. The complexity levels of these structures range from single-level formations - those of a complex elements with an underived base in the case of affixation, zero derivation and inflection, and underived base and adjunct in compounding - to the six level structure of the compound $\bar{u} p \bar{a} s t \bar{i} g n e s t \bar{i} d ~ ' a s c e n s i o n-t i d e ' ~ s h o w n ~ i n ~(6): ~$
(6)

Suffixed adjunct < Inflection < Prefixation < Prefixation + Zero-derived base (1)


On the grounds of the number of predicates that display each morphological structure, the classification given in table 2 can be put forward:

| Number of predicates | Number of structures | Levels of complexity |
| :---: | :---: | :---: |
| $1000+$ | 4 | $1-2$ |
| $500+$ | 3 | $2-3$ |
| $100+$ | 16 | $1-2-3$ |
| $50+$ | 5 | $2-3$ |
| $10+$ | 17 | 20 |
| $5+$ | 26 | $3-4-5-3-4$ |
| $2+$ | 28 | $2-4$ |
| 1 |  |  |

Table 2. Type frequency of morphological structures

Table 2 shows that there is an inverse ratio between frequency and complexity: the more complex the morphological structure, the less frequently it is displayed by complex nouns. More significantly, table 2 also evidences that the higher the level of complexity, the more different morphological structures partake of the level of complexity in question. In order to get a more refined interpretation, these data must be related to the total number of predicates created by the whole set of structures displaying the same level of complexity. If we focus on all the derivatives that display a certain structure in a given complexity level, the results are those shown in table 3:

| Structural complexity | Number of Predicates | Number of Structures |
| :---: | :---: | :---: |
| 1 level | 4,095 | 5 |
| 2 levels | 7,790 | 24 |
| 3 levels | 1,819 | 61 |
| 4 levels | 118 | 26 |
| 5 levels | 2 | 2 |
| 6 levels | 1 | 1 |

Table 3. Word-formations by level of structural complexity

Although in general terms recursive lexical creation is common in Old English, high complexity in word-forms is strongly disfavoured. In fact, 5 and 6 complexity level structures must be regarded as exceptional, with only three combinations giving rise to three different predicates. The bulk of Old English complex nouns display a three-level internal structure. Nonetheless, the most frequent morphological structure found in complex nouns is that of two complexity levels, which is responsible for the creation of over half the predicates analysed in this research.

Regarding the final morphological process occurring in complex words, another two aspects deserve comment. On the one hand, the number of structures to which each derivational process puts an end, and, on the other hand, the number of predicates they create by complexity level. Table 4 presents the number of structures to which each process puts an end:

|  | 1 Level | 2 Levels | 3 Levels | 4 Levels | 5 Levels | 6 Levels |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Prefixation | 1 | 5 | 8 | 4 |  |  |
| Suffixation | 1 | 5 | 17 | 9 | 2 |  |
| Compounding | 1 | 10 | 33 | 13 | 1 |  |
| Zero-derivation | 1 | 2 | 1 |  |  |  |
| Inflection | 1 | 2 | 1 |  |  |  |

Table 4. Word structures by final derivational process.
Compounding and suffixation are responsible for the vast majority of the structures identified in this article. This is predictable to a certain extent, considering that these processes are final in 11,803 predicates, which represent $83.4 \%$ of the grand total of complex nouns. The relation between the three major lexical creation processes is of arithmetic progression, with compounding doubling the number of structures with respect to suffixation, and suffixation presenting twice as many structures as prefixation. This again reflects very neatly the proportion of predicates analysed. These three processes can be final with respect to all other processes. Only inflection and zeroderivation - which can be final with respect to underived, prefixed and compound bases only - are more constrained.

By process and level of internal complexity, the formation of complex nouns can be summarised as follows in table 5.

Along with the relative frequency of more and less complex morphological structures, tables 1 to 5 offer a picture of noun formation in which the different derivational processes interact in a rather unrestricted way. In this respect, I concur with Martín Arista (2008), who has pointed out that there is no lexical integrity in Old English word-formation, be it understood as a constraint on the recursive application of morphological processes or as a principle imposing a certain relative ordering on derivational and inflectional processes. Although the analysis I have carried out, unlike

Martín Arista's (2008), includes inflection and zero-derivation, lexical integrity does not hold in these areas either. Consider the examples in (7), where suffixation occurs before and after prefixation in ( 7 a ), and before and after compounding in ( 7 b ):
(7)
a. midfæesten 'mid-Lent'
ontimbernes 'material; teaching'
b. дornдȳfel 'thorn bush'
nīedдearfnes 'need, necessity'

|  | 1 Level | 2 Levels | 3 Levels | 4 Levels | 5 Levels | 6 Levels |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Prefixation | 206 | 511 | 67 | 9 |  |  |
| Suffixation | 1,010 | 2,236 | 418 | 24 | 2 |  |
| Compounding | 2,503 | 4,013 | 1,331 | 85 |  | 1 |
| Zero-derivation | 357 | 4 | 2 |  |  |  |
| Inflection | 19 | 148 | 3 |  |  |  |

Table 5. Total number of predicates by final derivational process and complexity level
As (7) shows, no relative ordering of processes can be put forward on account of these data. Lexical creation in Old English is a considerably free process in which complexity is achieved with little restriction. Whereas in Present-day English prefixation occurs systematically before compounding, these processes can feed each other in Old English. Thus, in midfesten the prefix mid- is attached to the suffixed element foesten, while in ontimbernes the suffix -ness is final with respect to the prefixed lexeme ontimber. As regards the examples in ( 7 b ), suffixation occurs in $\partial \bar{y} f e l$ before this lexeme becomes part of the compound $\partial o r n \partial \bar{y} f e l$, while suffixation is final and takes place once a compound word has been created in nïedдearfnes.

The instances in (7) constitute 2 complexity level structures. Morphological processes interact in a more pervasive way when more complex formations with processes taking place at least twice, with another derivational element inserted in between, as in (8):
(8)
a. ungesibsumnes 'quarrelsomeness'
b. Prefixed base < Inflection < Prefixation + Suffix: unālȳfednes 'licentiousness'
c. Prefixed base < Sufixation < Inflection + Suffix: undrowendlicnes 'impassibility'

In example (8), we find identical processes being separated by a different derivational item, in such a way that a derivational process occurs before and after another derivational process identifiable in the same lexeme. Even more, (8a) presents subsequent affixation comprising prefixation + suffixation + prefixation + suffixation, with both intermediate processes feeding each other successively. In (8b) two
prefixations occur before and after inflection, with suffixation occurring finally. In (8c) it is suffixation that occurs before and after inflection. The evidence against lexical integrity, as reflected by these examples, is compelling. Further instances of reversible feeding processes arise when compounding plays a role in lexical creation. Structures such as Prefix + Compound Base (suffixed adjunct + underived base) and Compound base (basic adjunct + prefixed base) + Suffix confirm that no relative ordering of processes can be claimed for this stage of the language. In the former case suffixation is prior to compounding, and compounding occurs before prefixation, while in the latter prefixation is found at the beginning of the derivation, entering a process of compounding with the resulting predicate being finally suffixed.

