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Digitizing the Old English Anonymous and Wulfstanian Homilies through the *Electronic Corpus of Anonymous Homilies in Old English (ECHOE)* Project

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Abstract: This article first outlines the challenges involved in the editing of Old English anonymous and Wulfstanian homilies before introducing the *Electronic Corpus of Anonymous Homilies in Old English (ECHOE)* project. This new initiative at the University of Göttingen reverses the traditional collation of texts and instead celebrates the book-historical significance of every individual manuscript version, its textual and palaeographical idiosyncrasies, and its revisional layers up through c. 1200 AD. The project provides new forms of display to expose the complex interversional network of textual representations, and develops a range of digital tools to facilitate the identification and swift comparison of related passages. It includes digital facsimiles, palaeographical and rhetorical version profiles, and the Latin sources for each homily, creating opportunities for unprecedented research on the transmission, composition, variation, and performance of the fluid preaching text.

Key terms: Old English prose, homilies, sermons, palaeography, digital editing, variance, text encoding, *ECHOE*

1 The Textual Instability of the Homiletic Corpus

Anonymous and Wulfstanian homilies in Old English, composed, copied, and re-compiled between the ninth and early thirteenth centuries, are an exceptional

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literary genre.¹ Their chimerical textual nature is rooted in a paradox that concerns homilies in general: they are man-made texts supposed to communicate the timeless and unchanging truth of God's word to an ever-changing world that is constantly reshaped through human agency. This conflict between invariable purpose and changing contexts is text-immanent: on the one hand, codified Old English homilies rely extensively on the authority of a wide range of Latin sources, which they wish to preserve; on the other hand, they are repeatedly performed over time in recurring ritual contexts to changing audiences and are therefore revised and adapted in order to conserve their topicality and elocutionary force.² In other words, they are classical texts of use and reuse. As a corollary, the degree of textual *mouvance* (Zumthor 1972: 71–72 and *passim*) and *variance* (Cerquiglini 1989) in Old English anonymous and Wulfstanian homilies surpasses that of most other known genres of Old English and in fact almost every other contemporary genre of European literature.³

This textual fluidity becomes visible in a number of recurring phenomena: (1) in varying demarcations of textual borders and a flexible length of seemingly 'parallel' manuscript versions;⁴ (2) in considerable textual deviations or macro-variations between 'parallels'; (3) in frequent micro-variations between 'parallels' or even within one and the same manuscript version; or (4) in thematic echoes and eclectic reuses of specific textual units, sentences, or phrases across the entire homiletic corpus and beyond, resembling the (oral) formulaic nature of Old English poetry.⁵ A few brief examples may illustrate these points.

1 In line with early English terminological practice, 'homily' will be used in a holistic sense here, comprising homilies and sermons in their narrower senses as texts of catechesis and exegesis. On this problem, see, for example, Clayton (1985: 208) and Tristram (1995: 3). Apart from the broad anonymous tradition, *ECHOE* also includes all arguably original and non-original homilies associated with Wulfstan of York (d. 1023 AD), here comprehensively labelled 'Wulfstanian', because selective reuses of his works by others, as well as his own reuse of the works of others, are widespread and permeate into the anonymous corpus (Orchard 2007). The canon of Wulfstan's original works is still controversially debated.

2 For the sources of Old English homilies, see the *Fontes Anglo-Saxonici* Project, the *Sources of Old English and Anglo-Latin Literary Culture* (SOEALLC, formerly known as *Sources of Anglo-Saxon Literary Culture* [SASLC]) project, Scragg (1990), and Wright (2007a).

3 The textual fluidity of Old English homilies has been recognised, for example, by Godden (1975), Scragg (1977), or Irvine (2000).

4 I use 'parallel' in inverted commas throughout, meaning to highlight the indistinct nature of the term, whose accuracy with regard to medieval textual transmission is often a matter of subjective judgement.

5 For oral style in homilies, see especially Orchard (1992 and 1997: 109–111); on the controversial theory of exclusively "literate-formulaic composition", see Bredehoft (2009: xi and 104–145). Poetic traces in homilies have been identified by Trahern (1977 for 1975), Wright (2002), and others.

1.1 Changing Textual Borders

Contrary to its edition, Arthur Napier's (Pseudo-)Wulfstan homily XXII (1883: 112–115) is never demarcated as a separate text by any of its surviving manuscript versions.⁶ Titled *To folce* in Cambridge, Corpus Christi College, 201 (p. 21) and Oxford, Bodleian Library, Hatton 113 (fol. 62v), it is extended in both manuscripts by versions of the first part of Napier XXIV (1883: 119.12–121.5). The same extension also occurs in London, British Library, Cotton Tiberius A.iii (fols. 88v–90r), where a version of Napier XXII is further preceded by versions of Napier XX and XXI (1883: 110.8–111.15) and integrated into one item under the title *To eallan folke*. In the fourth 'parallel' manuscript version, CCC 419 (p. 234–251), Napier XXII appears under the rubric *Larspell* as part of one large item which unites versions of Napier XXI–XXIV (1883: 110.8–122.10). Evidently, Napier seems to have struggled with this identity problem and accordingly left homily XXII, as some other items of uncertain demarcation, untitled in his edition. Dorothy Bethurum's edition of the same material as her Wulfstan homily XIII (1957: 225–232) covers the sequence of Napier XIX–XXII, yet again not demarcated as such by any of the surviving manuscripts.

Such creation of an artificial *Idealtext*, albeit in less obvious fashion, can still be observed in Donald G. Scragg's *The Vercelli Homilies and Related Texts* (1992a), although his edition is one of the very few admirable attempts at including selective textual 'parallels'.⁷ As Scragg supplements the text of two missing leaves in Vercelli XVIII (1992a: 291–308) on St Martin from its 'parallel' manuscript version in the Blickling manuscript (Princeton, University Library, Scheide 71, fols. 130v–132r and 135rv), he silently introduces three Latin quotations into the text (Scragg 1992a: 299 and 397), although there is clear evidence across the rest of the Vercelli-based text that the homilist meant to avoid any Latin in this version, possibly because of the non-biblical source (Sulpicius Severus's *Vita Martini*) or his anticipated audience. Scragg's hybrid edition thus creates the illusion of a complete homily at the expense of the Vercelli homilist's original intention, without communicating this conflict to the reader.

