

Assessing the Semantic Transparency of Old English Affixation: Adjective and Noun Formation

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Abstract

The aim of this article is to assess the semantic transparency of Old English nominal and adjectival affixation. Three principles of semantic transparency are defined, requiring that (i) the attachment of an affix significantly modifies the meaning of the base of derivation; (ii) an affix performs one and the same lexical function in all the derivatives to which it is attached; (iii) a lexical function is performed by one and the same affix in all the derivatives where it applies. The discussion shows that the relation affix-function is overall more transparent than function-affix. The conclusion is drawn that the formation of Old English nouns and adjectives by affixal means is relatively transparent. Considering that approximately one fourth of the total vocabulary of Old English and one half of the derived lexicon have been analyzed, this conclusion clearly points to the relative transparency of Old English word-formation.

1. Aims, terminology and data

One of the most consistently Germanic features of Old English is its vocabulary, which is characterized by a low percentage of loanwords and generalized word-formation processes. Kastovsky notices the existence of large morphologically related word-families in Old English, like the one of the strong verb *gan* ‘to go’, which comprises, among others, zero derivatives such as *gang* ‘going, journey, track’, compounds like *angenga* ‘a solitary, lone goer’ and prefixed forms like *agan* ‘to go, go by’, *began* ‘to go over’, *forgan* ‘to pass over, abstain from’, etc.² Kastovsky also remarks that the morphological relationships that hold in the word-families of Old English are *transparent not only formally but most often also semantically*.³ On the question of formal transparency, Lass points out:⁴

In general, the older an IE language, the more transparent and complex its derivational morphology; and indeed, the more derived forms there appear to be, and the more central derivation appears to be to overall lexical structure. As Germanic evolved, this older derivational apparatus became increasingly opaque, and affixes often fused with stems leaving apparent simplex words.⁵

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² Kastovsky, “Semantics and vocabulary”, 294.

³ Ibid.

⁴ The term word-family is used here as in the original, but see Martín Arista (“Morphological relatedness”, “The Old English Prefix Ge-”, “Recursivity, derivational depth” and “Noun layers”) on a paradigmatic analysis of word-formation in which the morphological and semantic relations holding between the lexemic root and the derivatives are explicit and motivated.

⁵ Lass, 198.

Kastovsky, Quirk and Wrenn and Lass agree on the loss of productivity and the formal opaqueness of many of the Old English affixes inherited from Proto-Germanic, while providing fairly large inventories of formally transparent affixes with different degrees of morphological productivity.⁶ Leaving aside the points just reviewed, little is found in the literature regarding the transparency of the Old English derived vocabulary, apart from the remarks on the self-explanatory character of some nominal compounds whose meaning is clearly compositional.⁷ Baugh and Cable explain that *these are compounds of two native words whose meaning in combination is either self-evident or has been rendered clear by association and usage* and illustrate the type by means of the instances shown in figure 1.⁸

Figure 1

Further evidence may be gathered, in the line of Kastovsky's examples reproduced in figure 1, of verbal compounds with a directional preverb like *underlicgan* 'to underlie', *ūpārīsan* 'to rise up' and *wiðdrīfan* 'to drive off', which are remarkably transparent as far as semantic compositionality is concerned, but, as has already been remarked, the question of semantic transparency has been left practically untouched by work in the lexical semantics of Old English.⁹

Against this background, the aim of this article is to assess the semantic transparency of Old English derivational morphology as reflected by the formation of nouns and adjectives by affixal means.¹⁰ This aim imposes the additional task of defining the concept of semantic transparency as applied to prefixation and suffixation. Previous research stresses three characteristics of transparency: analysability, interpretability and predictability.¹¹ The position adopted in this article is that semantic transparency requires formal transparency, meaningfulness and correspondence form-function. That is to say, for a formation to be semantically transparent it is necessary that it can be decomposed into base and affix and that the affix contributes some meaning that is not present in the base of derivation, which is tantamount to saying that the meanings of the base and the affix are analysable too. In this sense, semantic transparency is the opposite of lexicalization, with one remarkable difference. Whereas lexicalization is a local phenomenon, semantic transparency in this analysis is a paradigmatic phenomenon, that is, for a set of morphologically related derivatives to be semantically transparent it is necessary that the affix that they share contributes the same meaning to all the formations in the set and that such meaning is coded by means of the same affix in all the derivatives of the lexicon.¹²

⁶ Kastovsky, "Semantics and vocabulary"; Quirk and Wrenn; Lass.

⁷ Torre Alonso, "The Morphological Structure", "Nominal Affix Combinations".

⁸ Baugh and Cable, 65.

⁹ Kastovsky, "Semantics and vocabulary", 294.

¹⁰ See Hiltunen on the origin of the phrasal verb in the semantic weakening of the verbal prefixes. See also Brinton and Brinton and Traugott for an explanation of the rise of a new set of prefixes based on the classes of the preposition and the adverb as a grammaticalization of a locative meaning resulting in a telic meaning. See also Martín Arista and Cortés Rodríguez.

¹¹ Zwitserlood, 344; Fabb, 68; Plag, 34.

¹² Fischer, 336. See Martín Arista, "The Old English Prefix Ge-", 416, for a discussion of the Old English prefix *ge-* and the semantic transparency held in pairs of a simplex

This concept of semantic transparency elaborates on Lieber, who, in a study in morphology and lexical semantics, divides lexical semantic representations into the Semantic/Pragmatic Body and the Semantic/Grammatical Skeleton. The body is encyclopaedic and non-decompositional.¹³ The skeleton is decompositional, hierarchically arranged and oriented towards those aspects of meaning that have consequences for the syntax. The semantics of word-formation, in this view, consists of the creation of a single referential unit out of two skeletons that hold a relationship of juxtaposition (compounding) or subordination (derivation) to each other. Within this framework, Lieber raises some questions related to the more general question of how to account for the meaning of complex words, including the polysemy question (why do affixes usually convey more than one meaning?), the multiple-affix question (why do several affixes perform the same function?) and the semantic mismatch question (why is the correspondence in word-formation not one-to-one?).¹⁴ Lieber, therefore, puts the focus on the reversal of semantic transparency (or opaqueness) as has been defined above, as she tackles lack of meaningfulness and of one-to-many correspondence. With the two poles of transparency and opaqueness thus defined by drawing on Lieber, three principles of semantic transparency are proposed in this article, in such a way that the first one affects meaningfulness and interpretability and the other two on one-to-one correspondence and predictability, while the three of them bear on analysability. The principles of semantic transparency are presented in figure 2.

Figure 2.