While I agree with Martín Arista (2008) on the lack of lexical integrity of Old English derivation, I part company with this author regarding the maximum degree of complexity displayed by Old English complex words, at least of the lexical category noun. Martín Arista (2008) puts forward a morphological template with two structural positions to the left (prefield) and another two to the right (postfield) of the morphological head. This template is offered in figure 1:

$$
\text { [PREFIELD 2][PREFIELD 1]BASE[POSTFIELD } 1][\text { POSTFIELD 2] }
$$

Figure 1. Old English morphological template (from Martín Arista 2008)
Whereas this proposal does not take into account zero-derivation or separate affixation from inflection in the rightmost position, I have opted for a maximum degree of complexity that consists of six positions, although I must admit that these structures are to be seen as exceptional rather than as the product of a generalised rule of wordformation (at least as far as to the category noun is concerned). A second point of divergence with the template given in figure 1 lies in the ordering of the constituents; I agree with Martín Arista (2008) in that the highest level of complexity without zeroderivation is four. On the other hand, the analysis I have carried out shows that the maximum number of elements attached to a base is two to the right and another two to the left. A structure as Suffixed base < Suffixation + Suffix, of which I have been able to identify a few instances, is a three-level structure which requires three postfield positions, as is the case with the examples in (9):
(9)
ealdordōmlicnes 'authority, control'
[[[[ealdor]N[dōm]Af1]N[lic]Af2]ADJ[nes]AF3]N
wuldorfæstlicnes 'glory'
$\left[\left[\left[[\text { wuldor }]_{N}[f æ s t]_{\text {Afi }}\right]_{\text {Ad }}[\text { lic }]_{\text {Afr }}\right]_{\text {Adv }}[\text { nes }]_{\text {Af }}\right]_{\mathrm{N}}$
But for these exceptional instances, the template in figure 1 is valid for the vast majority of Old English complex nouns.

## 4. Conclusions

The study of the structure of complex nouns reported in the previous sections yields the following results.

In the first place, this study has demonstrated the recursive character of complex nouns, which favour complex morphological structures that result from the successive application of different rules of word-formation. Overall, 119 different morphological structures have been identified on the grounds of the degree of complexity and the processes exhibited by complex nouns.

Secondly, a study based on the identification of the bases of complex nouns, considering the pre-final and final derivations only, underlines the inadequacy of any statement of lexical integrity in Old English, if this term is understood as relative ordering of the morphological processes of inflection and derivation.

And thirdly, some differences have arisen regarding the complexity levels that each process admits. Up to three complexity levels, all the derivational processes analysed in this work (prefixation, suffixation, compounding, zero-derivation and inflection) may be final in the structure. Beyond this point, prefixation, suffixation and compounding only may turn up as final. Whereas prefixation, suffixation and compounding appear as final in four-level structures, suffixation only is final to five-level structures and compounding stands out as the final process in the only six-level structure identified in this research. Leaving aside five and six-level structures, which must be regarded as exceptional, the differences do not lie in the morphological structure of the formation, but in the number of structures of a given level to which each process can put an end. Thus, compounding is, in three- and four-level structures (by far the most frequent structures), the most frequent terminal process, followed by suffixation, and prefixation. Considering the final process, it is compounding that offers the greatest variation as regards the number of structures it puts an end to, which cannot be isolated from the fact that compounds constitute more than half of the corpus of analysis and that they are the result of the combination of two analysable constituents.

## Works Cited

Aronoff, Mark 1976: Word Formation in Generative Grammar. Cambridge: MIT P.
Bosworth, Joseph, and Thomas Northcote Toller 1973 (1898): An Anglo-Saxon Dictionary. Oxford: Oxford UP.
Caballero González, Laura, Elisa González Torres, Ana Ibáñez Moreno and Javier Martín Arista 2004-2005: 'Predicados verbales primitivos y derivados en inglés antiguo. Implicaciones para la elaboración de una base de datos léxica'. Revista Española de Lingüística Aplicada 17-18: 35-49.
Clark Hall, John Richard 1996 (1896): A Concise Anglo-Saxon Dictionary. Toronto: U of Toronto P.
González Torres, Elisa 2009: Affixal Nouns in Old English: Morphological Description, Multiple Bases and Recursivity. Unpublished Ph.D. thesis. University of La Rioja, Spain.
-_ 2010: 'The Inflection-Derivation Continuum and the Old English Suffixes $-a,-e,-o,-u$ '. Atlantis 32.1: 103-22.
Kastovsky, Dieter 1968: Old English Deverbal Substantives Derived by means of a Zero Morpheme. Unpublished Ph.D. thesis. Eberhard-Karls-Universität, Tübingen.
-_ 2006: 'Typological Changes in Derivational Morphology'. Ans van Kemenade and Bettelou Los, eds. The Handbook of the History of English. Oxford: Blackwell. 151-77.

Mairal Usón, Ricardo and Francisco Cortés Rodríguez 2000-2001: 'Semantic Packaging and Syntactic Projections in Word Formation Processes: the Case of Agent Nominalizations'. Revista Española de Lingüística Aplicada 14: 271-94.
Martín Arista, Javier 2008: 'Unification and Separation in a Functional Theory of Morphology'. Robert Van Valin, ed. Investigations of the Syntax-Semantics-Pragmatics Interface. Amsterdam: John Benjamins. 119-45.

- 2009: ‘A Typology of Morphological Constructions’. Cristopher Butler and Javier Martín Arista, eds. Deconstructing Constructions. Amsterdam: John Benjamins. 85-115.
——_ 2010a: 'Building a Lexical Database of Old English: Issues and Landmarks'. John Considine, ed. Current projects in historical lexicography. Newcastle: Cambridge Scholars. 1-39. - 2010b: 'Lexical negation in Old English'. NOWELE-North-Western European Language Evolution: 89-108.
__ forthcoming a: 'Morphological Relatedness and Zero Alternation in Old English'. Christopher Butler and Pilar Guerrero, eds. Morphosyntactic Alternations in English. London: Equinox.
forthcoming b: 'Parasynthesis in Old English Word-Formation'.
___ forthcoming c: ‘Adjective Formation and Lexical Layers in Old English'. English Studies.
- forthcoming d: 'Projections and Constructions in Functional Morphology: the Case of HREOW'. Language and Linguistics 12.2.
- forthcoming e: ‘Old English Lexical Primes: Corpus Analysis and Database Compilation’. Nila Vázquez, ed. Creation and Use of Historical Linguistic Corpora in Spain. Newcastle: Cambridge Scholars.
Martín Arista, Javier, Laura Caballero González, Elisa González Torres, Ana Ibáñez Moreno and Roberto Torre Alonso 2009: Nerthus: An Online Lexical Database of Old English. http://www.nerthusproject.com
Pesquera Fernández, Laura 2009: Transparent and Opaque Word-formation in the Derivational Paradigms of Old English Strong Verbs. Unpublished Ph.D. thesis. University of La Rioja, Spain.
Siegel, Dorothy 1979: Topics in English Morphology. New York: Garland.
Spencer. Andrew 1991: Morphological Theory. Oxford: Blackwell.
Stark, Detlef 1982: The Old English Weak Verbs. A Diachronic and Synchronic Analysis. Tübingen: Niemeyer.
Sweet, Henry 1976 (1896). The Student's Dictionary of Anglo-Saxon. Cambridge: Cambridge UP.
Torre Alonso, Roberto, Javier Martín Arista, Ana Ibañez Moreno, Elisa González Torres and Laura Caballero González 2008: 'Fundamentos empíricos y metodológicos de una base de datos léxica de la morfología derivativa del inglés antiguo'. Revista de linguiística y lenguas aplicadas 3: 129-44.
Williams, Edwin 1981: ‘On the Notions "Lexically Related" and "Head of a Word"'. Linguistic Inquiry 12: 51-97.