⁶ Collations of Old English anonymous and Wulfstanian homilies are referred to by their established edition or manuscript reference (e.g. Napier, Tristram, or Vercelli) followed by their Roman item number or by the *DOE* short title as specified by Cameron (1973).

⁷ See especially his complex apparatuses to Vercelli II and IX (1992a: 52–65 and 158–184).

1.2 Macro-Variations

The end of Napier XXIII (1883: 116.1–119.11) offers a unique manuscript variant of more than 140(!) words that had to walk the paths of exile into the apparatus under the collated main text:

and we ::: beodaþ, þæt nan cristen mann ne beo butan sawelscætte (þe hit gelæstan mæi *ü. d. z. von and. hd.*) [and git *auf rasur*] we læraþ, þæt ælc cristen man beo arful fæder and meder and beo on gebeorhge earmum wydewum (*das y aus u*) and steopcildum and godes þeawum and godes þearfan. uton (nu *ü. d. z. von and. hd.*) on ælce wisan georne gode gecweman, þonne beorge we us sylfan wið ece wite and gegearnjaþ us heofonan rice. god ælmihtig us gefultume, þæt we hit gehealdan motan, þæt we motan becuman to þam ecan life, and wite ælc .b. be þam, þe he wille beon wiþ god geborgen, and wiþ Scē Peter, þæt ælc penig cume forþ of þam romfeo on his .b.scire and siþþan þam ærce.b. to handa on Cristes cyrcean; and, locahwa hit gewanje, þæt hit forþ na cume þam arce.b. to handa [:: si hit pr:: stre *am rande von and. hd.*], si he Judas gefera, þe Crist belæwde, amen. (Napier 1883: 118 n. 1)

‘And we [...] command that no Christian be without the fee for the deceased (whoever can pay for it *above the line in a different hand*) [And further on *erasure*] we teach that each Christian be respectful to father and mother and be a protector of poor widows (the *y* formed from a *u*) and stepchildren and of God’s servants and God’s needy. Let us (now *above the line in a different hand*) eagerly please God in every way, then we will shield ourselves against the eternal torment and earn the heavenly kingdom for us. May almighty God help us that we keep it [i.e. the command] so that we may come to the eternal life. And concerning this, each bishop who wants to be protected by God and St Peter shall know that each penny of the Rome-money [i.e. Peter’s Pence] come forth in his diocese and afterwards into the hands of the archbishop at Christ Church; and whoever embezzles it, so that it not came forth into the hands of the archbishop [...] be it a priest [...] *in the margins in a different hand*), be he a companion of Judas, who betrayed Christ. Amen’. (own translation)

This spectacular passage on the Peter’s Pence occurs uniquely in Tiberius A.iii, at fol. 91v. It contains an explicit reference to the archbishop of Canterbury at Christ Church, who warns bishops not to withhold the slightest amount of the tax. The direct reference to the cathedral monastery has been ignored by most previous scholarship, probably because the small print apparatus obscures this passage, which, like several others of its kind, is not (yet) part of the *Dictionary of Old English Web Corpus (DOEC)*.⁸ Nevertheless, Napier’s apparatus is remarkable for

⁸ For detailed descriptions of the manuscript, see, for example, Ker (1957, no. 186) and Gneuss (1997), who localise the manuscript correctly nevertheless. The *DOEC* is based mainly on the main texts of extant editions, thus often distorting or neglecting specific aspects of manuscript transmission.

its time because, unlike those of many other editions, it records annotations, the shift of scribal hands, and a letter modification, and it retains a few noteworthy scribal abbreviations. It is possible that the promised (1883: vi), but never finished, commentary volume to Napier’s edition as well as his personal confession to Karl Jost (1932: 265) that he was at a loss concerning the “Wulfstanfrage” are partly due to his struggle with the traditional corset of printed editions.

1.3 Micro-Variations

The beginning of Napier XXXII *Sermo de cena domini* (1883: 153.6–155.32), Bethurum XV (1957: 236–238), in Hatton 113 looks like this:

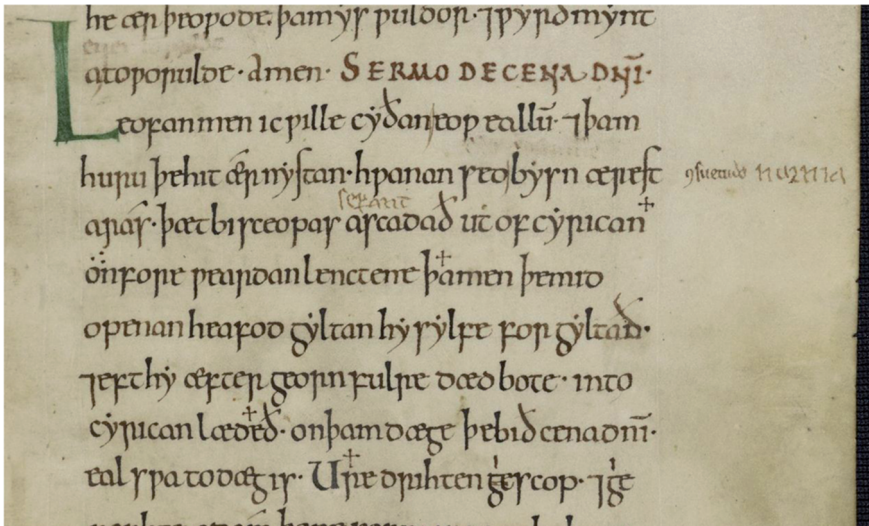


Figure 1: Oxford, Bodleian Library, Hatton 113, fol. 81r (detail). Omission markers at the beginning of a version of Napier homily XXXII. By kind permission of the Bodleian Library, Oxford

Apart from the familiar glosses by the Worcester ‘Tremulous Hand’, it is clear that contemporary interlinear crosses, perhaps even added by the main scribe Wulfgeat, mark the optional omission of the phrases *on foreweardan lenctene* ‘at the beginning of Lent’ and *on þam dæge þe bið cena domini. ealswa todæg is* ‘on the day that is *Cena Domini* [i.e. Holy Thursday], which is today’. Evidently, we have at least two performances of the text on the page here: one specifically for Holy Thursday, the other more flexible, probably *quando uolueris* ‘whenever one

wishes'.⁹ Neither Napier's nor Bethurum's maximum text editions comment on this alternative in any way.

