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The Author and the Authors of the *Vita* *Ædwardi Regis*: Women's Literary Culture and Digital Humanities

Abstract

Commissioned by Queen Edith in the 1060s, the *Vita Ædwardi Regis* (hereafter *VER*) has recently received substantial scholarly attention, including focus on identification of the author of this putatively anonymous text; the quest for authorial identification has until now proceeded with the assumption of sole authorship of the text. Lexomics, an open-access vocabulary analysis tool, adds digital strategies to more traditional literary and historical analyses; the Lexomic evidence indicates that the *VER* is a composite text built by multiple contributors under the direction of the queen. Not only did Edith's patronage cause the *VER* to be written, but her knowledge, and her personal and political interests, shaped the *Life's* content. Hers was the active, guiding intellect behind the entire text, and in two passages the *VER* appears not only to communicate the queen's intentions but also to preserve her voice. If any one person is to be identified as the 'author' of the *VER*, therefore, it is Edith, guiding a team of writers and scribes to tell her story.*

Preface by Diane Watt

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This collaborative research by Mary Dockray-Miller and Michael Drout and their team of undergraduates began at about the same time as the work of the Women's Literary Culture and the Medieval Canon international network, funded by the Leverhulme Trust from 2015–17.¹ At the second network meeting, held at Boston University in July 2016, Mary, in collaboration with Jillian Valerio, a student in historical linguistics, introduced our members to the methods of Lexomics developed by Michael, his team at Wheaton College, and other colleagues, methods which offer new ways of analyzing and understanding authorship and which is thus particularly relevant to the study of medieval women's engagement with literary culture.

The main aim of the Women's Literary Culture and the Medieval Canon network project was to consider to what extent and in what ways research into women's literary culture might enhance our understanding of late medieval

English literature as a whole. The phrases ‘women’s literary culture’ and ‘women’s writing’ encompass many possible forms of women’s relationships with textuality – women as subjects, authors, audience, patrons, scribes, editors, and archivists of various written expressions. They thus make visible the diverse contributions of women to what we now think of as the literary canon.

Network members adopted a range of methodologies in the course of this project, including empirical research; close comparative readings of literary texts by male and female authors to examine the significance of gender in relation to issues such as genre and influence, the construction of readers and reading, the influence of patrons, and textual anonymity; and archival research, such as analysis of manuscripts, focused specifically on evidence of female ownership, production, readership and reception. Particular attention was paid to the collaborative literariness of medieval women, who often worked alongside other women or men in the production of texts.

The work of the network has informed my own recent research project, also funded by the Leverhulme Trust, which addressed Women’s Literary Culture before the Conquest (2017–19).² This project explored women’s texts in early medieval England, from the seventh to the eleventh centuries. One aim was to demonstrate that late medieval women writers and visionaries, who are often viewed as exceptional, are part of a much longer tradition. With this in mind, I began by considering women’s engagement with literary culture in the seventh and early eighth century in the early double monasteries at Whitby, Ely and Barking, looking in detail at the evidence found in the fourth book of Bede’s *Ecclesiastical History*, which is sometimes referred to as the ‘Book of Abbesses’ because it includes the lives of three founding mothers of the English church: Æthelburh (Ethelburga) of Barking (fl. 664); Æthelthryth (Etheldreda) of Ely (c. 636–79); and Hild of Whitby (614–80) (Watt “Lost Books,” “Earliest Women’s”). In brief, I suggest that Bede’s accounts of these elite women elide their sources, which would certainly have included lives of the founding abbesses originally composed within their religious houses, very possibly by the nuns themselves. My argument is that Bede ‘overwrote’ the women’s lives in the sense that he wrote over, and thus partially obliterated accounts, whether written or oral, that had been produced in the abbesses’ own monasteries.

Through conversation at the second network meeting, I found out about the published work of Michael Drout and his colleagues that complements my own findings (Downey, Drout, et al). The computer-assisted statistical analysis of parts of the *Ecclesiastical History* reported in that article appears to support my argument that Bede drew heavily on a lost written source in writing his life of Hild, and fascinatingly indicates that Bede’s immediate source also included the material about Barking that he drew upon in his account of Æthelburh. In other words, the Lexos findings suggest that an earlier, now vanished, book of abbesses does indeed underpin Bede’s account. As a researcher well established in medieval literary studies but new to the field of digital humanities, I am only now beginning to understand the ways in which these tools can support, and at times challenge, more traditional literary analysis.

At the 2018 “Medieval Canon in the Digital Age” conference, I was fortunate to have the opportunity to give a joint presentation with Mary, entitled “Women’s

2. Project reference MRF-2016-014; see full conclusions in Watt, *Women, Writing and Religion*.

Authorship, Collaboration and Patronage in the Medieval Literary Canon”, in which we jointly explored how a consideration of ‘women’s texts’ and collaborative authorship can enable a widening of the medieval literary canon, as well as consideration of the contributions digital humanities tools might make to this process. My most recent project investigates a whole range of other early material, including, for example, the correspondence of St Boniface, saints’ lives such as Hugeburc of Heidenheim’s *Lives of Willibald and Winnebald* and Rudolf of Fulda’s *Life of Leoba*, and also later texts, including the hagiographical and devotional works of Goscelin of St Bertin (including *The Legend of Edith* and the *Liber confortatorius*). I have therefore followed with considerable interest Mary’s and Michael’s exciting research on the anonymous *Vita Ædwardi*.

3. We would like to thank Jeroen De Gussem, Mike Kestemont, Tom Licence, Rosalind Love, Renee Trilling, Elizabeth Tyler, Diane Watt, Erica Weaver, and the editors and reviewers of *Interfaces* for suggestions and critiques as we worked on this project from initial blog posts and conference presentations to its published form.

1 Introduction³

As the preface indicates, the findings reported here are part of a larger, discipline-wide trend of experimenting with the ways that digital tools can interact with traditional literary analyses and textual understandings. The varied methodologies of that work on a wide range of texts produced by or for medieval women have helped our team as we grappled with the unwieldy *Vita Ædwardi Regis*, a piece of medieval ‘women’s literary culture’ that is finally having a moment. Commissioned by Queen Edith in the 1060s, this text has languished for many years in relative critical obscurity, castigated as both bad history and bad hagiography (Jordan 122–23). Recent scholars, however, have recognized the potential of this *Life of Edward the Confessor* (hereafter *VER*) to shed considerable light on eleventh-century English history, religion, and literature within a broader European context. Part of that attention has focused on identification of the author of this putatively anonymous text, although the search for certain authorial identification of the *VER* highlights the difficulty of assigning or even defining medieval ‘authorship,’ as varied contributions, collaborations, and revisions throughout the process of textual production create an extant text. In the quarter of a century that has passed since Pauline Stafford first suggested that the *VER* presents the “voice of a woman mediated through the clerical, dynastic, and male culture of the early Middle Ages” (“Portrayal” 165–66), scholars have focused in the quest for authorial identification on two known male clerics, Goscelin of Canterbury and Folcard, and on an anonymous poet of the Loire School. There are good arguments for any (or all) of these authors to have contributed to the text, but something has been lost in this concentration on sole authorship:

the voice of a woman, of Edith of Wessex, Edward's widow and the dowager queen.

In this paper, we show how new techniques of computer-assisted analysis, paired with traditional methods of textual investigation, can not only recover that lost voice but also explain the ways it has been mediated through the work of other writers. The best explanation of the evidence, we argue, is that the *VER* is a composite text built by multiple contributors under the direction of the widowed queen. Not only did Edith's patronage cause the *VER* to be written, but her knowledge, and her personal and political interests, shaped the *Life's* content. Hers was the active, guiding intellect behind the entire text, and in two passages the *VER* appears not only to communicate the queen's intentions but also to preserve her voice. If any person is to be identified as the 'author' of the *VER*, therefore, it is Edith, guiding a team of writers and scribes to tell her story.

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Modern scholars use the title *Vita Ædwardi Regis qui apud Westmonasterium requiescit* to distinguish this text, found only in London, British Library, Harley 526, from other *Lives* of Edward the Confessor, composed later and for different reasons (see Barlow, *The Life*, for introduction, edition, and translation; Bloch; Aelred; Södergård). The unique manuscript lacks at least two folios and possibly more (Barlow, *The Life* lxxix).⁴ Frank Barlow's edition of the *VER* therefore includes accounts from other texts to fill these gaps and provide basic narrative flow, but because our analysis focuses on authorial identification, we use only the text preserved in Harley 526; we cannot rely on texts restored from other sources to preserve the text as it was composed in the 1060s. Although the manuscript indicates narrative breaks with colored capitals, it does not explicitly indicate books or provide numbered chapter divisions, but for ease of reference we have retained Barlow's system of dividing the *VER* into two 'books,' which are then subdivided into numbered 'chapters' (see the appendix for a table indicating the contents of and other information about these various divisions).

The bulk of the extant manuscript, what Barlow terms Book I, is a 'historical essay' that might more fruitfully be titled an *Encomium Edithae Reginae* than the *Vita* of her husband King Edward. This part of the *VER* is indebted more deeply to the literary tradition of the *encomium* or secular biography than to that of hagiography; recent work on the text has shown that the creators of the *VER* knew the thematically similar *Encomium Emmae Reginae*, which was com-

4. Latin text and English translations throughout from Barlow, *The Life*.

posed in England 1041/1042 by a Flemish cleric (Campbell and Keynes; Tyler, “Wings” 94; Tyler, *England* 151). Throughout the *VER*, Queen Edith is acknowledged as patron and guiding force for the narrative. Barlow, Tom Licence, and Elizabeth M. Tyler all argue separately, with slightly different emphasis and interpretation of the evidence, that ‘Book I’ was composed before the Norman Conquest, some time between the autumn of 1065 and the spring or summer of 1066 (Barlow, *The Life* xxx; Licence, “Date and Authorship” 272; Tyler, *England* 143–44). While many scholars have seen this book to focus quite firmly on praise of the Godwin family, Tyler has persuasively argued instead for the text’s overall purpose as praise specifically for Edith. The *VER* both celebrates and criticizes Earl Godwin (Edith’s father) and the earls Harold and Tostig (her brothers) in its construction of Edith as a figure of pathos, concord, and wisdom in turbulent times (Tyler, *England* 145–55); Tyler refers to the poet’s “fiercely uncritical loyalty to her [Edith], which contrasts with his backhanded attitude to the men in her family” (*England* 211). This first section of the *VER* is prosimetric, with lyrics interspersed periodically throughout the narrative. The poems comment, usually allegorically and sometimes quite critically, on the events of the prose text.

Barlow’s ‘Book II,’ which he starts with the last of the eight poems, narrates the death of Edward and enumerates some of his early miracles, eliding entirely the events of the Norman Conquest. Because of missing folios, this material is contained in only folios 54r–57r of Harley 526; when texts by Osbert of Clare and others are removed (those that Barlow interpolated into the text in his edition), Book II is only about one-third the length of Book I. Since Edward’s death and miracles are told as if in the recent past, Barlow, Licence, and Tyler all date this material to the months immediately following the Conquest, c. 1067 (Barlow, *The Life* xxxii; Licence, “Date and Authorship” 272; Tyler, *England* 200). The text of Book II makes it clear that the author has had to adapt the text’s overall purpose to the change in political circumstances: rather than a celebration of the Queen and the newly-royal family of her birth, the *VER* becomes a remembrance of the widowed Queen’s husband. In her analysis of the ways that trauma figures in the *VER*, Catherine A.M. Clarke has referred to the text’s “cycle of insistent, intrusive re-telling and re-playing” of events leading up to and following the elided Norman Conquest.

