

ON THE APPLICABILITY OF THE DICTIONARIES OF OLD ENGLISH TO LINGUISTIC RESEARCH¹

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ABSTRACT. *The aim of this article is to review the standard dictionaries of Old English from the perspective of the evolution from traditional lexicography to electronic lexicography. An Anglo-Saxon Dictionary (Bosworth and Toller 1973), The student's Dictionary of Anglo-Saxon (Sweet 1976), A Concise Anglo-Saxon Dictionary (Hall 1996) and The Dictionary of Old English in Electronic Form A-G (Healey et al. 2008) are discussed with respect to headword, alternative spellings and cross-references, vowel quantity and textual evidence.*

Keywords: Lexicography, electronic lexicography, Old English, dictionary.

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SOBRE LA APLICABILIDAD DE LOS DICCIONARIOS DEL INGLÉS ANTIGUO A LA INVESTIGACIÓN LINGÜÍSTICA

RESUMEN. *El objetivo de este artículo es discutir la aplicabilidad de la información filológica proporcionada por los diccionarios de inglés antiguo a la investigación lingüística, entre los cuales se incluyen An Anglo-Saxon Dictionary, The Student's Dictionary of Anglo-Saxon, A Concise Anglo-Saxon Dictionary y The Dictionary of Old English in Electronic Form A-G. El análisis gira en torno a los siguientes aspectos de los diccionarios bajo estudio: morfología, sintaxis y semántica (definición de significado y etimología). Las conclusiones insisten en los aspectos lingüísticos que no son compatibles o que pueden ser mejorados para satisfacer algunos estándares de la teoría lingüística moderna.*

Palabras clave: Lingüística histórica, inglés antiguo, lexicografía, morfología, sintaxis, semántica.

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1. INTRODUCTION

This article deals with the lexicography of Old English. To be more precise, it engages in the development from traditional to electronic lexicography as witnessed by the most representative dictionaries in the field of Anglo-Saxon studies.

Hanks (2012: 59-60) distinguishes four types of dictionaries: dictionaries of current usage for native speakers, bilingual dictionaries, dictionaries for foreign learners, and scholarly dictionaries on historical principles, the category to which dictionaries of Old English clearly belong. In the last two decades, two trends have become increasingly common to the edition of these four types of dictionaries, corpus compilation and computational processing. On corpus compilation, Granger and Paquot (2012: 15-16) remark that “for some time, lexicographers have been struggling with the constraints of print: with access to powerful corpus-querying software applied to billion-word corpora, we have the tools (and the data) to provide a fuller and more systematic account of how language works”. Regarding computing, Kilgarriff and Kosem (2012: 31) state that with the advance of computer technology “compiling and storing corpora has become faster and easier, so corpora tend to be much larger than previous ones”. At the same time, the reduction in the price of computers has contributed to the compilation of larger and more representative corpora. In Granger and Paquot's (2012: 18-19) words, “quite suddenly, a number of factors combined to make it

possible, at relatively low cost, to collect, annotate, and store corpora measured in billions of words rather than millions". In order to explain the development of electronic lexicography, a third factor should be added to the development of corpus linguistics and the generalisation of computers, to wit, the spread of the Internet and the design of the hypertext and mark-up language protocols, which allow lexicographers not only to publish their products online but also to provide them with search options that turn the lexicographical work into a multifunctional database. According to Tarp (2012: 107) "printed dictionaries will be published for a long period ahead but, at the same time, it is no secret that the electronic medium is gaining still more ground and will gradually overtake and outshine paper as the preferred platform".

Given this background, the aim of this article is to discuss the advances in the lexicography of Old English from the angle of the evolution from traditional to electronic lexicography. The scope of the article comprises the most authoritative lexicographical sources in Anglo-Saxon studies: *An Anglo-Saxon Dictionary*, hereafter Bosworth-Toller or BT, (Bosworth and Toller 1973), *The student's Dictionary of Anglo-Saxon*, henceforth Sweet, (Sweet 1976), *A Concise Anglo-Saxon Dictionary*, hereafter Hall-Merritt, (Hall 1996), and *The Dictionary of Old English in Electronic Form A-G*, henceforth DOE, (Healey *et al.* 2008).² The discussion that follows includes the updates of the dictionaries when available, that is to say, the *Supplement* to Bosworth-Toller by Thomas N. Toller himself (1921) as well as the *Enlarged addenda and corrigenda* by Alistair Campbell (1972), and the revised edition of Hall-Merritt by Herbert T. Merritt (1996).

