UNIVERSITY OF MURCIA

International Journal of English Studies

IJES

http://revistas.um.es/ijes

Prime Identification in Historical Languages: The Old English Exponent for the Semantic Prime DIE

RAQUEL MATEO MENDAZA*
University of La Rioja (Spain)

Received: 26/01/2024. Accepted: 29/10/2024.

ABSTRACT
This research focuses on the identification of the Old English exponent for the semantic prime DIE following the approach of the Natural Semantic Metalanguage theory (Goddard, 2008, 2011; Wierzbicka, 1996). The aim of this paper is to complete the research begun on Old English exponents for the category *Life and Death* and to review the methodology applied in previous research on this field, which is based on morphological, textual, semantic and syntactic criteria and on the search for examples of the exponent word within the alternative syntactic configurations associated with the prime. The fact that DIE is the only predicate prime which does not allow for optional arguments entails the implementation of a new methodological approach to determine the suitability of the verb selected as prime exponent. All in all, the conclusion is drawn that the OE verb *sweltan* is selected as the exponent of DIE in Old English.

KEYWORDS: Semantic Primes, Natural Semantic Metalanguage, Historical Linguistics, Old English

1. INTRODUCTION

This research is framed within the *Natural Semantic Metalanguage* (henceforth, NSM) approach (Goddard, 2002, 2008a, 2011, 2018; Goddard & Wierzbicka, 2002; Wierzbicka, 1996, 2002a), which revolves around the idea of the existence of a minilanguage by which meanings can be described in terms of simple and universal concepts. These terms are called "semantic primes", and their use in semantic analysis has been gaining importance up to the

Address for correspondence: Edificio de Filologías, Universidad de La Rioja, c/ San José de Calasanz 33, 26004 Logroño, La Rioja; e-mail: raquel.mateo@unirioja.es

Print ISSN: 1578-7044; Online ISSN: 1989-6131
doi: 10.6018/ijes.602341

point of being currently applied to many other disciplines such as lexicography, language teaching, and intercultural communication, among others.

The first step in validating this approach was to establish the semantic prime exponents of different living languages, such as French, Polish, Spanish, and Japanese, which were identified by native speakers. More recently, focus has also been placed on the identification of primes in historical languages, Old English (henceforth, OE) being the language used as a sample to develop a new methodology of prime identification by means of indirect methods. This methodology has been subsequently refined through diverse studies based on the identification of OE exponents of the primes included within the category *Actions, events, movement, contact* (Mateo Mendaza, 2013, 2016a, 2016b, 2020) as well as of the semantic prime LIVE (Mateo Mendaza, 2021). After tackling various hindrances emerging from each line of research, these investigations have enabled me to reach the conclusion that an analysis of candidate words against an array of different criteria –morphological, textual, semantic and syntactic– along with a study of the behaviour of these words in real contexts, would lead to accurate results for prime identification in historical languages.

Against this background, the aim of this article is to identify the OE exponent for the semantic prime DIE. The motivation for this research is twofold. On the one hand, the identification of DIE contributes to completing the research already done on the category *Life and Death*, for which the OE exponent of LIVE has already been identified (Mateo Mendaza, 2021). On the other hand, DIE stands out from the rest of the primes in presenting the simplest syntactic behaviour, as only one complementation pattern is associated with this prime. For this reason, the methodology established in previous research has to be slightly modified and adapted to the requirements of this prime. This article is structured as follows: Section 2 explains the main tenets of the NSM approach, and the advances made in identifying primes in historical languages. The next section describes the semantic prime DIE in terms of the NSM approach. Section 4 establishes the OE candidate verbs for the prime exponent. Then, candidate words are analysed in terms of four different criteria, and the word satisfying most of them is examined from a syntactic point of view, using real examples retrieved from a corpus. Finally, the conclusions drawn from this study are presented in Section 6.

2. THE NSM APPROACH: IDENTIFYING PRIMES IN HISTORICAL LANGUAGES

The NSM theory is an approach to semantic analysis, which has been gaining relevance from the early seventies to the present day. This model, put forward by Anna Wierzbicka (1996, 2002a) and later developed by her colleague Cliff Goddard (2002, 2011, 2018), reduces the meaning of language to its minimal semantic representation, leading to the term *universal*

Print ISSN: 1578-7044; Online ISSN: 1989-6131

semantic primes. These primes are simple indefinable lexical units, which combine with each other to describe the meaning of complex terms in a simpler way, giving rise to a kind of minilanguage which expresses ideas in the same way as a full natural language. This method of semantic analysis is known as a *reductive paraphrase*, and the resulting output from this process is called an *explication*. Within these explications, complex meanings are decomposed using semantic primes and the grammatical rules governing the language at stake, in such a way that definitions avoid circularity and are easy to understand for the user, as they use simple and ordinary language (Goddard, 2018, p. 31). Figure 1 presents the explication proposed for the complex term "pleased":

Someone X was pleased at this time:
someone X thought like this at this time:
'something good happened before
I wanted this'
Because of this, this someone felt something good at this time
like someone can feel when they think like this

Figure 1. Explication of "pleased" (Goddard, 2011, p. 107).

All the elements included within explanations are part of the inventory of semantic primes proposed by the NSM theory. These primes have been established by means of a trial-and-error process, in which researchers tried to find all those concepts which were impossible to decompose, and then checked their existence against different natural languages (Goddard, 2011, p. 66; 2018, p. 38). The language-specific representations of these universal expressions are known as the *exponents* of a prime.

From the early seventies to the present day, the inventory of primes has been gradually improved and enlarged to reach a total of 65 elements. To design this inventory of primes, apart from examining their universal core meaning, the grammatical options of these lexical units have also been explored cross-linguistically. Syntactically speaking, each prime presents a basic or minimal frame in which they are able to occur. However, most of them also allow for extended frames related to different participant or semantic roles (patient, instrument, experiencer, etc.), which are given the name of *valency options*:

Someone said something	[minimal frame]
Someone said: '_ _ _'	[direct speech]
Someone said something to someone	[plus "addressee"]
Someone said something about something/someone	[plus "locutionary topic"]

Figure 2. Minimal frame and valency options for SAY (Goddard, 2011, p. 70).

Print ISSN: 1578-7044; Online ISSN: 1989-6131

The identification of these core meanings along with their grammatical features in different languages such as Chinese, Danish, Arabic, or Ewe (a West African language) has allowed for the validation of the main hypothesis of the NSM theory. Indeed, more recent research has focused on applying this approach to historical languages in order to extend the scope of research of this theory.

First studies in this field are mainly diachronic and trace the Middle English period onwards. These papers discuss the evolution undergone by some concepts both in terms of their meaning and frequency in the language from a cultural perspective (Wierzbicka, 2002b, 2002c, 2006)[i].