Other scholars, however, have disagreed both with this dating and with the conclusion that the composition of the text spanned the Conquest. Simon Keynes and Rosalind Love state that “it seems

more likely that the whole work was written at one time (perhaps *c.* 1068), and that it was intended from the outset to rationalize for Edith's benefit the turn of events following Edward's death in January 1066 and Harold's death in October" (Keynes and Love 199). In this claim, they follow Eleanor K. Heningham, who provides New Critical arguments for the unity of the *VER* as a text that primarily celebrates the peace that Edward's reign brought to England (Heningham, "Literary Unity" and "Genuineness"). While Victoria Jordan similarly argues for the *VER*'s thematic unity as a celebration of peace and cooperation, she shies away from statements about dating and authorship of the composition. Heningham's and Keynes/Love's arguments gloss over both the assumptions early in the text that Edward is still alive (his death is noted at the end of Book I and described in greater detail in Book II) and also the *VER*'s obvious initial goal of celebrating Edith and, more hesitantly, the extended Godwin family. Highlighting the many details that argue against a post-Conquest start of composition, Tyler's analysis of Poem Two shows that "The Anonymous's stance – that Harold and Tostig have not yet destroyed each other – militates against a post-1066 composition for this portion of the *VER*" (Tyler, *England* 164).

In addition, the final poem of the prosimetrum describes the process of the text's change of purpose, from praise of Edith to a celebration of Edward's holy life, stating that *Vsque sub extremum deuoti codicis unguem / rebamur sanctam dicere progeniem* ("We thought to the last page of this devoted book to tell of blessed progeny") but now will focus on *Ædwardum forma meriti[sque] decorum* ("Edward fair in form and worth") (Barlow, *The Life* 84–85 and 88–89). While remaining agnostic about the dating issue, Monika Otter does note that a reading of the text as a unified document composed at one time requires the understanding of the text's internal chronology and logic to be a "literary fiction" (Otter, "1066" 580).

2 Authorship: circumstance and style

Since 1943, when R.W. Southern suggested that Goscelin wrote the *VER*, scholars have struggled to identify the author of the text. Recently, the pendulum of scholarly opinion has seemed to swing toward a different monk, Folcard, who, like Goscelin, came to England from St. Bertin in Flanders (Licence, "Date" 273–85; Love, "Goscelin"). Both Goscelin and Folcard could have composed the *VER*, but

scholars have not been able to confirm either as the author of the *VER*. All other evidence (for example, that the author received much of his narrative information directly from Queen Edith, or that he worked primarily at Wilton) is, although sensible, necessarily circumstantial (Barlow, *The Life* xliv–xlvi).

In their numerous discussions of the *VER*, both Barlow and Tyler remain carefully neutral, referring to the author as “the Anonymous.” Barlow also emphasizes that Goscelin’s and Folcard’s biographies overlap so substantially that differentiating between them is not easy: the two men “were contemporaries, with the same educational background, and made similar careers in England” (Barlow, *The Life* xlvi). Both monks were educated at St. Bertin before coming to England in the late 1050s or the early 1060s, where they served the English church in a variety of capacities and wrote hagiographical texts. Both were employed by Bishop Herman, a recipient of Queen Edith’s patronage who had himself become a monk of St Bertin during a period of absence from his diocese. Goscelin was surely with Herman through the mid- to late-1060s (the time of the *VER*’s composition); Folcard’s exact whereabouts during those years, and his precise relationship with Herman during them, are less certain, although he may have been in the Bishop’s service at this point as well (Barlow, “Folcard” and “Goscelin”). Furthermore, if Rosalind Love is correct in identifying a “Saint-Bertin school of hagiographical writing,” both Goscelin and Folcard would have had a very similar academic training (Love, *Three* xl). Barlow concludes his reflections on the identity of the *VER* author by stating that “it is impossible to make a completely convincing case for either Goscelin or Folcard,” but “no other claimant of any merit has hitherto been put forward” (Barlow, *The Life* lix). Further complicating the conversation, Love has not suggested either as the author of the *VER* in her extensive scholarship on each monk, and Monika Otter in her substantial work on Goscelin never includes the *VER* (even hesitantly) in her discussion of Goscelin’s writings (Love, *Three*; Otter, “Closed”).

Any identification of the author of the *Life of King Edward*, therefore, needs not only to address the text’s circumstances and style but also recognize that the scholarly focus on the two named, known Flemish monks has circumscribed the discussion. Most previous analysis ignores the possibility that a person (or people) unknown by name to historians created or contributed to the text. Although Barlow remarks that “it would be remarkable indeed if there were more than two Flemish monks writing in England at the same time”

(Barlow, *The Life* lix), the high level of cross-Channel religious/political activity does not rule out the number of itinerant Flemish hagiographers in eleventh-century England being greater than two. Indeed, Tyler discusses continental clerics working in England in the second half of the eleventh century, providing a number of examples and noting that, “The mobility of clerics who found preferment in the Confessor’s court is remarkable and adds to the difficulty in identifying the Anonymous or understanding where his poetics were formed” (Tyler, *England* 253). Additionally, none of the scholars mentioned above or in the notes has considered the possibility that the text is a composite composed by a variety of “authors.”

The circumstantial evidence for the monks known by name can seem compelling. As Barlow states, “Goscelin could easily have written this book,” especially since we have extra-textual evidence that Goscelin attended the celebrations for the new buildings at Wilton and Westminster that are described in the *VER* (Barlow, *The Life* 1). A monk at St. Bertin until about 1058, Goscelin came to England to serve Herman, Bishop of Ramsbury and Sherborne. Throughout his service to Herman, Goscelin may have found time to write a few of his hagiographical texts, but he was obviously busy with his duties as part of the episcopal staff. It was only after Herman’s death in 1078 that Goscelin became something of an itinerant hagiographer who seems to have traded *Vita*-composition and chaplain services for temporary residency in a number of religious establishments, including the monastic houses of Wilton, Barking, and Ely. By 1090 he had settled at St Augustine’s Canterbury, where he continued producing hagiographical texts for that Abbey’s program of relic translation and promotion. Goscelin was renowned not just for his hagiographical skill but also for his poetry and his musical compositions (Barlow, *The Life* xlix; “Goscelin”). He certainly had substantial opportunity to be involved with the *VER*’s composition.

Perhaps even more importantly, Goscelin can also be placed in the right places at the right times. As chaplain of Wilton and a member of Herman’s staff through the 1060s, he had ongoing access to the court before the Conquest and, afterwards, to the dowager queen at Wilton. Queen Edith had been instrumental in securing the Sherborne bishopric for Herman in 1058, so the obligation of a patronage relationship was already in place for Goscelin’s superior (Barlow, *The Life* xlix; William of Malmesbury ii.83.6–11). In 1065, especially before the Northern Rebellion, a request from the queen to write an *encomium* must have seemed like a stellar opportunity for advance-

ment; it is easy to imagine Herman eagerly acceding to Edith's desire for a highly literate cleric to work her version of her family's history into a suitably sophisticated, literary format. Goscelin had composed at least one hagiographical text, the *Vita Amalbergae*, before he came to England; his next surely-ascribed hagiographical text, the *Vita Wulsini*, was composed at Sherborne *c.* 1078 (Love, "Wulfsige"). Intriguingly, Rosalind Love also ascribes the *Vita Kenelmi*, written *c.* 1066-1075, to Goscelin, and that text as well lauds Queen Edith for her patronage and generosity (Love, *Three* xci–ci), although Stephanie Hollis disagrees with that attribution (Hollis, "Wilton" 332, n. 123).

However, the patronage of the queen also figures in the circumstantial arguments for Folcard as the author of the *VER*. Like Goscelin, Folcard came to England from Flanders; unlike Goscelin, he left a relatively small corpus of texts composed in England. Only the *Vita* of John of Beverley (hereafter *VJB*) and a group of texts written *c.* 1070 at Thorney (which includes a *Vita* of St Botwulf) can be certainly attributed to him from his time in England (Folcard; Love, "Thorney"). The prologue to the *VJB* includes praise of and gratitude to "the queen," who is not named. This queen sends Folcard to Ealdred, Archbishop of York, for protection after Folcard's expulsion from an unnamed monastery, and Folcard then dedicates the *Life* of John of Beverley to Ealdred. The *VJB* was written between 1061 and 1069, so the queen in question could be Edith or Matilda, although there is no explicit internal evidence for either. Ealdred was definitely part of Edith's court circle; his archbishopric intersected with her brother Tostig's earldom of Northumbria, and Tostig was instrumental in securing that position for Ealdred, as the narrative in *VER* of their 1061 journey to Rome indicates (Barlow, *The Life* 53–57).

In his argument for Folcard as the author of *VER*, Tom Licence identifies the queenly patron of *VJB* as "probably Edith," but does not acknowledge (as Barlow does) that the *regina* of the *VJB* prologue could just as easily refer to Matilda (Licence, "Date" 275–77; Barlow, *The Life* lv). Like Edith's, Matilda's court circle included Ealdred of York – indeed, in 1068, Ealdred crowned Matilda just as he had crowned her husband William the year before (Nelson 398). Ealdred's ability to serve both queens in quick succession indicates his political astuteness and versatility; it also leaves the identity of the *VJB's regina* an open question. In order to strengthen what he sees to be the text's connections with Folcard and Ealdred, Licence makes the very tenuous and even startling claim that the *VER* was composed in York. This localization stems partly from the praise giv-

en in the *VER* to Siward, Earl of Northumbria before Tostig. In addition, Licence extrapolates from the diction of that praise:

Siward two years later was buried ‘in the church . . . of St. Olave, king and martyr.’ St Olave’s was in York. Of all the churches mentioned in the work it was the most obscure. Yet it is the only church for which the author fails to name the location. That it did not occur to him to do so suggests that he may have written in York. To him, St Olave’s was simply St Olave’s. (Licence, “Date” 274)

Licence elides the point that the *VER* text includes the geographical information that Siward was Earl of Northumbria, thus localizing the church (albeit in a somewhat general way). The full sentence from the *VER* reads:

Nec multo post tempore occubuit etiam moriens Northumbrorum dux Siwardus, cuius meminimus supra, sepultusque est in ea quam ipse a fundo construxerat in beati Olavi regis et martyris <honore> ecclesia.