These dictionaries are witnesses to the evolution from traditional to electronic lexicography and all of them are representative of their times, from the Victorian era to the Information Society. All four constitute superb sources of philological data, considering their scope and accuracy, although remarkable differences arise between them. Sweet, Hall-Merritt and Bosworth-Toller were published at the turn of the 20th century, that is to say, they are roughly coetaneous with *The Oxford English Dictionary*, which came out between 1884 and 1928, whereas the first letters of the DOE appeared in the mid-1980s. Sweet and Hall-Merritt are more suitable for learners, whereas Bosworth-Toller and the DOE represent highly scholarly works devised for experts, as has been remarked with respect to the DOE by Fulk (2009). More to the point of this work, the DOE clearly departs company with respect to the other three dictionaries in being an electronic dictionary.

² A word of caution is necessary regarding the publication dates. In the remainder of the article, the dates in citations correspond to the editions used in this study and not to the original dates of publication. *An Anglo-Saxon Dictionary* was first published in 1898, while *The student's Dictionary of Anglo-Saxon* and *A Concise Anglo-Saxon Dictionary* came out in 1896 and 1894 respectively.

Although current lexicography relies on computing, digitisation, databases and online resources, the importance of traditional methods of investigation and the wealth of philological data compiled with such methods must be acknowledged. The different approaches that have been adopted by these dictionaries raise questions relevant not only for applied disciplines such as lexicography but also for more theoretically oriented areas of Old English scholarship, such as morphology, lexicology and syntax. In this respect, this work may contribute to the research line in the linguistics and lexicography of Old English pursued, among others, by García García (2012, 2013), Martín Arista (2012a, 2012b, 2013, 2014, 2017a, 2017b), Mateo Mendaza (2013, 2014, 2015a, 2015b, 2016), Novo Urraca (2015, 2016a, 2016b) and Veá Escarza (2012, 2013, 2014, 2015, 2016).

In order to deal with the evolution of Old English dictionary making from traditional to electronic lexicography in a systematic way, the remainder of this article is organised as follows. Section 2 gives an overview of the dictionaries under analysis. Section 3 discusses the evolution from traditional to electronic lexicography as regards the entries and lemmatisation of dictionaries, headwords, alternative spelling and cross-references, vowel length and textual evidence. A discussion of these questions follows in section 4 and, to round off the article, section 5 draws the main conclusions.

2. OVERVIEW OF THE DICTIONARIES

In the field of Old English studies, the following comments on Bosworth-Toller can be considered a general assessment of the available dictionaries:

While the Bosworth-Toller dictionary is also, without a doubt, more systematic than Bosworth's earlier work, it still suffers from some of the inconsistencies in spelling and arrangement of headwords found in Bosworth's *Compendious Dictionary*, particularly in the treatment of orthographic variants and in a consistent method of cross-referencing (...) following the *vide* back to the main entry sometimes can lead the reader on a frustratingly circuitous route. For example, at *ciele* ('cold') the reader is directed to the alternate spelling *cile*; at *cile* the reader is directed to his final destination, *cyle*. (Ellis 1993: 4-5)

Ellis (1993: 4-5), in spite of raising some issues of Bosworth-Toller, states that "the Bosworth-Toller dictionary is far superior to Bosworth's earlier work, and together with Toller's 1921 *Supplement*, this work remains the most comprehensive Old English dictionary currently available". It must be noted, however, that the three dictionaries of Old English published at the turn of the twentieth century were devised for different users. Whereas Bosworth-Toller constitutes an academic work written in the same encyclopedic tradition as the *Oxford English Dictionary*, Sweet is a dictionary for beginners and Hall-Merritt an abridged dictionary, which

is made explicit in their respective titles, *The student's Dictionary of Anglo-Saxon* and *A Concise Anglo-Saxon Dictionary*. The Sweet dictionary was edited in answer to the Clarendon Press delegates' demand to develop an abridged version of the Bosworth-Toller dictionary, as stated by Sweet (1976: vii) in his preface: "if [a dictionary-DMR] is done ideally well and on an adequate scale it is never finished – and an unfinished dictionary is worse than useless- or, if finished, is never uniform as regards materials and treatment". This is a fundamental difference with respect to Bosworth-Toller and the section that follows must be read from this perspective. As regards the DOE, this dictionary has been reviewed by authors like Koopman (1992) and Fulk (2009), who have stressed, respectively, its adequacy for the study of syntax and morphology. Overall, it constitutes a remarkable philological contribution and the reference project in the field of Old English.