1.4 Recompilation and Echoing

A typical homiletic apostrophe such as *Wa þam þe þær sceal wunian on wite* 'Woe to the one who must dwell there in torment', which frequently entails a *Betere him wære [...]* 'It would be better for him [...]'-sentence, can be traced for its 'parallels' separately in Bethurum III and VII (three manuscript versions each), as well as XIII (four versions), but not collectively across all ten versions.¹⁰ Nor would any extant critical edition indicate that, in addition, this sentence collocation also occurs in varying contexts in homilies Napier XLII (two versions), Napier XLIII, and HomU 30 (TristrApp 2).¹¹ Not to mention questions of hidden near-sameness of a sequence such as *Wa þam þe þær sceall wunian on witum. Him wære betere [...]* as in the Oxford, Bodleian Library, Junius 121 version of Wulfstan's *Institutes of Polity* (Jost 1959: 108.143).

Likewise, shorter composite units as in art. 5 in London, Lambeth Palace Library, 489 – a catena of various Ælfrician material, mainly from his First Series Catholic homily on the Lord's Prayer, and selective parts of homilies Napier V (c. 60 words), XIX (c. 60 words), XXIV (c. 60 words; see above p. 130), XL (c. 50 words), and LVII (c. 100 words) – are covered neither by Napier's nor Bethurum's apparatuses.¹² The homily in its entirety and singularity is still unpublished and will appear as ECHOE 283.5.

2 Digital Text Model and Editorial Approach

This handful of examples may sufficiently demonstrate that there is no panacea to the complex issues faced by editors of Old English. They show that a 'classical' editorial approach to non-Ælfrician homilies must inevitably clash with their evident mutability and cannot serve a deeper understanding of the textual dynamics

⁹ On varying regulations on and practices of public penance in early medieval England, see Bedingfield (2002). For similar cases of alternative performances in Hatton 113, see Rudolf (2012: 62–84).

¹⁰ See Bethurum (1957: 126.68–70, 162.124–125, 230.87–89 and related notes), where no intertextual relations are indicated.

¹¹ See Napier (1883: 203.15–17, 209.19–22) and Tristram 1970: 437.185–187).

¹² For full details of the piece's composition, see Ker (1957: 344).

of this genre.¹³ This dilemma surrounding the uncertain parameters of ‘text’, ‘authorship’, and ‘work’, which we have seen in Napier and Bethurum above, seems to have been responsible for the piecemeal editing of the anonymous and Wulfstanian corpus over the past 180 years: more than 80 different print editions – from prestigious EETS volumes, to single journal articles, to unpublished dissertations – cover about 350 manuscript versions, with some unpublished homilies still being only accessible as *DOEC* transcripts.¹⁴ These editions differ considerably in quality and practice and hardly any of them seeks to expose, rather than conceal, the textual fluidity of the Old English homily.

Key to acknowledging this fluidity is to resist the creation of idealised collations through text maximizing and eradication of ‘errors’ and instead to respect each imperfect individual manuscript version and its multiple performances on the written page as part of a non-hierarchical community of interrelated representations, which together constitute the ‘multiform text’ (Slotkin 1979: 442; Tristram 1995: 4).¹⁵ This network of textual links knows the full spectrum of relations, from almost apographic ‘parallels’ to partial overlaps to distant echoes in technical phrase or parenetic formula. Once we accept this individual text model and respect the genre’s hypertext nature, we must recognise the evident spatial and temporal limits of print editions.¹⁶ These editions can only be altered with great difficulty and are therefore medially compelled to present a static idealised text, often estranged from its manuscript realities, a text that can neither be improved nor socially commented on over time.¹⁷

The answer to this problem must no doubt be a digital solution. To respect and celebrate the book-historical idiosyncrasies of individual manuscript versions, to expose their known and hidden relationships within the entire network of surviving homilies, and to provide unprecedented tools for the study and ana-

13 This is not to say that the ‘classical’ or indeed any other editorial approach may not serve other genres of Old English literature better than the homilies. See, for example, Lapidge (1991) and Gneuss (1998: 128).

14 For an incomplete overview of available print editions, see Bately (1993). The *ECHOE* project currently counts twelve homilies available only as *DOEC* transcripts.

15 It is necessary to introduce the concept of the single ‘manuscript version’ as distinct from ‘version’ or ‘Fassung’ as established by Bumke (1996: 32) for the *Nibelungenklage* or Stolz (2016: 354–359) for Wolfram von Eschenbach’s *Parzival*, because these texts show a significantly lesser degree of *variance*.

16 On the spectrum of text models and forms of digital editions and the necessity of specific text-definitions in relation to genre, see, for example, Robinson (1996) and the seminal study by Sahle (2013: III, 1–98).

17 For a very useful and comprehensive bibliography on the theories of traditional editing, see Sahle (2013: III, 421–452). On social scholarly editing, see Price (2016).

lysis of the compositional procedures and dynamic variations between any two or more textual representations in the corpus are the main objectives of the *ECHOE* project.¹⁸ In its theoretical approach, the project thus tries to respond to Susan Schreibman's (2002: 287–291) concept of 'versioning', i.e. the quality of all documents participating in a 'work', with aspects of reception theory, i.e. of situating literature "in the larger continuum of events" (Holub 1995: 322), by partly recording and exposing data on the revisional layers of manuscripts. *ECHOE* assumes a continuum of existences of 'document', 'text', and 'work' (see Robinson 2013: 114) for the homilies that can only be mapped as digital multiform text. Often facing the issue of overlapping hierarchies, as in the uncertain demarcations of textual borders (see Section 1.1 above), *ECHOE* is also critical of the theory of the digital text inevitably being an "ordered hierarchy of contents objects" (known as OHCO, see Renear 1997), sharing the objections of Sahle (2013: III, 159–183 and *passim*) and Schreibman (2013).