(Not long afterwards also died Siward, earl of the Northumbrians, whom we have mentioned before; and he was buried in the church he had built from its foundations in honour of St Olave, king and martyr). (Barlow, *The Life* 48–49)

St Olave’s was not a common church dedication; Bond lists only one St Olave’s in York (17 and 204). A church built by the Earl of Northumbria would have been in Northumbria, most likely in York, his seat; the *VER* author may have simply assumed that the reference to Northumbria was enough of a localization, especially if that author were in a more southern location that considered “Northumbria” to be a somewhat hazy hinterland. More importantly, all previous scholarship on the *VER* has assumed that the text was composed at or near the court (before Edward’s death) and at or near Wilton Abbey (after Edward’s death) in order to be close to Edith and the version of events she wanted included in the text. The Godwins were notoriously unpopular in York and throughout Northumbria: Edith was accused of facilitating the murder of a Northumbrian nobleman at the royal court, Tostig had been driven from his earldom during the Northern Rebellion, the northern lords had pillaged his household in York, and Tostig’s and his father’s names had been erased from the Durham *Liber Vitae*’s lists of those for whom the community should pray (Dockray-Miller 49–

50). It was a not good location, before or after the Conquest, to be composing an *encomium* to the Godwins, especially when the primary source of information was more than 200 miles away. The author of the *VER* had regular access to Queen Edith throughout the process, an impossibility if the author was in York, so if Folcard was in York at the time of the *VER*'s composition, he is a weaker candidate to be author of the *VER*. We can surely date Folcard's appointment to Thorney in late 1069, but other attempts to date to his whereabouts are speculative, so it is only safe to claim that he was probably in England but not yet at Thorney at the time of the *VER*'s composition. Folcard certainly could have served Edith at Wilton (rather than in York, as Licence claims) and then gone to York and, later, to Thorney.

Barlow, Licence, and others have examined the various permutations of patronage and location that allow both Goscelin and Folcard to be at the right places at the right times in their careers to carry out the commission of composing the *VER*. Rather than repeat those details here, it will suffice to say that the information we have about Goscelin's and Folcard's activities throughout the 1060s does not allow us to prove that one or the other of them was the sole author of the *VER*. Indeed, those circumstantial links suggest that it is logistically possible that both monks worked on various parts of the text at various times between the beginning of 1065 and the end of 1067, a scenario in keeping with the Lexomic evidence we discuss below.

Since evidence of circumstances remains, well, circumstantial, the question of the *VER*'s style becomes paramount. To this point, most stylistic analysis has been focused on identifying specific words or phrases in the *VER* that are found primarily (or only) in the undisputed works of either Folcard or Goscelin. Rhona Beare's argument for the *VER*'s authorship, for example, turns on attributing the single phrase *Cyllenius heros* ("Cyllenian hero"), used to refer to the Roman god Mercury, to Goscelin; Keynes and Love have shown crucial weaknesses in this argument (Keynes and Love 205–06; Licence, "Date" 275).

In his extensive examination of the poetry and prose styles of Goscelin, Folcard, and the *VER*, Licence identifies similarities of both vocabulary and phrasing that he believes link the *VER* to Folcard. For example, the word *interdum* is used with unusual frequency in Folcard's Thorney texts (including the *Life* of Botwulf) and in the *VER*, as is the phrase *proh dolor* (Licence, "Date" 278–79). There is no question that these items appear more frequently in the work of Folcard than they do in that of Goscelin, but, as we discuss below, not merely the presence, but the specific locations in the *VER* of

these characteristically Folcardian stylistic features is significant.

However, Licence ascribes some phrases, usages, and vocabulary only to Folcard, when they should be acknowledged as at least somewhat Goscelin-like as well. For example, Licence identifies a connection between the *VER* and Folcard through a specific usage of the word *munificentia*:

... the very rare noun *munificentia* appears five times in the *VAEdR* to refer to royal or princely munificence. Folcard uses it of royalty too ... as did Ivo of Chartres, but this usage is rare; mostly the word is used of heavenly generosity. Bede uses it twice, both times with reference to divine munificence. Goscelin uses it rarely and in the Bedan sense (Licence, “Date” 278).

But Licence has not included in his corpus Goscelin’s reference to *regalis munificentia* in the *Vita Wulfhildae*, where *munificentia* refers to the bountifulness of King Edgar and his confirmation of ancient gifts of Barking Abbey to Abbess Wulfhild (423). This usage matches those in the *VER* and Folcard’s *Life* of St Bertin in that it refers to the generosity of a historical royal personage, not that of God. Similarly, Licence sees unique connections between Folcard’s corpus and the *VER*’s use of forms of *rutilo* to begin a poem, although one of Goscelin’s *Vita Edithae* poems includes *prerutilant* in its first line (Licence, “Date” 280; Goscelin, “La légende” 89). These items dilute (but do not refute) Licence’s argument for Folcard as the sole author of the *VER*: there is substantial stylistic overlap among the poems and prose of the *VER*, the small corpus of extant Folcard works, and the very much larger corpus of texts by Goscelin. These intersections do not point clearly to one or the other of the monks as ‘the’ author of the *VER*; instead, they suggest that either or both of the Flemish clerics – and possibly other ‘authors’ as well – could have contributed to the text. Again we note that the exact locations of these stylistic features in the text may be more important than their mere presence or absence.

Licence also provides criteria for stylistic attribution to Goscelin in his discussion of a set of *miracula* of St. Edmund, which he assigns to Goscelin (*Miracles of St. Edmund* cxvi–cxxvi). Some of these features overlap with stylistic elements in the *VER*, although in a general and nondefinitive way. For example, Licence sees frequent use of agentive nouns ending in *-or* or *-rix* as a feature of Goscelin’s style (the *VER* includes forms of *persecutor*, *lector*, *rector*, *auctor*, *moderatrix*, etc.), as well as of diminutives and superlatives (like *iuuencula*

and *strenuissimus*, both in the *VER* with many other examples). Most of the items on Licence's list of Goscelin's idiosyncratic words and phrases do not appear in the *VER*, although *contubernii* and *supernis civibus* do (Barlow, *The Life* 76 and 92). One item on Licence's list of "unusual words reminiscent of Goscelin" is *coclea* used to mean "spiral stairwell" (*Edmund* cxx). In Goscelin's *Vita Edithae*, Edith's chapel at Wilton is compared to the Temple of Solomon *cum cocleis*, with winding stairs (89); however, in the *VER* description of Edward's building of Westminster Abbey, the church *cocleis multipliciter ex arte ascendentibus plurimis tumescit*, swells with many a stair spiraling up in artistic profusion (Barlow, *The Life* 68–69). Thus there are some stylistic connections between Goscelin's surely attributed works and the *VER*, but, as with the stylistic criteria that would tend to support the identification of Folcard as the author, these overlaps with 'Goscelinesque' criteria are indicative but not definitive: they are at least as (if not more so) indicative of a 'house style' that trained both monks than of either's authorship.

Albeit at a larger scale than vocabulary or phrasing, genre is also a stylistic feature. The *VER* is one of only two prosimetric texts from eleventh-century England, both of which were commissioned at Wilton, indicating, as Elizabeth Tyler notes, the literary sophistication of that community ("Politics" 153; *England* ch. 5). The other prosimetrum is the *Vita Edithae*, by Goscelin, who is praised by his contemporaries for his poetic and musical skills (Rigg 14–15); in addition to the poetry preserved in the *Vita Edithae*, there are also short poetic texts in the preface to the Edmund miracles and at the end of the *translatio* of St Wulfhild. In contrast, there is no extra-textual, contemporary praise of Folcard as a poet, and he left us with only one short poem, in praise of St. Vigor (we do not know when or where he composed it); indeed, Tyler seems to question the very attribution of the St. Vigor poem to Folcard in *England in Europe*, where she refers to that poet as 'Fulcardus' (249–50). Genre, then, weighs much more heavily toward Goscelin than Folcard as the author of the *VER*: the definitively identified author of the only other prosimetrum from the relevant time period is Goscelin. However, Tyler has recently argued persuasively against identifying Goscelin as the poet of the *VER*, referring to "the very different poetry and learning of Goscelin and the Anonymous" and stating that they "are definitively not the same writer" (*England* 241 and 248). Similarly, Tyler seems hesitant to accept Licence's stylistic connections between the *VER* poems and Folcard's St. Vigor poem; not only does

she question the attribution of that poem to Folcard, but Tyler states that the poetics of the St. Vigor piece “show more affinity with those of Goscelin (who was himself a metrical experimenter) than with those of the Anonymous” (*England* 250).

Tyler introduces a new potential author into the discussion of the *VER*, a continental cleric-poet familiar with the emerging Loire School and its affinities for classical poetry and allusion. “The virtuosity of the Anonymous’s poetry,” she argues, “emerges strongly and requires that it be situated in the context of the famous Loire school, especially the work of the later eleventh-century poets Baudri of Bourgueil and Hildebert of Larvardin” (*England* 137). Tyler’s detailed analysis of the poetry is entirely convincing in its connection to the Loire school, and we have accepted her attribution of the poetry in the prosimetrum to a currently-anonymous Loire school poet. However, Tyler’s attribution of the prose sections to the same person is not as convincing – her analysis focuses almost entirely on the poetry and its connections to what she terms the “Roman story world,” its allusions to Virgil, Lucan, Statius, and others. Tyler approaches the *VER* as a single prosimetrical text with only one author; she does not consider the possibility that the *VER* is composite. Eliminating Goscelin or Folcard as poet, as Tyler has done so effectively, does not eliminate either as author of some or all of the prose, although Tyler’s Loire School poet could have authored (parts of) the prose as well.

Detailed, careful examinations of the vocabulary, phrasing, genre and poetic style can thus support the identification of either Goscelin, Folcard, a Loire School poet, or some other anonymous writer as the single author of the entire *VER*. Traditional stylistic analysis has, it seems, led to an impasse. When the meticulous analysis of extremely capable scholars leads to such disparate conclusions, new methods or new assumptions (or both) may be needed to make better sense of the conflicting evidence. We have therefore augmented the traditional approaches of previous scholars with ‘Lexomic’ methods of digital analysis and have proceeded with the assumption that the authorial unity of the *VER* is not a settled question.

3 Lexomics: definitions and methodologies

What we call ‘Lexomic’ methods combine computer-assisted statistical analyses with traditional literary methods such as close reading, philological analysis, source studies and cultural interpretation

(Dyer; Burrows; Hoover). Lexomic approaches provide us with more data about texts than traditional stylistic analysis alone. Lexomic analyses have led to fruitful conclusions consistent with traditional forms of analysis in textual research – giving us confidence in the applicability of the digital approaches – and have shed new light on texts in multiple languages and cultural traditions, including Old English poetry and prose texts, Old Norse, Modern English, and, most relevant for the present investigation, medieval Latin poetry and prose (Drout, Kahn, *et al.*; Drout and Chauvet; Downey, Drout, *et al.*; Drout, Kisor, *et al.*; Boyd *et al.*; Drout, “Adapting;” Berger and Drout; Drout, Hitotsubashi and Scavera). Lexomics methodologies and techniques were developed separately from but somewhat parallel to those of the European “Stylometrics” group (Eder *et al.*); the two digital tools demonstrate substantial overlap in their coding and processes. We will use Lexomics terminology throughout but also provide comparable Stylometry terms for ease of reference.⁵

5. For an overview of Lexomics tools, see: [Wheaton College Lexomics Project](#) and [Lexos](#) [accessed 3rd December 2021]; for stylometrics, visit [Computational Stylistics Group website](#) [accessed 15 December 2021]. Both are public access digital tool sets.

