SPLIT AND UNIFIED FUNCTIONS IN THE FORMATION OF OLD ENGLISH NOUNS AND ADJECTIVES[1]

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Abstract: *This journal article draws a distinction between the split and unified functions obtaining in the formation of Old English nouns and adjectives. The starting point of the discussion is an enlarged inventory of lexical functions that draw on Meaning-Text Theory and structural-functional grammars and explain the change of meaning caused by prefixation and suffixation in Old English. The extended inventory of lexical functions consists of 33 functions and has been applied to ca. 7,500 affixed nouns and adjectives extracted from the lexical database Nerthus (www.nerthusproject.com). The distinction between split and unified functions, in such a way that the former can be realized by both prefixes and suffixes and the latter by either prefixation or suffixation, allows for some generalizations. Firstly, the analysis proves that there are more functions involved in prefixation than in suffixation. Secondly, prefixation is meaning oriented while suffixation is class oriented.*

Keywords: lexical functions, structural-functional grammar, affixation, nouns, adjectives, Old English.

1. INTRODUCTION

Recent research in the lexical semantics of Old English pays more attention to morphological than semantic aspects. Kastovsky (2006) identifies a typological change in the morphology of Old English whereby variable bases of derivation have been replaced by invariable bases. Kastovsky distinguishes two steps in this evolution: from root-formation to stem-formation and from stem-formation to word-formation. The work by Haselow (2011) follows in the same track, although he is more concerned with derivational morphology than Kastovsky, who focuses on inflectional phenomena such as ablaut in strong verbs or the simplification of inflection and explains their consequences to derivational morphology from the perspective of inflection. Haselow (2011) addresses the question of productivity in noun formation and finds some rising analytic tendencies that can be seen as a consequence of the change to invariable base morphology which, being unable to modify the root to produce a stem or a stem to produce a word, has to add affixes (thus *analytic*) to bases of derivation that enjoy the status of words.[2] Martín Arista (2008, 2009, 2011c, 2012b) puts forward a framework of functional morphology that is inspired in the layering of functional grammars and, consequently, focuses on the points of contact between morphology and syntax. This author has applied different aspects of the morphological framework of the Layered Structure of the Word to the derivational morphology of Old English (Martín Arista 2010a, 2010b, 2011a, 2012a) as well as the structure of the Old English lexicon in general (Martín Arista 2011b, 2013).

The works just cited, in spite of their valuable contribution to the study of derivational morphology and the structure of the Old English lexicon, do not engage in the changes of meaning caused by the derivational processes of word-formation. Indeed, Kastovsky (1992) provides lists of affixes, derivatives and processes or explains the relationship between inflection and derivation in terms of the status of morphological bases (Kastovsky 2006). Martín Arista (2008, 2009, 2011c, 2012b) explains the similarities between syntactic and morphological units by means of the concept of layering (or increasing semantic-syntactic complexity) and devises a syntactic model of morphology that uses templates, positions and functions at word level. Such functions, however, express only syntactic relations of constituency or dependency and have little to do with meaning.[3] A line of research more

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[2] Trips (2009) looks at the same series of Old English noun-forming suffixes as Haselow (2011) although she puts more emphasis on the question of productivity.

[3] Cf. Martín Arista and Cortés Rodríguez (fc.).

concerned with meaning is the one in the semantic primes of Old English pursued by Martín Arista and Martín de la Rosa (2006), who apply the methodology and inventory of primes of the Natural Semantic Metalanguage Research Programme (Goddard and Wierzbicka 2002; Wierzbicka 2002) to the substantives, determiners and quantifiers of Old English. In subsequent publications, de la Cruz Cabanillas deals with descriptors, Guarddon Anelo (2009a, 2009b) with compound adpositions and Mateo Mendaza (2013) with TOUCH. These works, however, revolve around the basic lexicon or, when they take derivatives into account, the parameter of word-formation is a secondary one (Mateo Mendaza 2013) or is not considered.

Another relevant aspect for a review of previous research in the area of Old English lexical semantics is the overall syntagmatic or paradigmatic approach to lexical items and lexical relations in general and to those involved in derivational processes in particular. Kastovsky (1992, 2006) opts for an exclusively syntagmatic approach because he does not make generalizations applicable to sets of affixes or sets of meanings. Martín Arista (2011b, 2013) makes two types of generalizations characteristic of the paradigmatic axis of analysis. Firstly, he devises derivational paradigms (comparable to word-families but with an explicit and principled hierarchical structure) that have a dynamic part (the derivational processes that produce all the derivatives in the paradigm) and a static one (the output of such processes). Secondly, he distinguishes two lexical layers in Old English that depend on the formal and semantic transparency and relative productivity of derivational processes and introduces the parameter of recursivity (or derivation of previously derived words), in such a way that the layer of zero derivation is subservient to affixation and affixation is subservient to recursive derivation. In the remainder of this work the line is taken that the paradigmatic approach adopted by Martín Arista (2011b, 2013) can be enriched by identifying lexical functions in word-formation as a means of making generalizations that cut across derivational paradigms and tightening up the lexical relations that hold among bases.