Despite their evident flexibility, digital editions and corpora such as *ECHOE* face their own problems of imposed normativity, urged by recurrent calls and practical necessities for standardisation of metadata and transcription (Driscoll and Pierazzo 2016: 7–8; Sahle 2016: 34–35), at the risk of repeating some of the mistakes of the past (Pierazzo 2016: 44). However, extant international consortia such as the Text Encoding Initiative (TEI) attempt to negotiate the conflicts between individual editorial projects and their specific needs as well as the technological alignment to the global medium of the internet. Still, it seems that the teleology of establishing global standards is to work towards ever bigger, collectively searchable accumulations of often gravely different types of data. These growing standardised repositories then pose new epistemological, statistical, and ethical problems to which *ECHOE* seeks to give a mindful response. The project upholds the principle that editions of ancient texts – ultimately remaining as individual as the identities of their editors – must primarily serve the understanding of the original material text in context and educate the reader towards a comprehensive transcultural empathy, no matter which specific digital editorial model is chosen.

18 On the challenges of dynamic digital display of text-critical aspects and revisional layers, see, for example, Rehbein (1999), Robinson (2013), or Schäuble and Gabler (2018).

3 *ECHOE* – The Project

The *Electronic Corpus of Anonymous Homilies in Old English (ECHOE)* project first began in 2015 as a collaborative initiative between the University of Göttingen and University College London, aimed at digitizing the Blickling and Vercelli homilies and related texts, sponsored by the Alexander von Humboldt-Foundation through its Anneliese Maier-Forschungspreis, awarded to Professor Susan Irvine (University College London) in the same year. Since September 2018 the project has received funding from the European Research Council under the European Union's Horizon 2020 research and innovation programme (Grant No. 772744). It is now located at the University of Göttingen, with the author acting as its principal investigator. *ECHOE's* main aim is to create a complete corpus and user-friendly edition of all anonymous and Wulfstanian homilies as well as anonymous saints' lives, juxtaposed with their digital facsimiles and Latin sources, and to develop new digital tools that allow fresh insights into the complex homiletic network and its strands of transmission.¹⁹ In the following I will outline some of the project's architecture, challenges, and aims, cautiously reminding the reader of its 'work in progress'-status.²⁰

3.1 Taxonomy

ECHOE seeks to establish a standardised, yet inclusive taxonomy for the corpus that foregrounds the single manuscript version, no matter how fragmented. It is trying to overcome the inconsistent nomenclature of the past, which designated single homiletic versions or collations indifferently by either manuscript (e.g. Blickling, Vercelli), first editor (e.g. Bazire-Cross, Irvine, or Tristram), or a rather technical *DOE* short title (e.g. HomU 12, HomM 1). Each of the c. 350 versions receives an *ECHOE* number based on N. R. Ker's *Catalogue of Manuscripts Containing Anglo-Saxon* (1957) by manuscript number and item (e.g. *ECHOE* 228.3 for Byrhtferth's[?] *Ammonitio amici*), but is also accompanied by a header that contains comprehensive metadata on the textual identity, such as the exact manuscript reference and short title, the original manuscript rubric, previous designations of standard print editions, the nearest *DOE* short title and Cameron number,

19 I adopt Sahle's (2016: 35) definition of an 'edition': "As soon as the publication makes a substantial amount or percentage of the intended documents or texts available so that it can be fruitfully used in research, we may call it an edition".

20 Front-end representations and citations of *ECHOE* data are according to the extant alpha-version at <echoe.uni-goettingen.de>, which does not represent the final result of the project.

as well as references to the preceding and succeeding items in the manuscript and the specified occasion. In future outputs from the corpus the *ECHOE* number will occur in combination with the manuscript short title and a formerly established label (e.g. “*ECHOE* 49B.37 – CCCC 201 – Napier XL” for the CCCC 201 version of Napier XL). Quotations from the corpus add the sentence number to the *ECHOE* label. This taxonomy honours the merits of past scholarship and preserves familiar points of orientation, while shifting the focus towards the single manuscript representation as well as opening up the possibility of adding further Old English texts to the corpus by the same taxonomy in the future.

3.2 Transcription, Encoding Standard, Database, and Data Storage

In the first instance, every edition is only another copy of the text, complementing the already extant physical representations that “map the text’s path in the world” (O’Brien O’Keeffe 1994: 153). In the modern age, transcribing ancient documents means graphically to translate idiosyncratic handwriting for the inexperienced reader into a better readable, but therefore standardised, form of graphic code. What is sacrificed in this process are the human singularities of the handwriting of medieval scribes and the historical specifics of individual book layout. Habit as much as economic reasons have forced the print editions of the past two hundred years gradually to iron out most palaeographical traces of Old English minuscule. Whereas Thorpe’s 1842 edition of the Exeter Book still employed an expensive imitative Old English font, modern editions of Old English texts are even more standardised now and almost always retain only the **ð/p** distinction plus the Tironian note 7. They also frequently introduce modern punctuation and expand abbreviations. A good deal of valuable data about the text is thus carelessly obliterated.

One of the major advantages of digital editions is that they can preserve important historical aspects of manuscript books through a range of different outputs of the text, including such where a number of palaeographical features of the layout and script can be preserved, as long as these features are consistently transcribed and encoded. *ECHOE* is fully aware of the prescriptiveness of this process and the remaining standardizations it will nonetheless produce in its online form (see above, p. 136). Still, it tries to be less patronizing to the modern reader by encoding some essential features of the script and layout, including coloured initials and their size, peritext, original line length and number per page, as well as the concurrent letterforms of Old English vernacular minuscule, such as three forms of **s** (*ſ*/*f*/*s*), **ð** vs. **þ**, and three forms of **y** (*y*/*ȳ*/*f-shaped*). This specific gra-

phemic inconsistency of Old English minuscule scripts is fortunate with regard to individual scribal profiling and text mining (see below, pp. 145–146). Further valuable data comes from at least ten different types of punctuation and all types of abbreviation used both in Old English and Latin quotations, which *ECHOE* encodes too. The project further records all accent marks and all textual interventions by hands datable to before the year 1200 AD.²¹ Markup categories include erasures, substitutions, additions, and letter modifications, all of which are given place and hand specifications.²² Main and revising hands are classified by DigiPal hand numbers, whenever available, or are freshly designated in correspondence with this project.