The accuracy of Lexomic methods has been validated by their confirmation of previously-known consensus about authorship and sources for certain texts. For example, Lexomics correctly indicated that the ninth-century poem *Waltharius* is homogeneous, and that the preface and conclusion of Sulpicius Severus’ *Vita sancti Martini* are stylistically, distinctively different from the rest of the text (both of these points were generally acknowledged before Lexomic confirmation). The methods were able to detect the influence of previously-known external sources on both Alan of Lille’s *De planctu naturae* and Geoffrey of Monmouth’s *Vita Merlini*. In research most directly related to the investigation of the authorship of the *VER*, Lexomic techniques were able to separate the sections of the *Gesta Frederici Imperatoris* written by Otto of Freising from those known to have been written by his secretary Rahewin and to distinguish between those sections of the *Ecclesiastical History* that have acknowledged sources and those that are fresh compositions by Bede (Downey *et al.*). In each of these cases, the conclusions drawn from the Lexomic evidence is completely consistent with pre-existing knowledge about the texts.

The specific Lexomic techniques employed in this paper fall into two categories: rolling window analysis and hierarchical clustering. While more methodological detail follows in the relevant sections and in the notes, it will suffice to state here that rolling window analysis produces a visual representation of the changing frequencies throughout the text of the occurrence of individual words or phrases. In contrast, hierarchical clustering groups texts or segments based on similarity of

their complete vocabulary distributions (rather than of individual words or phrases). The results of cluster analysis are most strongly influenced by the distribution of the most common words in a text, ‘function words’ such as conjunctions, prepositions and pronouns. Together, the two methods compensate for each other’s weaknesses by allowing us both to map patterns of word distribution throughout a given text and also to compare the similarities of and differences between vocabulary distribution in whole texts or large segments.

4 Corpus selection and preparation

As all digital methods can be substantially influenced by the characteristics of the electronic corpora being analyzed, it is important to make sure that we are comparing like with like and not accidentally biasing the investigation, either by constructing an unrepresentative corpus or by embedding hidden interpretation inside the electronic texts or attempting to perform analysis on insufficient data.

Although we accept Tyler’s attribution of the *VER* poetry to an anonymous Loire Poet, we initially attempted to include the poetry in our Lexomic explorations to see if it would help to identify affinities among the sections of the prosimetric text, between sections of the *VER* and poetry by Goscelin, or between sections of the *VER* and poetry by Folcard. However, issues of textual length impeded that line of inquiry. Since Folcard’s poem on St. Vigor is only 170 words, it provides insufficient data for Lexomic analysis; the word counts of the *VER*’s poems range from 132–665 words. We therefore could not use our digital methods on the poetic sections of the *VER* because cluster analysis requires texts or text-segments to be close to 1000 words long (and certainly no less than 500 words).⁶ By necessity, then, our final cluster analysis is limited to the prose of the *VER*, to prose sections of texts definitely identified as authored by Folcard and Goscelin, and to a variety of prose texts chosen as control group comparisons.

Restricting ourselves to prose, however, still does not eliminate all the challenges of constructing a representative corpus. Previous Lexomic research shows that an author’s use of sources can be detected through hierarchical agglomerative clustering; for example, sections of Bede’s *Ecclesiastical History* that draw heavily upon the works of historians Gildas and Orosius, and those based on Papal letters, cluster separately from the main body of Bede’s text (Downey *et al.* 255–60). We do not know if this source-influence is sufficient

6. Analyses of segments smaller than 500 words usually produce results that are inconsistent with the known composition of texts, or they fail to detect any hierarchical relationships at all among the segments of a text. We have far more confidence in cluster analysis that uses segment sizes of 1000 words or greater (Drout *et al.*, “Dendrogrammatology” 320).

to make the vocabulary of a text or segment so different from the rest of an author's works that it does not cluster with them, but it seems prudent to reduce or eliminate segments of texts that are known to be based primarily on external sources. This was most difficult when dealing with Goscelin's *Vita Edithae*. Although this text is in many ways the best comparison to the *VER* (both are long, prosimetrical texts about royal saints), both traditional analyses and substantial variations in various rolling window plots indicate that Goscelin had external sources for several large sections of the *Vita Edithae*, thus somewhat complicating our analyses. There is also simply so much more extant work by Goscelin that it would be easy to digitally swamp Folcard's texts within an enormous Goscelin corpus. On the other hand, that we have so few of Folcard's texts could lead us to create an impoverished comparative corpus of Goscelin's work if we used only the same number of texts as can be attributed to Folcard.

To create as representative and directly comparable a corpus as possible, we removed from our corpus those texts that are not securely attributed to either writer (*e.g.*, the *Vita* of St. Kenelm) or which in their entirety are strongly influenced by external sources (*e.g.* Goscelin's *Vita* of St. Ivo of Ramsey). We also excluded Goscelin's later work, composed at Canterbury after 1090, since this is somewhat distant in time from the mid-1060s *VER*. We excluded both Goscelin's *Life* of Amalberga and Folcard's *Life* of St. Bertin, because both of these texts were composed earlier and on the continent rather than in England. These texts also appeared as outliers in analyses of the individual authors' separate corpora (*i.e.*, in a cluster analysis of known texts by Goscelin, the *Life* of Amalberga is substantially different in vocabulary from all the others securely attributed to Goscelin; see figures A1 and A2 in the ancillary figures section at the end of this paper).

In order to avoid complications of genre, we excluded Goscelin's *Liber Confortatorius*, his book of consolation on the departure of his protégé Eve to an anchoritic life in France composed *c.* 1083 (an area for potential further research, the *Liber Confortatorius* segments did not overlap substantially in cluster analysis with other texts known to be authored by Goscelin, raising interesting questions about the ways that genre affects vocabulary choices within an author's corpus). We included all of Folcard's texts composed in England, but because the *Life* of St Botwulf and the brief texts about the anchorites at Thorney were individually too short for cluster analysis, we combined these into a single file which was, when appropriate, segmented, just as the longer texts were. We included Goscelin's *Life* of Wulf-

7. Even after all of these electronic files were identical in content to the printed texts, additional work was necessary before we could begin our analyses. Most significantly, we had to standardize the inconsistent treatment of certain letters in the editions. For example, some editors print manuscript <uu> as <w> while others retain the original orthography, and similar practices are followed in the representation of <u> and <v>, <i> and <j>, and e-caudata (hooked-e) <ę>. Although the Lexomic methods we used are not highly sensitive to individual minor variants or errors, small but consistent differences in orthography in frequent words have the potential to produce artifactual similarities or differences. Variants that are distributed either randomly or evenly throughout an entire text usually do not affect the geometry of a dendrogram; variants that are concentrated in only one part of a text, such as the B-Scribe's spellings in *Beowulf*, often do (Drout, Kisor, *et al.* 17–22). We therefore self-normalized our corpus by using the “consolidation” and “lemmatization” functions of Lexos to make our electronic corpus consistent in its orthography, converting <w> to <uu>, <v> to <u>, and <j> to <i>. Ideally, hooked-e would not be represented as <ę>, but since some of the early editions printed <ę> and <e>, we were forced to follow them (fortunately, the total number of hooked-e characters was small). Editorial practice with regard to <ę> (variously, hooked-e, e-caudata or cedillated-e) is extremely inconsistent (Cain). Some editors normalize the spelling as <ae>, others as <æ> and still others as <e> (these are mostly electronic editions). Fortunately, comparison of dendrograms suggest that the character did not appear frequently enough in the texts in question for its inconsistent use (alone) to produce artifacts. We also used the Lexos ‘scrub’ functions to remove all punctuation, formatting, and digits from the files, and to change all capital letters to lower-case, thus allowing us to compare the distribution of words rather than the distribution of editorial spellings in the text.

since it was composed relatively close in time to the *VER* (and has a male subject, unlike many of Goscelin's other *vitae*); the prose of the *Vita Edithae*, since it is generically similar to the *VER* as a prosimetric text; and the *Lives* of the Barking abbesses Wulfhild and Æthelburh, since their subjects are also historical, royal English saints.

Previous research has shown that careful preparation of the electronic versions of the texts to be studied is absolutely essential to producing results in which we can have confidence. Variations in encoding have the potential both to obscure relationships that really do exist and to produce artificial similarities that are only the result of the flawed processing. Unfortunately, there exists no complete and standardized electronic corpus of early medieval Latin texts analogous to the consistently edited and encoded *Dictionary of Old English* corpus. For many of the texts we are investigating, there are no electronic editions at all, and both print and electronic editions that do exist, including the *Patrologia Latina*, use a variety of different editing and encoding standards. To produce our corpus, therefore, we had to combine electronic tools (scanning with optical character recognition [OCR], and the powerful ‘scrubbing’ software included in the Lexos Integrated Workflow) with old-fashioned letter-by-letter proofreading against the standard print editions.⁷ The texts in our corpus, therefore, are normalized, but to themselves rather than to some external standard.

The longer texts were then divided into sections that corresponded to their chapter divisions or groups of chapter divisions (for example, the prose of the *Vita Edithae* was divided into six sections, each with 2–6 chapters, so that each section contained roughly 1500 words). While these segments were not precisely the same length (i.e. exactly 1500 words), they were close enough to be mathematically comparable; the sample sizes did not diverge enough to disturb the relative frequency analysis (see Downey *et al.* 228–33 for specific details and analysis about variation and divergence in Lexomic sample size).

We removed from the *VER* all of Barlow's restored texts and inserted the material missing from his edition of the second poem (lines 23–54 of which were published and discussed by Henry Summerson in 2009) so that our electronic version is made up of all of the text extant in Harley 526 as well as the few lines of poetry surely there before the folio loss (although that poetry was ultimately not part of our Lexomic analysis). As part of our initial inquiries, we made a series of files that separated the poetry from the prose of the *VER* and the *Vita Edithae* so that we could compare the complete prosimetric texts, the prose alone from those texts, and the poetry

8. We begin by selecting a ‘window’ size, w , which must be substantially smaller than the total number of units, T , in the text to be examined. The first window begins with the first unit and ends with the w^{th} unit of the text (so if we are using a window of 1000 words, the first window is made up of words 1-1000). We then count the number of features of interest, n , found in this first window and divide by the window size in units, providing an average of the number of features per unit ($p = n/w$). From this information, we produce a data pair composed of the ordinal number of the window, k , and the value of p (k, p_k), so for the first window, where $k=1$, the data pair is $(1, p_1)$. We then shift the window one unit towards the end of the text by incrementing both the initial and final units in the window by 1 ($k+1, w+1$); tabulate the number of times the feature of interest appears in this shifted window; and calculate $p_2 = n_2/w$, producing a new pair of data-points, $(2, p_2)$. This process is repeated, moving the window through the text until the edge of the window meets the end of the text (i.e., where $k+w=T$), producing a set of k coordinates in the form (k, p_k) . Formally, the value of p at any location k is equal to:

$$p_k = \left[\left(\sum_{i=k}^{k+w} n \right) \div (w) \right], k + w \leq T$$

where: k is the ordinal number of the first unit in the window, w is the size of the window in units
 n is the total number of features of interest in the window, and T is the total number of units in the text.
 The graph produced by plotting the total set of coordinates not only indicates the simple presence of features but also highlights clusters of elements of interest in a way that a simple inspection often does not.

alone from those texts. Initial experiments indicated (as noted above) that the dearth of poetry outside those two main *vitae* complicated findings that included the prosimetric texts instead of just their prose sections; the results of those initial experiments did not contribute to our inquiry, showing simply that the vocabulary of the prose and poetry sections of the individual texts are substantially different (see figures A3 and A4 at the end of this paper).