Later on, a new line of research began into the identification of prime exponents in OE[ii]. Within these studies, Martín Arista and Martín de la Rosa (2006) de and de la Cruz Cabanillas (2007) aimed at establishing the OE exponents of the primes included in the categories *Substantives, Determiners, Quantifiers* and *Descriptors*, respectively, examining the frequency of candidate words in OE texts. Bearing these studies in mind, more recent research has focused on OE exponent identification within the categories *Actions, Events, Movement, Contact*[iii] (Mateo Mendaza, 2013, 2016a, 2016b, 2020). Given that the meaning expressed by these primes is more complex, as they represent verbal meanings, it was necessary to propose a new methodology, in which different linguistic aspects were considered. As regards the asymmetry between the principle of reductive paraphrase and the concept of *markedness* (Croft, 1991; Givon, 1995), by which marked concepts can be explained in terms of unmarked ones, assuming that the latter are less complex, more frequent, and more iconic than the former, these studies are based on the study of candidate words from a morphological, textual, semantic and syntactic perspective. In this respect, candidates are first described in terms of their morphological properties. By obtaining the lexical paradigm in which each word is included, we are able to determine their morphological status as well as the inheritance relations among the elements of the paradigm. Sources of lexical derivation are favoured, as they are seen as less complex words, whereas the paradigm in which the word is included is analysed both quantitatively and qualitatively regarding the number of derivatives and the word formation processes involved in the creation of new words. Then, the textual frequency of candidate words is assessed by counting their types and tokens within all surviving records in the language. The candidate with a higher frequency is preferred, since this confirms its availability for the speakers of the language. Finally, the semantics and syntactic behaviour of candidate words is analysed. The word which best satisfies the requirements posed by the semantic prime at stake, both in terms of meaning and complementation patterns, is selected as the prime exponent.

Successive research on the OE exponents of TOUCH, HAPPEN, MOVE, DO, and LIVE (Mateo Mendaza, 2013, 2016a, 2016b, 2020, 2021) has allowed a progressive improvement in the methodology of identifying primes in historical languages, as some setbacks have been

Print ISSN: 1578-7044; Online ISSN: 1989-6131

faced throughout the process. Most of these issues are related to the inner semantics and syntax of the primitive, which leads us to adapt to the requirements posed by each prime, avoiding phenomena such as polysemy and *Anglocentrism*. Besides, these historical studies have emphasized the importance of valency options, which are applied to determine the suitability of the selected exponent when it is found within these syntactic alternations in real contexts.

Concerning the data of analysis required for this kind of research, identifying primes in historical languages requires examining all the available information in the language. In the case of OE, relevant lexicographical and textual sources including the *Historical Thesaurus of the Oxford English Dictionary* (henceforth HTOED, Kay et al., 2009), Bosworth-Toller's dictionary, the *Dictionary of Old English* (hereafter, DOE; Healey et al., 2018) and the *Dictionary of Old English Corpus* (DOEC from now on; Healey et al., 2009) compiled at the University of Toronto, and the *Nerthus* database (Martín Arista et al., 2009), among others, have been accessed to retrieve authentic and reliable data.

This said, Figure 3 shows the whole inventory of primes proposed by the NSM approach, in which the correspondent OE exponents identified so far have been incorporated.

I~ME= **IC**, YOU= **ÐU**, SOMEONE=**MAN**, SOMETHING =**HWÆT~ÐING**, PEOPLE=**FOLC/LEODE**, BODY=**BODIG**	Substantives
KINDS, PARTS	Relational substantives
THIS= **ÐES**, THE SAME=**ILCA/SELF**, OTHER~ELSE=**OÐER**	Determiners
ONE=**AN**, TWO=**TWEGEN**, SOME=**SUM**, ALL=**EALL**, MUCH~MANY=**MICEL~FELA**, LITTLE~FEW	Quantifiers
GOOD, BAD, BIG=**MICEL**, SMALL=**LYTEL**	Evaluators, descriptors
KNOW, THINK, WANT, DON'T WANT, FEEL, SEE, HEAR	Mental predicates
SAY, WORDS, TRUE	Speech
DO=**(GE)DON**, HAPPEN=**(GE)LIMPAN**, MOVE=**(GE)STYRIAN**	Actions, events, movement
BE (SOMEWHERE), THERE IS, BE (SOMEONE/SOMETHING), (IS) MINE	Location, existence, specification, possession
LIVE=**(GE)LIBBAN**, DIE	Life and death
WHEN~TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME, MOMENT	Time
WHERE~PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE, TOUCH=**(GE)HRINAN**	Space
NOT, MAYBE, CAN, BECAUSE, IF, VERY, MORE, LIKE~AS	Logical concepts

Figure 3. Updated inventory of primes with OE exponents (in bold).

Print ISSN: 1578-7044; Online ISSN: 1989-6131

3. THE SEMANTIC PRIME DIE WITHIN THE NSM APPROACH

The semantic prime DIE was included within the inventory of primes soon after LIVE, which was incorporated in 1996. On the first attempt, Wierzbicka related the prime LIVE to the term "die" in the sense that the latter could be explained by the opposition of "being alive" and "not being alive". Then, further research concluded that DIE should be established as a semantic prime itself, and it was included along with LIVE in the category *Life and Death*. However, as in the case of LIVE, NSM researchers have not provided a firm definition of DIE. As Goddard and Peeters (2006, p. 19) state, "because the concept of 'life after death' is not a contradiction, the attempts to explicate DIE as 'cease to be alive' have been abandoned". On the contrary, researchers have focused on describing this prime according to its universal grammatical properties.

In terms of the NSM, although LIVE and DIE are closely related, they are not as symmetrical as expected in terms of grammar. Both are considered predicate primes, which open an obligatory argument slot in the subject position represented by an animate substantive complement. In general, most languages associate the action described by DIE to all living things including people, animals, and plants, as it happens in Mandarin-Chinese, Spanish or Mangaaba-Mbula (Papua New Guinea). Nonetheless, in other languages such as Polish, the meaning of the exponent is more restricted, and it only applies to people (Wierzbicka, 2002a, p. 125). The substantive complement preceding DIE can be represented by the semantic prime SOMEONE or the specific and deictic substantive complements PEOPLE, I, and YOU (Goddard, 2008b, p. 71). All in all, the minimal frames associated with both LIVE and DIE are identical: SOMEONE LIVES, SOMEONE DIES.