To produce meaningful and manageable outputs for the user, *ECHOE*, like the *DOEC*, encodes sentences, the demarcation of which poses one of the main challenges to the project. To serve the user of the corpus best, sentences need to have a certain length in order to provide enough context for the reader, but they must not be too long lest they impede easy comparison with other related sentences. *ECHOE* strives for a good compromise in length (ideally c. 10–30 words) using a mix of criteria in its decision making, such as original manuscript layout and punctuation, correspondence with the Latin source sentence or Old English ‘parallels’, and, of course, basic syntax. Sentences can always also be studied in views that display their wider context.

Thematic and rhetorical markup categories of *ECHOE* include, among other things, all personal names and place names, all forms of address (e.g. *Men þa leofestan* ‘Dearly beloved’), metacommunicative phrases (e.g. *swa we ær cwædon* ‘as we said before’), all forms of first and second person pronouns in singular and plural (e.g. *ic, þin, we, us, eower*), doxologies, enumerations (e.g. *7 forlætan we morþor 7 man. 7 oferhydyg 7 æfeste 7 idel gilp* etc. ‘and let us forsake murder and evil, and arrogance and envy and vain boasting’), binomials (e.g. *gescop and geworhte* ‘created and made’), exclamations (e.g. *Eala, þu man* ‘O, you human’, *la hwæt* ‘lo, listen’), Latin quotations, and rhythmical or poetic passages.²³

21 The project excludes, for example, the copious annotations by the Worcester ‘Tremulous Hand’, which have been dated to the mid-thirteenth century by Ker (1937) and studied by Franzen (1991). A comprehensive collection of data on this important ‘re-user’ of Old English homilies and other texts is currently being carried out by David F. Johnson (see Johnson 2019).

22 Identifying individual revising hands is sometimes extremely difficult because of the limited amount of text. *ECHOE* is nevertheless trying to ascribe and match interventions as far as possible, among other things with the help of DigiPal and Scragg’s *A Conspectus of Scribal Hands* (2012).

23 On bilingual aspects of Old English anonymous homilies, see Rudolf (2015). For poetic passages in anonymous homilies, see above n. 6. On markup categories and version profiles, see below, pp. 142–144.

All transcription and encoding is carried out in XML according to the “TEI P5 standard”.²⁴ The *ECHOE* web portal will run on a virtual server located at the Göttingen Association for Scientific Data Processing (GWDG) and can be accessed at <<http://echoe.uni-goettingen.de>>.²⁵ All XML files are converted and stored in the project’s database. The database will contain different tables for texts and sentences, with each table containing diplomatic, semi-diplomatic, and normalised versions of the content as well as fields for metadata for each version of the corpus, including all header information outlined above (see p. 136–137), manuscript date, origin, and provenances, information on scribes and revisers, and comprehensive bibliographical data. GWDG run a rigorous backup service and guarantee long-term access to the data. *ECHOE* documents its project development in extensive guidelines, designed to facilitate future encoding of other genres of Old English prose.

3.3 Front End – Reading, Studying, and Comparing Versions

Editing the Old English anonymous and Wulfstanian homilies in the twenty-first century must first assist the understanding of the complex multiform text, which is essentially a community of equal interrelated versions. This means to provide a transparent introduction and easy, almost self-explanatory access to the complex system of intricate relationships between homiletic versions. One of the basic views of *ECHOE* is the version view, in which any two or more versions can be selected and compared with each other (see Figure 2).

Searchable header information can assist the user in finding the classical ‘parallel’ versions by edition or related versions in the manuscript. *ECHOE* will offer as a default two diplomatic outputs, in which specific letterforms of the vernacular minuscule, abbreviations, and original punctuation are reflected, and a normalized output, in which, for example, the different forms of **s** and **y** are standardised, **p** becomes **w**, and abbreviations can (but need not) be dissolved. The project also provides open access to digital manuscript images for all encoded texts, either from its own servers or embedded through the International Image Interoperability Framework (IIIF). Images can be juxtaposed with the digital text or with each other for swift comparison. In the transcriptions all individual hands

²⁴ *ECHOE*’s content developers work in oXygen XML Editor and store their work on a remote server with Subversion version control.

²⁵ The portal is a Java servlet running under Apache Tomcat, backed by a MySQL database. To speed up response times, the XML is preprocessed into HTML via XSLT, rather than being processed on demand.

The screenshot shows the ECHOE web interface. At the top, there is a navigation bar with the ECHOE logo and the text 'Electronic Corpus of Anonymous Homilies in Old English'. Below this is a 'Version Selection' dropdown menu. A table lists four versions with their IDs, call numbers, and names. The first version (49B.37) is unchecked, while the others (68.8, 144.1, 331.82) are checked. Below the table, three panels are displayed side-by-side, each showing a different version of the text 'Napier homily XL'. The first panel (CCCC 419 art. 8) shows the text in a standard font. The second panel (Cleo B.xiii art. 1) shows the text with a blue highlight around the words 'LEOFAN MEN' and 'UTAN DON'. The third panel (Hatton T14 art. 82) shows the text with a blue highlight around the words 'LEOFAN MEN' and 'UTAN DON'.

| ID | Call Number & Article | Name |
|-------------------------------------|---------------------------|------------------|
| <input type="checkbox"/> | 49B.37 CCCC 201/B art. 37 | Napier homily XL |
| <input checked="" type="checkbox"/> | 68.8 CCCC 419 art. 8 | Napier homily XL |
| <input checked="" type="checkbox"/> | 144.1 Cleo B.xiii art. 1 | Napier homily XL |
| <input checked="" type="checkbox"/> | 331.82 Hatton T14 art. 82 | Napier homily XL |

Figure 2: The *ECHOE* version comparison view, normalised output (alpha version) © *ECHOE* (University of Göttingen) 2020

on the page can be highlighted in distinctive colours. Revisions can be dynamically faded in and out of the main text, including text originally marked for optional omission (see Section 1.3 above).