The data of the analysis carried out to assess semantic transparency with respect to the principles in figure 2 comprise 7,588 complex words, which can be broken down by category into 4,370 nouns and 3,218 adjectives. They consist of 2,001 prefixed words and 5,587 suffixed ones. On specific questions relating to meaning definitions, *The Dictionary of Old English* has been consulted, while some decisions on morphological relatedness have been made on the basis of the data provided by *The Dictionary of Old English Corpus*.¹⁵ For type analysis, the lexical database of Old English *Nerthus* (consulted on May 2013) has been used.¹⁶ *Nerthus* is based on *An Anglo-Saxon Dictionary*, *The Student's Dictionary of Anglo-Saxon* and, above all, *A Concise Anglo-Saxon Dictionary*.¹⁷ It must be borne in mind that, as in *Nerthus*, numbered predicates indicate that more than one lexical class, morphological class or meaning can be associated with the same form.

The morphological analysis of affixed nouns and adjectives relies on the inventories of prefixes and suffixes provided by Kastovsky, Lass and Quirk and Wrenn, with the important difference that affixoids like the prefix *healf-* and the suffix *-bora*, on whose status the authors just mentioned do not agree, have been included as affixes.¹⁸ The resulting list of prefixes can be seen in figure 3. Textual realizations and variants are given between brackets.

and a complex word with this prefix when there is meaning contrast between them, as in *lang* ‘long’ ~ *gelang* ‘dependent’.

¹³ Lieber, 10.

¹⁴ Ibid., 2.

¹⁵ Healey; Healey *et al.*

¹⁶ Available from www.nerthusproject.com.

¹⁷ Bosworth and Toller ; Sweet; Clark Hall.

¹⁸ Kastovsky, “Semantics and vocabulary”; Lass; Quirk and Wrenn.

Figure 3

Nominal suffixes with their textual realizations and variants are displayed in figure 4, while figure 5 lists adjectival suffixes with the same format.

Figure 4

Figure 5

With these aims, terminology and data of analysis, the remaining sections of this article are organized as follows. Section 2 presents the extended framework of lexical functions used to gauge the meaning of word-formation processes. The starting point of this discussion is the model of paradigmatic derivational morphology put forward by Pounder, to which additional functions are added by deriving inspiration from structural-functional theories of language. The degree of implementation of the principles of semantic transparency in figure 2 is discussed, on the grounds of lexical functions, in section 3, 4 and 5. To close this work, section 6 summarizes the main conclusions.

2. The extended framework of lexical functions

To recapitulate, this work aims at assessing the semantic transparency of the formation of nouns and adjectives by means of prefixes and suffixes. To decide whether or not a formation is semantically transparent, it is necessary to relate the meaning of the derivative to the base of derivation. This can be done in an explicit and principled way by means of lexical functions.

Pounder carries out a paradigmatic analysis of the formation of German adjectives in which the relationship holding between the meaning of a derivative and its base is accounted for in terms of a lexical function, as in Meaning-Text Theory.¹⁹ For the present study, a number of lexical functions have been adopted from Pounder's work directly, including REL(ative)('X'), EX(origin)('X'), LIKE(similarity)('X'), DIM(inutive)('X'), I(dentity)('X'), PEJ(orative)('X'), INTENS(ifier)('X') and DIST(ributive)('X').²⁰ When additional functions have been necessary, their motivation has been sought in the structural-functional tradition of linguistics. Thus, the typology of entities draws on Functional Grammar while the roles associated with the semantic macroroles ACTOR and UNDERGOER are based on Role and Reference Grammar. Finally, the enlarged inventory of semantic categories partly relies on Functional Discourse Grammar. These theories have been chosen because they are, to a large extent, compatible with one another. Indeed, they share not only their philosophical underpinnings but, above all, the focus on semantics and its mapping onto syntax and the layered framework of the word, the phrase and the clause.

Functional Grammar has adopted the taxonomy of basic semantic categories put forward by Lyons, according to whom the inventory of basic semantic categories includes, in the first place, the Individual, which is a first-order entity characterized by the fact that it can be located in space and evaluated in terms of its existence. Secondly, the State-of-Affairs is a second-order entity that can be located in both time and space and evaluated in terms of its reality. Finally, a third-order entity, called Propositional

¹⁹ Mel'čuk, "Semantic primitives", "Lexical Functions", "Aspects of the Theory".

²⁰ Pounder, 110-121.

Content, assigns a mental construct that can be located neither in space nor in time, but can be evaluated in terms of its truth.²¹ Dik adds entities of another two orders to this taxonomy: zero order entities (properties or relations) and fourth-order entities (speech acts).²² In the extended framework of lexical functions, the distinction between Property and Individual has a correlate in the pair of lexical functions PROP(erty)(‘X’) and ENT(ity)(‘X’), as well as in the derived functions WITHENT(ity)(‘X’) and WITHPROP(erty)(‘X’). The distinction between WITHENT(‘X’) and WITHPROP(‘X’) specifies the function WITH(‘X’) and contributes to the overall cohesion of the analytical framework because there are two nominal counterparts to these adjectival functions, namely ENT(‘X’) and PROP(‘X’). Derived expressions in Dik’s terminology, that is, deverbal nominalizations that embed a predication, have also been accounted for on the basis of the taxonomy of semantic categories proposed by Lyons and enlarged by Dik.²³ The function PRED(icative)(‘X’) has been defined to deal with embedded predictions. Finally, the lexical function COM(itative)(‘X’), which coincides with the semantic role defined in Functional Grammar, is based on the semantic category Individual.

Functional Discourse Grammar has added more semantic categories to the inventory advanced by Lyons and Dik, including, among others, Time, Location and Quantity.²⁴ The semantic category Location motivates a figurative and a non-figurative lexical function. The figurative one is LIKE(LOC(ative)(‘X’)) and the literal function is LOC(ative)(‘X’). Similarly, the semantic category Time motivates two lexical functions, one literal, the other one figurative, namely TEMP(oral)(‘X’) and LIKE(TEMP(oral)(‘X’)). The label MASS(ive)(‘X’) has been preferred over Pounder’s SING(ular)(‘X’) to designate uncountable amounts. It can be related to the semantic category Quantity.