Since the *VER* exists in only that one manuscript, we had no issues with choosing among manuscript witnesses. In contrast, the *Vita Edithae* exists in two versions, Cardiff, Public Library I. 381 and Oxford, Bodleian Library, Rawlinson C. 938. We chose the text of the Cardiff manuscript as our base text since it was composed for nuns (probably at Wilton but possibly at Barking), and thus corresponds to the needs of the commissioners and first readers of the *VER* more closely than does the text in the Oxford manuscript, which was created for the distant archbishop (Hollis, “Introduction” 11–12). Rosalind C. Love very generously shared her pre-publication editions of the works of Folcard, providing up-to-date and correct Latin texts in electronic form; similarly, Tom Licence shared electronic and easily-convertible versions of his editions of the *lectiones* of St. Eadwold.

5 Initial rolling window analysis of the *VER*

Rolling window analysis visually represents the distribution of individual phrases, words, or letters throughout an entire text.⁸ Because the rolling average moves continuously through the entire text, there are no statistical artifacts produced by the placement of segment boundaries. Abrupt changes in the rolling average of textual features are frequently associated with changes in authorship or source.

Previous research has shown that rolling window plots of the most frequent words in a text can not only separate poetry from prose but can also determine whether a text is stylistically heterogeneous and, if so, which parts of the text differ from each other (Eder; Eder *et al.*). We therefore used the Lexos software to plot the frequency of the most commonly used words – the function-words *et*, *ad*, *in*, *ut*, and *est* – in the prose of the *VER*, producing Figure 1 (for the sake of legibility, we have only printed the plots of *et* and *in*; the plots of the other most common words in the text exhibit abrupt changes at the same places).

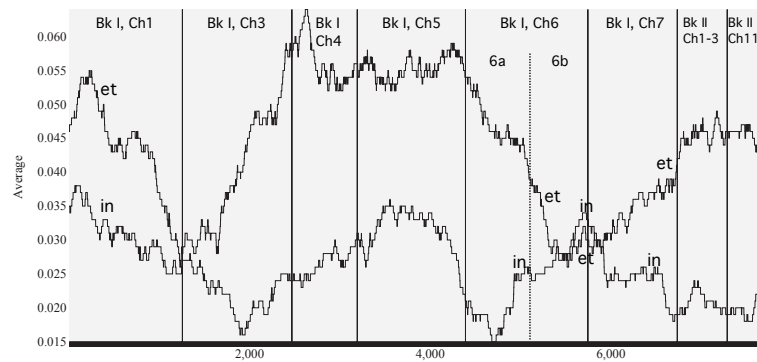


Figure 1. Frequency of *et* and *in* in the prose chapters of the *Vita Ædwardi Regis* in a rolling window of 1000 words.

The rolling window plot is characterized by steep-sided peaks and valleys. Abrupt changes in frequency are almost all coincident with the boundaries between textual sections, with the differences in frequencies in each section being readily visible even when the poems have been removed from the text. The two most striking features of figure 1 are the two large drops in *et* frequency – one at the start of Chapter 3 and the other towards the end of Chapter 6 – and the plateau of a higher frequency of *et* in Chapters 4 and 5. The second half of Chapter 1, the end of Chapter 3, the beginning of Chapter 6, and both Book II chapters employ *et* at an intermediate frequency. The dip at the end of Chapter 1 is really just the result of the rolling window moving into the much lower frequency area at the start of Chapter 3. The large change in *et* within Chapter 6, however, does not appear to be an artifact of changing chapters; the shift in *et*-frequency occurs when the *VER* changes its focus from Tostig’s and Harold’s accomplishments to Edward’s and Edith’s building programs: *Redeamus interim ad regem Ædwardum eiusque regiam coniugem Ædgith, cui potissimum nunc hac famulamur descriptione presenti* (“Now let us turn to Edward and his royal consort Edith – the illustrious mistress whom we chiefly serve in this present account”) (Barlow, *The Life* 66–67). The section of lower-frequency *et* continues to the end of Chapter 7, where there is a sudden upwards jump in the rolling window plot.

If our analysis of the *VER* is consistent with previous research into rolling window analysis, the difference in frequencies of common words in these two sections implies that they have distinct textual or authorial histories and that those histories might be the same for the first half of Chapter 3, the end of Chapter 6, and Chapter 7. Likewise, the high frequency of *et* at the beginning of Chapter 1 and in Chapters 4 and 5 appear to indicate that these sections of the text have similar histories, sources or authors. Rolling window analysis alone cannot determine if the middle range of frequencies at the ends of Chapters 1 and 3 and in

9. To perform cluster analysis, we first determine the relative frequencies of every word in a group of texts or text-segments, calculate the differences among these frequencies, square the resulting numbers, and use the square-root of the sums of the differences to find what is called the ‘Euclidian distance’ between each pair of segments. Manhattan and Canberra metrics have produced no significant difference in the final clustering results. The Lexos software allows researchers to choose among these metrics and between different linkage methods. The free implementation of hierarchical, agglomerative clustering is then used to group the texts or segments by identifying those that have the shortest distances between them (these have the most words in common). From this information, the Lexos software produces a branching diagram, or dendrogram, that visually represents the relative similarities of the segments (for an example, see figure 2 below). The length of the vertical lines leading from the bottom of the graph to any branch-point indicates the similarity of the segments below that branch: the shorter the distance to the branch-point, the greater the similarity of the segments below it.

As noted above, there appears to be a lower limit of between 500 and 750 words to the size of text-segments that will lead to non-artifactual results in cluster analysis (this lower limit prevented us from using Folcard’s poetry in Lexomic analysis). This problem of minimum segment-size is interconnected to the problem of segment boundary placement. Within hierarchical clustering techniques, the arrangement of words *within* a segment does not influence the results of the analysis; the clustering represents only the relative frequencies of all the words in the entire segment. However, the division of the text into segments does have the potential to affect the analysis substantially. The placement of segment boundaries has the potential either to split up real concentrations of features (if a cluster is divided by the placement of a segment boundary) or to artificially join together otherwise distinct concentrations (if there are concentrations of features at each end of a segment). These problems can be mitigated by using natural boundaries within a text (i.e. chapters, stanzas or book-divisions) and also by comparing

the Book II material is also distinct from the high- and low-frequency sections of the poem or if it has an affinity with one or the other.

The rolling window analysis of *et*, *ad*, *in*, *ut*, and *est* indicates that the *VER* is heterogeneous with regard to the most common words used in the text, with at least two distinctly different frequencies appearing in several places, with abrupt changes in frequency often coincident with chapter or book boundaries. These features, while not completely diagnostic in themselves, are consistent with a hypothesis of different sections of the text having different sources, authors, or transmission histories, and must be taken into account when comparing the overall distribution of vocabulary in the *VER*.

6 Cluster analysis of the *VER*

Cluster analysis can often identify broad patterns of vocabulary distribution that are not always evident to the unaided eye. Variations in the distribution of very frequent words, which are often ‘function words’ such as conjunctions, prepositions, and pronouns, more strongly influence dendrogram geometry than the presence or absence of rare words in particular segments. The complete distribution of all vocabulary – the entire ‘bag of words,’ no matter their order or meaning – determines the geometry of the dendrogram; the hierarchical clustering software does not focus on the distribution of any single word or phrase (as more traditional stylistic analysis does).⁹

Some of our Lexomic analyses of the *VER* use the manuscript’s sectional divisions (which correspond to Barlow’s numbered books and chapters), and early in the process we also separated the poetry from prose to elicit different sorts of comparisons of the *VER* with various texts by Goscelin, Folcard, and control authors; hierarchical clustering of the *VER*, the *Vita Edithae*, and other texts continually grouped the prosimetric texts together, no matter the other texts in the group. Only when the poetry was removed did the *VER* and *Vita Edithae* (prose only) begin to interact with other known texts by Goscelin, Folcard, and others. But we have also revised the boundaries of the segments when other information – such as that produced by rolling window analysis of high-frequency words – suggests that the most obvious natural boundaries might be masking underlying differences.

Cluster analysis allows us to determine if the patterns we see in figure 1 extend beyond the most frequently appearing words in the text. Figure 2 is the result of performing hierarchical agglomerative

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the results of a series of analyses that use segments with different boundaries and identifying relationships that persist through multiple small changes in segment boundaries (we call such relationships *robust*).

clustering on the *VER* when the text is divided at the places where the chapters are separated by poems. Unfortunately, both I.4 and II.1–3 are quite short, 720 and 554 words respectively, and thus do not provide robust enough data to make them mathematically comparable to the other segments (see the appendix for detail about exact word counts for each section of the *VER*). As noted above, segments shorter than 1000 words do not in most cases cluster with the rest of a text (even when we know that the text is homogeneous). That phenomenon is apparent with these two segments in figure 2: they appear as single-leafed clades at the edges of the dendrogram. We therefore cannot determine their affinities from this analysis alone.

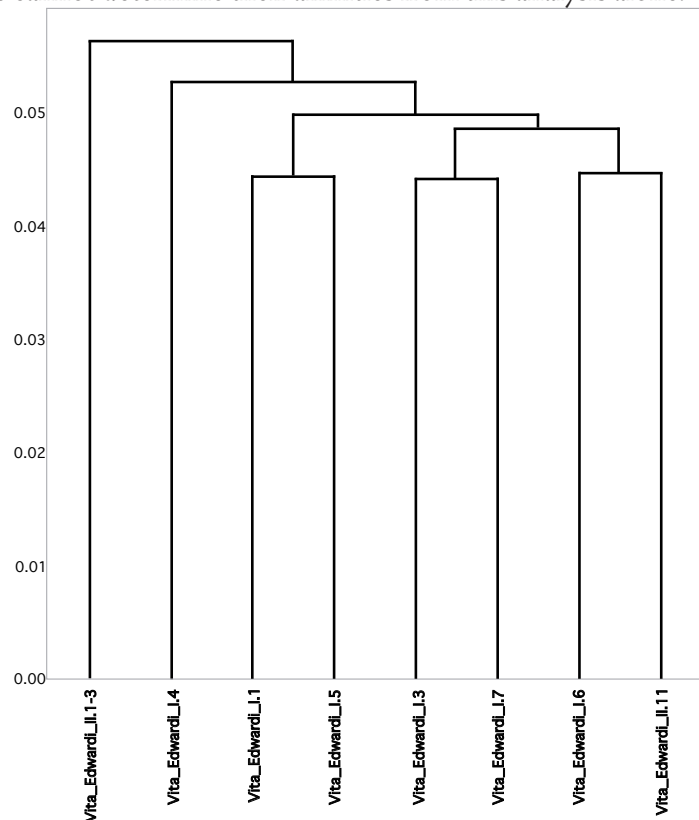


Figure 2. Dendrogram of the *VER* when divided at Chapter boundaries.