ECHOE also provides the identifiable Latin source text for each Old English sentence in the corpus, which can be juxtaposed in the version view. The closest source text will usually be given (e.g. not John Chrysostom's original Greek homily 29 on Hebrews, but Mutianus's Latin translation of the text as source for Vercelli VII).²⁶ The Latin text is selectively quoted from standard editions and, in some cases, even provided from the closest original manuscript redactions known to date (see, for example, Wright 2007b). Summaries for each version (e.g. including the transmission from John Chrysostom to Mutianus) allow the user to gain a quick overview of the compositional structure, the different Latin authors and works participating, but also the as yet unsourced sentences and passages. Important bibliographical details on previous source scholarship is also provided.

²⁶ For the identification of the Greek source and its Latin translation as well as a parallel edition in print, see Zacher (2009: 98–149).

4 Exploring the Corpus

4.1 The *ECHOE* Search Engine and Text Comparison Tools

One of the key features of the *ECHOE* project is the development of a specific search engine that is insensitive to the lack of a standard orthography of Old English texts. At its core the engine represents each text as a numerical vector and compares them against search strings using a distance metric called ‘cosine similarity’, common in modern information retrieval (Singhal 2001). Results with the highest cosine similarity are considered matches. This engine will allow the user to enter any string of words from any version, receiving an output of sentences that is both meaningful and ordered gradually by degree of similarity. These outputs will not only help to identify the ‘parallel’ sentences already known from the standard print editions, but will add to those hitherto undiscovered textual ‘parallels’ and even distant formulaic ‘echoes’ between various versions. *ECHOE* leaves it to the user to decide at what point they would stop to consider a specific sentence a ‘parallel’ or only a distant ‘echo’ of another (see Section 1.4 above). The search engine, once completed and available as open source software, may hopefully be able to support other digital projects and editions of Old English texts in the future and help to interlink them with the *DOE* as the central lexicographic hub in the field.

From the search engine output users will then be able to select specific sentences – no matter how divergent from each other – and move back to the version view, where they can study newly discovered overlaps or echoes between versions in their wider version contexts and in their manuscript chronology. They can also apply various analytical tools to a selection of sentences, such as a text-comparison tool that highlights the unique parts of a version sentence (up to the level of individual spelling) in comparison with one or several others in the sentence view. *ECHOE* will plug in the CollateX open source tool (see Figure 3) to achieve this, which – despite the project’s focus on the unique variant – can also assist users interested in the textual criticism, stemmatical analysis, and emendation of specific sentences or entire versions.²⁷

ECHOE tries to overcome the deficits of printed critical apparatuses in various ways: on the one hand, the sentence view provides a better overview of the context of more specific variants and is much better suited to understand changes of word order; on the other hand, the digital apparatus retains not only the spel-

²⁷ See <<http://collatex.net>> and Dekker et al. (2015).

The screenshot shows the ECHOE web interface. At the top, the logo 'ECHOE' is displayed, followed by the text 'Electronic Corpus of Anonymous Homilies in Old English'. There are links for 'Versions' and 'About'. Below the header, the 'Sentence Group 144.1.1' is shown, with two versions: 'Cleo B.xiii s. xi (3rd quarter)' and 'Hatton 114 s. xi (3rd quarter)'. The main text area displays the sentence 'LEOFAN MEN' in green, followed by its Old English text in two versions. Below the text is a collation diagram showing the relationship between the two versions. The diagram consists of several nodes and arrows. The central node is 'Leofan men utan don swa us'. Arrows point from this node to 'Cleof B. xiii' and 'Hatton 114'. From 'Cleof B. xiii', an arrow points to 'ðearf'. From 'Hatton 114', an arrow points to 'mycel þearf'. From 'ðearf', an arrow points to 'is'. From 'mycel þearf', an arrow points to 'is'. From 'is', an arrow points to 'Cleof B. xiii, Hatton 114'. There are also arrows pointing from 'Cleof B. xiii, Hatton 114' to the central node and from the central node to 'Cleof B. xiii, Hatton 114'.

Figure 3: The *ECHOE* sentence view, normalised output and collation tool of two versions of Napier homily XL (alpha version) © *ECHOE* (University of Göttingen) 2020

ling but also the decisive palaeographical features of variants, specifically the concurrent letterforms and abbreviations. This helps to refine cladistic analyses of the exact degree of relationships between single sentences, partial or complete versions and, potentially, even entire manuscripts (see Table 1 below). The data apparatus of *ECHOE* therefore allows users to identify not only matches of variants in wording and spelling, but also in letterform use and in corresponding abbreviation habit and instance.

4.2 Text-Mining Tools

The rich markup of the corpus allows for a number of quantitative analyses in the areas of palaeography, sources, composition, variation, style, and rhetoric. Users can access individual version profiles which will provide data in the following “*ECHOE* Profiling Categories”:

Basic Data

- Manuscript origin and provenance
- Version length in words
- Number of sentences
- Relation Old English/Latin: number of Latin quotations, total of Latin words, average in relation to version length

Palaeography/Codicology

- Number, identities, and dates of main text hands and length of their stints
- Number, identities, and dates of revising hands and length of their stints
- List of corpus versions in which main or revising hands also occur
- Total number of additions, substitutions, erasures and their averages in relation to version length
- Lines per page: max/min/average
- Words per line: max/min/average
- Letters per line: max/min/average

For each Main and Revising Hand

- Distribution of **ð/p** in %; incl. beginnings/ends of words and in relation to compositional structure of the version
- Distribution of **ç/f/s** in %; incl. beginnings/ends of words and in relation to compositional structure of the version
- Distribution of **y/ÿ/f-shaped** in % in relation to compositional structure of the version
- Punctuation: types, frequency, distribution
- Capitalisation and initials: types, frequency, distribution
- Abbreviations: types, quantity, variety, distribution in version and on folio
- Old English/Latin minuscule types used
- Titles, marginal rubrics, and other peritext
- Additions, substitutions, erasures, letter modifications: total number, average in relation to version length and distribution in relation to compositional structure and their averages in relation to version length
- Accents: total number, average in relation to version length and distribution in relation to compositional structure

Sources

- Sources/authors contributing: quantity, variety
- List of other versions in the corpus using the same source(s)
- Closest manuscript redactions if known (origin/provenance)
- Identification of known manuscripts containing a pool of sources of a homily or cluster of homilies
- Number of main compositional units as determined by source or deviation from Old English ‘parallel’