## Appendix

## 1 LEVEL OF COMPLEXITY

a) prefix + Underived predicate (217) oferbrāw 'eye-brow' [[ofer][brāw]N]N
b) Underived predicate + Suffix $(1,010)$ дēofung 'thieving' [[дēof]N[ing]]N
c) Underived adjunct+ Underived base $(2,503)$ stāntorr 'stone tower; crag, rock' [[stān] $\left.]_{\mathrm{N}}[\text { torr }]_{\mathrm{N}}\right]_{\mathrm{N}}$
d) Zero-derived nouns from Underived bases(357) ece 'ache, pain' [(acan) $\left.)_{\mathrm{vb}}(\mathrm{ece})_{N}\right]_{\mathrm{N}}$
e) Nouns from inflection of underived predicates (19) bidden 'petitioner' [\{biddan $\left.\}_{\mathrm{Vb}}\{\text { biddend }\}_{\mathrm{Vb}}\right]_{\mathrm{N}}$

## 2 LEVELS OF COMPLEXITY

## I) Prefixation

a) Prefix + Prefixed base (31) undertōdal 'secondary division' $\left[[\text { under }]_{A_{2}}\left[[t o ̄]_{A_{1}}[\text { dāl }]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
b) Prefix + Suffixed base (167) midfæsten 'mid-Lent' $\left[[\text { mid }]_{A 2}\left[[f æ s t]_{\mathrm{Adj}}[\mathrm{en}]_{\mathrm{A}_{1}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
c) Prefix + Compound base (underived + underived) (17) forelättēow 'leader' [[fore] $\left.]_{A_{1}}\left[[\text { lād }]_{N}[\partial \text { ēow }]_{N}\right]_{N}\right]_{N}$
d) Prefix + Zero-derived base (275) ymbcyme 'assembly, convention' $\left[[y m b]_{A 1}\left[(\text { cuman })_{\mathrm{vb}}(\text { cyme })_{N}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
e) Prefix + Inflected base (21) foretēd 'front teeth' $\left[[\text { fore }]_{\text {Af1 }}\left[\{t o ̄ \partial\}_{N}\{t e ̄ \partial\}_{N}\right]_{N}\right.$

## II) Suffixation

a) Prefixed base + Suffix $(1,152)$ ontimbernes 'material; teaching' $\left[\left[[o n]_{A_{1}}[\text { timber }]_{N}\right]_{N}[\text { ness }]_{A 2}\right]_{N}$
b) Suffixed base + Suffix (368) häligdōm 'holiness' $\left[\left[[h a ̄ l]_{N}[i g]_{A 1}\right]_{A_{d j}}[\mathrm{dōm}]_{A 2}\right]_{N}$
c) Compound base + Suffix (143) nīedдearfnes 'need, necessity' $\left[\left[[\text { nīed }]_{N}[\partial \text { earf }]_{N}\right]_{N}[\text { ness }]_{A 1}\right]_{N}$
d) Zero-derived base + Suffix (386) $\check{æ} t e r e ~ ' e a t e r, ~ g l u t t o n ' ~\left[\left[(e t a n) ~ v b ~(\overline{x t}){ }_{\mathrm{N}}\right]_{\mathrm{N}}\left[\mathrm{erere}_{\mathrm{A}_{1}}\right]_{\mathrm{N}}\right.$
e) Inflected base + Suffix (187) strecednes 'bed, couch' $\left[\left[\{\text { strecan }\}_{\mathrm{Vb}}\{\text { streced }\}_{\mathrm{Vb}}\right]_{\mathrm{N}}[\text { ness }]_{\mathrm{A} 1}\right]_{\mathrm{N}}$

## III) Compounding

a) Prefixed adjunct + underived base (46) gedālland 'land under joint ownership' $\left[\left[[g e]_{A_{1}}[\text { dāl }]_{N}\right]_{N}[\text { land }]_{N}\right]_{N}$
b) Suffixed adjunct + underived base (290) blētsingsealm 'the Benedicite' $\left[\left[[\text { blēts }]_{\mathrm{Vb}}[\text { ing }]_{\mathrm{A} 1}\right]_{\mathrm{N}}[\text { sealm }]_{\mathrm{N}}\right]_{\mathrm{N}}$
c) Compound adjunct + underived base (64) hläfordдrimm 'dominion, power' $\quad\left[\left[[h l a ̄ f]_{N}[\text { weard }]_{N}\right]_{N}[\partial r y m m]_{N}\right]_{N}$
d) Zero-derived adjunct + underived base (821) flotscip 'ship, bark' [[flēotan) $\left.\left.)_{\mathrm{vb}}(f l o t)_{\mathrm{N}}\right]_{\mathrm{N}}[\text { scip }]_{\mathrm{N}}\right]_{\mathrm{N}}$
e) Inflected adjunct + underived base (35) Crīstesmæsse 'Christmas' $\left.\left[[\{\text { Crīst }\}\}_{N}\{\text { Crīstes }\}_{\mathrm{N}}\right]_{\mathrm{N}}[\text { mæsse }]_{\mathrm{N}}\right]_{\mathrm{N}}$
f) Underived adjunct + prefixed base (279) дēodgestrēon 'people's treasure' $\quad\left[[\partial \bar{e} o d]_{N}\left[[g e]_{A 1}[\text { strēon }]_{N}\right]_{N}\right]_{N}$
g) Underived adjunct + suffixed base (417) дornдȳfel 'thorn bush' $\left[[\partial \mathrm{orn}]_{N}\left[[\partial \mathrm{u} f]_{\mathrm{N}}[\mathrm{el}]_{\mathrm{A} 1}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
h) Underived adjunct + compound base (75) ̌̈lārēow 'teacher of the law' $\left[[\bar{\ngtr}]_{N}\left[[\text { ār }]_{N}[\partial \text { ēaw }]_{N}\right]_{N}\right]_{N}$
i) Underived adjunct + zero-derived base $(1,982)$

j) Underived adjunct + inflected base (4) bencsittend 'one who sits on a bench' [[benc $\left.\left.]_{N}[\{s i t t a n\}\}_{\mathrm{Vb}}\{\text { sittend }\}_{\mathrm{vb}}\right]_{\mathrm{vb}}\right]_{\mathrm{N}}$

## IV) Zero-derivation

a) Zero-derivation from prefixed bases (368) ymbsprāc 'conversation' $\quad\left[\left(\left[[y m b]_{\text {Af1 }}[\text { sprecan }] v \mathrm{vb}\right]_{\mathrm{vb}}\right)_{\mathrm{vb}}(y m b s p r \bar{æ} c)_{\mathrm{N}}\right]_{\mathrm{N}}$
b) Zero-derivation from compound bases (7) $\bar{a} \partial s w a r a$ 'oath-swearing, oath' $\left[\left(\left[[\bar{a} \partial]_{\mathrm{N}}[\text { swerian }]_{\mathrm{vb}}\right]_{\mathrm{vb}}\right)_{\mathrm{vb}}\left(\mathrm{a} \partial \mathrm{s}^{2} \mathrm{wara}\right)_{\mathrm{N}}\right]_{\mathrm{N}}$

## V) Inflection

a) Predicates resulting from the inflection of prefixed bases (143)

b) Predicates resulting from the inflectioGn of compound bases (5)