The placement of the other chapters in the figure 2 dendrogram, however, does provide some information about their similarities and differences. In terms of vocabulary distribution compared among the segments/chapters as determined by the clustering tool, figure 2 shows that I.1 is similar to I.5, I.3 is similar to I.7, and I.6 is similar to II.11. Furthermore, the I.3–I.7 and I.6–II.11 pairings are more similar to each other than they are to the I.1–I.5 pairing. This arrangement would be consistent with I.1 and I.5 having a source, author, or history different from that of I.3, I.6, I.7 and II.11.

Chapters I.1 and I.5 both discuss the rise of the Godwin family,

so the similarities between those chapters could hypothetically be attributed to overall similarity of content, but I.3 and I.7 demonstrate lexical similarities even though they are distinct in content (I.3 focuses on tensions between Edward and Earl Godwin, while I.7 narrates the Northern Rebellion against Tostig). Furthermore, differences in content are not exhibited in the most frequently used words in these or any of the other segments: the Lexomics ‘top words’ tool shows that 92% of the top 10 words in each segment are function words (see figure A5). The few content words (*dei*, *regni*, *ducis*, *rex*, and *dei*) that appear in the ten most frequent words for each segment are not shared by either I.3 and I.5 or I.3 and I.7 (in fact, only one, *ducis*, is shared by two segments, but these, I.3 and I.4, do not cluster together in the dendrogram).¹⁰ We therefore conclude that the overall vocabulary similarity in the paired segments (and the differences among the pairs and clusters) is not due to their topics and must therefore be caused by some other factor.

10. Note that Latin forms are not lemmatized in this instance since the Lexomic software works with inflected rather than lemmatized forms, e.g. *ducis* (not *dux*) is one of the ten most frequent words in segment I.3 and in segment I.4. The Stylometric ‘Most Frequent Words’ (MFW) function is the equivalent to the Lexomic ‘Top Words’ function.

However, before proceeding further in this analysis we need to take into account the evidence of the rolling window analysis of high frequency words (figure 1). Chapters I.3 and I.7, which cluster together in figure 2, are characterized by distinctly lower frequencies of *et* and *in*, and higher frequencies of *cum* and *ad*. To be certain that the dendrogram was not just a different visual representation of the rolling window analysis (i.e. that the geometry of the dendrogram was not caused solely by the distribution of the five most frequent words in the text), we used the StopWords function of the Lexos software to remove *et*, *ad*, *in*, *ut*, and *cum* from every segment and then repeated the hierarchical cluster analysis. (The StopWords function is analogous to the ‘unmasking’ function of Stylometry; see Kestemont *et al.*) The resulting dendrogram was identical to figure 2, indicating that the similarities and differences in vocabulary distribution detected by the cluster analysis extend beyond these five most frequently used words in the text and thus that the evidence of the dendrograms is entirely independent of the rolling window analysis (see figure A6). This result is even more significant than it might first appear, because the highest-frequency words in a text contribute much more to the final results of cluster analysis than do uncommon words. There are thus substantial similarities in overall vocabulary distribution and the frequency of the most common words between chapters I.1 and I.5, chapters I.3 and I.7, and chapters I.6 and II.11; the last of these pairings is more like each other than they are like other portions of the *VER*. These results would be consistent with the linked segments sharing similar sources, transmission histories, or authorship.

The rolling window analysis discussed above demonstrates that the frequencies of common words often shift at chapter boundaries, but it also indicates a few places where frequencies change abruptly within a chapter, most dramatically in the middle of Book I, Chapter 6, with the second half of that chapter being much more like Book I Chapter 7 in the frequency of common words than it is like the first half. Unfortunately, dividing Chapter 6 into two segments merely produces yet more single-leafed clades at the edge of the dendrogram because the resulting segments are too small (only 707 and 652 words) to cluster. We therefore added the first of these small segments (I.6a, the descriptions of Harold and Tostig) to I.5 and the second (I.6b, the descriptions of the Westminster and Wilton building programs) to I.7 and performed cluster analysis on the resulting text, producing figure 3.

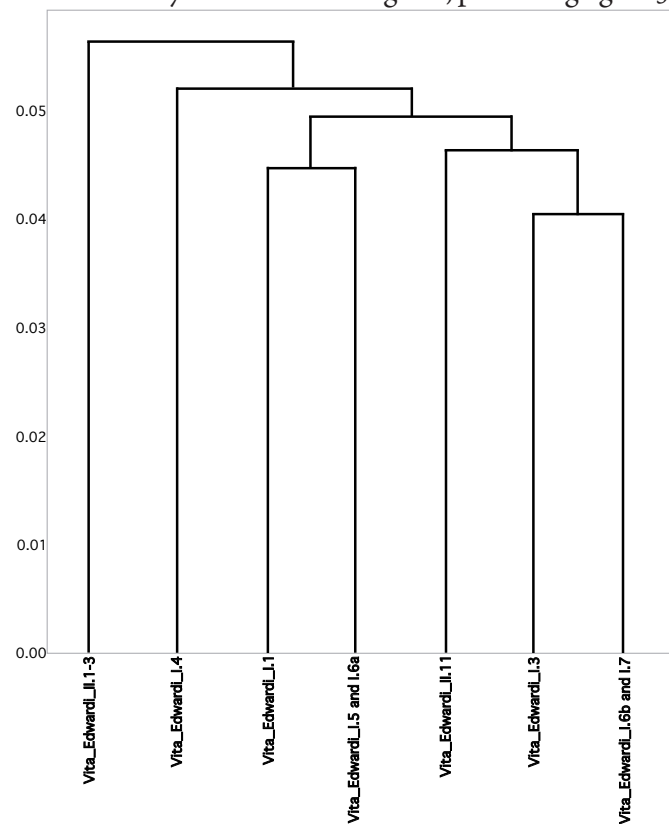


Figure 3. Dendrogram of the *VER* with I.6 divided, the first part being added to I.5, the second part to I.7.

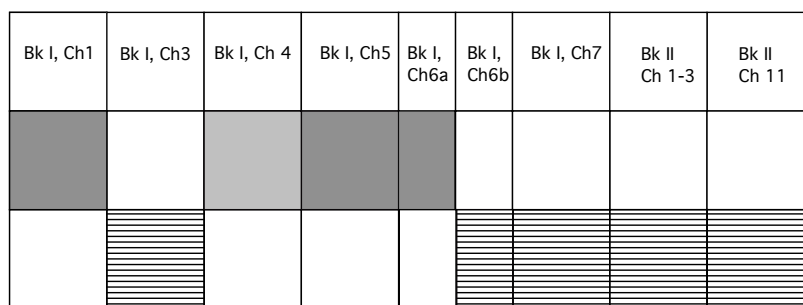
Even though the first half of Chapter 6 is now blended with it, segment I.5 still clusters with I.1, and likewise I.3 remains with the now-augmented I.7. Book II Chapter 11, which had clustered with the undivided I.6, remains part of the higher-level clade containing the pairing of I.3 with the augmented I.7. Additional experiments show that II.11 is similar enough to the I.3–I.7 pair that it remains part of that clade if either the second half of I.6 or the entire chapter is removed from the test's data set. Thus, we can conclude that, although II.11's greatest

similarity is with I.6, it is also similar in vocabulary distribution to I.3 and I.7. The dendrogram does not change when the cluster analysis is performed on the texts with the five most frequent words removed.

Identifying the affinities of the short segments (I.4 and II.1–3) is more difficult. To see when the blending of segments would disrupt the original dendrogram geometry, we used the technique of combining a short segment with a longer segment, then producing a dendrogram of the blended text, then attaching the same short segment to a different longer segment and producing a new dendrogram, repeating until we examined every possible combination. Combining I.4 with either I.1 or the augmented I.5 produces a dendrogram that is only different from figure 3 in that there is no longer a single-leafed clade containing I.4. Similarly, II.1-3 does not disrupt dendrogram geometry at all when it is blended with II.11; however, when it is blended with either I.3 or the augmented I.7, II.11 pairs with the blended segment and the other chapter to connect to the pair. We therefore conclude that I.4 is most similar to I.1 and I. 5, and that the two Book II segments are most like each other but also somewhat similar to I.3 and the augmented I.7. These results are summarized in the diagram in Figure 4.

As noted above, previous research using both Lexomics and Stylometry has shown that this kind of clustering can be caused by a shared source, transmission history, or author. Since no substantial sources for the *VER* have ever been identified, and since the text was composed almost contemporaneously with the events it narrates, we provisionally conclude that the cause of the groupings is shared authorship among the clustering segments rather than shared source(s): one author most likely wrote the majority of segments I.1, I.4, I.5, and the first part of I.6, while another wrote I.3, the second part of I.6, I.7 and all of Book II.

Figure 4. Representation of the similarities among the sections of the *VER*. Lighter squares indicate less certain but still likely similarities.



The next step is identification of those different authors. In order to begin our investigation with the known authors most frequently referred to in the authorship discussion, we performed cluster analysis upon the *VER* and two other sets of texts, one set definitely authored by Goscelin and the other by Folcard. We divided the prose of the *VER* into seg-

ments as per the above discussion (i.e. I.6 divided between I.5 and I.7, and all the Book II material in a single segment). The *Vita Edithae* was segmented based on additional research – beyond the scope of the present paper – into that text’s likely sources, and the remaining texts were divided in content-sensible ways such that they produced segments of between 1500 and 2000 words. For all of the texts except the *Vita Edithae* (for which there is no real comparison in Folcard’s corpus), we tried to pair a Folcard text with a similarly sized one by Goscelin.

For out-group comparison we used Osbern of Canterbury’s *Vita Elphegi* because it was written at roughly the same time as the *VER* (c. 1080) and is by an English writer about a local and historical (rather than universal) male saint (Rigg 21, Rubenstein 35–37). But despite these similarities to the *VER*, the segments of the *Vita Elphegi* fell into a separate clade from all the other texts under investigation (figure A7). We also compared all the texts to the *Encomium Emmae*, but that text also clustered in its own distinct clades (figure A8). Our out-group comparison, then, merely showed that the texts under consideration are substantially more like each other than they are like the *Vita Elphegi* and the *Encomium Emmae*. For reasons of legibility we have left them out of the dendrograms we include here, as their presence in or absence from the analysis make no difference whatsoever in the rest of the dendrogram geometry.