Role and Reference Grammar has inspired a significant number of lexical functions of this analytical framework.²⁵ The semantic interpretation of verbal arguments in Role and Reference Grammar is based on two generalized semantic roles or macroroles called ACTOR and UNDERGOER. 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 semantic properties of the predicate (**pred'**). The semantic macroroles ACTOR and UNDERGOER are generalizations across argumental structures. That is to say, the ACTOR is the x (1st.) argument of verbs like *eat*, *put* and *give*, while the UNDERGOER is the y (1st.) argument of *be*, *die* and *have* and the y (2nd.) argument of *eat*, *put* and *give*. In the wake of Role and Reference Grammar, this analytical framework distinguishes, to begin with, the lexical function PAT(ient)(‘X’), which includes, along with arguments of state **pred'**(x), as the semantic role PATIENT of Role and Reference Grammar does, the 1st. argument of **pred'** (x, y) and the 2nd. argument of **pred'** (x, y). The adjectival counterpart is the lexical function STA(tive)(‘X’), often corresponding to **pred'**. In the second place, the extended framework of lexical functions distinguishes the function EFF(ector)(‘X’) to account for the 1st. argument of **do'** (x,). The function AG(ent)(‘X’) has also been included to

²¹ Lyons, 325. See Dik, *The Structure of the Clause, Complex and Derived Constructions*.

²² Dik, *The Structure of the Clause*, 55.

²³ Dik, *Complex and Derived Constructions*, 93.

²⁴ Hengeveld and Mackenzie.

²⁵ Foley and Van Valin; Van Valin and LaPolla; Van Valin.

express the argument of DO when it codes a prototypical agentive (conscious, animate, human) and the predicate qualifies as a prototypical transitive, that is, a verb of creation, destruction or consumption. Otherwise, the low profile EFF('X') function is assigned.

It can be the case that a pair of new functions are related to a certain function put forward by Pounder. For example, the functions MAGN(ifier)(‘X’) and MIN(imiser)(‘X’) are related to Pounder’s AUGM(entative)(‘X’) and DIM(‘X’) but the labels MAGN(‘X’) and MIN(‘X’) have been preferred to make reference to rank, whereas DIM(‘X’) is used for diminutives. It must also be noted that the function FEM(inine)(‘X’) has no masculine or neuter counterpart. The reason lies in the fact that there is a remarkable number of feminine-masculine pairs that share a lexemic basis, but pairs comprising the masculine and the neuter, or the feminine and the neuter, are harder to find. Moreover, when the suffixes of Old English nouns are considered (specifically *-nes*, and *-ung*, which form feminines), the feminine turns out to be the marked gender of the first argument and the unmarked gender of the second argument. Thus, the first argument has been broken down into four functions (agent, effector, patient and feminine, which, in practice, adds an additional gender feature to agents, effectors and patients).

Together with functional theories of language, other sources must be acknowledged. The typology of lexical negation relies on lexical category: privation requires a nominal base, while counterfactuality and opposition call, respectively, for a verbal base and an adjectival base.²⁶ Thus, Pounder’s function NEG(ation)(‘X’) has been broken down into three functions of a more specific nature: PRIV(ative)(‘X’), OPP(ositive)(‘X’) and COUNTFACT(ual)(‘X’). Still other functions, like ABST(ract)(‘X’), PART(itive)(‘X’) and MIT(igator)(‘X’) draw on Lexeme-Morpheme Base Morphology.²⁷

With these premises, the set of lexical functions relevant for Old English affixal nouns and adjectives is presented in figure 6.

Figure 6

3. STP1 and the function I('X')

In compliance with STP1, the vast majority of the derivations examined contribute a meaning that is not present in the base. This is the case with all the instances displayed in figure 6 except *langsumlic* ‘tedious’, which illustrates the function I(dentity)(‘X’). When a derivation links two partial synonyms, as in this example, the extended framework of lexical functions couches this relationship in terms of the zero function I(‘X’). Both nouns and adjectives display this *non-function*, which is performed by prefixes as well as suffixes. In the formation of nouns, the function I(‘X’) holds with the prefixes *and-*, *fore-*, *in-*, *on-* and *tō-* as well as the suffixes *-el*, *-en*, *-ing*, *-ling*, *-nes*, *-rāden*, *-scipe*, *tō-*, *-ð* and *-ung*, as can be seen in figure 7. By drawing on Lieber, the term *empty* is used in this section to refer to the strictly morphological counterpart of the I(‘X’) function.²⁸

- | | |
|--------------|---|
| <i>and-</i> | <i>angrisla</i> ‘terror’ (< GRISLA ‘terror’) _N |
| <i>fore-</i> | <i>forelār</i> ‘proverb’ (< LĀR ‘proverb’) _N |
| <i>in-</i> | <i>ingeþrif</i> ‘womb’ (< (GE)HRIF ‘womb’) _N |

²⁶ Martín Arista, “Lexical negation”, 104.

²⁷ See Beard and Beard and Volpe.

²⁸ Lieber, 161.

<i>on-</i>	<i>onēht</i> ‘possession’ (< ĀHT 1 ‘possession’) _N
<i>tō-</i>	<i>tōhopa</i> ‘hope’ (< HOPA ‘hope’) _N
<i>-el</i>	<i>tihtle</i> ‘accusation’ (< TIHT 1 ‘accusation’) _N
<i>-en</i>	<i>hefen</i> 1 ‘burden’ (< HEFE 1 ‘burden’) _N
<i>-ing</i>	<i>āting</i> ‘eating’ (< ĀT ‘eating’) _N
<i>-nes</i>	<i>blinnes</i> ‘cessation’ (< BLINN ‘cessation’) _N
<i>-rāden</i>	<i>camprāden</i> ‘war’ (< (GE)CAMP 1 ‘war’) _N
<i>-scipe</i>	<i>herescipe</i> ‘troop’ (< HERE ‘troop’) _N
<i>-ð</i>	<i>wāroð</i> ‘sea-weed’ (< WĀR 1 ‘sea-weed’) _N
<i>-ung</i>	<i>snyflung</i> ‘mucus’ (< SNOFL ‘mucus’) _N

Figure 7: I(‘X’) in noun formation (non recursive).

Figure 8 presents the affixes that perform the function I(‘X’) in the formation of adjectives, namely the prefix *and-* as well as the suffixes *-ig* and *-lic*.

<i>and-</i>	<i>andwīs</i> ‘expert’ (< WĪS 1 ‘expert’) _{Adj}
<i>-ig</i>	<i>hrīsig</i> ‘bushy’ (< HRĪS 2 ‘bushy’) _{Adj}
<i>-lic</i>	<i>ēcelic</i> ‘eternal’ (< ĒCE 1 ‘eternal’) _{Adj}

Figure 8: I(‘X’) in adjective formation (non recursive).

It is worth mentioning that an important number of the affixes that realize the function I(‘X’) in non recursive formations can also perform it in recursive derivations like the ones displayed in figure 9.