On the grounds of the preceding review, it seems necessary to adopt a paradigmatic perspective on word-formation and, moreover, to deal with its semantic side more clearly than previous research. As a contribution to these lines of research, this article aims at explaining the change of meaning caused by the derivational processes of Old English that turn out nouns and adjectives. More specifically, the concept of split vs. unified funcion, based on positional realization, is coined in order to determine whether or not prefixation and suffixation change in a different way the meaning of the base of derivation. The theoretical foundations are provided by the structural-functional theory of linguistics.

The remainder of the article is organized as follows. Section 2 discusses the methodological aspects of the research, including pre-theoretical questions, data and units of analysis. Section 3 develops an extended framework of lexical functions that draws on Pounder (2000) and is enlarged by following the structural-functional theories of language. Section 4 applies the extended framework of lexical functions to the affixed (prefixed and suffixed) nouns and adjectives of Old English and puts forward the concepts of split and unified lexical function. After the discussion of the results of the analysis from the perspective of these concepts, the conclusions are presented in section 5.

2. METHODOLOGY

Beginning with the question of explanation, explanation in functional grammars (Foley and Van Valin 1984; Dik 1997a, 1997b; Van Valin 1997; Van Valin 2005; Hengeveld and Mackenzie 2008) is mostly couched in terms of functions. Functions, as relations between linguistic units that capture the systematic aspects of language and thus allow generalizations, are at the core of functional-structural grammars like the ones cited above. As in these works, explanation in this article is sought through functions.[4]

The question of the change of meaning is addressed in an exclusively synchronic fashion. This research, therefore, does not belong in etymology. Rather, it centres on the meaning relations that hold in an isolated stage of the English language like Old English. This does not mean that the importance of the origin and the subsequent historical evolution of a given word are underestimated but the simultaneous analysis of all synchronic and diachronic facts is incompatible with the exhaustive analysis carried out in this work, which has scope over all affixed nouns and adjectives.[5]

The study of meaning in a historical language is more dependent on dictionary meaning than is meaning in a living language because there are no native speakers and, consequently, no intuitions or judgements about their linguistic abilities are available. Moreover, the limits of the knowledge of a historical language is completely constrained by the surviving written records, which are unlikely to reflect all and every detail of lexical organization.

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[4]   See Butler (2003a, 2003b) on functional relations and the organization of the major structural-functional theories of grammar.

[5]   Martín Arista (2013) proposes the concept of derivational depth, which combines some of the synchronic and diachronic aspects of the formation of a lexical paradigm.

This means that, in this article, meaning is used with the value of dictionary meaning. The unit of analysis where meaning is sought is the word rather than the sentence of the utterance.[6]

As for the derivational processes, this work assumes a strictly gradual application of the processes of word-formation, in such a way that a maximum of one affix is attached by any given process.[7] This has two consequences. If a maximum of one morpheme is attached by derivational step, zero derivation is considered a relevant process for Old English word-formation. The second is that word-formation requires explicit or implicit morphemes (bound forms), which excludes free forms as inputs to derivational processes. Regarding the derivational processes of Old English, it is also necessary to remark that no assessment of productivity is done in the research that follows. This means that no difference is made between productive and non-productive processes (or even between more and less productive processes) provided that the output of the process is still formally analysable.

In prefixation, the following prefixes can be distinguised. Textual realizations and variants are given between brackets:

(1) Ā- (*ā-*), Ǣ- (*ǣ-*), ÆFTER- (*æfter-*), ÆT- (*æt-*), AND- (*am-*, *an-*, *and-*), ANTE- (*ante-*), ARCE- (*arce-*), BE- (*bi-*, *bī*), EALL- (*æl-*, *al-*, *eall-*), ED- (*ed-*), EL- (*æl-*, *el-*), FOR- (*for-*, *fōr-*, *fore-*), FORE- (*for-*, *fore-*, *fōre-*), FORÐ- (*forð-*), FRAM- (*fram-*), FRĒA- (*frēa-*), FUL- (*ful-*, *full-*), GĒAN- (*gean-*, *gēan-*), HEALF- (*healf-*), IN- (*in-*, *inn-*), MID- (*med-*, *mid-*), Ō- (*ō-*), OF- (*æf-*, *of-*), OFER- (*ofer-*), ON- (*on-*), OR- (*ō-*, *or-*), SĀM- (*sam-*, *sām-*), SIN- (*sin-*, *sine-*), SUB- (*sub-*), TŌ- (*tō-*), TWI- (*twi-*), ÐRI- (*ðri-*, *ðry-*), ÐURH- (*ðurh-*), UN- (*and-*, *on-*, *un-*), UNDER- (*under-*), ŪP- (*up-*, *ūp-*), ŪT- (*ūt-*, *ūð-*),WAN- (*wan-*), WIÐ- (*wið-*), WIÐER- (*wiðer-*), YMB- (*ymb-*, *ymbe-*).