## 3 LEVELS OF COMPLEXITY

## I) Prefixation

a) Prefix + Suffixed base $<$ Prefixation (15) onbescēawung 'inspection, examination' $\left[[\mathrm{on}]_{\mathrm{AfS}}\left[\left[[\mathrm{be}]_{\mathrm{Af}}[\mathrm{sceaw}]_{\mathrm{vb}}\right]_{\mathrm{vb}}[\mathrm{ung}]_{\mathrm{Af} 2}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
b) Prefix + Suffixed base < Suffixation (5) mishealdsumnes 'carelessness' $\left[[\text { mis }]_{\mathrm{Af3}}\left[\left[[\text { heald }]_{\mathrm{N}}[\text { sum }]_{\text {Af1 }}\right]_{\text {Adj }}[\text { ness }]_{\text {Afr }}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
c) Prefix + Suffixed base < Compounding (2) tōendebyrdnes 'order, series' $\left[[t \overline{0}]_{\text {Afr }}\left[\left[[e n d e]_{N}[\text { byrd }]_{N}\right]_{N}[\text { ness }]_{A f 1}\right]_{N}\right]_{N}$
d) Prefix + Suffixed base < Inflection (5) tōgecorennes 'adoption' $\left[[t \overline{0}]_{\text {Afr }}\left[\left[\{c e ̄ o s a n\} v b\{\text { gecoren }\}_{\mathrm{Vb}}\right][\text { ness }]_{\text {Afi }}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
e) Prefix + Compound Base < suffixed adjunct (3) $\bar{t} t w \check{æ} p n e d m a n n ~ ' s t r a n g e r ' ~\left[[u ̄ t]_{A f 2}\left[\left[[w \bar{æ} p n]_{N}[e d]_{\text {Af1 }}\right]_{\text {Adj }}[m a n n]_{N}\right]_{N}\right]_{N}$
f) Prefix + Compound Base < Inflected base (1) unlandāgend 'not owning land' $\left[[\text { un }]_{\text {Af1 }}\left[[\text { land }]_{N}\left[\{\text { āgan }\}_{\mathrm{vb}}\{\text { agend }\}_{\mathrm{Vb}}\right]_{\mathrm{Vb}}\right]_{N}\right]_{N}$
g) Prefix + Zero-derived base < prefixed verb (33) unbelimp 'mishap, misfortune' $\left[[\text { un }]_{\mathrm{Af} 2}\left[\left([\text { be }]_{\text {Af1 }}[\text { limpan }]_{\mathrm{Vb}}\right)_{\mathrm{vb}}(\text { belimp })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
h) Prefix + Inflected base < Prefixed predicate underandfōnd 'receiver (Sweet)' $\left[[\text { under }]_{\mathrm{Af2}}\left[\left\{[\mathrm{on}]_{\mathrm{Af1}}[f o ̄ n]_{\mathrm{vb}}\right\}_{\mathrm{vb}}\{\text { andfōnd }\}_{\mathrm{vb}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$

## II) Suffixation

a) Prefixed base < Prefixation + Suffix (18) ūpārisnes 'resurrection' $\quad\left[\left[[\mathrm{un}]_{\mathrm{Af}}\left[[\bar{a}]_{\mathrm{Af} 1}[\mathrm{ris}]_{\mathrm{Vb}}\right]_{\mathrm{Vb}}\right]_{\mathrm{vb}}[\mathrm{nes}]_{\mathrm{Af}}\right]_{\mathrm{N}}$
b) Prefixed base < Suffixation + Suffix (26) unwæstmfæestnes 'barrenness' $\left[\left[[\text { un }]_{\text {Afr }}\left[[\text { wæstm }]_{\mathrm{N}}[f æ \text { frt }]_{\text {Af1 }}\right]_{\text {Adj }}\right]_{\text {Adj }}[\text { nes }]_{\text {Af3 }}\right]_{\mathrm{N}}$
c) Prefixed base < Compounding + Suffix (1) unleoдuwācnes 'inflexibility' $\left[\left[[u n]_{\text {Af1 }}\left[[l e o \partial u]_{N}[w a ̄ c]_{N}\right]_{N}\right]_{N}[n e s s]_{\text {Af }}\right]_{N}$
d) Prefixed base < Zero-derivation + Suffix (3) onbringelle 'instigation' $\left[\left[[\mathrm{on}]_{\text {Af1 }}\left[(\text { bringan })_{\mathrm{vb}}(\text { bring })_{N}\right]_{\mathrm{N}}\right]_{\mathrm{N}}[\mathrm{el}]_{\mathrm{Afr}}\right]_{\mathrm{N}}$
e) Prefixed base < Inflection + Suffix (3) forewritennes 'proscription, exile' $\left[\left[[f o r e]_{A f 1}\left[\{w r i ̄ t a n\}_{v b}\{\text { written }\}_{\mathrm{Vb}}\right]_{\mathrm{vb}}\right]_{\mathrm{Vb}}[\text { ness }]_{\mathrm{Afz}}\right]_{\mathrm{N}}$
f) Suffixed base < Prefixation + Suffix (60) andgietlēast 'want of understanding' $\left[\left[\left[[\text { and }]_{\text {Af1 }}[\text { giet }]_{\mathrm{vb}]}\right]_{\mathrm{vb}}[\text { leaas }]_{\mathrm{Af} 2}\right]_{\mathrm{Adj}}[\mathrm{t}]_{\mathrm{Af}}\right]_{\mathrm{N}}$
g) Suffixed base < Suffixation + Suffix (5) wuldorfæestlicnes 'glory' $\left[\left[\left[[\text { wuldor }]_{\mathrm{N}}[f æ s t]_{\text {Af1 }}\right]_{\text {Adj }}[\text { lic }]_{\text {Af2 }}\right]_{\text {Adv }}[\text { nes }]_{\text {Af }}\right]_{\mathrm{N}}$
i) Suffixed base < Compounding + Suffix (5) hearmcwidolnes 'slander' $\left[\left[\left[[\text { hearm }]_{\mathrm{N}}[\mathrm{cwid}]_{\mathrm{vb}}\right]_{\mathrm{Vb}}[\mathrm{ol}]_{\mathrm{Af1}}\right]_{\mathrm{Adj}}[\mathrm{nes}]_{\mathrm{Af} 2}\right]_{\mathrm{N}}$
j) Compound base (prefixed adjunct + underived base) + Suffix (3) gedyldmödnes 'patience' $\quad\left[\left[\left[[g e]_{\text {Af1 }}[\partial y l d]_{N}\right][m o ̄ d]_{N}\right]_{N}[\text { ness }]_{\text {Afr }}\right]_{N}$
k) Compound base (suffixed adjunct + underived base) + Suffix (3) mægendrymnes 'great glory, majesty' $\left[\left[\left[[m a g]_{\mathrm{vb}}[\mathrm{en}]_{\text {Af1 }}\right]_{\mathrm{N}}[\partial \mathrm{rym}]_{\mathrm{N}}\right][\mathrm{ness}]_{\mathrm{Arf}}\right]_{\mathrm{N}}$