Noun formation

<i>and-</i>	<i>angelīness</i> ‘likeness’ (< (GE)LĪCNES ‘likeness’) _N
<i>fore-</i>	<i>forestēora</i> ‘look-out man’ (< STĒORA ‘steersman’) _N
<i>in-</i>	<i>inflāescnes</i> ‘incarnation’ (< FLĀESCNESS ‘incarnation’) _N
<i>on-</i>	<i>onsymbelnes</i> ‘celebration’ (< SYMBELNES ‘celebration’) _N
<i>tō-</i>	<i>tōgehlytto</i> ‘fellowship’ (< GEHLYTTO ‘fellowship’) _N
<i>-el</i>	<i>onbringelle</i> ‘instigation’ (< ONBRING ‘instigation’) _N
<i>-en</i>	<i>oferwritten</i> ‘superscription’ (< OFERWRIT ‘superscription’) _N
<i>-ing</i>	<i>cnāwelācing</i> ‘acknowledgement’ (< CNĀWLĀEC ‘acknowledgement’) _N
<i>-nes</i>	<i>gegearwungnes</i> ‘preparation’ (< (GE)GEARWUNG ‘preparation’) _N
<i>-rāden</i>	<i>bebodrāden</i> ‘command’ (< BEBOD ‘command’) _N
<i>-scipe</i>	<i>ðēowtscipe</i> ‘service’ (< ÐĒOWOT ‘service’) _N
<i>-ð</i>	<i>fæderenmægð</i> ‘paternal kindred’ (< FÄDERENMÄG ‘paternal kindred’) _N
<i>-ung</i>	<i>spannung</i> ‘span’ (< SPANN ‘span’) _N

Adjective formation

<i>and-</i>	<i>andwrāð</i> ‘hostile’ (< WRĀÐ ‘hostile’) _{Adj}
<i>-ig</i>	<i>feasceaftig</i> ‘hostile’ (< FRĒASCEAFT ‘hostile’) _{Adj}
<i>-lic</i>	<i>metcundlic</i> ‘metrical’ (< METCUND ‘metrical’) _{Adj}

Figure 9: I(‘X’) in recursive formations.

Focusing on the suffixes *-nes* and *-lic*, the former appearing in noun formation and the latter in adjective formation, they stand out in this analysis not only because, as in figures 7, 8 and 9, they can attach to simplex and complex forms, but for the frequency with which they perform the function I(‘X’). Beginning with *-nes*, it is very frequently the case that a pair of partial synonyms arises consisting of a zero derivative and a suffixed noun, both of which are morphologically related to the strong verb. This

is the case with instances like *bryce/brecnes* ‘breach’ (< *brecan* ‘to break’), *underfang/underfangenes* ‘undertaking’ (< *underfōn* ‘to undertake’) and *ymbset/ymbsetennes* ‘siege’ (< *ympsittan* ‘to surround’). Pairs also can be found comprising a *-nes* derivative and a nominalized past participle like *āgen/āgennes* ‘property’ (< *āgan* ‘to own’) and *druncen/druncennes* ‘drunkenness’ (< *drincan* ‘to drink’); or a weak noun ending in *-a* (*cūða/cūðnes* ‘acquaintance’), *-e* (*wīde/wīdnes* ‘width’), *-o* (*pryto/prūtung* ‘pride’) or *-u* (*dēafu/dēafness* ‘deafness’). Such weak nouns are, as a general rule, morphologically related either to a strong verb (*ondrysnu/ondrysnness* ‘fear’; *sceððu/sceðnes* ‘hurt’) or to an adjective (*unclāno/unclānnnes* ‘uncleanness’; *næcedu/næcednes* ‘nakedness’). The case with the suffix *-lic* is slightly different. The pairs of partial synonyms that arise consist of a *-lic* derived adjective and another adjective that falls into one of the these categories: simplex adjective (*hrēofl/hrēoflic* ‘leprous’), derived adjective (*canonic/canonniclic* ‘canonical’), adjective with suffixoid (*sōðfæst/sōðfæstlic* ‘true, sincere’) and compound adjective (*mildheort/mildheortlic* ‘merciful’). Among the pairs that consist of an affixal derivative and a recursive derivative with *-lic*, those consisting of an *un-* derived adjective form the largest set. Some instances are *unearg/unearhlic* ‘bold’, *unlæd/unlædlic* ‘miserable’ and *unmiht/unmihtelic* ‘impossible’.

Overall, the picture that emerges is one of a relatively infrequent empty morph whose frequency is directly proportional to the type frequency of an affix. Thus, the very frequent suffixes *-nes* and *-lic* outpower the others when it comes to performing the I(‘X’) function. As for the associated meaning, no claim of total synonymy between the two lexemes linked by the I(‘X’) function has been made in this discussion. As a matter of fact, contexts can be found for most instances in which the two members of the pair are not completely interchangeable. Under such circumstances, the subtle meaning difference between the two members of the pair will be largely local and idiosyncratic. On the other hand, the addition of an empty morph to perform the I(‘X’) function may have some general explanation. The term *empty morph* suggests excess structure, so that a form contributes no meaning to the process of lexical derivation. Although this might be the case, it seems preferable to seek *functional* explanations, which point in two directions. The first is to attain *variatio*. Not only in poetical texts but also in other textual types the author may need to coin an alternative form that conveys the same meaning. The fact that in some texts both forms are used seems to reinforce this explanation. On the side of derivational processes, the explanation is related to what Kastovsky describes as the typological change whereby variable bases of derivation are replaced by invariable bases of derivation or, put in another way, stem-formation yields way to word-formation.²⁹ Although this explanation is more relevant for pairs that comprise zero derivatives of strong verbs, it seems to be the case that the pairs under analysis are witnesses to diachronic variation. Indeed, the derivational status of zero derivatives is challenged by affixal derivatives, which ultimately prevail. In this context of variation, the zero and the affixed derivative often coexist, sometimes in the same text.

4. STP2: one function per affix

While section 3 has rendered some instances that represent a violation of STP1, this section turns to STP2, which requires that an affix performs one and the same lexical function in all the derivatives to which it is attached. This is the case with a significant number of affixes attached both in the formation of nouns and adjectives, but it is also

²⁹ Kastovsky, “Semantics and vocabulary”, 397.

true that some prefixes and suffixes that form nouns and adjectives perform two or more functions.

In the formation of nouns, there are a few affixes that perform one function only. The prefix *ante-*, for instance, is associated to the function OPP('X') exclusively. The prefix *arce-* also performs an only function: MAGN('X'). The suffix *-bora* is also found performing only one function: EFF('X'). These and other instances of a one-to-one association can be seen in figure 10.