Suffixes with their textual realizations and variants are displayed in (2). (2a) presents the nominal suffixes and (2b) the adjectival suffixes distinguished in the analysis:

(2) a. -BORA (*-bior*, *-bora*), -DŌM (*-dōm*), -ED (*-ad*), -EL (*-el*, *-eld*, *-ele*, *-elle*, *-il*, *-l*, *-la*, *-le*, *-ll*, *-lle*, *-ol*), -ELS (*-els*, *-ls*), -EN (*-en*, *-n*), -END (*-d*, *-en*, *-end*, *-ende*, *-iend*, *-liend*, *-nd*), -ERE (*-e*, *-er*, *-era*, *-ere*, *-igere*, *-lere*, *-lēre*, *-re*), -ESSE (*-esse*), -ESTRE (*-estre*, *-istre*, *-stre*, *-ystre*), -ETT (*-et*, *-eta*, *-ett*, *-t*, *-tt*), -FUL (*-ful*), -HĀD (*-hād*), -ICGE (*-ecge*, *-icge*, *-ige*), -IG (*-ig*), -INCEL (*-incel*), -ING (*-ing*, *-unga*, *-inga*), -LING (*-ling*), -NES (*-enes*, *-es*, *-nes*, *-ness*, *-nis*, *-nys*, *-nyss*, *-s*), -RǢDEN (*-rǣden*), -SCIPE (*-scipe*, *-scype*), -SUM (*-sum*), -ð (*-að, -d, -ed, -ot, -oð, -oða, -t, -ð, -ða, -ðe, -ðo, -ðu, -uð*), -UNG (*-ng*, *-ung*), -WIST (*-wist*).

    b. -BǢRE (*-bǣre*), -CUND (*-cund*), -ED (*-ade*, *-ed*, *-ede*, *-od*, *-ode*, *-te*, *-ud*), -EL (*-el*, *-ol*, *-ul*), -EN (*-en*), -END (*-end*, *-igend*), ENDE (*-ende*, *-iende*), -ERNE (*-ern*, *-erne*), -FÆST (*-fæst*), -FEALD (*-feald*), -FUL (*-ful*), -IC (*-ic*), -IG (*-ig*, *-ige*), -IHT (*-eht*, *-ehte*, *-iht*, *-ihte*), -ING (*-ing*), -ISC (*-isc*), -LĒAS (*-lēas*), -LIC (*-lic*), -OR (*-or*), -SUM (*-sum*), -WEARD (*-weard*), -WELLE (*-welle*), WENDE (*-wende*).

The data comprise 7,588 complex words. By category, they can be broken down into 4,370 affixed nouns and 3,218 affixed adjectives. By process, they consist of 2,001 prefixed words and 5,587 suffixed ones. They have been retrieved from the lexical database of Old English *Nerthus* (www.nerthusproject.com), which is based on *An Anglo-Saxon Dictionary* (Bosworth and Toller 1973), *The Student´s Dictionary of Anglo-Saxon* (Sweet 1976) and, above all, *A Concise Anglo-Saxon Dictionary* (Clark Hall 1996). On specific questions relating to meaning definitions, *The Dictionary of Old English* (Healey 2008) 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* (Healey *et al.* 2004). Finally, on some minor etymological questions, the standard dictionaries of Germanic and Old English etymology have been looked up, including Holthausen (1963), Pokorny (1989) and Orel (2003), as well as Seebold (1970) and Heidermanns (1993).

3. THE LEXICAL FUNCTIONS OF OLD ENGLISH WORD-FORMATION

Pounder (2000) 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. For the concept of lexical function, Pounder (2000) draws on Meaning-Text Theory (Mel'čuk 1989, 1996, 2006), which goes beyond semantic relations in order to identify lexical functions between words. This theory was firstly applied to Russian and French and devised more than 60 lexical functions that appear in the *Explanatory Combinatorial Dictionary* (Mel'čuk, Clas, and Arbatchewsky-Jumarie 1984-99). Pounder draws a basic distinction

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[6] See Kastovsky (1992) and Lass (1994) on the issues that arise in the lexical analysis of historical languages.

[7] See Lacalle Palacios (2011) on the limits of gradual affixation in Old English. See also Torre Alonso (2009, 2011a, 2011b, 2012) on recursivity.

between primary and secondary functions, so that secondary functions *modify word-formation meanings rather than constituting word-formation meaning on their own* (Pounder 2000: 109). In this view, a function typically used in combination with primary functions is the pejorative. The Old English data, however, clearly indicate that the distinction between primary and secondary functions is not relevant for the analysis of this language. It has been found, in the first place, that some functions considered secondary by Pounder (2000) apply to underived lexical items. This is the case with the following functions:

(3) PEJ(orative)('X'): *mislār* 'ill teaching' (< LĀR 'teaching')
     INTENS(ifier)('X'): *eallgrēne* 'all green' (< GRĒNE 1[8] 'green')
     AUGM(entative)('X'): *fullmægen* 'great power' (< MÆGEN 'power')

The Old English data also evidence that Pounder´s (2000) primary functions apply to derived lexical items that already hold a lexical function. This happens in combinations of functions that involve REL(ative)('X'), EX(origin)('X'), DIST(ributive)('X') and I(dentity)('X'), as is shown in (4a), (4b), (4c) and (4d) respectively:

(4) a. WITHPROP('X') < REL('X')
         wlitigfæst 'of enduring beauty' < *wlitig* 'radiant' (< WLITE 'brightness')

     b. WITHPROP('X') < EX('X')
         fȳrenful 'fiery' < *fȳren* 'of fire'(< FȲR 'fire')

     c. REL('X') < DIST('X')
         ðrifealdlic 'triple' < *ðrifeald* 'three-fold'(< ÐRĪE 'three')

     d. REL('X') < I('X')
         sāriglic 'sad' < *sārig* 'sore, grieved' (< NĒAT 'sore')