On the other hand, one of the main differences between these two primes appears in the optional arguments they combine with. Apart from their minimal frame, most semantic primes included in the "predicate primes" category (see Goddard, 2008b, p. 69) allow for other syntactic alternations to explain some aspects of the situation described by the semantic prime. As mentioned before, these optional combinatorial possibilities, which bear a special relationship with each prime, are called *valency options*, and they are labelled according to the different semantic roles. In this sense, whereas the valency options for LIVE include "time", "place", "comitative", and "manner-evaluator" arguments (Goddard & Wierzbicka, 2002, pp. 53–54; Mateo Mendaza, 2021, p. 92), DIE is seen as the odd one out within the predicate primes, since it is the only one which does not allow for optional arguments (Goddard, 2008b, p. 80).

Regarding adjuncts, DIE is a perfective verb, which refers to an action completed at a particular moment in time –in contrast to LIVE, which is imperfective and thus durational. For this reason, DIE can occur with some temporal adjuncts expressed by primes within the category *Time*, like MOMENT, AFTER, or BEFORE. But, unlike LIVE, it is not found along

Print ISSN: 1578-7044; Online ISSN: 1989-6131

with other primes included in this category that imply duration, such as FOR SOME TIME or A LONG/SHORT TIME (Wierzbicka, 2002a, p. 116). Indeed, DIE is also labelled as an *event* predicate. This set of predicates, which also includes MOVE, HAPPEN, DO, and SAY, is characterized by the fact that there is an intersection of the temporal and manner properties. In this sense, these primes refer to things which "both happen in time, so to speak, and which are capable of varying in a way which can be seen and commented on by an external observer" (Goddard, 2008b, p. 72). This means that manner adjuncts can also appear with DIE in an adverbial function in sentences like SOMEONE DIES LIKE THIS (AT THIS MOMENT). Although the manner and temporal adjuncts are also found with LIVE, it is not considered an event predicate for its durative nature.

Apart from these adjuncts, location can also be expressed with spatial primes (Goddard & Wierzbicka, 2002; Goddard & Peeters, 2006) in sentences like SOMEONE DIES (FAR FROM) HERE, since it is common to refer to the fact that people die in a particular place. Even though the prime LIVE is also related to location, it is necessary to describe how location is expressed by each prime. The expressions of location presented by LIVE and DIE may seem similar at first (SOMEONE LIVES IN A PLACE/SOMEONE DIES IN THIS PLACE). However, both the inner structure and the meaning of these sentences differ from each other. Location can be expressed by means of an adjunct with DIE; thus, it is not part of the meaning of the verb. In the case of LIVE, location is implied within the meaning of this prime in specific situations, and hence it is expressed by an optional argument in the valency option labelled as "place" (Mateo Mendaza, 2021, p. 93). In terms of the NSM approach, the universal syntax of LIVE refers, exclusively, to locational domain sentences; this means, it applies to permanent living conditions in contrast to residential or temporal living conditions (*Fish live in water* vs. *I live in Canberra*) (Peeters *et al.*, 2006, p. 132). For this reason, the resulting expressions for each prime are not transferable; whereas DIE is localisable in a particular point with primes like HERE, NEAR, or FAR, these primes are not related to LIVE, since it is restricted to a construction with the meaning KIND OF PLACE, referring to a locational domain (Goddard, 2008b, p. 79).

All things considered, the main semantic-syntactic features of the semantic prime DIE have been presented. Therefore, the following research will look for a verb displaying the core meaning "to die", which is found with an obligatory subject slot filled by a substantive complement and that accepts spatial, temporal, and manner adjuncts, to be selected as the prime exponent.

Print ISSN: 1578-7044; Online ISSN: 1989-6131

4. SELECTING CANDIDATE WORDS

As established in previous methodology, the selection of prime exponents is a key step in the identification of semantic prime exponents. This step of analysis requires accessing lexicographical sources to obtain a list of candidates, to be checked later on against four different criteria. The words included in this list demand an in-depth semantic analysis, as they must adapt to the requirements posed by the semantic prime, expressing its core meaning in a direct and simple way.

In the case of DIE, a search made on HTOED (heading 01.02.05.) and the *Nerthus* database for those intransitive verbs conveying the meaning "to die" provides a list of approximately forty verbs in each source (40 and 38, respectively). Although the words attested in these sources nearly coincide with each other, it is necessary to reduce the list of candidates to a manageable extent. Frequently, the information found in lexicographical sources may lump together all words with a similar meaning, regardless of the nuances expressed by each of them. For this reason, the meaning of these candidates will be closely analysed.

First of all, it is important to bear in mind that the concept of death is a sensitive issue in every culture, and it is sometimes difficult to discuss it (Ower, 1996, p. 29). That is why "die" can be seen as a taboo word and several euphemisms are used to express this concept. These euphemisms are created under a process of metaphoric extension, as an existing verb is used to refer to a different concept due to its similarity in conceptual terms. As put forward by Lakoff and Johnson (1980, p. 5), metaphor implies "understanding and experiencing one kind of thing in terms of another". In this respect, Ower (1996) provides a full description of the verbs of dying found in the HTOED and gathers them into different categories according to their date of use, their classification as euphemisms or neutral terms, and the kind of metaphor involved, if any. Following Ower's (1996) work, all those verbs labelled as euphemism are removed from the list of candidates as they do not conform to DIE in terms of the NSM theory. This is so because, as Goddard (2004, p. 1212) claims, metaphors are considered not universal but culture-specific phenomena that can be paraphrased by means of semantic primes in terms of cultural scripts[iv].

To complete Ower's work and validate this point, the following lines present these rejected verbs along with their primary meaning as found in the *Nerthus* database, which allows us to evidence their metaphorical implications while conveying the meaning of death. Discarded verbs include: *āswāmian* "to languish, fail", *āswindan* "to fade away, languish away", *(ge)cringan* "to fall, sink", *(ge)deorfan* "to perish, be wrecked", *(ge)drēosan* "to fall down, disappear", *(ge)endian* "to end, finish", *(ge)faran* "to go, set forth", *(ge)feallan* "to fall, stumble", *geferan* "to go, depart", *gegān* "to go, proceed, depart", *glīdan* "to glide, fall", *(ge)hweorfan* "to turn, change", (ge)lēoran "to go, depart", *(ge)losian* "to lose", *sāwlian* "to expire", *(ge)slǣpan* "to sleep", *(ge)ðrōwian* "to suffer, endure", and (*ge)witan* "to see, keep".