- ante-* > OPP('X'): *Antechrist* 'Antichrist' (< CR̄IST 'Christ')_N
- arce-* > MAGN('X'): *arcedīacon* 'archdeacon' (< DīACON 'deacon')_N
- bora* > EFF('X'): *lēohtbora* 'light-bearer' (< LĒOHT 2 'light')_N
- ed-* > PROP('X'): *ānad* 'waste' (< ĀN 1 'a, an')_{Adj}
- el-* > LIKE(LOC('X')): *elland* 'foreign country' (< LAND 'land')_N
- esse* > FEM('X'): *abbodesse* 'abbess' (< ABBOD 'abbot')_N
- fram-* > MAGN('X'): *framrinc* 'chief' (< RINC 'man')_N
- ful* > DIST('X'): *glæsful* 'glassful' (< GLÆS 1 'glass')_N
- full-* > AUGM('X'): *fullmægen* 'great power' (< MÆGEN 'power')_N
- healf-* > PART('X'): *healfmarc* 'half a mark' (< MARC 'mark')_N
- iht* > MASS('X'): *ālcuht* 'everything' (< ĀLC 1 'each')_{Adj}
- incel* > DIM('X'): *hūsincel* 'small house' (< HŪS 'house')_N
- inga* > PROP('X'): *leoðuwācunga* 'mitigation' (< LĒOÐUWĀC 'flexible')_{Adj}
- mis-* > PEJ('X'): *misgelimp* 'misfortune' (< GELIMP 'occurrence')_N
- sām-* > PART('X'): *sāmbryce* 'partial breach' (< (GE)BRYCE 1 'breach')_N
- sub-* > MIN('X'): *subdīacon* 'subdeacon' (< DīACON 'deacon')_N
- twi-* > DIST('X'): *twiheolor* 'balance' (< HEOLOR 'scales')_N
- ðurh-* > EX('X'): *ðurhgefeht* 'war' (< (GE)FEOHT 'action of fighting')_N
- un-* > OPP('X'): *unār* 'dishonour' (< ĀR 3 'honour')_N
- wan-* > PRIV('X'): *wanspēd* 'poverty' (< SPĒD 'luck')_N
- wið-* > EX('X'): *wiðmētednes* 'invention' (< GEMĒTEDNES 'finding')_N

Figure 10: One affix to one function in noun formation.

In turn, other nominal affixes perform a remarkably high number of functions. The suffix *-el* clearly outnumbers the other affixes because it performs a total of 10 functions: AG('X'), DIST('X'), EFF('X'), ENT('X'), EX('X'), FEM('X'), I('X'), PAT('X'), PRED('X'), and PROP('X'). Other instances of one function to many affixes correspondence involve the suffixes *-en*, *-ere*, *-ing*, *-ling* and *-ð*, all of which realize seven functions. These relations affix-function are described and illustrated in figure 11.

- el*
 - > AG('X'): *strelengel* 'ruler' (< STRENGE 'severe')_{Adj}
 - > DIST('X'): *sescle* 'sixth part' (< SIEX 'six')_{Num}
 - > EFF('X'): *byrele* 'cup-bearer' (< (GE)BERAN 'to bear')_V
 - > ENT('X'): *hrympel* 'wrinkle' (< HRIMPAN 'to twist')_V
 - > EX('X'): *gescierpla* 'clothing' (< SCEORP 'ornament')_N
 - > FEM('X'): *lȳtle* 'female slave' (< LYT 2 'little')_{Adj}
 - > I('X'): *pūcel* 'goblin' (< PŪCA 'goblin')_N
 - > PAT('X'): *āemetla* 'one at leisure' (< ĀMETTA 'leisure')_N
 - > PRED('X'): *fyndele* 'invention' (< (GE)FINDAN 'to find')_V
 - > PROP('X'): *gemēdla* 'madness' (< GEMĀD 'mad')_{Adj}
- en*
 - > ENT('X'): *selen* 'gift' (< (GE)SELLAN 'to give')_V
 - > EX('X'): *cr̄isten* 2 'Christian' (< CR̄IST 'Christ')_N

	> FEM('X'): <i>ælfen</i> ‘nymph’ (< ÆLF ‘elf’) _N
	> I('X'): <i>hesen</i> 1 ‘burden’ (< HEFE 1 ‘burden’) _N
	> MASS('X'): <i>æcen</i> 1 ‘wood of oaks’ (< ĀC ‘oak’) _N
	> PRED('X'): <i>tilen</i> ‘endeavour’ (< (GE)TILIAN ‘to obtain’) _V
	> PROP('X'): <i>fæsten</i> ‘fastness’ (< FÆST 1 ‘fast’) _{Adj}
-ere	> AG('X'): <i>drēfre</i> ‘disturber’ (< (GE)DRĒFAN ‘to stir up’) _V
	> EFF('X'): <i>biddere</i> ‘petitioner’ (< BIDDAN ‘to bid’) _V
	> ENT('X'): <i>wīsere</i> ‘a sign-post’ (< (GE)WĪSIAN ‘to direct’) _V
	> EX('X'): <i>antefnere</i> ‘book of antiphons’ (< ANTEFN ‘antiphon’) _N
	> PAT('X'): <i>slāpere</i> ‘sleeper’ (< SLĀP 1 ‘sleep’) _N
	> PRED('X'): <i>forliger</i> 1 ‘adultery’ (< FORLICGAN ‘to commit adultery’) _V
	> PROP('X'): <i>rīceter</i> ‘force’ (< RĪCE 1 ‘strong’) _{Adj}
-ing	> EFF('X'): <i>flīeming</i> ‘fugitive’ (< (GE)FLĪEMAN ‘to put to flight’) _V
	> ENT('X'): <i>holing</i> ‘hollow place’ (< HOLIAN ‘to hollow’) _V
	> EX('X'): <i>hilting</i> ‘sword’ (< (GE)HILTE ‘hilt (of sword’) _N
	> I('X'): <i>gielping</i> ‘glory’ (< GIELP ‘glory’) _N
	> PAT('X'): <i>fōstring</i> ‘foster-child’ (< FŌSTRIAN ‘to foster’) _V
	> PRED('X'): <i>tācing</i> ‘teaching’ (< (GE)TĀCAN ‘to teach’) _V
	> PROP('X'): <i>hræding</i> ‘haste’ (< HRÆD ‘quick’) _{Adj}
-ling	> EFF('X'): <i>feohftling</i> ‘fighter’ (< (GE)FEOHTAN ‘to fight’) _V
	> ENT('X'): <i>hwyrfling</i> ‘orb’ (< (GE)HWIERFAN ‘to turn’) _V
	> EX('X'): <i>fōstorling</i> ‘foster-child’ (< FŌSTOR ‘sustenance’) _N
	> I('X'): <i>postling</i> ‘pellet’ (< POSL ‘pellet’) _N
	> PAT('X'): <i>nīdling</i> ‘slave’ (< NĪED 1 ‘need’) _N
	> PRED('X'): <i>tendling</i> ‘burning’ (< TENDAN ‘to kindle’) _V
	> PROP('X'): <i>ðeorfling</i> ‘unleavened bread’ (< ðEORF 1 ‘fresh, skim’) _{Adj}
-ð	> ENT('X'): <i>fōstrað</i> ‘food’ (< FŌSTRIAN ‘to foster’) _V
	> EX('X'): <i>ernð</i> ‘crop of corn’ (< ERN 1 ‘corn’) _N
	> FEM('X'): <i>nift</i> ‘niece’ (< NEFA ‘stepson’) _N
	> I('X'): <i>unsālð</i> ‘unhappiness’ (< UNSĀEL ‘unhappiness’) _N
	> MASS('X'): <i>(ge)fyrhð</i> ‘wooded country’ (< FYRH ‘fir’) _N
	> PRED('X'): <i>hæfmoð</i> ‘confinement’ (< (GE)HÆFTNIAN ‘to take prisoner’) _N
	> PROP('X'): <i>strenghð</i> ‘strength’ (< STRANG ‘strong’) _{Adj}