Although the distinction between primary and secondary functions is not made in the present study, a number of lexical functions have been adopted from Pounder´s (2000) work directly, including REL('X'), EX('X'), LIKE(similarity)('X'), DIM(inutive)('X'), I('X'), PEJ('X'), INTENS('X') and DIST('X'). They are illustrated in (5):

(5) DIM('STĀN'): *stānincel* 'little stone'
     DIST('HUND 1'): *hundwelle* 'a hundred-fold'
     EX('LĀR'): *lārdōm* 'teaching, instruction'
     I('WEDD'): *anwedd* 'pledge'
     INTENS('HWĪT 1'): *eallhwīt* 'entirely of white'
     LIKE('WĪN'): *wīnlic* 'like wine'
     PEJ('TĪD'): *mistīd* 'evil time'
     REL('HOF'): *hoflic* 'pertaining to a court'

A study in Old English word-formation requires additional functions, whose motivation has been sought in the structural-functional tradition of linguistics. In a nutshell, Functional Grammar (Dik 1997a, 1997b) has provided the typology of entities and Role and Reference Grammar (Van Valin and LaPolla 1997; Van Valin 2005) has contributed the roles associated with the semantic macroroles ACTOR and UNDERGOER. The latest framework of Functional Grammar, Functional Discourse Grammar (Hengeveld and Mackenzie 2008), has supplied additional semantic categories, while the layered framework consisting of semantically defined units is, to a certain extent, common to all three theories (Butler 2003a, 2003b).

Dik's (1997b) taxonomy of basic semantic categories has provided inspiration for the function PRED(icative) ('X'), which indicates deverbal nominalizations that embed a predication. In turn, the semantic category Individual is the basis of the lexical function COM(itative)('X'), which coincides with the semantic role defined in Functional Grammar.

Functional Discourse Grammar (Hengeveld and Mackenzie 2008) has completed Lyon's (1995) semantic taxonomy to account for, among others, Time, Location and Quantity. For instance, the semantic category Location motivates the function LOC(ative)('X'). In turn, the semantic category Time motivates two lexical functions, one literal, the other one figurative, namely TEMP(oral)('X') and LIKE(TEMP(oral)('X')). Finally, the semantic category Quantity has motivated the function MASS(ive)('X'), which makes reference to uncountable amounts.

With the addition of the lexical functions inspired by structural-functional theories of language, it can be the case that a certain function further specifies one proposed by Pounder (2000). For instance, WITH('X') has been divided into WITHENT(ity)('X') and WITHPROP(erty)('X') in the case of adjectives, which give rise to their nominal

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[8] As in the lexical database *Nerthus*, numbered predicates are used to indicate that homophones belong to different lexical categories or morphological classes. For example, *grēne 1* is an adjective and *grēne 2* a noun.

counterparts, namely ENT(ity)('X') and PROP(erty)('X'). It can also 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('X') and DIM('X') but the labels MAGN and MIN have been preferred to make reference to rank, although DIM('X') is used after Pounder for diminutives. It remains to say that figurative meaning in this framework results from the function of similarity and the corresponding non-figurative meaning, as in LIKE(LOC(ative)('X')) 'figurative locative' as applying in instances like *forðāurnen* 'elapsed' (< FORĐĀGAN 'to pass away')$_V$.

Although functional theories of language have been the main inspiration for extending the inventory of lexical functions, other sources must be acknowledged. The typology of lexical negation is based on Martín Arista (2010b) and relies on lexical category: privation requires a nominal base, counterfactuality a verbal base and opposition an adjectival base. Thus, Pounder´s (2000) 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'). Finally, the functions ABST(ract) ('X'), PART(itive)('X') and MIT(igator)('X') draw on Lexeme-Morpheme Base Morphology (Beard 1995; Beard and Volpe 2005).

Although there is a FEM(inine)('X') lexical function, no masculine or neuter counterparts have been defined. This is so for two reasons. Firstly, there is a significant number of pairs feminine-masculine that share a lexemic basis, but pairs comprising the masculine and the neuter or the feminine and the neuter are hard to find. Secondly, 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. Conversely, the masculine is the unmarked gender of the first argument and the marked gender of the second. Moreover, feminine derivatives tend to be abstract whereas masculine derivatives show a tendency to be concrete. These reasons can be put in another way by remarking that the first argument has been broken down into five functions (AG(ent)('X'), EFF(ector)('X'), PAT(ient)('X'), STA(tive)('X') and FEM('X')), which, in practice adds an additional gender feature to agents, effectors and patients). This is consistent with the prototypical first argument of a predication, which is conscious, animate and human. On the contrary, the second argument is underspecified by comparison (patient and predicative).