3. FROM TRADITIONAL TO ELECTRONIC LEXICOGRAPHY

This analysis has been carried out through a comparative study of the four dictionaries. It must be noted that given that the DOE is still in progress, in some general comparisons, such as the number of headwords, the data searched for in the other dictionaries were also restricted to the letters A-G, although, in most cases, evidence was gathered from all four works. This said, the following subsections deal with the scope, headword spelling, alternative spellings and cross-references as well as textual evidence, with a view to explaining the evolution from traditional to electronic lexicography as reflected in Anglo-Saxon studies. This procedure has been adopted to guarantee exhaustiveness, but it has to be borne in mind that the four dictionaries provide neither the same type nor the same amount of information on these questions.

3.1. ENTRIES AND LEMMATISATION

For assessing the scope, the number of entries presented in a given range of headwords has been considered. The set of words beginning from *fe-* to *feo-* has been selected for this purpose. The selection of items has paid attention to the restricted character of the DOE in its present state. The figure of entries found between *fe-* and *feo-* is tabulated in Table 1:

Table 1. Number of headword entries per dictionary.

	Hall-Merritt	Sweet	DOE	BT
Number of entries	224	127	185	173

As shown in Table 1, Hall-Merritt stands out as the most complete dictionary of the four under comparison in quantitative terms. This simply means that Hall-Merritt presents a greater number of headwords, which does not imply that it provides more information, as some of the headwords are, in fact, inflectional forms or simply spelling variants which refer the reader to another headword by means of a cross-reference. Figure 1 offers the beginning of the segment under analysis, with the display of the headwords contained in each dictionary. It allows for a qualitative analysis of the headword distribution in each work.

Hall-Merritt	Sweet	DOE	BT
<i>fearr</i>	<i>fear</i>	<i>fearr</i>	<i>fear</i>
∅	∅	<i>fearre-mearg</i>	∅
∅	<i>fear-bryþer</i>	<i>fear-bryþer</i>	∅
∅	∅	<i>fearrlic</i>	∅
<i>feas</i>	∅	∅	∅
<i>fēasceaft</i>	∅	<i>fēasceaft</i>	<i>fēa-sceaft</i>
<i>fēasceaftig</i>	∅	<i>fēasceaftig</i>	<i>fēa-sceaftig</i>
<i>fēasceaftnes</i>	∅	<i>fēasceaftnes</i>	∅
<i>feast</i>	∅	∅	∅

Figure 1. Headword entries per dictionary (fearr-feast).

As shown in Figure 1, both Hall-Merritt and the DOE display a similar inventory of headwords, which clearly outnumber the ones proposed in the other dictionaries. However, there are significant differences between them. On the one hand, the DOE introduces three complex words based on the noun *fearr* ‘beast of burden’, which are not present in the other sources, with the only exception of *fear-bryþer* ‘bull’ which can also be found in Sweet’s dictionary. On the other hand, Hall-Merritt counts the terms *feas* and *feast* as headwords, but they are actually spelling variants of *fæs* ‘fringe, border’ and *fæst* ‘firm, secure’ respectively, and the only information displayed in these headwords is the reference to the canonical forms to which they are related.

In this respect, not only Hall-Merritt presents inconsistencies regarding lemmatisation. Ellis (1993) points out that Bosworth-Toller also shows a great degree of instability as to the elements presented as dictionary entries, although that phenomenon is not observable in the selection presented above. However, in the 16 entries found between *būend* ‘dweller’ and *bunden* ‘bound, tied’, Bosworth and Toller display 4 non-lemmatised forms, which constitute 25% of the cases in

the selection. To wit, the unlemmatised entries are *búende part.* ‘inhabiting or dwelling’, *búgende* ‘bowing, kneeling’, *bulgon* ‘made angry, were angry’ and *bunden* ‘bound, tied’. The unlemmatised entries correspond to participial forms, both present and past, but also to inflectional forms of strong verbs, such as the preterite plural of *belgan* ‘to cause oneself to swell with anger’.