Print ISSN: 1578-7044; Online ISSN: 1989-6131

Along with these words, we also find some affixed forms such as those verbs formed with the prefixal particle *forð-*, namely, *forð(ge)faran* "to go forth, depart", *forðgelēoran* "to pass forth or away", and *forðgewītan* "to depart". Although the adding of the prefix does not convey a change in meaning at all with respect to their unprefixed counterparts (Kastovsky, 1992, p. 376), *forð-* "forth, forwards" reinforces the metaphorical meaning of these verbs in the sense that death is seen as a journey to eternal life. On the other hand, the prefix *for-* is also attached to some verbs to be used with the meaning "to die" in a metaphorical way, as in the case of *(ge)for(ge)fēran* "to go or pass away", *foreslæpan* "to fall sleep in the Lord, pass away", *forlætan* "to leave, quit, abandon", *forsīðian* "to go forth, depart", and *forweorðan* "to vanish; to become nothing, perish". Except for the latter, the adding of *for-* to these verbs does not imply any change in meaning. This is caused by the fact that some OE verbal prefixes, such as *a-*, *be- ge-*, *for-*, or *oð-*, have undergone a process of semantic bleaching, and thus there is no difference in meaning between prefixed forms and their simplex counterparts (Kastovsky, 1992, p. 377; Martín Arista, 2012, p. 7). As regards *forweorðan* "to vanish; to become nothing, perish", the meaning of the base of derivation *weorðan* "to be, become, turn to" is clearly affected by the prefix *for-*, whose meaning is that of "loss, destruction" (Kastovsky, 1992, p. 379). Indeed, the verb *forweorðan* is the one most frequently found among OE texts (approximately 700 occurrences in the DOEC). However, most of these occurrences belong to glosses, which reinforces the idea of its use as a euphemism, given the religious tone of these kinds of texts.

After applying this filter, the verbs from the candidate list referring to "die" in a neutral way include *āsweltan, forsweltan, sweltan, āsteorfan, steorfan, becwelan, cwelan, oðcwelan, dēagan, dēadian,* and *ādēadian*. From this list, *dēagan* is removed, as it only shows one occurrence in poetry (Healey et al., 2018). Besides, following the explanation provided in the previous paragraph on the lack of semantic content of some OE prefixes, the verbs *āsweltan, forsweltan, āsteorfan, becwelan, oðcwelan,* and *ādēadian* will be studied along with their simplex counterpart, reducing the list of candidates to *sweltan, steorfan, cwelan,* and *dēadian*.

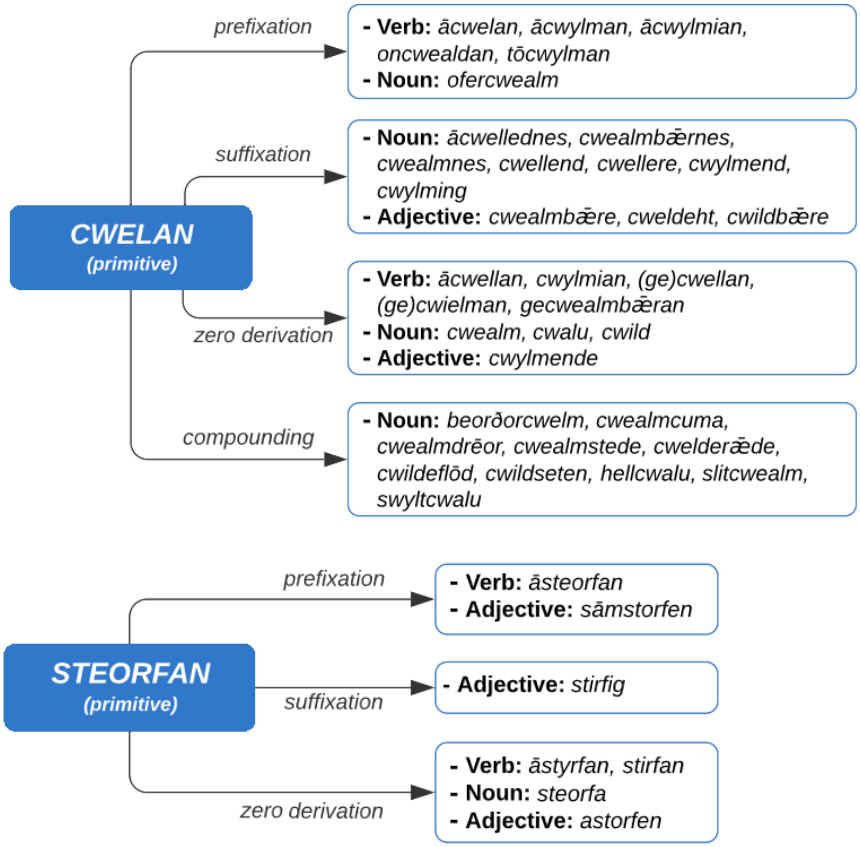
5. CHECKING CANDIDATE WORDS AGAINST FOUR DIFFERENT CRITERIA

After selecting candidate words for the prime exponent, the next step of analysis calls for implementing the methodology designed for identifying primes in historical languages.

In terms of the morphological criterion, it is expected that the candidate selected as a prime exponent is the primitive word of its lexical paradigm and gives rise to several derived words. This means that apart from its centrality within the language, its productivity is also taken into consideration. The information on the inheritance relations of each verb has been

Print ISSN: 1578-7044; Online ISSN: 1989-6131

retrieved from the *Nerthus* database, which, along with the meaning of the predicate, also includes the morphological status of each word and the lexical prime involved in their formation. As regards our candidate verbs, only *cwelan*, *steorfan*, and *sweltan* are the lexical primitives of their paradigms. In these terms, *cwelan* presents 35 derivatives against the eight and four derived words displayed by *steorfan* and *sweltan*, respectively. Figure 4 illustrates the lexical paradigm of *cwelan*, and it shows that, although some of the words included in the paradigm do not directly derive from *cwelan*, as in the case of the nouns *acwelledness* "killing, slaughter", *cwellend* "killer, slayer", or *cwellere* "killer, murderer", it is still the most productive paradigm. Moreover, this paradigm includes words from the major lexical categories (nouns, verbs and adjectives) formed by means of the most significant word formation processes in the OE period, to wit, prefixation, suffixation, compounding, and zero derivation. In this sense, *cwelan* would be selected as the best candidate word for the prime exponent, followed by the verbs *steorfan* and *sweltan*. On the contrary, *dēadian* does not adapt to the morphological requirements, as it is a derivative form of the adjective *(ge)dēad* or "dead", and thus it does not have derivatives of its own.