With these premises, the set of lexical functions relevant for Old English affixal nouns and adjectives includes:

ABST('X') 'abstract' holds in nouns with nominal base whose meaning becomes less concrete, as in *winescipe* 'friendship' (< WINE 1 'friend')$_N$

AG('X') 'agent' holds in nouns with verbal base that qualify as prototypical agents, as in *cwylmend* 'destroyer' (< CWYLMIAN 'to torment')$_V$

AUGM('X') 'augmentative' holds in nouns whose referent becomes increased*,* as in *oferwist* 'gluttony' (< MIHT 1 'might')$_N$

COM('X') 'comitative' holds in nouns that involve company or association, as in *samwist* 'living together' (< WIST 'provision')$_N$

COUNTFACT('X') 'counterfactual' holds in adjectives with verbal bases that convey a meaning of reversal of the verbal base, as in *unscirped* 'unclothed' (< SCIERPAN 'to clothe')$_V$

DIM('X') 'diminutive' holds in nouns which denote a reduced size of the referent, as in *tūnincel* 'small property' (< TŪN 'enclosure')$_N$

DIST('X') 'distributive' holds in nouns and adjectives that denote the scaling of the referent by an amount or number, as in *twiwǣg* 'junction of two roads' (< WEG 'road')$_N$

EFF('X') 'effector' holds in nouns with verbal base. It denotes a non-prototypical agent, as in *andettere* 'one who confeses' (< (GE)ANDETTAN 'to confess')$_V$

ENT('X') 'entity' holds in nouns that refer to an entity, thus concrete and identifiable in space and time, as in *cæfing* 'hair-ornament' (< CÆFIAN 'to embroider')$_V$

EX('X') 'origin' holds in both nouns and adjectives. This function defines 'X' as the origin, as in *Centisc* 'Kentish' (< CENT 'Kent')$_N$

FEM('X') 'feminine' holds in nouns that have a masculine counterpart, as in *lybbestre* 'sorceress' (< LYBB 'poison')$_N$

I('X') 'identity' holds in nouns and adjectives when the base of derivation and the derivative are partial synonyms, as in *grimlic* 'fierce' (< GRIMM 'fierce')$_{ADJ}$

INTENS('X') 'intensifier' holds in adjectival predicates whose properties are intensified with respect to the base, as in *eallbeorht* 'all bright' (< BEORHT 1 'bright')$_{ADJ}$

LIKE('X') 'similarity' holds in adjectives that take a characteristic of 'X' to establish a comparison, as in *āncorlic* 'like a hermit' (< ĀNCOR 'hermit')_N

LIKE(LOC('X')) 'figurative locative' holds in nouns and adjectives to convey a figurative sense of location, as in *wiðerwyrd* 'contrary' (< (GE)WYRD 'fate')_N

LIKE(TEMP('X')) 'figurative temporal' holds in nouns. This function involves a figurative sense of time, as in *foreðanc* 'forethought' (< (GE)ÐANC 'thought')_N

LOC('X') 'locative' holds in nouns and adjectives and expresses concrete location, as in *inwund* 'internal wound' (< WUND 1 'wound')_N

MAGN('X') 'magnifier' holds in nouns to denote a higher rank than that of the base, as in *framrinc* 'chief' (< RINC 'man')_N

MASS('X') 'mass' holds in nouns. This function is used to denote a pluralization or collectivization of the referent of the base, as in *scræfen* 'place with caves' (< (GE)SCRÆF 'cave')_N

MIN('X') 'minimiser' holds in nouns and denotes a lower rank than the referent, as in *undercyning* 'under-king' (< CYNING 'king')_N

MIT('X') 'mitigator' holds in adjectives whose characteristics become diminished, as in *healfrēad* 'reddish' (< RĒAD 'read')_{ADJ}

OPP('X') 'oppositive' holds in nouns and adjectives to convey the meaning of the opposite of the entity or property expressed by the base, as in *uncynn* 'unsuitable' (< CYNN 2 'suitable')_N

PART('X') 'partitive' holds in nouns to indicate that a part of a larger amount is referred to, as in *healffers* 'hemistich' (< FERS 'verse')_N

PAT('X') 'patient' holds in nouns that convey the meaning of the patient of a stative verb, as in *swefecere* 'sleeper' (< SWEFAN 'to sleep')_V

PEJ('X') 'pejorative' holds in nouns and in adjectives when the meaning of the base is evaluated negatively, as in *mishworfen* 'perverted' (< (GE)HWEORFAN 'to turn')_V

PRED('X') 'predicative' holds in nouns and expresses the objective type of deverbal predications, as in *sealtnes* 'saltness' (< SEALTAN 'to salt')_V

PRIV('X') 'privative' holds in nouns and adjectives and denotes the absence of a property or entity, as in *egelēas* 'fearless' (< EGE 'fear')_N

PROP('X') 'property' holds in nouns and expresses an abstract property, as in *wearmnes* 'warmth' (< WEARM 'warm')_{ADJ}

REL('X') 'relative' holds in adjectives and assigns a reference relation to the meaning of the base, as in *bōclic* 'of or belonging to a book' (< BŌC 'book')_N

STA('X') 'stative' holds in adjectives and expresses a property derived from a verbal base, as in *hospul* 'despised' (< HOSPAN 'to reproach')_V

TEMP('X') 'temporal' holds in nouns and adjectives and expresses a temporal reference, as in *midsumer* 'midsummer' (< SUMOR 'summer')_N

WITHENT('X') 'with entity' holds in adjectives to define the possession of an entity, which is concrete, as in *loccod* 'hairy' (< LOCC 1 'lock, hair')_N

WITHPROP('X') 'with property' holds in adjectives that enjoy a property, which is abstract, as in *ātorbǣre1* 'poisonous' (< ĀTOR 'poison')_N

Figure 1: The extended framework of lexical functions.