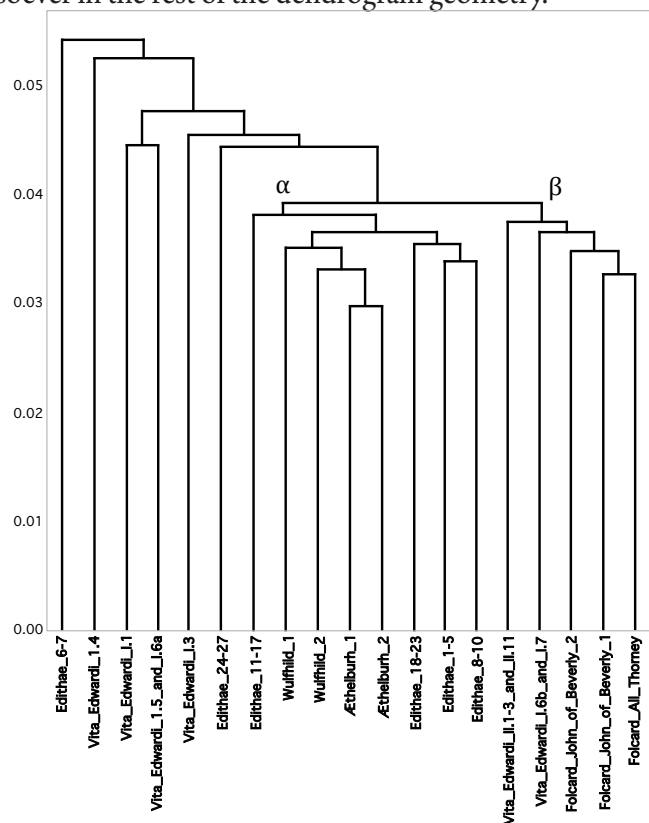


Figure 5. Dendrogram of the *VER* when clustered with core Goscelin and Folcard texts.

Figure 5 shows the results of this cluster analysis. The two most outlying single-leafed clades contain the two shortest segments in the corpus, chapters 6 and 7 of the *Vita Edithae* and chapter I.4 of the *VER*. Much previous research, as well as the cluster analysis of only the *VER* discussed above, indicates that the placement of these segments in the dendrogram is almost certainly a result of their lengths, since, regardless of content, very short segments almost always appear in simplicifolious clades. The pairing of segments I.5 (augmented with I.6a) and I.1 is consistent with the analysis of the *VER* alone, as these two segments always link with each other even when I.5 is not augmented. That I.3 appears in a single-leafed clade is somewhat surprising, since I.3 and I.7 were a very robust pairing in multiple experiments. Why the presence of additional texts causes this segment to become simplicifolious is not immediately apparent (although below we discuss a possible explanation).

The most important feature of figure 5 is the very clear division between the clades labeled α and β in the dendrogram and the placement of Book I Chapter 7+ (i.e. augmented with the second half of Chapter 6) in β . Clade α contains only texts that are definitely written by Goscelin; β contains all the texts definitely written by Folcard as well as these two segments of the *VER*. If we remove these two segments of the *VER* and repeat the analysis, α and β are respectively all Goscelin and all Folcard, leading to the conclusion that Book I.7 (augmented with I.6b) and the blended Book II chapters were most likely written by Folcard rather than Goscelin. Modifications of the Folcardian texts made no difference in this key feature of dendrogram geometry: merging the two segments of the *VJB* into one or dividing them into three, dividing the Thorney texts into two or three content-sensible segments (the *vitae* of Botwulf and the various anchorites) does not change the affinity of I.7 (augmented) and Book II for the Folcardian texts. Furthermore, clade β has the ‘stepwise’ geometry that previous research has found to be characteristic of intra-clade homogeneity, indicating that all five of these segments are quite similar to each other even though they come originally from several different texts. In contrast, clade α includes three subdivisions (one of which is a single-leafed clade containing only chapters 11–17 of the *Vita Edithae*), none of which includes all the segments of the *Vita Edithae*. Clade β , therefore, shows every sign of being a non-artifactual grouping. Thus Folcard is much more likely than Goscelin, the putative Loire School poet, or some other anonymous writer to be the author of the second half of Chapter 6 and Chapter 7 in Book I and all of the extant Book II of the *VER*.

11. There are good mathematical reasons for this phenomenon, but it is perhaps more intuitive to use the metaphor of clustering by color. In a dendrogram initially composed of many yellow segments, some orange segments, and one blue segment, an introduced reddish-purple segment would initially pair with blue. But if a red segment were then introduced into the analysis, the reddish-purple could then pair with that red, and so might some darker orange segments, leaving the blue in a single, outlying clade.

Some of the segments of the *VER* appear as outliers in the dendrogram (i.e. not in α or β). For our present purposes, it is sufficient to note that the addition of comparanda has in the past broken up the clade structure of a dendrogram of a single text: in some instances, introducing a new, closer match for a segment into the dendrogram causes that segment to break free of its old pairing to link with the new segment, leaving its old partner in a smaller clade or as an outlier.¹¹ We believe that this is what has happened with both I.3 and the pair of I.5+6a and I.1: it is not that they have been pushed away from their previous clusters, but that the other members of the clusters have been pulled away from them by the introduction of much more similar segments. If I.3 is very much like I.7+6b and the Book II segments in the *VER* by itself, and if these two segments are much like Folcard, then we believe that I.3 should be seen as being like Folcard as well, though not as much as like Folcard as the *VER* segments in clade β .

The short vertical distance between clades α and β supports Love's hypothesis of a 'St Bertin school' style, since the two groupings as wholes are more similar to each other than they are to the other texts or to the out-group comparanda of the *Vita Elphegi* and *Encomium Emmae*. This complicates the cluster analysis, since the similarity of the two monks' work and the small size of Folcard's corpus makes it difficult to know whether the outlying clades are by different people entirely or are simply deviations from this putative 'house style' caused by the influence of sources.

The last text in our corpus, Goscelin's *Vita Wulsini*, helps to place these outliers somewhat more firmly (see figure 6 below). When we add the *Life* of Wulfsige to the set of analyzed texts, two of its segments appear as a pair (clade b) outside the main clusters of Folcard's and Goscelin's work (clades d and e), as do the pairing of I.5+6a and I.1, and the simplicifolious segments I.3, I.4, and two sections of the *Vita Edithae*. Because of this placement of the two Wulfsige segments, we identify most of the outlying clades of the *VER* in Figure 6 as being somewhat more like the works of Goscelin even though they are not clustered in clade d – where the middle segment of the Wulfsige text appears. Several segments of the *VER* are closer to the combined Folcard and Goscelin cluster (clade c) than are some segments of the *Vita Edithae*, although this text is definitively known to have been written by Goscelin. The surprising pairing of the middle segment of Goscelin's *Vita* of Wulfsige with chapters 11–17 of the *Vita Edithae* (clade f) suggests an explanation for the changes in dendrogram geometry caused by the introduction of the Wulfsige text: in

both segments, an external source may have affected the author’s style, making these segments less similar in their vocabulary distributions than the other Goscelin texts are in clade g. In that clade – based on rolling window analysis of frequent words – the author does not appear to have been influenced to the same extent.

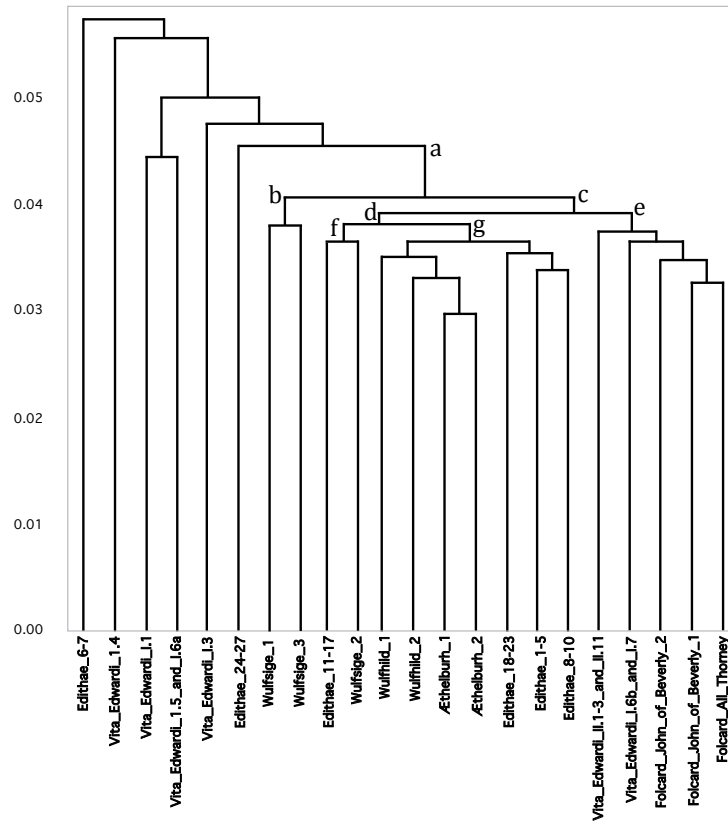


Figure 6. Dendrogram of the *VER* when clustered with the Goscelin and Folcard texts as well as Goscelin’s Life of St. Wulfsige.

The combined results of the various cluster analyses strongly support a conclusion that Folcard is the primary author of I.3, I.6b, I.7, and Book II, chapters 1–3 and 11. The cluster-analysis evidence for Goscelin as the author of I.1, I.4, I.5, and I.6a is more equivocal, although it is not inconsistent with him being the primary author. However, it is important to note that these are general and broad affiliations and that the rolling window analysis suggests that there is some heterogeneity within sections as well as between them.

Furthermore, cluster analysis could be partly confounded if one writer revised the other’s work. The segments of the text that are not surely identified with Folcard seem more strongly related to the pre-Conquest purpose of the *VER*: to celebrate Edith as the keystone of the Godwin family’s inevitable rise to throne. Sections I.1, I.4, I.5, and I.6a celebrate Edith’s father’s rise to power, the glorious reinstatement of Godwin after the Crisis of 1051, and the maturation of his sons into powerful figures in their own right after his death. Book

one, chapter two, which is lost in the version preserved in the Harley MS, celebrated Edith and her virtues; it is likely that this section was composed before the Conquest as well (either by Goscelin or another writer who is not Folcard). Folcard's sections, in contrast, adhere more closely to the *VER*'s post-Conquest purpose of lamenting the fatal errors of Edith's brothers and the death of her saintly husband. It is possible, and perhaps even likely, that the instability of segment I.3 – its tendency to move around in the dendrograms depending on which texts it is compared to – is caused by initial composition of this chapter by Goscelin or some other writer before the Conquest and its substantial revision by Folcard after it. Although Tyler is not addressing the possibility of composite authorship, this scenario accords with her suggestion that “though Book I was written before October 1066, it was strategically revised later” (*England* 143–44). In addition to revision, however, there may be another reason for the instability of segment I.3: the influence of yet another author on Folcard.