Print ISSN: 1578-7044; Online ISSN: 1989-6131

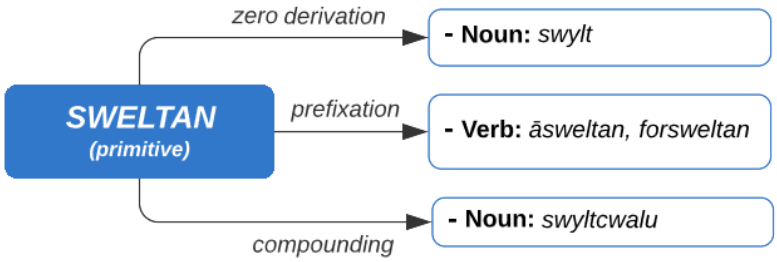


Figure 4. Lexical paradigms of *cwelan*, *steorfan*, and *sweltan* (information retrieved from the *Nerthus* database).

Regarding the textual criterion, the counting of types and tokens found for each candidate word determine their suitability as a prime exponent. As explained, this criterion demands that the word selected as a prime exponent must present a high number of textual types and tokens, as this means that it was considered a core word within the OE lexicon, and, thus, was highly available for the speakers of that time. With this purpose, the DOE and the DOEC are accessed. For those verbs beginning with A-I, the DOE is checked, as it provides a list of the types appearing in the corpus bearing the relevant meaning. For the rest of the candidates, different searches are conducted on the DOEC, with the canonical inflected forms and the attested alternative spellings found for each verb. As previously mentioned, the prefixed forms of the candidate verbs are also included in the counting of types and tokens. The results obtained for each verb are shown in Table 1.

VERB	OCCURRENCES	TYPES	TOKENS
Cwelan	*acwellan* (132), *acwelð* (5), *cwellað* (5), *cwelað* (4), *acwelan* (4), *acwolen* (4), *acwælon* (4), *cwelð* (3), *acwele* (3) *acwælan* (2) *acwæle* (2), *acwelað* (2), *acwylð* (2), *cwelleð* (2), *cwelende* (2), *cwellende* (2), *cwelan* (1), *cuelan* (1), *cwele* (1), *cweleð* (1), *cuelað* (1), *acuelan* (1), *acwyle* (1), *acwæl* (1), *acweal* (1), *acwilð* (1) *cwelendum* (1), *cwellendum* (1), *acwęlan* (1), *acwelon* (1), *acwolene* (1)	31	193
Sweltan	*sweltan* (113), *swelte* (91), *swylt* (57), *sweltað* (54), *swealt* (39), *swulton* (32), *swelt* (27), *swulte* (26), *sweltaþ* (17), *swylte* (9), *swylteð* (4), *aswelte* (3), *aswalt* (3), *swelten* (3), *aswolten* (3), *swyltað* (3), *swulten* (2), *aswoltenes* (1), *aswealt* (1), *asweolt* (1), *sweltene* (1)	21	490
Dēadian	*adeadadon* (4), *adeadedum* (4), *deadade* (3), *adeadige* (3), *adeadod* (3), *adeadodum* (3), *deadiga* (2), *deadage* (2), *deadege* (2), *deadigað* (2), *deadageð* (2), *deodige* (2), *adeadodes* (2), *deadað* (1), *deodigað* (1), *deadige* (1), *deadia* (1), *deodade* (1), *deadadon* (1), *deadedon* (1), *adeadaþ* (1), *adeadað* (1), *adeadad* (1), *adeadode* (1)	24	45

Print ISSN: 1578-7044; Online ISSN: 1989-6131

Steorfan	*astorfen* (4), *steorfan* (3), *astorfenne* (2), *astorfene* (2), *storfæt* (2), *astorfenum* (1), *steorfende* (1), *storfan* (1), *styrfð* (1)	9	17

Table 1. Occurrences of the candidate verbs within the DOEC.

These data suggest that, in terms of types, *cwelan* is the most frequent candidate, with 31 types, followed by *dēadian* (24) and *sweltan* (21). On the contrary, as regards textual tokens, *sweltan* outnumbers the rest of the candidates, with 490 occurrences in the corpus.

At this point, it is necessary to clarify that, as happened with its lexical paradigm, the number of tokens presented by *cwelan* is affected by its close relationship with *cwellan*, "to kill, slay". In this sense, although the DOE includes some words with the spelling "ll" among the attested forms of both *cwelan* and *acwelan*, it also remarks that only approximately 47 of these occurrences display the meaning "to die". This difference is caused by the fact that the textual criteria applied in this work searches for each attested form in the corpus and counts all its occurrences, since it is an extremely demanding task to analyse each sentence to discern the meaning it refers to. Consequently, *cwelan* is not the most suitable candidate for the prime exponent. In the case of *dēadian*, it should not be considered a good candidate in terms of textual frequency, either. As specified by the DOE, occurrences of *dēadian* are restricted to Northern specimens, whereas those of *adēadian* are mostly found in medical recipes. Therefore, it cannot be said to be commonly used in the language. All things considered, it can be concluded that *sweltan* represents the best candidate for the prime exponent, since this verb is maximally available and frequently used within the OE language.

Moving on to the semantic and syntactic criteria, they stipulate that the word selected as a prime exponent should correspond, as much as possible, to the semantic and syntactic features described by the semantic prime under investigation. In order to check their suitability as prime exponents, these verbs were looked up in three different dictionaries, namely, the DOE, Bosworth-Toller's dictionary (1973), and Sweet's dictionary (1897). The information retrieved from these sources is presented below:

	DOE	**Bosworth Toller's dictionary**	**Sweet's dictionary**
Cwelan	To die.	To die.	Die.
Steorfan	-	To die.	Die.
Sweltan	-	I. To die a natural or a violent death. I.a. to die by or of something, where the cause of death is expressed by a case or by a preposition with a noun. II. To die of something, in a manner described. III. To die with respect to something.	Die. With gen.: become dead to.

Print ISSN: 1578-7044; Online ISSN: 1989-6131

		IV. To die from something (gen.), be no longer conscious or under the action of something.	
Dēadian	To die.	To die.	

Table 2. Semantic and syntactic information for candidate words retrieved from dictionaries.

When contrasting these data against the description of the semantic prime made on previous sections, all of them provide the meaning of the primitive, which is, "to die". Therefore, in semantic terms, all candidates are suitable for the prime exponent.

Syntactically speaking, little information is included in the dictionaries. The entries and examples found for candidate verbs concur on the structure of the minimal frame of DIE; that is, they are all intransitive verbs introduced by an argument slot in the subject position performed by a substantive (SOMEONE DIES). At this point, it is important to remind the reader that, as an event predicate, DIE allows for non-durational temporal adjuncts and manner adjuncts (SOMEONE DIES AT THIS MOMENT, SOMEONE DIES LIKE THIS), and it can also be found with spatial adjuncts (SOMEONE DIES (FAR FROM) HERE). A review of the use of adjuncts found in the entries of the candidate verbs in the dictionaries indicates that only *sweltan* is defined in terms of its relationship with manner adjuncts (see Table 2). Nevertheless, there is no reference to temporal or locational adjuncts along with this verb.