Figure 11: One affix to many functions in noun formation.

In adjective formation, there are some cases in which an adjectival affix performs only one function. This happens to the prefix *ā-*, which only performs the function EX('X'), and the suffix *-ade*, only associated to the function WITHENT('X'). The list includes a few other instances, given in figure 12.

<i>ā-</i>	> EX('X'): <i>āðegen</i> ‘distended (with food)’ (< ðEGN ‘servant’) _N
<i>æfter-</i>	> TEMP('X'): <i>æfterboren</i> ‘afterborn’ (< (GE)BERAN ‘to bear’) _V
<i>-cund</i>	> EX('X'): <i>hellcund</i> ‘of hell’ (< HELL ‘hell’) _N
<i>-eht</i>	> WITHENT('X'): <i>cineht</i> ‘chinky’ (< CINE 2 ‘chink’) _N
<i>-end</i>	> STA('X'): <i>twēonigend</i> ‘doubtful’ (< TWĒONIAN ‘to doubt’) _V
<i>-feald</i>	> DIST('X'): <i>twelffeald</i> ‘twelve-fold’ (< TWELF ‘twelve’) _{Num}
<i>frēa-</i>	> INTENS('X'): <i>frēaglēaw</i> ‘very wise’ (< GLĒAW ‘wise’) _{Adj}
<i>healf-</i>	> MIT('X'): <i>healffrēo</i> ‘half-free’ (< FRĒO 1 ‘free’) _{Adj}
<i>-ic</i>	> EX('X'): <i>Davītic</i> ‘of David’ (< DAVID ‘David’) _N
<i>-ing</i>	> STA('X'): <i>sylting</i> ‘seasoning’ (< (GE)SYLTAN ‘to salt’) _V

- lēas > PRIV('X'): *mūðlēas* ‘mouthless’ (< MŪÐ ‘mouth’)_N
- mis-* > PEJ('X'): *mishæbbende* ‘being ill’ (< HABBAN ‘to have’)_V
- sām-* > MIT('X'): *sāmstorfen* ‘half-dead’ (< STEORFAN ‘to die’)_V
- sum > WITHPROP('X'): *lārsum* ‘teachable’ (< LĀR ‘learning’)_N
- ðurh- > INTENS('X'): *ðurhhālig* ‘most holy’ (< HĀLIG 1 ‘holy’)_{Adj}
- wan-* > PRIV('X'): *wanscryd* ‘poorly clad’ (< (GE)SCRÝDAN ‘to clothe’)_V
- wiðer-* > LIKE(LOC('X')): *wiðerwyrd* ‘contrary’ (< (GE)WYRD ‘fate’)_N

Figure 12: One affix to one function in adjective formation.

The highest number of functions that an adjectival affix performs is five. This is the case with prefix *and-*, which performs: I('X'), LOC('X'), OPP('X'), PRIV('X'), WITHENT('X'); and the suffix *-ed*, performing the functions EX('X'), LIKE('X'), WITHENT('X'), WITHPROP('X'). The affixes that perform four different functions include the prefixes *for-*, *forð-* and *ofer-* as well as the suffixes *-en*, *-ende* and *-iht*. These correspondences are shown in figure 13.

- and-* > I('X'): *andlang 1* ‘entire’ (< LANG ‘entire’)_{Adj}
 - LOC('X'): *anhende* ‘on hand’ (< HAND 1 ‘hand’)_N
 - OPP('X'): *unleoðuwāc* ‘inflexible’ (< LEOÐUWĀC ‘flexible’)_{Adj}
 - PRIV('X'): *andfeax* ‘bald’ (< FEAX ‘hair’)_N
 - WITHENT('X'): *andsæte* ‘hateful’ (< GESĀTE ‘snare’)_N
- ed > EX('X'): *fracoð 1* ‘vile’ (< FRACU ‘wickedness’)_N
 - LIKE('X'): *æppled* ‘shaped like an apple’ (< ÆPPEL ‘apple’)_N
 - WITHENT('X'): *gesperod* ‘armed with a spear’ (< SPERE ‘spear’)_N
 - WITHPROP('X'): *gelaured* ‘laurel-flavoured’ (< LAUR ‘laurel’)_N
- en > EX('X'): *gylden* ‘golden’ (< GOLD ‘gold’)_N
 - I('X'): *wēsten 2* ‘waste’ (< WĒSTE ‘waste’)_{Adj}
 - LIKE('X'): *hwælen* ‘like a whale’ (< HWÆL 1 ‘whale’)_N
 - WITHPROP('X'): *crīsten 1* ‘Christian’ (< CRĪST ‘Christ’)_N
- ende > STA('X'): *spediende* ‘suffering from sped’ (< (GE)SPĒDAN ‘to prosper’)_V
 - WITHENT('X'): *ānhyrnende* ‘having one horn’ (< HORN ‘horn’)_N
 - WITHPROP('X'): *hwilende* ‘transitory’ (< HWIL ‘while’)_N
- for-* > I('X'): *fordēad* ‘dead’ (< (GE)DĒAD ‘dead’)_{Adj}
 - INTENS('X'): *forstrang* ‘very strong’ (< STRANG ‘strong’)_{Adj}
 - TEMP('X'): *forcēap* ‘forestalling’ (< CĒAP ‘purchase’)_N
 - WITHPROP('X'): *forcilled* ‘chilled’ (< CEALD 2 ‘coldness’)_N
- forð-* > INTENS('X'): *forðsnoter* ‘very wise’ (< SNOTOR ‘clever’)_{Adj}
 - LIKE(LOC('X')): *forðātȳdred* ‘propagated’ (< ĀTȳDRAN ‘to beget’)_V
 - LOC('X'): *foretimbrigende* ‘enclosing’ (< (GE)TIMBRAN ‘to build’)_V
 - TEMP('X'): *foremearcod* ‘before-mentioned’ (< (GE)MEARCIAN ‘to mark’)_V
- iht > LIKE('X'): *wudiht* ‘thick (with trees)’ (< WUDU ‘wood’)_N
 - WITHENT('X'): *healhihte* ‘having many angles’ (< HEALH ‘corner’)_N
 - WITHPROP('X'): *sceadiht* ‘shady’ (< SCEAD ‘shade’)_N
- ofer-* > INTENS('X'): *oferlēof* ‘very dear’ (< (GE)LĒOF ‘dear’)_{Adj}
 - LOC('X'): *oferlyftlic* ‘above the air’ (< LYFT ‘air’)_N
 - PRIV('X'): *oferhȳre* ‘heedless’ (< HȳR ‘hire’)_N