1) Compound base (compound adjunct + underived base) + Suffix (2) fyrwitgeornes 'curiosity' $\left[\left[\left[[f y r]_{N}[\text { wit }]_{N}\right]_{N}[\text { georn }]_{N}\right]_{N}[\text { ness }]_{\text {Af1 }}\right]_{N}$
m) Compound base (underived adjunct + prefixed base) + Suffix (7) lēasōlecung 'empty flattery' $\left[\left[[\mathrm{e} a \mathrm{as}]_{\mathrm{Adj}}\left[[\overline{\mathrm{o}}]_{\mathrm{Af1}}[\mathrm{lecc}]_{\mathrm{vb}}\right]_{\mathrm{vb}}\right]_{\mathrm{vb}}[\mathrm{ung}]_{\mathrm{Af}}\right]_{\mathrm{N}}$
n) Compound base (underived adjunct + suffixed base) + Suffix (6) ælmihtignes 'omnipotence' $\left[\left[[\text { eal }]_{\mathrm{Adj}}\left[[\mathrm{miht}]_{\mathrm{N}}[\mathrm{ig}]_{\mathrm{Af1}}\right]_{\mathrm{Adj}}\right]_{\mathrm{Adj}}[\mathrm{ness}]_{\mathrm{Afr}}\right]_{\mathrm{N}}$
o) Compound base (underived adjunct + zero-derived base) + Suffix (3) mancwealmnes 'manslaughter' $\left[\left[[m a n]_{\mathrm{N}}\left[(\text { cwelan })_{\mathrm{vb}}(\text { cwealm })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}[\text { nes }]_{\mathrm{Af1}}\right]_{\mathrm{N}}$
p) Compound base < underived adjunct + inflected base) + Suffix (3) æдelborennes 'nobility of birth or nature' $\left[\left[[æ \partial \mathrm{el}]_{\text {Adj }}\left[\{\text { beran }\}_{\mathrm{vb}}\{\text { boren }\}_{\mathrm{vb}}\right]_{\mathrm{vb}}\right]_{\text {Adj }}[\text { ness }]_{\text {Af1 }}\right]_{\mathrm{N}}$
q) Zero-derived base < Prefixation + Suffix (94) ofercymend 'assailant' $\left.\left[\left[\left([\text { ofer }]_{\text {Afi }}[\text { cuman }]_{\mathrm{Vb}}\right)_{\mathrm{vb}} \text { (ofercyme }\right)_{\mathrm{N}}\right]_{\mathrm{N}}[\mathrm{end}]_{\mathrm{Af} 2}\right]_{\mathrm{N}}$
r) Inflected base < Prefixation + Suffix (176) ymbsetennes 'siege' $\left[\left[\left\{[y m b]_{\mathrm{Af} 1}[\operatorname{sittan}]_{\mathrm{vb}}\right\}_{\mathrm{vb}}\left\{\text { ymbseten }^{\mathrm{vb}}\right]_{\mathrm{vb}}[\mathrm{nes}]_{\mathrm{Af2}}\right]_{\mathrm{N}}\right.$

## III) Compounding

a) Underived adjunct + Prefixed base < suffixation (2) bōcgesamnung 'library' $\left[[\mathrm{bōc}]_{N}\left[[g e]_{\mathrm{Afz}}\left[[\operatorname{samn}]_{\mathrm{vb}}[\mathrm{ung}]_{\mathrm{Af1}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
b) Underived adjunct + Suffixed base < Prefixation (5) eftforgifnes 'remission, reconciliation' $\left[[\text { eft }]_{\text {Adv }}\left[\left[[f f r]_{\text {Af1 }}[\text { gief }]_{\mathrm{vb}}\right]_{\mathrm{vb}}[\text { nes }]_{\text {Afr }}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
c) Underived adjunct+ Suffixed base < Inflection (1) hrægelgefrætwodnes 'fine clothing' $\left[\left[h^{2} æ g e l\right]_{N}\left[\left[\left\{\text { frætwan }_{v \mathrm{vb}}\left\{\text { gefrætwod }_{\mathrm{Vb}}\right]_{\mathrm{Vb}}[\text { ness }]_{\mathrm{Af1}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}\right.\right.$
d) Underived adjunct + Compound base (Suffixed adjunct + underived base) (2) sumorrādingbōc 'summer lectionary' $\left.\left[[\text { sumor }]_{N}\left[[[r æ d]]_{\mathrm{b}}[i n g]_{\text {Af1 }}\right]_{\mathrm{N}}[b o ̄ c]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
e) Underived adjunct + Compound base (prefixed adjunct + underived base) (1) sundorgerēfland 'land reserved to the jurisdiction of a gerēfa' $\left[[\text { sundor }]_{\text {Adv }}\left[\left[[g e]_{\text {Af }}[\text { rēf }]_{N}\right]_{N}[\text { land }]_{N}\right]_{N}\right]_{N}$
f) Underived adjunct + Compound base (underived adjunct + prefixed base) (1) rihtlandgemǣære 'lawful boundary (of land)' $\left[[\text { riht }]_{\text {Adj }}\left[[\text { land }]_{N}\left[[\text { ge }]_{\text {Af1 }}[\text { māre }]_{N}\right]_{N}\right]_{N}\right]_{N}$
g) Underived adjunct + Compound base (zero-derived adjunct + underived base) (5) eoforhēafodsegn 'banner with a boar's head design?' $\left[\text { eoofor }^{2}{ }_{N}\left[\left[(\text { hebban })_{\mathrm{vb}}(\text { hēafod })_{\mathrm{N}}\right]_{\mathrm{N}}[\text { segn }]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
h) Prefixed adjunct + Prefixed base (2) unrihtgestrēon 'unrighteous gain' $\left[\left[[\text { un }]_{\text {Afr }}[\text { riht }]_{\text {Adj }}\right]_{\text {Adj }}\left[[g e]_{\text {Af1 }}[\text { strēon }]_{N}\right]_{N}\right]_{N}$
i) Prefixed adjunct + Suffixed base (17) fulwihtдə̄nung 'baptismal service' $\left[\left[[f u l]_{\text {Afr }}[\text { wiht }]_{\mathrm{N}}\right]_{\mathrm{N}}\left[[\text { degn }]_{\mathrm{N}}[\text { ung }]_{\text {Af1 }}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
j) Prefixed adjunct + Zero-derived base (57) arcebiscoprīce 'archbishopric, post of archbishop' $\left[\left[[\text { arce }]_{\text {Af1 }}[\text { bisceop }]_{\mathrm{N}}\right]_{\mathrm{N}}\left[(\text { rēcan })_{\mathrm{Vb}}(\text { rice })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
k) Prefixed adjunct + Inflected base (2). Two cases lose ge-in the adjunct.