Rhetoric/Style/Performance

- Pericope/catechetical topics
- Liturgical occasion: references
- Homiletic address: types and frequency
- Doxologies: types and frequency
- Exclamations: types and frequency
- Word cloud of most frequent words used
- List of most frequent collocations of words
- List of rarest vocabulary
- Use of first and second person pronouns: types and frequency
- Enumerations: types and frequency
- Binomials: types and frequency
- Metacommunicative phrases
- Poetry/rhythmical passages: length in relation to version length; list of sentences
- Accentuation: list of words accentuated

Encyclopaedic Information

- Names
- Places
- Numbers

This core information is decisive in revealing new aspects of a version's composition and its exact location within the hypertextual homiletic network. *ECHOE* will further enable the collective extraction of all instances of a single reviser's textual interventions, not just across a single version, but throughout a whole manuscript, or even the entire corpus. This will produce unique user-specific data and reveal linguistic, socio-cultural, theological, or political agendas of revision, in dialogue with extant variants in 'parallel' versions.

Unlike traditional stemmatics, distributive data in certain categories will also make it possible to put an exact figure to degrees of similarity between versions and even refine the analytical grid to compositional units or single sentences within single versions. This last point is of particular importance when we want to respect in full the eclectic nature of Old English homilies. While classical stemmatics often silently assumes that a copy of a text was taken from a *single* exemplar, the specific source situation as well as the palaeographical specifics of some Old English homilies indicate, however, that exemplars were changed not only between but also within single items of manuscripts during (re)compilation. *ECHOE* will therefore highlight shifts of scribal hands, notable changes of scribal habit in the choice of concurrent letterforms or types of ab-

breviation within one and the same scribal stint, and the accumulation of revisions, corrections, or accent marks within different sectors of a single version through dynamic diagrams.²⁸ Preliminary research shows that some versions indeed seem to conserve some crucial elements of the palaeography of their exemplars and that some were evidently drawn from several exemplars (see Rudolf 2015: 278).

ECHOE will facilitate analyses of the distribution of scribal abbreviations on the manuscript page. Here again, dynamic diagrams can show if a statistically significant majority of abbreviations occurs in the rightmost third of the page or if abbreviations are evenly distributed. The former would suggest scribal economy during the copying process, whereas the latter – in dialogue with other versions – could indicate the preservation of a number of abbreviation instances as found in potential exemplars. This data, alongside matches in spelling and text variants, will improve the cladistic analyses and pose new questions on the constraint ranking of transmission criteria of individual versions, as in the following example:

Table 1: *ECHOE* analysis of Wulfstan’s autograph spellings and abbreviations in relation to later versions of Napier homily XXV

| <i>ECHOE</i> Scribal Profiles | 130.d | 49B.10 | 186.19i | 331.21 |
|--|-------------------|-----------------|-----------------------|-------------------|
| | Add. 38651 | CCCC 201 | Tiberius A.iii | Hatton 113 |
| | 1002 × 1005 | s. xi med. | s. xi med. | 1062 × 1070 |
| Letterform Distribution | (autograph) | Napier XXV | Napier XXV | Napier XXV |
| <i>s</i> total | 70 | 54 | 54 | 56 |
| <i>s</i> long | 69 | 10 | 52 | 25 |
| <i>s</i> descending | 1 | 44 | 2 | 29 |
| <i>s</i> round | 0 | 0 | 0 | 2 |
| Ratio <i>s</i>-long/<i>s</i>-descending | 69.00 | 0.23 | 26.00 | 0.86 |
| <i>ð</i> total | 28 | 31 | 19 | 36 |
| <i>ð</i> initial position | 0 | 4 | 0 | 8 |
| <i>ð</i> non-initial position | 28 | 27 | 19 | 28 |
| <i>þ</i> total | 45 | 31 | 36 | 39 |
| <i>þ</i> initial position | 42 | 31 | 31 | 36 |
| <i>þ</i> non-initial position | 3 | 0 | 5 | 3 |
| Ratio <i>ð</i>/<i>þ</i> | 0.62 | 1.00 | 0.53 | 0.92 |

²⁸ For such dynamic diagrams of revisions by the thirteenth-century Worcester ‘Tremulous Hand’, see Johnson (2019: 236–245).

| <i>ECHOE Scribal Profiles</i> | 130.d | 49B.10 | 186.19i | 331.21 |
|---|-------------|------------|----------------|-------------|
| | Add. 38651 | CCCC 201 | Tiberius A.iii | Hatton 113 |
| | 1002 × 1005 | s. xi med. | s. xi med. | 1062 × 1070 |
| Letterform Distribution | (autograph) | Napier XXV | Napier XXV | Napier XXV |
| <i>y</i> total | 30 | 15 | 16 | 26 |
| <i>y</i> undotted | 30 | 0 | 0 | 1 |
| <i>ẏ</i> dotted | 0 | 10 | 16 | 25 |
| Spellings/Abbreviations in Corresponding Parts ²⁹ | | | | |
| <i>hefenum</i> | 1 | 0 | 0 | 0 |
| <i>hy</i> | 5 | 1 | 1 | 5 |
| <i>sy</i> -spellings (<i>sy</i> , <i>sylfe</i> , <i>syððan</i> etc.) | 6 | 1 | 2 | 6 |
| corresponding <i>þæt</i> -abbreviation | 12 | 11 | 7 | 1 |
| corresponding <i>þonne</i> -abbreviation | 4 | 3 | 2 | 0 |
| corresponding <i>-m</i> -abbreviation | 5 | 5 | 2 | 1 |

Comparing Wulfstan's autograph in London, British Library, Additional 38651, fol. 58r–v to later 'parallel' versions of Napier XXV (1883: 122–124) we note varying individual correspondences in wording. While the version in Tiberius A.iii largely matches the beginning (Napier 1883: 122.12–123.11) of the autograph, the other two 'parallels' are closer in a later description of the crucifixion (Napier 1883: 124.5–6). All three Wulfstian versions also show notable deviations from the autograph, which itself contains an independent part in the middle and most probably a different ending.³⁰ With regard to concurrent letterforms the scribe's preference in Tiberius, A.iii tallies best with Wulfstan's preference of long **f** and initial **þ**, but notable autograph-spellings of *hy* 'they' and *sy*-forms (e.g. *sy* 'be', *sylfe* 'self', *syþþan* 'afterwards, next') show precise correspondence with the version in Hatton 113, while CCCC 201, in turn, retains almost all abbreviations of *þæt*, *þonne* and *-m* exactly(!) where the autograph has them. Users of *ECHOE* can study such detailed palaeographical information in relation to the specific textual variants in order to reassess the transmission process of these Wulfstian adaptations, depending on which of these palaeographical criteria they consider to be

²⁹ For preferred letterforms and typical spellings of Wulfstan that explain the above selection criteria, see Ker (1971: 316–319), Dance (2004: 35–36), and Rudolf (2019: 270–271).