3.2. HEADWORDS

Apart from the selection of headwords, perhaps the major problem addressed by a lexicographer of Old English is to determine the headword spellings that are going to define the dictionary entries. In a language where a variety of spellings are available, this task becomes crucial, for it defines the first and foremost property of the dictionary. As a general tendency, since the publication of Sweet the Early West Saxon dialect has often been considered the standard variety of Old English. Ellis (1993), in his review of the problems of Old English headword spelling, follows Wrenn (1933: 82) in acknowledging the usefulness of Sweet’s normalisation for teaching purposes. However, the system of the Sweet dictionary is not devoid of problems. Despite his attempt to obtain an idealised, normalised standard of Old English, based on the Early West Saxon dialect, problems arise in several areas. On the one hand, only three texts from the Alfredian period (late 9th - early 10th century) are available. On the other hand, the lack of diatopic and diachronic perspectives in Sweet clearly constitutes a weak point, and authors like Wrenn (1933) criticise the inconsistencies of Sweet’s approach. In this vein, Ellis (1993: 6) summarises the problem in the way presented in Figure 2:

Sweet (1871)	Sweet (1976)	Late West Saxon
<i>biscep</i>	<i>biscep</i>	<i>bisceop</i>
<i>burg</i>	<i>burg</i>	<i>burb</i>
<i>fierd</i>	<i>fierd</i>	<i>fyrð</i>
<i>all</i>	<i>eall</i>	<i>eall</i>
<i>bion</i>	<i>beon</i>	<i>beon</i>
<i>monig</i>	<i>manig</i>	<i>manig</i>

Figure 2. Headword spelling variation in *The Students’ Dictionary of Anglo-Saxon*. (adapted from Ellis 1993: 6).

Figure 2 shows some inconsistencies of the headword spelling system adopted by Sweet (1976). It compares the spellings found in the dictionary against the standards Sweet himself proposed in his *Pastoral Care* (1871) and the spelling of

Late West Saxon. As seen in Figure 2, Early West Saxon spelling is maintained in Sweet (1976) in a limited number of words. Early spellings include the use of the unpalatalised <g> and the diagraph <ie>, which is, in fact, the only property that can be exclusively attributed to the West Saxon dialect. Figure 2 reflects the fact that, despite his initial purpose, Sweet (1976) makes use of spellings which are representative of a later period.

The importance given by Sweet to Early West Saxon is related to what Wrenn (1933: 67) termed “mechanical oversystematizing”. This concept implies the lack of alternative spellings and cross-references, as well as the use of *reconstructed* headwords, which display spellings that are not attested in any word form. Thus, Sweet presents the words *ceald* and *cield* both meaning ‘cold’ as separate words rather than spelling variants of the same word.

As regards his preference for the use of the <ie> spelling, even if unattested, it turned into a rather artificial system which was followed and even increased by other authors. Holthausen’s (1963) etymological dictionary includes the word *ciecen* ‘chicken,’ which Sweet lists as *cycen*.

Other dictionaries, such as Hall-Merritt, also attempt to use Early West Saxon spelling, but they are less likely to include unattested spellings. On the opposite extreme is the DOE, which prefers the oldest attested form for its headwords, which is in most cases a late form with the spelling <y>, where Sweet and Hall-Merritt opt for <ie>.

By way of summary, Ellis (1993) provides a comparison between the different spellings of some headwords in the different dictionaries.

Figure 3 presents a comparison between the different headwords defined by the four dictionaries. The figure summarises the two main tendencies, either Early West Saxon or Late West Saxon. In this respect, the DOE, as said above, represents the most systematic approach towards the use of the latest available form, while Sweet makes use of the oldest spelling, even if the precise form is unattested (signalled with an asterisk in the figure). Hall-Merritt and Bosworth and Toller represent compromise solutions, although, again, heading to different directions. Whereas Hall-Merritt aims at using the oldest spelling, he is more conservative than Sweet and adopts modern spellings where the potential oldest form is not attested in the texts. Bosworth and Toller attempt to make use of the latest spelling, but they are more unsystematic than the DOE, although Fulk (2009: 24) also finds some shortcomings in the DOE spelling of words, such as opting for forms of individual authors, such as *Ælfric* rather than truly Late West Saxon forms, thus *bysmor* instead of *bysmr* ‘disgrace’.