In spite of the applicability of Pounder´s (2000) lexical functions to this study, which may be explained as a consequence of the Germanic background common to English and German, it has been necessary to resort to proposals made mainly by Functional Grammar, Functional Discourse Grammar and Role and Reference Grammar because some functions defined by Pounder have little applicability to the data, like SING('X'), and because some lexical functions, especially in nouns, cannot be accounted for by Pounder´s inventory. It has to be borne in mind in this respect that it can be the case that a certain function drawn from another framework further specifies one proposed by Pounder. For instance, WITH('X') has been broken down into WITHENT('X') and WITHPROP('X'). It can also be the case that a pair of new functions are related to a certain function put forward by Pounder. For example, the functions MAGN('X') and MIN('X') are related to Pounder´s AUGM('X') and DIM('X') but the labels MAGN and MIN have been preferred to make reference to rank, although, as it has just been remarked, DIM('X') is used after Pounder for diminutives.

4. SPLIT *vs.* UNIFIED FUNCTIONS

To recapitulate, the preceding sections have reviewed the relevant literature on the lexical semantics of Old English and presented an extended framework of lexical functions applicable to the analysis of the affixed nouns and adjectives of Old English. This section discusses the results of the analysis and puts forward the concepts of split and unified lexical function. These concepts allow to draw conclusions on the contribution of meaning made by prefixation and suffixation.

Figure 2 summarizes the results of the analysis that has been carried out.

Category	Lexical Function	Affixes
Adjective	COUNTFACT('X')	*un-*
Adjective	DIST('X')	*-feald, twi-, ðri-, -wele*
Adjective	EX('X')	*ā-, -cund, -ed, -en, -erne, -ic, -isc*
Adjective	I('X')	*ǣ-, æt-, and-, eall-, -el, for-, ful-, -ig, -lic, on-, sin-, tō-, un-*
Adjective	INTENS('X')	*eall-, for-, forð-, frēa-, ful-, ofer-, on-, sin-, ðurh-, ūt-*
Adjective	LIKE('X')	*-ed, -en, -ig, -iht, -lic*
Adjective	LIKE(LOC('X'))	*fore-, forð-, fram-, in-, of-, under-, ūt-, -weard, wiðer-*
Adjective	LOC('X')	*and-, forð-, fram-, in-, of-, ofer-, under-, ūt-, -weard*
Adjective	MIT('X')	*healf-, mid-, sām-*
Adjective	OPP('X')	*am-, and-, in-, un-*
Adjective	PEJ('X')	*mis-*
Adjective	PRIV('X')	*ǣ-, æt-, and-, -lēas, ofer-, or-, wan-*
Adjective	REL('X')	*-ig, -lic*
Adjective	STA('X')	*-el, -end, -ende, -ing, -or*
Adjective	TEMP('X')	*æfter-, for-, fore-*
Adjective	WITHENT('X')	*-ade, and-, -bǣre, -ed, -eht, -ende, -fæst, -ful, -iht, -welle*
Adjective	WITHPROP('X')	*-bǣre, -ed, -ede, -en, -ende, -fæst, for-, -ful, -iht, -or, -sum, -welle*
Noun	AG('X')	*-el, -end, -ere, -estre, -icge*
Noun	COM('X')	*mid-, sam-*
Noun	DIM('X')	*-incel*
Noun	DIST('X')	*-el, -ful, twi-*
Noun	EFF('X')	*-bora, -el, -end, -ere, -estre, -ig, -ing, -ling*
Noun	ENT('X')	*-el, -els, -en, -end, -ere, -ett, -ing, -ling, -nes, -ð*
Noun	EX('X')	*and-, be-, ed-, -el, -els, -en, -ere, -ett, for-, -icge, -ig, -ing, -ling, ō-, of-, on-, -sum, tō-, -ð, ðurh-, under-, -ung, ūp-, wið-, ymb-*
Noun	FEM('X')	*-el, -en, -esse, -estre, -icge, -ð*
Noun	I('X')	*ā-, ǣ-, æt-, and-, be-, ed-, -el, -els, -en, -end, -estre, -ett, for-, fore-, forð-, fram-, -hād, -icge, in-, -ing, -ling, -nes, ō-, of-, ofer-, on-, -rǣden, -scipe, tō-, -ð, under-, -ung, ūp-, ūt-, -wist, ymb-*
Noun	LIKE(LOC('X'))	*æfter-, æt-, and-, be-, el-, fore-, forð-, fram-, gēan-, in-, of-, ofer-, on-, tō-, ūp-, ūt-, wiðer-*
Noun	LIKE(TEMP('X'))	*æfter-, ed-, fore-*
Noun	LOC('X')	*æfter-, and-, be-, for-, fore-, forð-, in-, mid-, of-, ofer-, on-, under-, ūp-, ūt-, ymb-*
Noun	MAGN('X')	*arce-, fore-, forð-, fram-, frēa-, of-, ofer-, sin-*
Noun	MASS('X')	*and-, -en, -estre, -icge, -iht, -ð, -ung*
Noun	MIN('X')	*-incel, sub-, under-*
Noun	OPP('X')	*ante-, un-*
Noun	PAT('X')	*-el, -end, -ere, -estre, -ing, -ling, wiðer-*
Noun	PEJ('X')	*for-, mis-*
Noun	PRED('X')	*-dōm, -el, -els, -en, -end, -ere, -ett, forð-, -hād, -ing, -lāc, -ling, -nes, on-, -rǣden, -scipe, -sum, ð, -ung, -wist*
Noun	PRIV('X')	*ā-, ǣ-, of-, or-, wan-*
Noun	PROP('X')	*-dōm, -el, -els, -en, -end, -ere, -ett, -hād, -ing, -ling, -nes, -rǣden, -scipe, -ð, -ung*
Noun	TEMP('X')	*æfter-, ed-, fore-, mid-, ofer-, sin-*