From this analysis, it can be concluded that *sweltan* should be selected as the OE exponent for the semantic prime DIE, given that, although its lexical paradigm is not the most productive one, *sweltan* is a primitive of lexical derivation; it is also the most frequent candidate within the DOEC, and it concurs with the semantic and syntactic requirements proposed by the primitive.

The final step of analysis applied in previous studies in identifying OE exponents focuses on the search in the DOEC for examples of the word selected as a prime exponent along with the valency options associated with the semantic prime under investigation. Given that the NSM does not identify any valency option associated with DIE (Goddard, 2008a, p. 14), a different methodological approach is required at this point.

The suitability of prime exponents in living languages is confirmed by native speakers of the language at stake, who determine if the selected exponent word can be used to describe complex concepts in different contexts expressing the same meaning as the original (Goddard, 2011, p. 65). As this is not possible with historical languages, the study of the written records in detail will serve to verify the appropriateness of the selected candidate word. It is important to remark that exponents of each language are expected to match the requirements of the prime, and regarding syntactic alternations, there is a set of combinations that are considered universal, as they are displayed by all exponent words across languages. This does not mean that the word selected as a prime exponent cannot display other meanings apart from those considered

Print ISSN: 1578-7044; Online ISSN: 1989-6131

essentially universal, since "sometimes the exponent of a prime allows grammatical extensions which look like additional valency options, but which are actually complex language specific constructions" (Goddard, 2018, p. 49). For instance, the English exponent THINK presents other non-primitive uses, as in the case of the "opinion" frame (*She thinks that…*) (Goddard & Karlsson, 2008). Similarly, language-specific uses for a candidate word are found for the Polish exponent for KNOW –that is, *wiedzieć*– which, in contrast to what is expected by the nature of this imperfective prime, it combines with inchoative phrases expressing duration (*know for a long time*) (Wierzbicka, 2002a, p. 117). This fact, far from detracting attention from the focus of semantic primes, emphasises the suitability of that word as a prime exponent, given that it adapts to different contexts. Its combinatorial possibilities suggest that the selected word is simple enough to be used to describe more complex terms. Besides, this implies that the term is highly available for the speakers, and therefore it is considered part of their ordinary and natural language (Goddard, 2002, p. 5).

Against this background, I will first retrieve from the corpus different examples of *sweltan* with the universal uses associated with the prime DIE. In this sense, a search of the DOEC concludes that, as illustrated in Bosworth-Toller's dictionary (see table 2) *sweltan* is able to occur with manner adjuncts expressing the way in which the subject dies, as shown in (1) and (2). Although the use of temporal and locational adjuncts is not included in lexicographical sources, *sweltan* is found with adjuncts describing the time and place at which the death occurred (see examples 3 and 4).

(1)
Bo B9.3.2
[0524 (18.45.25)] *Hu ne witon we þæt ealle <men>* ***lichomlice sweltað****, & þeah sio sawl bið <libbende>?*
"Do we not know that all men **bodily die**, and yet the soul is living?" (Fox, 1864, p. 69)

(2)
ProgGl 2 (Först) C16.2
[0094 (14.3)] *Puer natus mercator; signum circa oculos uel in femore habet; audax, superbus, sibi soli placens; cito moritur cild acenned ceapman; tacn abutan eagan oððe on þeo hæfð; þriste, modig, him silfan licigende;* ***raðe swelt.***
"A boy born will be a merchant, and he will have a sign around the eyes or on the thigh; bold, proud, pleasing only himself, he will **quickly die**". (Liuzza, 2011, p. 137)

(3)
BenR B10.3.1.1
[0670 (64.121.17)] *Geþence he þa gesceadwisnesse Sancte Jacobes, þæs heahfæder, þe þus cwæþ: Gif ic mine heorda to swiðe on gange þrafige and swence, hy ealle* ***anes dæges sweltað****.*

Print ISSN: 1578-7044; Online ISSN: 1989-6131

"He should consider the discretion of Saint Jacob the patriarch, who says, If I press and work my flock too hard along the way, they will all **die in a single day**". (Riyeff, 2017, pp. 129–130)

(4)
Bede 3 B9.6.5
[0515 (16.228.20)] *& mid biscoplicre aldorlicnesse wæs cyþende, & þus cwæð: Ic þe secgo, cwæð he, forðon þu ne woldest þec ahebban from þam huse þysses forlorenan mannes & þæs geniþredan, þæt þu scealt* ***in þæm sylfan huse sweltan*** *& deaþ þrowigan.*
"[A]nd with episcopal authority he declared and said: 'I tell you', said he, 'as you would not refrain from the house of this lost and condemned man, you shall perish and suffer death **in the same house**'". (Miller, 1959, p. 229)

Apart from the NSM meanings expected to be found across languages, *sweltan* can also be included in different contexts within the OE language. First of all, some extracts in the DOEC suggest that some of the uses of *sweltan* are closely linked to those associated with the prime LIVE, included in the same category as DIE. On the one hand, as shown in example 5, the subject argument slot related to *sweltan* is not only restricted to the universal usage of a human subject, but it can also refer to the death of animals, as happens with LIVE (Wierzbicka, 1996, p. 87) and its OE exponent (Mateo Mendaza, 2021). As in the case of LIVE, *sweltan* also allows for a comitative frame in which someone dies with someone else, as illustrated by (6) and (7), with the latter including a manner adjunct, too.

On the other hand, it is also frequent to find sentences in the corpus where the OE exponent for LIVE, that is, the verb *(ge)libban*, is found in combination with the verb *sweltan*, suggesting the idea of contrast between life and death (see 8 and 9). Furthermore, among the broad uses of this word, example (10) shows *sweltan* with other prepositional adjuncts expressing the reason for dying. Finally, some fixed expressions appear with this verb accompanied by the noun *deað* ("death"), as in *deaðe sweltan* "perish by death" (11) or *swelte se deaþe* ("die the death"), in (12).