	BT	Sweet	Hall-Merritt	DOE B-D
concubine	<i>cyfes</i>	<i>ciefes</i>	<i>cifes</i>	<i>cifes</i>
to call	<i>cigan</i>	<i>ciegan</i>	<i>ciegan</i>	<i>cigan</i>
cold	<i>cyle</i>	<i>ciele</i>	<i>ciele</i>	<i>cyle</i>
merchant	<i>cypa</i>	<i>ciepa</i>	<i>ciepa</i>	<i>cypa</i>
onion	<i>cipe</i>	<i>ciepe</i>	<i>cipe</i>	<i>cipe</i>
a shout	<i>cirm</i>	<i>*cierm</i>	<i>cirm</i>	<i>cirm</i>
to turn	<i>cyrran</i>	<i>cierran</i>	<i>cierran</i>	<i>cyrran</i>
fastidious	<i>cies</i>	<i>*cies</i>	<i>cis</i>	<i>cies</i>
cheese	<i>cyse</i>	<i>*ciese</i>	<i>cyse</i>	<i>cyse</i>
coffin	<i>cyst</i>	<i>*ciest</i>	<i>cist</i>	<i>cist</i>
kettle	<i>cytel</i>	<i>*cietel</i>	<i>citel</i>	<i>cytel</i>
to kill	<i>dydan</i>	<i>*diedan</i>	<i>dydan</i>	<i>dydan</i>
to dip	<i>dufan</i>	<i>*diefan</i>	<i>dyfan</i>	<i>dyfan</i>
hidden	<i>digol</i>	<i>diegle</i>	<i>diegol</i>	<i>digol</i>
to dip	<i>dyppan</i>	<i>*diepan</i>	<i>dyppan</i>	<i>dyppan</i>
to conceal	<i>dyrnan</i>	<i>diernan</i>	<i>diernan</i>	<i>dyrnan</i>

Figure 3. Headword spelling comparison among dictionaries
(adapted from Ellis 1993: 8-9).

Differences can also be observed between Bosworth-Toller and the first dictionary by Bosworth. As has already been mentioned, Bosworth did not intend any kind of prescriptivism when compiling the *Compendious Anglo-Saxon Dictionary* (1848) and this is reflected in a series of inconsistencies in the spellings selected, where forms include spellings with <e>, <i>, <y>, which correspond to different periods of the West Saxon dialect.

Leaving aside the question of spelling, there are other features affecting the headwords where the dictionaries reflect a diversity of approaches. While most dictionaries, with the exception of the thesauri (like *A Thesaurus of Old English* and *Historical Thesaurus of the Oxford English Dictionary*) and some etymological works, are organised alphabetically, Sweet, includes an innovative mixed system. Whenever a word functions as base of derivation or part of a compound, the resulting complex words are listed immediately after it, thus breaking the alphabetical order, which is resumed once the derivational paradigm of the word in question is completed. Consider the case in (1) where the headwords *sc̅ir* (f.) and *sc̅ir* (adj.) are non-consecutive entries:

- (1) **Scīr** *f.* office, administration; district, shire, diocese, parish.
 ~ **biscop** *m.* bishop of a diocese.
 ~ **lett** *n.* piece *or* measure of land.
 ~ **(e)mann, scīrig-** *m.* official, steward; procurator; native of a district.
 ~ **gemot** *n.* shire-mote
 ~ **gerefa** *m.* judicial president of a shire, sheriff.
 ~ **gesceatt** *n.* property of a see
 ~ **geþegen** *m.* thane of shire
(e)wita *m.* chief man of shire.
scīr transparent, clear (weather); bright, glittering, white, brilliant; pure (wine); clear (voice); splendid.
 ~ **baso** bright purple.
 ~ **e** *av.* Brightly; clearly (*of* voice).
 ~ **ecg** bright-edged.
 ~ **ham** in bright armour.
 ~ **mæled** with bright ornaments (sword)
 ~ **wered** bright (light)
scīran declare, tell, speak...

As can be seen in example (1) the expected alphabetical order is interrupted to include the lexical family of the noun *scīr* before the adjective *scīr*, and the same holds true for the derivatives of the adjective, which are displayed before the verb *scīran*.