Figure 13: One affix to many functions in adjective formation.

5. STP3: one affix per function

To recapitulate, section 3 and 4 have gathered evidence of the fulfillment as well as the violation of STP1 and STP2 respectively. When it comes to assessing STP3, which stipulates that a lexical function is performed by one and the same affix in all the derivatives where it applies, the situation is comparable to the one holding with respect to STP1 and STP2, that is to say, the instances of semantic transparency coexist with those of opaqueness. This is the case with both noun and adjective formation as well as prefixation and suffixation.

In the formation of nouns, the function DIM('X') provides the only example of a function performed exclusively by one affix, the suffix *-incel* (*scipincel* ‘little ship’). However, a number of other functions come close to a one-to-one association. An example is the function COM('X'), which is, as a general rule, performed by the prefix *mid-* (*midhlyt* ‘fellowship’), except for two derivatives that display the prefix *sam-*. Similarly, the function OPP('X') is mainly performed by the prefix *un-* (*ungelēafa* ‘unbelief’), but for one predicate prefixed with *ante-*. In the same way, PART('X') corresponds to the prefix *healf-* (*healffers* ‘hemistich’), while there is just one predicate with *sām-*. Finally, the function PEJ('X') is performed by the prefix *mis-* (*misweorc* ‘misdeed’) except in one predicate to which the prefix *for-* is attached.

In contrast, the functions that are performed by the highest number of affixes in the case of nouns are I('X'), which has already been discussed in section 3, and the others given in figure 14.

EX('X')	<i>and-</i>	<i>andefn</i> ‘measure’ (< EFNE 4 ‘material’) _{Adj}
	<i>be-</i>	<i>bisēc</i> ‘wallet’ (< SÆCC 2 ‘sackcloth’) _N
	<i>ed-</i>	<i>edcēlnes</i> ‘refreshness’ (< (GE)CĒLNES ‘coolness’) _N
	<i>-el</i>	<i>tygel</i> ‘pulling-rope’ (< TYGA ‘pull’) _N
	<i>-els</i>	<i>rēcels</i> ‘incense’ (< RĒC ‘smoke’) _N
	<i>-en</i>	<i>scilden</i> ‘protection’ (< SCIELD ‘shield’) _N
	<i>-ere</i>	<i>antefnere</i> ‘book of antiphons’ (< ANTEFN ‘antiphon’) _N
	<i>-ett</i>	<i>onālet</i> ‘lightning’ (< ONĀL ‘burning’) _N
	<i>for-</i>	<i>formāl</i> ‘negotiation’ (< MĀL 2 ‘talk’) _N
	<i>-icge</i>	<i>mōdrige</i> ‘mother’s sister’ (< MŌDOR ‘mother’) _N
	<i>-ig</i>	<i>nytig</i> ‘usefulness’ (< NYTT 1 ‘use’) _N
	<i>-ing</i>	<i>fleāming</i> ‘runaway’ (< FLEAM ‘flight’) _N
	<i>-ling</i>	<i>gædeling</i> ‘kinsman’ (< GÆD ‘society’) _N
	<i>of-</i>	<i>ofsprīng</i> ‘offspring’ (< SPRING ‘spring’) _N
	<i>on-</i>	<i>ontimber</i> 1 ‘material’ (< (GE)TIMBER ‘timber’) _N
	<i>tō-</i>	<i>tōwyrd</i> 1 ‘opportunity’ (< (GE)WYRD ‘chance’) _N
	<i>-ð</i>	<i>ernð</i> ‘crop of corn’ (< ERN ‘grain’) _N
	<i>ðurh-</i>	<i>ðurhgefeht</i> ‘war’ (< (GE)FEOHT ‘action of fighting’) _N
	<i>under-</i>	<i>underwedd</i> ‘deposit’ (< WEDD ‘pledge’) _N
	<i>-ung</i>	<i>tēoðung</i> ‘division into ten’ (< TĒOÐA ‘tenth’) _{Num}
	<i>ūp-</i>	<i>ūpheald</i> ‘support’ (< HEALD 1 ‘keeping’) _N
	<i>wið-</i>	<i>wiðmētednes</i> ‘invention’ (< GEMĒTEDNES ‘finding’) _N
	<i>ymb-</i>	<i>ymbcyme</i> ‘assembly’ (< CYME ‘coming’) _N
PROP('X')	<i>-dōm</i>	<i>frēodōm</i> ‘freedom’ (< FRĒO 1 ‘free’) _{Adj}
	<i>-ed</i>	<i>ānad</i> ‘waste’ (< ĀN 1 ‘alone’) _{Adj}
	<i>-el</i>	<i>gemēdla</i> ‘madness’ (< GEMĀD ‘mad’) _{Adj}
	<i>-els</i>	<i>brāedels</i> ‘anything spread’ (< BRĀD 1 ‘broad’) _{Adj}
	<i>-en</i>	<i>ielden</i> ‘delay’ (< EALD ‘old’) _{Adj}
	<i>-end</i>	<i>rihtwīsend</i> ‘Sadducee’ (< RIHTWĪS ‘righteous’) _{Adj}

-ere	<i>cōpenere</i> ‘lover’ (< GECŌP ‘proper’) _{Adj}
-ett	<i>ānett</i> ‘solitude’ (< ĀN 1 ‘alone’) _{Adj}
-hād	<i>druncenhād</i> ‘drunkenness’ (< DRUNCEN 2 ‘drunk’) _{Adj}
-ing	<i>ofering</i> ‘superabundance’ (< OFER 2 ‘above’) _{Adv}
-ling	<i>wiðerling</i> ‘opponent’ (< WIDER 2 ‘hostile’) _{Adj}
-nes	<i>teartnes</i> ‘sharpness’ (< TEART ‘sharp’) _{Adj}
-rēden	<i>holdrāden</i> ‘faithful service’ (< HOLD 1 ‘gracious’) _{Adj}
-scipe	<i>eargscipe</i> ‘idleness’ (< EARG ‘slothful’) _{Adj}
-ð	<i>strengð</i> ‘strength’ (< STRANG ‘strong’) _{Adj}
-ung	<i>sweartung</i> ‘darkness’ (< SWEART ‘dark’) _{Adj}
ymb-	<i>ymbhoga</i> ‘care’ (< HOGA 1 ‘careful’) _{Adj}

Figure 14: One function to many affixes in noun formation.