³⁰ For the independent parts, see Rudolf (2019: 294, fol. 58r19–23 and 296, fol. 58r35–58v3).

the least scribal. Traditionally, critical apparatuses have not provided such extra information, nor would they allow for a swift extraction and interversional comparison of this data.

The source information gathered in the profile provides access to a version's links with other versions that depend on the same source(s), even if these versions are not using the exact same passage. Collecting all the source and author information will allow us to reconstruct the 'preaching library' that was used by Old English homilists to compose a single version, the versions in a particular manuscript, or the corpus as a whole, and it will rank the most frequently used source passages. In the case of known manuscript redactions that seem to stand closest to a version or one of its parts, specifications of the manuscript origin and provenance(s) will supplement the data extracted from the palaeographical categories and thus open up new ways of looking at the transmission of a source from the Continent to England. Once the clusters of Latin sources used in the composition of a specific Old English homily or a set of versions in a manuscript are revealed, they can guide researchers to identify specific manuscripts that assemble these sources, as in the fascinating case of Vatican City, Biblioteca Apostolica Vaticana, Pal. lat. 220 (s. ixⁱⁿ, middle or upper Rhine area?, Reichenau?, in Lorsch around 900 AD), a Continental manuscript with strong Anglo-Saxon influence, which unites a conspicuous number of sources used in the composition of homilies in Oxford, Bodleian Library, Junius 85/86 (s. ix^{med}; O'Sullivan 2011: 103–147).

The rhetorical and stylistic markup categories are designed to profile the style of individual versions and their homilists. The frequency of use of the homiletic address, of imperatives and of referential personal pronouns all help to profile the specific performative tailoring of individual versions. They can, for example, expose revisions from inclusive *we/uton*-addresses to the more distanced second person *eow* between 'parallels', or reveal an increase of *Nähesprachlichkeit* through the accumulation of addresses and metacommunicative phrases.³¹ Word clouds specifying the most frequent as well as the rarest vocabulary, recurring collocations, and doublets promise new data to support the stylistic matching of versions, thus potentially enabling the identification of new homilists.³² Poetic passages will be highlighted and interlinked with the CLASP project at the University of Oxford.

The *Dictionary of Old English (DOE)* is one of the main collaborators of ECHOE. It will profit from ECHOE's consequent recording of all manuscript versions and

³¹ On criteria of *Nähesprachlichkeit* in conceptual and medial orality, see the important study by Koch and Oesterreicher (1985: 15–43).

³² For an exemplary study that argues for the common authorship of a group of four anonymous homilies, see Scragg (1992b).

their variants, which will extend the *DOEC* by several thousand words and provide hundreds of new spelling variants for the dictionary. In exchange, the *DOE* assists the *ECHOE* project in sourcing the homilies and shares lexicographical data to help design the *ECHOE* Search Engine and to work towards the future lemmatizing of the entire *ECHOE* corpus.³³

5 Conclusion

With regard to book history, *ECHOE* is hoping to break some new ground in the editing and analysing of Old English anonymous and Wulfstanian homilies by shifting the focus on the dynamic manuscript representations of the single version. Celebrating the textual multiform of Old English homilies, whilst providing easily accessible gateways into the complex network of interrelated versions, *ECHOE* is aiming to become the central resource for the study of non-Ælfrician Old English preaching texts. Flexible displays, comprehensive data, and swift text comparison in manuscript and digital transcription will offer the user unprecedented insights into the processes of palaeographical, linguistic, socio-cultural, and theological transformations. The corpus is hoping to set a benchmark for all those editorial projects interested in the value of such dynamic transformations in medieval books and their texts for the understanding of the period, rather than in the creation of hermetic and idealised editions designed to satisfy the habits of the modern reader through a deceptively ‘perfect’ representation of a static text. *ECHOE* is further aiming to increase its outreach to non-specialist audiences through a number of Modern English translations.

Although tools for text-critical assessment will also be provided, the project acknowledges human imperfection and goes to bat for more transcultural empathy towards the often scarred and fragmentary handwritten text by asking twenty-first-century readers for a more active critical engagement with various historical text-representations through independent comparison and analysis. The rewards of this activity will not be a long time coming. *ECHOE* is especially aware of the risks of potentially limitless automation in the digital humanities.³⁴ It will strive for a comprehensive, yet balanced quantitative and qualitative evaluation of textual variation that will help distinguish idiosyncrasies in content and style from the common textual ground of homilists, without hiding controversial data or

³³ *ECHOE* is further aiming to interlink its online resource with *PASE: The Prosopography of Anglo-Saxon England Database* at <pase.ac.uk> and *Early English Laws* at <earlyenglishlaws.ac.uk>.

³⁴ On this topic, see especially Hassner et al. (2013) and Stokes (2015).

suppressing false positives. Commensurate with expectations in present-day digital scholarship, the corpus, after its completion in 2023, will remain open to social extension and correction as well as the addition of further Old English prose in the future, as it warmly invites scholars of all trades and backgrounds world-wide to contribute to its hopefully long-lasting success.³⁵

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³⁵ I acknowledge with thanks the support of ECHOE team members Thomas N. Hall, Julia Josfeld, Paul S. Langeslag, Julie K. Kraft, Esther Lemmerz, Bente Offereins, Carolina Ruthenbürger, Sabine Rauch, and Grant L. Simpson as well as Susan Irvine at UCL in preparing the corpus and this publication. This paper is dedicated to Donald G. Scragg.

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