3.3. ALTERNATIVE SPELLING AND CROSS-REFERENCES

Closely related to the definition of headwords is the question of spelling. Old English was not stable at any linguistic level, as would be the case with any language from which a time span of 500 years was analysed. One of the levels that are not stable is spelling, as shown by the Present-Day English word *Thames* whose evolution, as presented in the *Oxford English Dictionary*, is shown in (2):

- (2) *Temes – Temese*
Temze – Temeze (Tamise)
Temys – Temmes(se) – Themes – Themys – Themise – Thamyse – Thamise
Thames

As exemplified by this kind of variation, the spelling information available from an Old English dictionary is a key element. Diatopic and diachronic variation constitute pressing issues for the lexicography of Old English. When several spellings can be proposed for a given form, decisions have to be made regarding which lexeme is going to be considered as canonical and which ones are to be treated as alternative forms of the word. The dictionaries under analysis also

show differences in this respect, as presented in Figure 4. The canonical element is indicated under <C> whereas the alternative forms are displayed under <A>:

Hall-Merritt		Sweet		DOE		BT	
C	A	C	A	C	A	C	A
<i>fabnian</i>	<i>fægnian</i>	<i>fægenian</i>	<i>fabnian,</i> <i>fægnian</i>	<i>fabnian</i>	<i>fægnian</i>	<i>fægnian</i>	<i>fagnian,</i> <i>fægnigan,</i> <i>fægenian</i>

Figure 4. Canonical and alternative spellings.

As is the case with headword organisation, the treatment of variant spellings is inconsistent and causes circularity. Consider the examples in (3), taken from Hall-Merritt:

- (3) a. *ābugan* (=on-) ‘bow, incline, bend, submit’
onbugan ‘to bend; bow, submit, yield to’
- b. *onbyhtscealc* = *ambibtscealc*
ambibtscealc ‘functionary, retainer’
- c. *oncierran* (e, i, y)
oncigan (ei = ie)

As (3) shows, Hall-Merritt is inconsistent in the treatment of spelling variation. Example (3a) shows that the author acknowledges the fact that *ā-* and *on-* are variant forms of the same prefix. In spite of giving that information in the entry for *ābugan*, Hall-Merritt creates another headword, *onbugan*. However, in the latter headword, no information is given on alternative spellings of the prefix. In both cases, a translation of the terms is included. In this respect, it should be remarked that the translations are not identical. In (3b), however, Hall-Merritt identifies two alternative spellings and refers the reader to the second term. As in the previous case, the reference to the variation is unidirectional. No reference to the form *on-* is made under the headword *ambibtscealc*. Finally, (3c) evidences inconsistencies as regards the choice of a standard form for the headwords. This example comprises two consecutive headwords of the dictionary. In the first case, the selected spelling for the headword is the diphthong *-ie-*, which displays the alternative forms *-e-*, *-i-* and *-y-*. The following word, however, is presented with the canonical form *-i-* for which an alternative *-ie-* form is attested.

3.4. VOWEL QUANTITY

A further distinction among the dictionaries under scrutiny has to do with the treatment of vocalic quantity. Old English had seven simple vowels and four diphthongs, with their corresponding long variants, as presented in (4):

- (4) Short vowels: /i/ - /e/ - /æ/ - /o/ - /u/ - /a/ - /y/
 Long vowels: /ī/ - /ē/ - /ǣ/ - /ō/ - /ū/ - /ā/ - /ȳ/
 Short diphthongs: /eī/ - /io/ - /ea/ - /eo/
 Long diphthongs: /ēi/ - /īo/ - /ēa/ - /ēo/

However, this phonological distinction is not signalled in the original texts. Rather, it constitutes a feature of modern editions and, as such, adopted in various ways by different authors. Vowel quantity in Old English is distinctive because different vocalic length implies a difference in meaning, as shown in (5):

- (5) *bær* 'bare, naked, unclothed' vs. *bǣr* 'a bier, handbarrow, litter'

Hall-Merritt and Sweet include information on vocalic quantity, and indicate vocalic length by means of a macron (ˉ) placed upon the long vowel or upon the first element of a long diphthong. The DOE also accounts for vocalic quantity in their headwords while, following the original texts, it does not mark it in the textual material included under the headword. Bosworth-Toller, on their part, make use of the diacritic (˘) with an ambiguous meaning. It sometimes denotes vocalic length while it shows stress position in other cases, especially when distinguishing derivatives from compounds. Consider (6) as an illustration:

- (6) *bær* 'bare, naked, open' vs. *bǣr* 'a bier, *feretrum*'
fōr-tācen 'a fore-token' vs. *fōr-tēab* 'misled, seduced'

This unsystematic use of the symbol (˘) causes some problems when looking up a given word. On the one hand, this dictionary does not always include this information and, on the other hand, the information available may lead to misunderstandings regarding the position of the stress in the word, as we can see in example (7) where a comparison between the four dictionaries is made:

- (7) BT: *candel-leóbt*.
 SW: *candel-leobt*.
 CH: *candel-lēobt*
 DOE: *candel-lēobt*

As can be seen in example (7), if the diacritic shows word stress, it is wrongly placed, as compounds in Old English are regularly stressed on the first element. If we consider it as a vowel quantity marker, there is a conflict with Sweet's (1976) proposal, while showing agreement with the other two works in the comparison. This point is also confirmed by the treatment given to this word in other sources.