In the formation of adjectives, the function PEJ(‘X’) is the only one performed exclusively by a single affix: the prefix *mis-* (*mishweorfed* ‘perverted’). Another relevant example is the function OPP(‘X’), which holds a nearly one-to-one association with the derivatives prefixed with *un-* (*unandwīs* ‘unskilful’), except for three of them that contain a different affix. In contrast, the functions that are performed by the highest number of affixes include, as is the case with nouns, the function I(‘X’), which has already been discussed in section 3. Other correspondences are described and exemplified in figure 15:

WITHPROP(‘X’)	-bāre <i>ātorbāre</i> ‘poisonous’ (< ĀTOR ‘poison’) _N
	-ed <i>ecged</i> ‘edged’ (< ECG ‘very strong’) _N
	-en <i>crīsten</i> 1 ‘Christian’ (< CRĪST ‘Christ’) _N
	-ende <i>hwilende</i> ‘transitory’ (< HWĪL ‘while’) _N
	-fæst <i>hygefæst</i> ‘wise’ (< HYGE ‘thought’) _N
	for- <i>forcilled</i> ‘chilled’ (< CEALD 2 ‘coldness’) _N
	-ful <i>hearmful</i> ‘hurtful’ (< HEARM 1 ‘harm’) _N
	-iht <i>croppiht</i> ‘clustered’ (< CROPP ‘cluster’) _N
	-or <i>slidor</i> 1 ‘slippery’ (< SLIDE ‘slip’) _N
	-sum <i>wilsum</i> ‘desirable’ (< WILL 1 ‘mind’) _N
	-welle <i>rūmwelle</i> ‘spacious’ (< (GE)RŪM 1 ‘roomy’) _{Adj}
INTENS(‘X’)	eall- <i>eallhwīt</i> ‘entirely of white’ (< HWĪT ‘white’) _{Adj}
	for- <i>forstrang</i> ‘very strong’ (< STRANG ‘strong’) _{Adj}
	ford- <i>forehālig</i> ‘very holy’ (< HĀLIG ‘holy’) _{Adj}
	frēa- <i>frēahraed</i> ‘very quick’ (< HRÆD ‘quick’) _{Adj}
	ful- <i>fullwearm</i> ‘full warm’ (< WEARM ‘warm’) _{Adj}
	ofer- <i>ofereald</i> ‘very old’ (< EALD ‘old’) _{Adj}
	on- <i>onfordōn</i> ‘destroyed’ (< FORDŌN 1 ‘to undo’) _V
	sin- <i>sinbyrnende</i> ‘ever-burning’ (< BIERNAN ‘to burn’) _V
	ðurh- <i>ðurhhefig</i> ‘very heavy’ (< HEFIG ‘heavy’) _{Adj}
	ūt- <i>ūðmæte</i> ‘huge’ (< MĀTE 1 ‘moderate’) _{Adj}

Figure 15: One function to many affixes in adjective formation.

It turns out from the discussion of the three principles that STP3 is the most frequently violated principle. As the results show, the function DIM(‘X’) in the formation of nouns and the function PEJ(‘X’) in the formation of adjectives are the only ones performed by one affix, the suffix *-incel* and the prefix *mis-*, respectively. Conversely, the least frequently violated principle is STP1, which is consistent with the

general function of word-formation of providing new meanings on the basis of the forms and meanings available in the lexicon. Regarding STP2, the only affixes that perform the same function in both noun and adjective formation are the pejorative prefix *mis-* and the privative prefix *wan-*. If considered together, STP1 and STP2 clearly indicate that semantic opaqueness is directly proportional to dictionary frequency. That is, very frequent affixes like *-nes* in noun formation and *-lic* in adjective formation violate these principles of semantic transparency far more often than rather infrequent affixes. This can be explained on the grounds of the loss of morphological productivity associated with the generalization of affixes, which is marked by their attachment to many different bases of derivation.

The discussion of the principles also shows that the relation affix-function is overall more transparent than function-affix. In noun formation the maximal degree of semantic transparency arises in the attachment of the Latin prefixes *ante-*, *arce-* and *sub-*, the prefixoids *eall-*, *full-* and *twi-*, the prefixes that have a prepositional counterpart like *wið-*, the gender marker *-esse* and the suffixoids like *-bora*. It is probably the case that maximal semantic transparency arises when affixes have been borrowed recently (*ante-*, *arce-*, *sub-*) or constitute borderline cases between fully lexical items and derivational morphemes (*eall-*, *full-* *twi-*, *wið-* and *-bora*). In adjective formation the maximal degree of transparency arises in the attachment of prefixes with a prepositional counterpart (*æfter-*, *tō-*, *wiðer-*) and suffixoids (*-cund*, *-feald*, *-leas* and *-sum*). All in all, as regards STP2 semantic transparency can be largely attributed to change in progress (borrowing or grammaticalization), which is compatible with the explanation of opaqueness in terms of loss of morphological productivity because the items we have identified as undergoing a change in lexical status are also characterized by their low dictionary frequency.

6. Conclusion

The preceding discussion has raised the question of how transparent the affixation of nouns and adjectives in Old English is from a semantic point of view. So as to conduct a methodologically sound analysis, three principles of semantic transparency have been defined, requiring that the attachment of an affix significantly modifies the meaning of the base of derivation (STP1); that an affix performs one and the same lexical function in all the derivatives to which it is attached (STP2); and that a lexical function is performed by one and the same affix in all the derivatives where it applies (STP3). As an overall assessment, the examination of these principles allows us to reach the conclusion that the formation of Old English nouns and adjectives by affixal means is relatively transparent. Given that approximately one fourth of the total vocabulary of Old English and around one half of the derived lexicon have been analyzed, this conclusion clearly points to the relative transparency of Old English word-formation as a whole.

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