1) Suffixed adjunct < Prefixation + underived base (2) forligerbed 'bed of fornication' $\left[\left[\left[[f f r]_{\mathrm{Af}}[\text { lig }]_{\mathrm{Vb}}\right]_{\mathrm{Vb}}[\text { ere }]_{\mathrm{Af} 2}\right]_{\mathrm{N}}[\text { bed }]_{\mathrm{N}}\right]_{\mathrm{N}}$
m) Suffixed adjunct < Suffixation + Underived base (1) hāligdōmhūs 'a place where holy things are kept, a sacrarium' $\left[\left[\left[[h a ̄ l]_{N}[\mathrm{ig}]_{A f 1}\right]_{\text {Adj }}[\mathrm{do} m]_{\mathrm{Afr}}\right]_{\mathrm{N}}[\mathrm{hūs}]_{\mathrm{N}}\right]_{\mathrm{N}}$
n) Suffixed adjunct + Prefixed base (8). mægenfultum 'mighty help' $\left[\left[[\mathrm{mæg}]_{\mathrm{vb}}[\mathrm{en}]_{\mathrm{ar} 2}\right]_{\mathrm{N}}\left[[f \mathrm{fu}]_{\mathrm{af1}}[\text { tum }]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
o) Suffixed adjunct + Suffixed base (17) bisceophādдēnung 'episcopal service' [[[bisceop] $]_{N}$ hād $\left.\left.]_{\text {Af }}\right]_{N}\left[[\partial \mathrm{egn}]_{N}[\text { ung }]_{\text {Af1 }}\right]_{N}\right]_{N}$
p) Suffixed adjunct + Compound base (5) дēnungwerod 'body of serving-men' $\left[\left[[\text { дegn }]_{N}[\text { ung }]_{A f 1}\right]_{N}\left[[\text { wer }]_{N}[\text { rād }]_{N}\right]_{N}\right]_{N}$
q) Suffixed adjunct + zero-derived base (123) $\left.r \bar{x} p l i n g w e a r d ~ ' w a r d e r ' ~\left[[r e ̄ p]_{\mathrm{vb}}[\text { ling }]_{\mathrm{Af1}}\right]_{\mathrm{N}}\left[(\text { weorдan })_{\mathrm{vb}}(\text { weard })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
r) Suffixed adjunct + Inflected base (1) $\bar{u}$ tancumen ${ }^{\text {'stranger, foreigner' }}\left[\left[[\text { ūt }]_{\mathrm{Adj}}[\mathrm{an}]_{\mathrm{Afi}}\right]_{\mathrm{Adv}}\left[\{\text { cuman }\}_{\mathrm{Vb}}\{\text { cumen }\}_{\mathrm{Vb}}\right]_{\mathrm{vb}}\right]_{\mathrm{N}}$
s) Compound adjunct (inflected adjunct + underived base) + underived base crīstelmælbēam 'tree surmounted by a cross?' $\left[\left[\left[\{c r i ̄ s t\}_{N}\{c r i \overline{s t e s}\}_{N}\right]_{N}[m æ l]_{N}\right]_{N}[b e ̄ a m]_{N}\right]_{N}$
t) Compound adjunct + Prefixed base (2) marmstāngedelf 'quarrying of marble' $\left[\left[[\operatorname{marm}]_{N}[\text { stān }]_{N}\right]\left[[g e]_{A f 1}[\text { delf }]_{N}\right]_{N}\right]_{N}$
u) Compound adjunct + Suffixed base (12) dægrēdoffrung 'morning sacrifice' $\left[\left[[\mathrm{d} æ g]_{\mathrm{N}}[\text { rēd }]_{\mathrm{Adj}}\right]_{\mathrm{N}}\left[[\text { offr }]_{\mathrm{Vb}}[\text { ung }]_{\mathrm{Afi}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
v) Compound adjunct + Compound base (1) ēoredweorod 'band, company' $\left[\left[[\text { eoh }]_{\mathrm{N}}[\text { rād }]_{N}\right]\left[[\text { wer }]_{N}[\text { rād }]_{N}\right]_{N}\right]_{N}$
w) Compound adjunct + Zero-derived base (39) mæsseprēostscīr 'district for which a mass-priest officiated' $\left[\left[[\text { mæsse }]_{\mathrm{N}}[\text { prēost }]_{\mathrm{N}}\right]_{\mathrm{N}}\left[(\text { scieran })_{\mathrm{vb}}(\text { scīr })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
x) Zero < Prefixation + Underived base (134) andfengstōw 'receptacle' $\left.\quad\left[\left[\left([\text { on }]_{\text {Af1 }}[\text { fōn }]_{\mathrm{Vb}}\right)_{\mathrm{Vb}} \text { (andfeng }\right)_{N}\right]_{\mathrm{N}}[\text { stōw }]_{\mathrm{N}}\right]_{\mathrm{N}}$
y) Zero-derived adjunct + Prefixed base (49). bealuinwit 'deceit, treachery' [[(belgan)vb(bealu) $\left.\left.)_{\mathrm{N}}\right]_{\mathrm{N}}\left[[\text { in }]_{\mathrm{Af1}}[\text { wit }]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
z) Zero-derived adjunct + Suffixed base (132). wordpredicung 'preaching' $\left[\left[(\text { weorдan })_{\mathrm{vb}}(\text { word })_{\mathrm{N}}\right]_{\mathrm{N}}\left[[\text { predic }]_{\mathrm{Vb}}[\text { ung }]_{\mathrm{AF1}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
aa) Zero-derived adjunct + Compound base (Underived adjunct + Underived adjunct) (14) sealtherpaд 'road to salt-works' $\left[\left[(\text { sealtan })_{\mathrm{vb}}(\text { sealt })_{\mathrm{N}}\right]_{\mathrm{N}}\left[[\text { here }]_{\mathrm{N}}[\text { pad }]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
ab) Zero-derived adjunct + Zero-derived adjunct (653) brynegield 'burnt-offering' [[(biernan) $\left.\left.)_{\mathrm{vb}}(\text { bryne })_{N}\right]\left[(\text { gieldan })_{\mathrm{vb}}(\text { gield })_{N}\right]_{N}\right]_{N}$
ac) Zero-derived adjunct + Inflected base (8) burgsittende 'city-dwellers' [[(beorgan) $\left.\left.)_{\mathrm{vb}}(\text { burg })_{N}\right]_{N}\left[\{s i t t a n\}_{\mathrm{Vb}}\left\{\text { sittende }^{2}\right\}_{\mathrm{Vb}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
ad) Inflected adjunct < Zero-derivation + Underived base (39) hildestrengo 'vigour for battle' [[\{(healdan) vb $\left.\left.\left.(\text { hild })_{N}\right\}_{\mathrm{N}}\{\text { hilde }\}_{\mathrm{N}}\right]_{\mathrm{N}}[\text { strengu }]_{N}\right]_{N}$
ae) Inflected adjunct < Prefixation + Underived base (1) infangeneдēof'right of judging thieves caught within the limits of one's jurisdiction, and of taking the fines for the crime'

af) Inflected adjunct + Suffixed base (1) haransprecel 'viper's bugloss' $\left[\left[\{\text { hara }\}_{\mathrm{N}}\{\text { haran }\}_{\mathrm{N}}\right]_{\mathrm{N}}\left[[\mathrm{sprec}]_{\mathrm{N}}[\mathrm{el}]_{\mathrm{Af1}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
ag) Inflected adjunct + Compound base (1) langafrīgedæg 'Good Friday' $\left[\left[\{l a n g\}_{\text {Adj }}\{\text { langa }\}_{\text {Adj }}\right]_{\text {Adj }}\left[[f r i ̄ g e]_{N}[d æ g]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
ah) Inflected adjunct + Zero-derived base (27) oxanslyppe 'oxanlip' $\left[\left[\{0\}_{N}\{\text { oxan }\}_{\mathrm{N}}\right]_{\mathrm{N}}\left[\text { (slūpan) } \mathrm{vb}(\text { slyppe })_{N}\right]_{N}\right]_{N}$

## IV) Zero-derivation

a) Zero-derived < Compounding (underived adjunct + prefixed base) (2) eftæ̈rist 'resurrection' $\left[\left([\text { eft }]_{A d v}\left[[a ̄]_{A f 1}[r i ̄ s a n] v b\right] v b\right)_{v b}(e f t æ ̄ r i s t)_{N}\right]_{N}$

## V) Inflection

a) Predicates resulting from the inflection of compound nouns with prefixed adjuncts (1) unrihthळ̄æmend 'adulterer' $\left[\left\{\left[[\mathrm{un}]_{\mathrm{Af1}}[\text { riht }]_{\mathrm{Adj}}\right][\text { hæ̈man }]_{\mathrm{vb}}\right\}_{\mathrm{vb}}\{\text { unrihthæَmend }\}_{\mathrm{Vb}}\right]_{\mathrm{N}}$