Figure 2: Lexical functions by affix and class (non-recursive formations).

Figure 2 evinces two types of lexical functions which can be distinguished on the grounds of the affixation process that realizes them: split and unified. Split functions can be realized by both prefixes and suffixes whereas unified functions opt for prefixation or suffixation. The only pair of semantically complementary functions that clearly resists this classification is MIN('X'), which is realized prefixally and suffixally, and MAGN('X'), which is always applied in prefixation. This is shown in example (6):

(6)　MAGN('BISCEOP'): *arcebiscop* 'archbishop'
　　　MIN('DĪACON'): *subdīacon* 'subdeacon'

It is usually the case that a pair of semantically complementary functions is split in the formation of a category and unified in the formation of the other. This happens to LOC('X') and LIKE(LOC('X')), which are split in adjective formation but represent unified functions in noun formation. Example (7a) illustrates this question for nouns, and example (7b) for adjectives:

(7)　a.　LIKE(LOC('RYNE')): *æfterryne* 'an encountering'
　　　　　LOC('LYFT'): *ūplyft* 'upper air'

　　　b.　LOC('DÆL'): *ofdæl* 'inclined (downwards)'
　　　　　LIKE(LOC('TŌ')): *tōweard 1* 'facing'

This said, several generalizations might be made. The split functions that can consistently be expressed prefixally and suffixally both in adjective and noun formation are the function I('X'), which relates two partial synonyms to each other, the associative functions EX('X'), WITHENT('X') and WITHPROP('X'), and the quantification functions DIST('X') and MASS('X'), which can be realized by prefixes and suffixes, but it occurs in noun formation only. The examples in (8a) include nouns, whereas those in (8b) include adjectives:

(8)　a.　I('HERE'): *herescipe* 'troop'
　　　　　EX('(GE)NEFA'): *fōrnefe* 'nephew's daughter'
　　　　　DIST('HAND'): *handful* 'handful'
　　　　　MASS('STRĒAW'): *gestrēagung* 'vegetation'

　　　b.　I('HOLD 1'): *holdlic* 'faithful'
　　　　　EX('FELL'): *fellen* 'made of skins'
　　　　　WITHENT('BLŌSTM'): *blōstmbǣre* 'flower-bearing'
　　　　　WITHPROP('FǢTT 2'): *fǣted 1* 'ornamented with gold'
　　　　　DIST('GĒAR'): *ðrigēare* 'three years old'

As for unified functions, in adjective formation, the following lexical functions are realized by prefixes only: COUNTFACT('X') (*un-*), INTENS('X') (*eall-, for-, forð-, frēa-, ful-, ofer-, on-, sin-, ðurh-, ūt-*), MIT('X') (*healf-, mid-, sām-*), OPP('X') (*am-, and-, in-, un-*), PEJ('X') (*mis-*) and TEMP('X') (*æfter-, for-, fore-*). Illustrations of these functions appear under (9):

(9)　COUNTFACT('(GE)SELLAN'): *unseald* 'ungiven'
　　　INTENS('HĀLIG 1'): *eallhālig* 'all-holy'
　　　MIT('GENACOD 2'): *healfnacod* 'half-naked'
　　　OPP('SEALT 2'): *unsealt* 'unsalted'
　　　PEJ('MICEL 1'): *mismicel* 'of varying sizes'
　　　TEMP('(GE)BERAN'): *æfterboren* 'afterborn'

In noun formation, the functions that are realized by prefixes only include COM('X') (*mid-, sam-*), LIKE(LOC('X')) (*æfter-, æt-, and-, be-, el-, fore-, forð-, fram-, gēan-, in-, of-, ofer-, on-, tō-, ūp-, ūt-, wiðer-*), LIKE(TEMP('X')) (*æfter-, ed-, fore-*), LOC('X') (*æfter-, and-, be-, for-, fore-, forð-, in-, mid-, of-, ofer-, on-, under-, ūp-, ūt-, ymb-*), MAGN('X') (*arce-, for-, fore-, forð-, fram-, frēa-, of-, ofer-, sin-*), OPP('X') (*ante-, un-*), PEJ('X') (*for-, mis-*), PRIV('X') (*ǣ-, of-, or-, wan-*), TEMP('X') (*æfter-, ed-, fore-, mid-, ofer-, sin-*). This can be seen in (10):