(5)
Prog 3.9 (Först) B23.3.3.9
[0004 (4)] *Kalendas Ianuarius gif he bið on þunresdæg, þonne biþ god winter, & windig lencten, & god sumor, & genihtsumnes on eorþan wæstmum, & sib biþ ofer eorðan, & swaþeah* ***sceap & cild sweltað.***
"If the Kalends of January is on a Thursday, then it will be a good winter and windy spring, and a good summer, and abundance in the fruits of the earth, and peace will be on earth, and yet sheep and children will die." (Liuzza, 2011, p. 207)

(6)
Mk (WSCp) B8.4.3.2

Print ISSN: 1578-7044; Online ISSN: 1989-6131

[0568 (14.31)] *& he þæs ðe mare spræc, & þeah me gebyrige **mid þe to sweltene**, ne ætsace ic þin; & swa hi cwædon ealle.*
"And he then spake the more, And though it behove me to die with thee I will not deny thee! And so they all said." (Leonard, 1881, p. 76)

(7)
ÆCHom I, 29 B1.1.31
[0201 (427.255)] *We wilniað **mid urum hlaforde clænlice sweltan** swiþor ðonne unclænlice mid eow lybban.*
"We desire to die purely with our lord, rather than to live impurely with you." (Thorpe, 1844, p. 433)

(8)
Bo B9.3.2
[0524 (18.45.25)] *Hu ne witon we þæt ealle <men> lichomlice **sweltað**, & þeah sio sawl bið <**libbende**>?*
"Do we not know that all men bodily die, and yet the soul is living?" (Fox, 1864, p. 69)

(9)
ÆCHom I (Pref) B1.1.1
[0025 (176.111)] *Gif ðu ne gestentst þone unrihtwisan & hine ne manast þæt he fram his arleasnysse gecyrre. & **lybbe**. þonne **swelt** se arleasa on his unrihtwisnysse. & ic wylle ofgan æt ðe his blod þæt is his lyre.*
"If thou warnest not the unrighteous, and exhortest him not, so that he turn from his wickedness and live, then shall the wicked die in his iniquity, and I will require from thee his blood that is his perdition." (Thorpe, 1844, p. 7)

(10)
ÆCHom I, 17 B1.1.19
[0051 (316.80)] *Mid þære lufe þe he wolde **for mancynne sweltan**: mid þære he cydde hu miclon he lufað his fæder.*
"With that love with which he would die for mankind, he manifested how greatly he loves his Father." (Thorpe, 1844, p. 243)

(11)
ÆCHom I, 1 B1.1.2
[0037 (181.82)] *Gif ðu þonne ðis lytle bebod tobrecst. þu scealt **deaðe sweltan**.*
"But if thou breakest this little commandment, thou shalt perish by death." (Thorpe, 1844, p. 15)

(12)
Mk (WSCp) B8.4.3.2

Print ISSN: 1578-7044; Online ISSN: 1989-6131

> [0255 (7.10)] *Moyses cwæð, wurða þinne fæder & þine modor; & se ðe wyrigþ his fæder & his modor,* ***swelte se deaþe****.*
> "Moyses saith, Worship thy father and thy mother and he that curseth his father let him die the death." (Leonard, 1881, p. 44)

All these examples have been of use to demonstrate the centrality of *sweltan* within the OE lexicon and thus to prove its suitability as the OE exponent of the semantic prime DIE.

6. CONCLUSIONS

This study has aimed at fulfilling the research begun on the category *Life and Death* by establishing the OE exponent of the semantic prime DIE on the basis of the NSM approach. The analysis of five candidate words against four different criteria has concluded that except for the morphological criterion, the OE verb *sweltan* stands out from the rest of the candidates and, therefore, it should be selected as the prime exponent. The suitability of this prime has been confirmed by all the examples retrieved from the DOEC.

From a methodological point of view, the selection of candidates has also posed some problems similar to those encountered in previous research (Mateo Mendaza, 2021). The sensitive nature of the concept of death prevents speakers from talking about this topic in a straightforward way; thus, they use euphemisms to refer to the meaning "to die". Discarding those words which display this meaning in a metaphorical way and selecting, exclusively, those ones presenting the core meaning of DIE has provided a managable list of candidate words. On the other hand, as regards the analysis conducted to select the prime exponent, the limited syntactic behaviour of DIE has necessitated taking a slightly different approach during the last step of analysis. The methodology established in previous research calls for gathering examples of the selected exponent with the valency options associated with the prime under analysis to check its suitability as the prime exponent. In this case, the fact that DIE presents no valency options and it is only found in its minimal frame has entailed reassessing the methodology applied. With this purpose, finding examples of *sweltan* with non-universal complementation patterns and in different fixed expressions has ascertained the centrality of this word in the OE lexicon as well as the availability of the verb for OE speakers in diverse contexts.

Broadly speaking, this study has contributed to enlarging the inventory of OE prime exponents, thus evidencing the validity of the NSM theory. At the same time, it has established an alternative for those semantic primes with restricted syntactic frames. Further analysis is called for, continuing the identification of OE exponents and dealing with other possible difficulties that may arise during the process, so that this methodology can be applied to other historical languages.

Print ISSN: 1578-7044; Online ISSN: 1989-6131

ACKNOWLEDGEMENTS

This research has been funded through the grant PID2020-119200GB-I00 (MCIN/AEI/10.13039/501100011033), which is gratefully acknowledged.

NOTES

[i] Other studies conducted in historical English can be consulted in the NSM webpage (https://nsm-approach.net/).

[ii] See Guarddon Anelo (2009) and Martín Arista (2018) for new lines of research in OE language and the NSM approach.

[iii] Due to an update in the inventory of primes, the prime TOUCH associated with *Contact* is now included in the category *Space*.

[iv] See Goddard (2004) for more information on metaphors within the NSM.

REFERENCES

Bosworth, J. &, Toller, T.N. (1973). *An Anglo-Saxon Dictionary*. Oxford: Oxford University Press. Available online at: http://www.bosworthtoller.com

Croft, W. (1991). *Syntactic Categories and Grammatical Relations*. Chicago: University of Chicago Press.

de la Cruz Cabanillas, I. (2007). Semantic Primes in Old English: A Preliminary Study of Descriptors. *SELIM 14*, 37–58.

Fox, S. (1864). *King Alfred's Anglo-Saxon Version of Boethius De Consolatione Philosophiae*. London: The University of Michigan.

Givon, T. (1995). *Functionalism and Grammar.* Amsterdam: John Benjamins.

Goddard, C. (2002). The Search for the Shared Semantic Core of All Languages. In C. Goddard & A. Wierzbicka (Eds.), *Meaning and Universal Grammar. Theory and Empirical Findings. Volume I* (pp. 5–40). Amsterdam: John Benjamins,

Goddard, C. (2004). The ethnopragmatics and semantics of active metaphors. *Journal of Pragmatics 36*, 1211–1230.

Goddard, C. (2008a). NSM: The State of the Art. In C. Goddard (Ed.), *Cross-Linguistics Semantics* (pp. 1-34). Amsterdam / Philadelphia: John Benjamins Publishing Company.