## 4 LEVELS OF COMPLEXITY

## I) Prefixation

a) Prefix + Suffixed base < Prefixation < Suffixation (1) ungemōdignes 'contentiousness' $\left[[\mathrm{un}]_{\text {Aft }}\left[\left[[\mathrm{ge}]_{\text {Afr }}\left[[\mathrm{mo} d]_{\mathrm{N}}[\mathrm{ig}]_{\text {Af1 }}\right]_{\text {Adj }}\right]_{\text {Adj }}[\text { ness }]_{\text {Af3 }}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
b) Prefix + Suffixed base < Suffixation < Prefixation (4) ungehïrsumnes 'disobedience' $\left[[\text { un }]_{\text {Aff }}\left[\left[\left[[g e]_{\text {Aff }}[\text { hīr }]_{\mathrm{Vb}}\right][\text { sum }]_{\text {Afr }}\right]_{\text {Adj }}[\text { ness }]_{\text {Af }}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
c) Prefix + Suffixed base < Suffixation < Compounding (1) ungearuwitolnes 'dulness of mind' $\left[[\text { un }]_{\mathrm{Af3}}\left[\left[\left[[\text { gearo }]_{\mathrm{Adj}}[\text { wit }]_{\mathrm{Vb}}\right][\mathrm{ol}]_{\mathrm{Af1}}\right]_{\mathrm{Adj}}[\text { ness }]_{\mathrm{Af} 2}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
d) Prefix + Suffixed base < Inflection < prefixation (3) unforhæfednes 'incontinence' $\left[[\text { un }]_{\mathrm{AfS}}\left[\left[\left\{[\text { for }]_{\mathrm{Af1}}[\text { hebban }]_{\mathrm{vb}}\right\}_{\mathrm{vb}}\{\text { forhæfed }\}_{\mathrm{vb}}\right]_{\mathrm{vb}}[\text { ness }]_{\mathrm{Afz}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$

## II) Suffixation

a) Prefixed base < Suffixation < Prefixation + Suffix (13) ungesibsumnes 'quarrelsomeness' $\left.\left.\left[\left[[\mathrm{un}]_{\text {Af3 }}\left[\left[[\mathrm{ge}]_{\text {Aff }}[\text { sib }]_{\mathrm{N}}\right]_{[s u m}\right]_{\text {Afr }}\right]_{\text {Adj }}\right]_{[n e s s}\right]_{\text {Af4 }}\right]_{\mathrm{N}}$
b) Prefixed base < Sufixation < Inflection + Suffix (1) undrowendlicnes 'impassibility' $\left[\left[[u n]_{\mathrm{Af}}\left[\left[\left\{\partial \text { rōwian }_{\text {vb }}\{\partial \mathrm{rōwiend}\}_{\mathrm{vb}}\right]_{\mathrm{vb}}[\text { lic }]_{\mathrm{Afi}}\right]_{\mathrm{Adv}}\right]_{\text {Adv }}[\text { ness }]_{\mathrm{Aff}}\right]_{\mathrm{N}}\right.$
c) Prefixed base < Inflection < Prefixation + Suffix (2)

d) Suffixed base < Prefixation < Suffixation + Suffix (1) unmihtiglicnes 'inability' $\left[\left[\left[[\mathrm{un}]_{\text {Afr }}\left[[\text { miht }]_{N}[\mathrm{ig}]_{\text {Af1 }}\right]_{\text {Adj }}\right]_{\text {Adj }}[\text { lic }]_{\text {Af } 3}\right]_{\text {Adv }}[\text { ness }]_{\text {Af4 }}\right]_{\mathrm{N}}$
e) Suffixed base < Inflection < Prefixation + Suffix (2) oferflöwedlīcnes 'excess, superfluity' $\left[\left[\left[\left\{[\text { ofer }]_{\text {Aff }}[\text { flōwan }]_{\mathrm{vb}}\right\}\{\text { oferflōwed }\}_{\mathrm{vb}}\right]_{\mathrm{vb}}[\text { lic }]_{\mathrm{Afr}}\right]_{\mathrm{Adv}}[\text { ness }]_{\mathrm{Af3}}\right]_{\mathrm{N}}$
f) Compound base (underived adjunct + Inflected base < Prefixation) +Suffix (1) eftācennednes 'regeneration' $\left[\left[\left[\mathrm{eft}_{\mathrm{Adv}}\left[\left\{[\bar{a}]_{\mathrm{Af1}}[\text { cennan }]_{\mathrm{vb}}\right\}\{\text { ācenned }\}_{\mathrm{vb}}\right]_{\mathrm{vb}}\right]_{\mathrm{vb}}[\mathrm{ness}]_{\mathrm{Afr}}\right]_{\mathrm{N}}\right.$
g) Compound base (underived adjunct + suffixed base < prefixation) + Suffix (1) rihtgelēaffulnes 'right belief' $\left.\left[[\text { riht }]_{A d j}\left[\left[[g e]_{A f 1}[\text { lēaf }]_{N}\right]_{N}[f u l]_{\text {Afr }}\right]_{A d j}\right]_{A d j}[\text { ness }]_{\text {Afr }}\right]_{\mathrm{N}}$
h) Compound base (Compound adjunct (Underived adjunct + Prefixed base) + Underived base) + Suffix welgelīcwirənes good pleasure' $\left[\left[\left[[w e l]_{\text {Adv }}\left[[g e]_{\text {Afi }}[\text { līc }]_{N}\right]_{N}\right]_{N}[\text { wir } \partial]_{\text {Adj }}\right]_{\text {Adj }}[\text { ness }]_{A f 2}\right]_{\mathrm{N}}$
i) Inflected base < Prefixation < Prefixation + Suffix (2) onweggewitennes 'departure' $\left[\left[\left\{[o n w e g]_{\mathrm{Af}}\left[[g e]_{\mathrm{Af1}}[\text { wītan }]_{\mathrm{Vb}}\right]_{\mathrm{Vb}}\right\}_{\mathrm{Vb}}\left\{\text { onwegewiten }^{\mathrm{Vbb}}\right]_{\mathrm{Vb}}[\text { ness }]_{\mathrm{N}}\right]_{\mathrm{N}}\right.$