(10)　COM('HELP'): *midhelp* 'assistance'
　　　　LIKE(LOC('HERE')): *innhere* 'native army'
　　　　LIKE(TEMP('WORD 1')): *foreword* 'condition'
　　　　LOC('LǢS 2'): *ūtlǣs* 'out-pastures'
　　　　MAGN('MANN'): *forðman* 'man of rank'
　　　　OPP('LAND'): *unland* 'desert'
　　　　PEJ('LĀR'): *mislār* 'ill teaching'
　　　　PRIV('SPĒD'): *wanspēd* 'poverty'
　　　　TEMP('GIELD'): *æftergyld* 'further payment'

To continue with unified functions, in adjective formation, the following lexical functions are realized by suffixes only: LIKE('X') (*-ed*, *-en*, *-ig*, *-iht*, *-lic*), REL('X') (*-ig*, *-lic*) and STA('X') (*-el*, *-end*, *-ende*, *-iŋg*, *-ol*, *-or*). These functions are illustrated in (11).

(11)   LIKE('ÆPPEL'): *æppled* 'shaped like an apple'
        REL('CEOSEL'): *ceoslig* 'gravelly'
        STA('SLĪPAN'): *slipor* 'slippery'

In noun formation, the following lexical functions result from suffixation only: AG('X') (*-el*, *-end*, *-ere*, *-estre*, *-icge*), DIM('X') (*-incel*), EFF('X') (*-bora*, *-el*, *-end*, *-ere*, *-estre*, *-ig*, *-ing*, *-ling*), ENT('X') (*-el*, *-els*, *-en*, *-end*, *-ere*, *-ett*, *-ing*, *-ling*, *-nes*, *-ð*), FEM('X') (*-el*, *-en*, *-esse*, *-estre*, *-icge*, *-ð*), PROP('X') (*-dōm*, *-el*, *-els*, *-en*, *-end*, *-ere*, *-ett*, *-hād*, *-ing*, *-ling*, *-nes*, *-ræden*, *-scipe*, *-sum*, *-ð*, *-ung*). Example (12) provides an illustration of each of these functions:

(12)   AG('(GE)ĒHTAN'): *ēhtere* 'persecutor'
        DIM('SCIP'): *scipincel* 'little ship'
        EFF('SWEORD 1'): *sweordbora* 'sword-bearer'
        ENT('HRIMPAN'): *hrympel* 'wrinkle'
        FEM('GOD 1'): *gyden* 'goddess'
        PROP('HĀLIG 1'): *hāligdōm* 'holiness'

It follows from this description of unified functions that PEJ('X') and TEMP('X') are realized exclusively through prefixation, both in adjective and noun formation. The phenomenon of negation, associated with the lexical functions COUNTFACT('X') and OPP('X'), is clearly prefixal. As for the negative function PRIV('X'), it is exclusively prefixal in noun formation and prefixal with the only exception of the suffix *-lēas* in adjective formation. As it turns out, in adjective formation the expression of circumstances of time, place, and company remains mainly prefixal and the type of modification conveyed by intensification and mitigation is also a product of prefixation. Pairs of a non-figurative and a figurative function, including LOC('X') and LIKE(LOC('X')) as well as TEMP('X') and LIKE(TEMP('X')) are also realized by means of prefixation, the former in noun formation only. Other logically related pairs like INTENS('X') and MIT('X') are found in prefixation only.

If we look at suffixation, deverbal nominalizations based on the first argument, including AG('X'), EFF('X'), FEM('X'), and deverbal nominalizations based on the second argument or non-arguments, including STA('X'), ENT('X') and PROP('X'), consistently opt for suffixal means. PRED('X'), which belongs in this group, is consistently suffixal too, leaving aside one very exceptional instance of prefixation with *on-*. Furthermore, denominal adjectivizations, as is the case when the lexical function LIKE('X') applies, are restricted to suffixation.

5. CONCLUSIONS

This article has analyzed the prefixation and suffixation of Old English nouns and adjectives on the grounds of an extended framework of lexical functions that has been enlarged and adapted to the empirical data by drawing on the structural-functional theories of language. The following conclusions can be drawn.

Firstly, there are more functions that rely on prefixation exclusively than there are functions restricted to suffixation, which means that a wider array of meanings can be expressed by prefixation and, more importantly, that the meaning conveyed, as a general rule, by the instances of prefixation under analysis is more contentful, as opposed to the meaning contributed by suffixation, which, with some exceptions, is more structural. In other words, prefixation tends to add new senses or aspects of meaning, whereas suffixation tends to change lexical class, with which the general characteristics of the output class (stating, for instance, that adjectives express states or qualities) are an essential component of the meaning of the derivative.

Secondly, prefixation is meaning oriented while suffixation is class oriented. By meaning oriented it is meant that the main target of the derivational process is the modification of meaning, in such a way that the meaning of the derivative is less predictable from the general characteristics of the output category. By class oriented it is meant that the main target of the derivational process is the modification of lexical class, so that the meaning of the derivative is more predictable from the general characteristics of the output category.

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