In the DOE, searches can be carried out disregarding vowel length and making use of the short vowel, in such a way that the query results include forms with both long and short vowels.

3.5. TEXTUAL EVIDENCE

The final aspect of comparison is the treatment of the textual evidence that supports the inclusion of a given headword or form in the dictionary.

Again, Sweet does not provide the reader with that information. Hall-Merritt includes the acronym of the text in which the form is attested at the end of each entry, as in (8):

- (8) **niðerhrēosende** (ȳ) *falling down*, *Æ.*

Bosworth-Toller and the DOE are the two dictionaries that best illustrate dictionary entries with textual evidence. Bosworth-Toller includes, along with the references to the textual sources, citations, as is illustrated in (9):

- (9) **BROC**, es; m.? A brock, badger; taxo = tassus [tasso *It.*: taison *Fr.*], meles:- Broc *taxo* vel *melus*, Wrt. Voc. 22, 53. Sum fyðerfēte nȳten is, ðæt we nemnaþ taxonem, ðæt ys broc on Englisc *there is a four-footed animal, which we name taxonem, that is brock in English*, Med/ ex Quadr. 1, 2: Lchdm. i. 326, 12 [Wȳc. brok: *Laym.* brockes, *pl.* *Dan.* brok: *Icel.* brokkr, *m.* *Wel.* *Corn.* broch: *IR.* broc, *m.* *Gæl.* broc, bruc, *m.* *Manx* broc, *m.* *Armor.* broc'h, *m.*]

The DOE follows a similar structure, but includes a textual reference not only for the headword, but also for each of the attested spelling, thus providing the reader with more detailed and accurate information. This can be seen in (10).

- (10) **earm-bēag**
 Noun (m., cl. 1)
 Att. sp.: earmbeag, earmbeah | ermboeg || armbages (m. nom. pl., WerdGIA)
 || earmbeaga
 6 occ. (in glosses and Beo)
 arm-band, bracelet
Beo 2756: geseah ða sigehreðig ... maððumsigla fealo, gold glitnian grunde getenge, wundur on wealle ... þær wæs helm monig eald ond omig, **earmbeaga** fela searvum gesæled.
HIGl D410: *dextrocerium .i. brachiale, armillum earmbeag.*
AntGl 6 791: *dextrochirium brad earmbeah.*
CollGl 11 24: *dextrocerium earmbeag.*
LdGl 19.43: *armilla ermboeg.*
WerdGIA 4.29: *dextralia armbages.*
 Lat. equiv. in MS: armilla, armillum, brachiale, dextrale; dextrocherium = (*brad*) *earmbeag*
 See also: earm noun, bēag; cf. earm-gegyrela, -hrēad.

As (10) shows, the DOE is the only dictionary of Old English that gives the information on the textual frequency of the lemma. This is the result of the incorporation of a corpus of reference to the project. Given that the data are exhaustive, it is also possible to determine if a word occurs in prose, poetry or glosses. This is done by through the links to the texts of the citations, which contain information similar to the one displayed in (11), which corresponds to the link **HIGI** in (10) and includes the metadata of the text (at least, title, author/ editor, year and pages).

- (11) HIGI (Oliphant) D16.1
 Latin-Old English Glossaries: Oliphant, 1966 21-208, corrected from MS; Oliphant, R.T., The Harley Latin-Old English Glossary, *Janua linguarum, series practica* 20 (The Hague); with corrections by Schabram, 1968; Schabram, H., Review of Robert T. Oliphant, The Harley Latin-Old English Glossary in *Anglia* 86: 495-500, and Voss, 1989; Voss, Manfred, 'Quinns Edition der kleineren Cleopatraglossare: Corrigenda und Addenda,' *Arbeiten aus Anglistik und Amerikanistik* 14: 127-39.