## III) Compounding

a) Underived adjunct + Suffixed base < Inflection < Prefixation (7) flǣscbesmitennes 'defilement of the flesh' $\left[[f l æ s c]_{N}\left[\left[\left\{[b e]_{\text {Af1 }}[\text { smītan }]_{\mathrm{vb}}\right\}_{\mathrm{vb}}\{\text { besmiten }\}_{\mathrm{Vb}}\right]_{\mathrm{Vb}}[\text { ness }]_{\mathrm{Af2}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
b) Underived adjunct + Suffixed base < Suffixation < Prefixation (1) dyrneforlegernes 'fornication' $\left[[\text { dyrne }]_{N}\left[\left[\left[[f o r]_{\mathrm{Af1}}[\text { leg }]_{\mathrm{vb}}\right]_{\mathrm{Vb}}[\text { ere }]_{\mathrm{Af} 2}\right]_{\mathrm{N}}[\text { nes }]_{\mathrm{Af} 3}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
c) Underived adjunct + Suffixed base < Suffixation < Suffixation (1) mōdstaдolfæestnes 'firmness of mind' $\left[[\mathrm{mōd}]_{\mathrm{N}}\left[\left[\left[[s t a \partial]_{\mathrm{vb}}[\mathrm{el}]_{\mathrm{Af1}}\right]_{\mathrm{N}}[f æ s t]_{\mathrm{Af} 2}\right]_{\mathrm{Adj}}[\text { ness }]_{\mathrm{Af} 3}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
d) Underived adjuct + Suffixed base < Zero-derivation < Prefixation (1) eardbegengnes 'habitation' $\left[[\text { eard }]_{N}\left[\left[\left([\text { be }]_{\text {Af1 }}[\text { gangan }]_{\mathrm{Vb}}\right)_{\mathrm{Vb}}(\text { begeng })_{\mathrm{N}}\right][\text { nes }]_{\mathrm{Af} 2}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
e) Suffixed adjunct + Suffixed base < Prefixation (1) ūtanymbstandnes ‘surrounding' $\left[\left[[\overline{u t t}]_{\mathrm{Adj}}[\mathrm{an}]_{\mathrm{AF3}}\right]_{\mathrm{Adv}}\left[\left[[y m b]_{\mathrm{Af1}}[\text { stand }]_{\mathrm{Vb}}\right]_{\mathrm{vb}}[\text { nes }]_{\mathrm{Af} 2}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
f) Suffixed adjunct < Prefixation + Zero-derived base (2) behrēowsungtīd 'time of repentance' $\left[\left[\left[[\text { be }]_{\text {Af1 }}[\text { hrēows }]_{\mathrm{vb}}\right]_{\mathrm{vb}}[\text { ung }]_{\mathrm{Afr}}\right]_{\mathrm{N}}\left[(\text { tēon })_{\mathrm{vb}}(\text { tīd })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
g) Suffixed adjunct + Zero-derived base < Prefixation (5) hālsunggebed 'prayer in a church service' $\left[\left[[h a ̄ l s]_{\mathrm{vb}}[\text { ung }]_{\mathrm{Afr}}\right]_{\mathrm{N}}\left[\left([\text { ge }]_{\mathrm{Af1}}[\text { biddan }]_{\mathrm{vb}}\right)_{\mathrm{vb}}(\text { gebed })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
h) Suffixed adjunct + Compound base (underived adjunct + Zero-derived base) (1) dryhtealdorman 'paranymphus' $\left[\left[[\text { dryh }]_{\mathrm{N}}[\mathrm{t}]_{\mathrm{Af1}}\right]_{\mathrm{N}}\left[[\text { ealdor }]_{\mathrm{N}}\left[(\text { munan })_{\mathrm{vb}}(\text { mann })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
i) Compound adjunct + Inflected base < prefixation (1) middangeardtōd̄̄̄lend 'cosmographer'

j) Compound adjunct (Suffixed adjunct + Suffixed base) + Underived base (7) sūдanwestanwind 'a south-west wind' $\left[\left[\left[[s u \overline{\partial u}]_{\text {Adj }}[\mathrm{an}]_{\text {Af1 }}\right]_{\text {Adv }}\left[[\text { west }]_{\text {Adj }}[\mathrm{an}]_{\text {Afr }}\right]_{\text {Adv }}\right]_{\text {Adv }}[\text { wind }]_{\mathrm{N}}\right]_{\mathrm{N}}$
k) Zero-derived adjunct + Zero-derived base < Prefixation (36) feohbehāt 'promise of money' $\left[\left[(f e \overline{o n})_{\mathrm{vb}}(\text { feoh })_{\mathrm{N}}\right]_{\mathrm{N}}\left[\left([\text { be }]_{\mathrm{Af1}}[\text { hātan }]_{\mathrm{vb}}\right)_{\mathrm{vb}}(\text { behāt })_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
l) Zero-derived adjunct < Prefixation + Suffixed base (9) forweardmercung 'heading' $\left[\left[\left([\text { for }]_{\mathrm{Afr}}[\text { weorдan }]_{\mathrm{vb}}\right)_{\mathrm{vb}}(\text { forweard })_{\mathrm{N}}\right]_{\mathrm{N}}\left[[\mathrm{mærc}]_{\mathrm{vb}}[\mathrm{ung}]_{\mathrm{Af1}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
m) Zero-derived adjunct + Suffixed base < Prefixation (2) wilgedryht $^{\prime}$ willing band' $\left[\left[(\text { willan })_{\mathrm{vb}}\left(\text { will }^{2}\right)_{\mathrm{N}}\right]_{\mathrm{N}}\left[\left[[g e]_{\text {Af1 }}[\text { dryh }]_{\mathrm{N}}\right]_{\mathrm{N}}[\mathrm{t}]_{\mathrm{Af}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$
n) Zero-derived adjunct < Prefixation + Zero-derived base (12) forfangfeoh 'reward for rescuing cattle or other property'


## 5 LEVELS OF COMPLEXITY

## I) Suffixation

a) Prefixed base < Suffixation < Inflection < Prefixation + Suffix (1) unācumenlicnes 'unbearableness' $\left[\left[[\text { un }]_{\mathrm{Af}}\left[\left[\left\{[\bar{a}]_{\mathrm{Af1}}[\text { cuman }]_{\mathrm{Vb}}\right\}_{\mathrm{Vb}}\{\text { ācumen }\}_{\mathrm{Vb}}\right][\text { lic }]_{\mathrm{Af} 2}\right]_{\mathrm{Adv}}\right]_{\mathrm{Adv}}[\text { ness }]_{\mathrm{Af} 4}\right]_{\mathrm{N}}$
b) Suffixed base < Suffixation < Zero-derivation < Prefixation + Suffix (1) gemyndiglicnes 'remembrance' $\left[\left[\left[\left[\left([g e]_{\mathrm{Af1}}[\text { munan }]_{\mathrm{Vb}}\right)_{\mathrm{Vb}}(\text { gemynd })_{\mathrm{N}}\right][\mathrm{ig}]_{\mathrm{Afr}}\right]_{\mathrm{Adj}}[\text { lic }]_{\mathrm{Af} 3}\right]_{\mathrm{Adv}}[\text { ness }]_{\mathrm{Aff}}\right]_{\mathrm{N}}$

## 6 LEVELS OF COMPLEXITY

## I) Compounding

a) Suffixed adjunct < Inflection < Prefixation < Prefixation + Zero-derived base (1) ūpāstīgnestīd 'Ascension-tide' $\left.\left[\left[\left[\left\{[u \bar{p}]_{\mathrm{Afz}}\left[[\bar{a}]_{\mathrm{Af1}}[\text { stīgan }]_{\mathrm{vb}}\right]_{\mathrm{vb}}\right\}_{\mathrm{vb}}\{\text { ūpāstigen }\}_{\mathrm{vb}}\right]_{[n e s s}\right]_{\mathrm{Af}}\right]_{\mathrm{N}}\left[(\text { tēon })_{\mathrm{vb}}(t \mathrm{ti} d)_{\mathrm{N}}\right]_{\mathrm{N}}\right]_{\mathrm{N}}$

Roberto Torres Alonso (PhD U. de La Rioja) is a member of the Functional Grammars Research Group responsible for the development of the lexical database Nerthus (www.nerthusproject.com) which includes formal, morphological and semantic information of over 30,000 Old English predicates.

Address: Departamento de Filologías Modernas. Universidad de La Rioja. C/ San José de Calasanz s/n, 26006 Logroño, La Rioja, Spain. Tel.:'+34 941299547. Fax: +34941299419.


[^0]:    ${ }^{1}$ This research has been funded through the project FFI2008-04448/FILO.
    ATL_ANVIIS. Journal of the Spanish Association of Anglo-American Studies. 33.1 (June 2011): 127-146 ISSN 0210-6124

[^1]:    ${ }^{2}$ See also Martín Arista (2010a, 2010b, forthcoming e) on the question of recursivity in Old English word-formation.