Goddard, C. (2008b). Towards a systematic table of semantic elements. In C. Goddard (Ed.), *Cross-Linguistics Semantics* (pp 59–81). Amsterdam / Philadelphia: John Benjamins Publishing Company.

Goddard, C. (2011). *Semantic Analysis: A Practical Introduction*. New York: Oxford University Press.

Goddard, C. (2018). Minimal English: The Science Behind It. In C. Goddard (Ed.), *Minimal English for a Global World. Improved Communication Using Fewer Words* (pp. 29–70). Cham: Palgrave Macmillan.

Print ISSN: 1578-7044; Online ISSN: 1989-6131

Goddard, C., & Karlsson, S. (2008). Re-thinking THINK in contrastive perspective: Swedish vs. English. In C. Goddard (Ed.), *Cross-Linguistics Semantics* (pp. 225–240). Amsterdam / Philadelphia: John Benjamins Publishing Company.

Goddard, C., & Peeters, B. (2006). The Natural Semantic Metalanguage (NSM) approach: an overview with reference to the most important Romance languages. In B. Peeters (Ed.), *Semantic primes and universal grammar: empirical evidence from the Romance languages* (pp. 13–38). Amsterdam: John Benjamins.

Goddard, C., & Wierzbicka, A. (2002). Semantic Primes and Universal Grammar. In C. Goddard & A. Wierzbicka (Eds.), *Meaning and Universal Grammar. Theory and Empirical Findings. Volume I* (pp. 41–85). Amsterdam: John Benjamins.

Guarddon Anelo, M. C. (2009). Un Análisis de las Propiedades Combinatorias de los Primitivos Semánticos a través de las Adposiciones Complejas en Inglés Antiguo. *Revista Española de Lingüística*, *39*(2), 93–122.

Healey diPaolo, A., Price Wilkin, J., & Xiang, X. (Eds.). (2009). *The Dictionary of Old English Web Corpus*. Toronto: Dictionary of Old English Project. Centre for Medieval Studies, University of Toronto.

Healey diPaolo, A., Cameron, A., Crandell Amos, A., Liuzza, R. Momma, H., Getz, R., & Pelle, S. (Eds.). (2018). *Dictionary of Old English: A to G online*. Toronto: Dictionary of Old English Project, Centre for Medieval Studies, University of Toronto.

Kastovsky, D. (1992). Semantics and vocabulary. In R. Hogg (Ed.), *The Cambridge History of the English Language I: The Beginnings to 1066* (pp. 290–408). Cambridge: Cambridge University Press.

Kay, C., Roberts, J., Samuels, M., & Wotherspoon, I. (2009). *The Historical Thesaurus of the Oxford English Dictionary*. University of Glasgow: Oxford University Press.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by.* Chicago: The University of Chicago Press.

Leonard, H. C. (Ed. & Trans). (1881). *A Translation of the Anglo-Saxon Version of St. Mark's Gospel*. London: James Clarke & Co.

Liuzza, R. M. (2011). *Anglo-Saxon Prognostics. And Edition and Translation of Texts from London, British Library, MS Cotton Tiberius A.iii*. Cambridge: D.S. Brewer.

Martín Arista, J. (2012). The Old English Prefix Ge-: A Panchronic Reappraisal. *Australian Journal of Linguistics*, *32*(4), 411–433.

Martín Arista, J. (2018). The semantic poles of Old English: Toward the 3D representation of complex polysemy. *Digital Scholarship in the Humanities, 33*(1), 96–111.

Martín Arista, J. (Ed.). (2009). *Nerthus: An Online Lexical database of Old English*. La Rioja: Nerthus Project, University of La Rioja.

Martín Arista, J., & Martín de la Rosa, M. V. (2006). Old English Semantic Primes: Substantives, Determiners and Quantifiers. *ATLANTIS*, *28*(2), 9–28.

Mateo Mendaza, R. (2013). The Old English exponent for the semantic prime TOUCH. Descriptive and methodological questions. *Australian Journal of Linguistics*, *33*(4), 449–466.

Mateo Mendaza, R. (2016a). The search for Old English semantic primes: the case of HAPPEN. *Nordic Journal of English Studies, 15*(1), 71–99.

Print ISSN: 1578-7044; Online ISSN: 1989-6131

Mateo Mendaza, R. (2016b). The Old English exponent for the semantic prime MOVE. *Australian Journal of Linguistics*, *36*(4), 542–555.

Mateo Mendaza, R. (2020). Semantic primes in historical languages. The identification of the Old English exponent for DO. *Journal of English Studies, 18*, 125–152.

Mateo Mendaza, R. (2021). Identifying the Old English exponent for the semantic prime LIVE. *Journal of the Spanish Society for Medieval English Language and Literature, 26*, 85–107.

Miller, T. (1959). *Bede's Ecclesiastical History of the English People. Part I 2*. London/New York/Toronto: Oxford University Press.

Ower, C. A. (1996). *A Diachronic Investigation of the Semantic Field 'Death'* [Doctoral dissertation, University of Glasgow]. ProQuest Dissertations Publishing.

Peeters, B. (2023). *NSM webpage*. Retrieved October 2, 2023 from https://nsm-approach.net

Peeters, B., Junker, M-O., Farrel, P., Perini-Santos, P., & Maher, B. (2006). NSM exponents and universal grammar in Romance: Speech; actions, events and movement; existence and possession; life and death. In B. Peeters (Ed.), *Semantic primes and universal grammar: empirical evidence from the Romance languages* (pp. 111–136). Amsterdam: John Benjamins.

Riyeff, J. (2017). *The Old English Rule of Saint Benedict: with Related Old English Texts*. Minnesota: Liturgical Press.

Sweet, H. (1897). *The Student's Dictionary of Anglo-Saxon.* New York and London: The MacMillan Company.

Thorpe, B. (1844). *The Homilies of the Anglo-Saxon Church*. London: Printed for the Ælfric Society.

Wierzbicka, A. (1996). *Semantics. Primes and Universals*. Oxford: Oxford University Press.

Wierzbicka. A. (2002a). Semantic Primes and Universal Grammar in Polish. In C. Goddard & A. Wierzbicka (Eds.), *Meaning and Universal Grammar. Theory and Empirical Findings. Volume II* (pp. 65–144). Amsterdam: John Benjamins.

Wierzbicka, A. (2002b). Philosophy and discourse: The rise of "really" and the fall of "truly". *Cahiers de praxématique*, *38*, 85–112.

Wierzbicka, A. (2002c). *Right* and *wrong*: From philosophy to everyday discourse. *Discourse Studies*, *4*(2), 225–252.

Wierzbicka, A. (2006). *English: Meaning and culture*. New York: Oxford University Press.

Print ISSN: 1578-7044; Online ISSN: 1989-6131