The hypertext links also relate the lemma to the two free forms identifiable in the compound (*earm* and *bēag*), as well as to other compounds of *earm*, thus providing some hints on the word-formation processes relevant for the word in question. Last but not least, the DOE is clearly superior to previous works not only as to the amount of textual information but, above all, as to the relation established between meanings and morphosyntactic patterns. For instance, the entry to *ā-būgan* describes this verb as appearing in, among others, constructions with inanimate subject and genitive of person ('to bow'); participial constructions ('inclined') and with dative of person ('to turn far from; 'to submit to'),

4. DISCUSSION

As far as the features common to the four dictionaries are concerned, all of them are similar in trying to present "headword spellings as they are most commonly found in Old English texts" (Ellis 1993: 5). In practice, this means that they are more focused on the West Saxon variety of Old English than on the other varieties, as grammars in general do, due to the scarcity of the linguistic evidence from other dialects in comparison to West Saxon (thus Campbell 1987; Hogg 1992; Quirk and Wrenn 1994; Hogg and Fulck 2011). For this reason, the DOE represents the spelling of late texts, most of which are written in West Saxon. Although these dictionaries are geared towards West Saxon, they also account for the records written in the other dialects.

On the side of differences, the dictionaries at stake differ in terms of textual material, format, organization and degree of exhaustivity. The major difference,

and a clear advantage, of the DOE with respect to the other dictionaries, is the textual material on which it is based. As a part of the DOE project, the *Dictionary of Old English Corpus* was compiled and has been regularly updated. The 2004 version comprises around three thousand texts and three million words and includes at least one version of the written records of Old English. On the basis of all the available evidence, the DOE clearly achieves more comprehensiveness and more accuracy than the other works, which still remain fundamental sources of Old English scholarship.

Leaving aside the question of scope raised above, Sweet has a clear advantage over the others in the fact that it is the only dictionary that arranges entries not only alphabetically but also by word family. All dictionaries reviewed in this paper are complete, with the exception of the DOE which, as its title indicates, has reached the letter G. With the exception of Bosworth-Toller, which does not always lemmatise, thus including numerous inflected forms as headwords (typically past participles or irregular forms), all dictionaries lemmatise, thus unifying all inflectional forms under the corresponding lemma headword. It is worth noting in this respect that the DOE includes the infinitive and the past participle of verbs on a regular basis. Numerous differences arise that are related to alternative spellings. Sweet contains fewer spelling alternants and fewer inconsistencies and circularities in this respect.

All dictionaries, except the DOE, which is accessible and searchable online, have been published in paper. An online version of Bosworth-Toller is available at <http://bosworth.ff.cuni.cz> but its functionalities are not comparable to those of the DOE. While there are also digitalised versions of Sweet and Hall-Merritt, they do not differ with respect to the paper version. Online publication makes a radical distinction with respect to paper. The product can be revised, refined and, above all, standardised throughout the project. It can also be enlarged by means of additional supplementary files and its users can suggest general improvements or point out minor flaws. Finally, through hypertext links (headwords and cross-references), the DOE allows its users to search the dictionary database and the 3 million word corpus with a web browser, both locally or online. While dictionaries in paper format must be checked manually, electronic dictionaries like the DOE can be consulted through several search options. These include the search by headword and within a given headword, but searches involving several headwords cannot be launched.

The DOE, with its database format, online access, search options, hypertext links and electronic distribution (compatible with constant revision), as well as its corpus of reference, not only incorporates the latest trends in electronic

lexicography but is also compatible with the standards of current work in corpus linguistics. Moreover, the exhaustivity of meaning definitions and morphosyntactic patterns, and the accuracy of the relation between meanings and forms make the DOE compatible with up-to-date linguistic research.

5. CONCLUSION

It could be debatable that lexicographical works published in a time span longer than a century are comparable at all. Moreover, contributions with different scope -a student's dictionary, a concise dictionary and two scholarly dictionaries- have been assessed as to the same standards. These considerations must guide the overall conclusion of this research because, while the DOE stands out as the most comprehensive work, this dictionary has benefited from a longer lexicographical tradition, a fully developed linguistic science and all the advances of the digital society. Furthermore, as a scholar no less than Henry Sweet (1976: vii) put it, "an unfinished dictionary is worse than useless". Leaving aside this question, BT deserves praise for its comprehensiveness, its treatment of irregularities and its etymological information; Sweet for its accuracy and lexical organisation; and Hall-Merritt for its balanced as well as consistent headword spelling. All in all, the DOE represents a remarkable contribution because, by fully conforming to the standards of electronic lexicography, has a corpus of reference, database format, online access, search options, hypertext links and electronic distribution (compatible with constant revision).

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