7 Another voice? High-resolution rolling window analysis

The degree of Edith's involvement in the creation of the *VER* has been something of an enigma – while it is evident that she is the text's patron and commissioner, it is not clear from intra-textual information how much input or detail she provided. Pauline Stafford, in her groundbreaking dual biography of Emma and Edith, sees both queens as having been proactively involved in the production of their respective texts:

The work was produced for Edith in the immediate aftermath of the Norman Conquest. It is another post-1066 English story, the most sustained and detailed of them all. Its argument is perhaps even more mediated through the eyes of the Flemish monk who wrote it than was that of the *Encomium*. Nonetheless English voices can still be heard, and particularly that of an English queen. It is Edith's story, set within the memories of the survivors of the pre-1066 court, telling the recent English past in a form suited to the post-Conquest present. (Stafford, *Queen Emma* 41)

Thus, while she does not go so far as to claim authorship for Edith (or for Emma, of the *Encomium Emmae*), Stafford argues for the

queen's playing an ongoing active role in the creation of the text, thus preserving her 'English' voice. Tyler follows Stafford in her analysis of a number of texts, including the *VER*, to show that "engagement on the part of the female patrons profoundly shapes the literary nature of each text, which is thus, in varying degrees, the result of a collaboration between writer and patron" (*England* 12). Licence, in contrast, sees Edith as a distant patron who would have given only generalized, overview instructions and financial rewards to the monastic author, with Ealdred, perhaps, providing more detailed guidance. Licence must be disagreeing with Stafford when he remarks that Ealdred's possible involvement in the creation of the *VER* "must serve to countermand the prerogative of scholars who wish to recover Edith's voice to read the *VÆdR* as it were her own words" ("Date" 284). Additional analysis, however, indicates two specific locations in the *VER* where we may hear the Queen's individual voice as she directed the creation of her version of the story she wanted recorded about her family, its rise and downfall.

As noted above, both clustering methods and rolling window analysis have limits to their resolution: the smaller the segment or window, the greater the likelihood of confusion in the resulting image. It has previously been established that segments smaller than 1000 words generally fail to cluster, regardless of their affinities. Less research has been done on the optimum sizes of rolling windows, but a general guideline has been to use a window of 5–10% of the total text length. However, although we cannot have the same degree of confidence in a plot with a smaller window as we do in one in which the window is large, we also have the chance of identifying smaller features. Because segment I.3 was behaving so unexpectedly in the dendrograms, we performed a new rolling window analysis of the most frequently used words in the *VER* using a window of 300 words, producing figure 7 (for the sake of legibility we have printed only the plot of *et*; the plot of *in* is positively and that of *ad* negatively correlated with the graph of *et*). As they do in lower-resolution rolling windows, abrupt changes in the frequency of a common word's use often indicate that a passage has a different source or author; steep-sided "W" or "M" formations, in which the material both immediately before and after a section has similar characteristics, are particularly diagnostic (Drout and Chavet 297–314). There are seven of these features in the rolling window graph of the *VER*, each of which is described and discussed below, with suggestions for the causes of these abrupt change in word frequency.

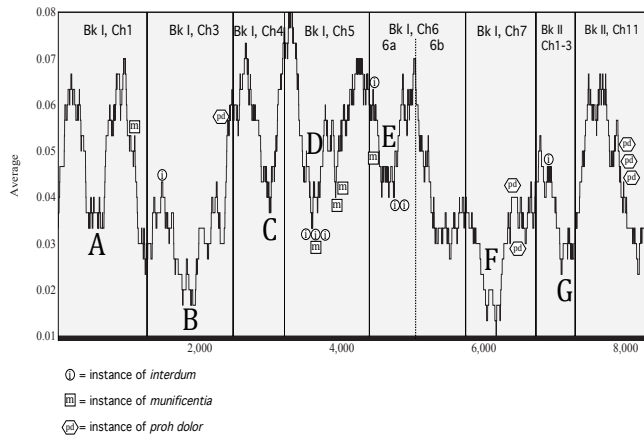


Figure 7. Frequency of *et* in a rolling window of 300 words as well as locations of *interdum*, *munificentia* and *proh dolor* in the *VER*.

A. The very distinct change in the frequencies of the most common words in I.1 begins with *Antiqui regis Æthelredi regia coniuge utero grauida* and continues to *Regnum, inquit, Anglorum est dei; post te prouidit sibi regem ad placitum sui* (“When the royal wife of old King Æthelred was pregnant in her womb... he answered, The kingdom of the English belongs to God; and after you He has already provided a king according to His own will”) (Barlow, *The Life* 12–15). This section of the chapter tells of Queen Emma’s pregnancy, which resulted in Edward’s birth; its accompanying prophecies and oaths from prominent members of the English aristocracy and clergy; the removal of the child to Normandy in the face of Danish invasion; and Bishop Brihtwald of Wiltshire’s vision of St Peter marking Edward for a life of chastity.

B. In chapter I.3, the abrupt change in the frequency of *et* begins at *Compos tandem desiderii sui, idem archipresul in adepta summi honoris dignitate...* and ends with *...eumque dolo in regem irruere conari, ut quondam in eius fratrem, credere persuadebat* (“his ambition satisfied at last, the archbishop in the office of high honour he had obtained ... and brought Edward to believe that Godwin was guilefully scheming to attack him, just as once upon a time he had attacked his brother”) (Barlow, *The Life* 30–33). This passage is a description of the scheming of Archbishop Rodbert against Godwin, who patiently suffers these unjust attacks *tum pro gentis innato more, quod nichil agant festine uel facile, sed ex consilio plurima uisa precipitatione per se expectant uel diffluere uel perire* (“because of the innate character of the family, for they do nothing hastily or readily, but when they see things happen with a great deal of turmoil, as a matter of policy wait for them to subside or disappear of themselves”) (Barlow, *The Life* 32–33). The word *interdum*, which Licence finds to be characteristically Folcardian, appears in the second sentence of this passage.

C. This abrupt dip in the plot of *et* begins with *Fit magna inuicem letitia patris et fratrum se mutuo conspicientium...* and concludes *qui scilicet auctores fuerant illius concitati turbini* (“with great joy the father and brothers looked on each other... since it was they who had been responsible for that storm of trouble”) (Barlow, *The Life* 42–45). This passage describes the resolution of the Crisis of 1051, when most of the Godwin family had departed for Flanders and Queen Edith herself was sent to a women’s monastic house; in this version of events, the family returns triumphantly, both to England and to power, once the King realizes his error.

D. The section of low-frequency *et* in I.5 is part of a celebration of two of Edith’s brothers, Tostig and Harold. The passage begins *Vterque satis pulchro et uenusto pollebat corpore, et, ut conicimus non [in]equali robore, non disparis audacię...* and concludes *at ut legentibus de eorum moribus dicatur tota summa, nulla etas, nulla regio, eius pretii duos mortales eodem educauit tempore* (“Both had the advantage of distinctly handsome and graceful persons, similar in strength, as we gather ... and to sum up their characters for our readers, no age and no province has reared two mortals of such worth at the same time”) (Barlow, *The Life* 48–51). This passage contains three of the eight instances of *interdum* in the *VER* as well as one of the five appearances of *munificentia*, and two additional examples of this latter occur immediately after the passage. Like *interdum*, *munificentia* has been identified by Licence as a characteristically Folcardian word (though see above for some complicating examples with regard to Goscelin).

E. The words *interdum* and *munificentia* also appear just before the start of this passage, which praises first Edward’s and then Edith’s piety and humility. The passage begins *Cetera uir deo uoluntarie deditus in squalore mundi angelum uiuebat, et accepto tempore quam assidue esset in Christiana religione strennue manifestabat* (“Otherwise this man, of his free will devoted to God, lived in the squalor of the world like an angel and, ‘at the accepted time’ he zealously showed how assiduous he was in practicing the Christian religion”) and ends with *Mulierem inquam cunctis nobilibus matronis siue regie et imperatorie dignitatis personis in exemplo uirtutis et honestatis anteponebam, tam ad Christiani cultus religionem quam ad mundi dignitatem seruandam* (“I say she was a woman to be placed before all noble matrons or persons of royal and imperial rank as a model of virtue and integrity for maintaining both the practices of the Christian religion and worldly dignity”) (Bar-

low, *The Life* 62–65). Edward is said to have kindly received abbots and monks – *potissimum autem transmarinos* (“above all foreign ones”) (Barlow, *The Life* 62–63) – whom he knew to be devout and strict, a kingly quality that surely either Goscelin or Folcard would have appreciated.

F. In chapter I.7 the W-formation begins with *quicumque poterat notari quod de eius aliquando fuerit curia...* and ends at *...sed ille citius ad sacramenta nimis, proh dolor, prodigus, hoc obiectum sacramentis purgavit* (“Whosoever could be identified as having been at some time a member of Tostig’s household ... but Harold, rather too generous with oaths (alas!), cleared this charge too with oaths”) (Barlow, *The Life* 76–81). This passage is an apologia for Tostig as a firm and just Earl of Northumbria (and object of the Northern Rebellion of 1065) as well as an equivocation regarding Edward’s and Harold’s assent in Tostig’s loss of his earldom and exile to Flanders. The passage refers to the lawless and wicked condition of the north before Tostig assumed the earldom and after he was expelled; the odd diction elides the point that King Edward and Earl Harold did not or could not garner enough support for their brother (-in-law) to retain that earldom. As in the Archbishop Rodbert passage (B above), negative perceptions of members of the Godwin family are said to be due to the dishonesty of others: *Dicebatur quoque, si dignum esset credere, fratris sui Haroldi insidioso, quod absit, suasu hanc dementia contra ducem suum aggressos esse* (“It was also said, if it be worthy of credence, that they had undertaken this madness against their earl at the artful persuasion of his brother, Earl Harold – which heaven forbid!”) (Barlow, *The Life* 78–81). The narrator thus simultaneously alludes to and then dismisses the charge that Harold had betrayed his brother. Two instances of the phrase “*proh dolor*,” which Licence has linked to Folcard, appear right after the end of the passage.

G. The final W-formation in the plot of *et* includes all of II.3, a miracle story in which a blind man is healed by the water in which the king had washed his hands; Edward tests the sight of the healed man first by holding up different numbers of fingers and then by pulling on his beard. The word *interdum* appears toward the beginning of the chapter.

Four of these passages appear in sections of the *VER* (A, C, D, and E) that we have tentatively attributed to Goscelin (or, more confidently, to a writer other than Folcard). In each case, the reductions in the frequencies of *et* and *in* and the increase in the frequency of *ad*

bring the passage roughly into line with the frequencies we see in the majority of the sections of the poem that cluster with the Folcard texts. Two of the passages (D and E) also contain clusters of words that Licence has argued are markers of Folcard's authorship. These features of the text could be explained by Folcard's revising and extending an original draft of the *VER* by an earlier writer, inserting passages to further elaborate upon or explain the material. Passage D is fulsome praise of Queen Edith's brothers, and passage E that of her and her husband. It may be that Folcard was trying to ingratiate himself with a new patron by adding panegyric material to the original narration (which is not itself lacking in praise of the Godwin family). This could also be the case with A and C, but the lack of Folcardian words in these passages implies instead that their author was working with external sources. The story of Edward's birth and the Bishop of Wiltshire's vision of St Peter is a shift from the focus on Godwin found in the preceding and subsequent text in this chapter; such a shift would be consistent with this specific section relying on a written source focused on Edward himself, but we do not have enough information to do more than speculate here. Passage C, however, relates events that are included in known written sources, most famously the *Anglo-Saxon Chronicle*, so it is likely that the author is here working from a written source; Barlow even suggests some overlap in translated phrasing between the *VER*'s Latin and the *Chronicle*'s Old English (Barlow, *The Life* 44, n. 106).

The influence of either inserted passages by Folcard or external sources upon the text in chapters I.1, I.4, I.5 and I.6a could explain why these segments do not cluster tightly with the core Goscelin texts in the dendrogram. When those vocabulary distributions of hybrid or composite segments are averaged across a full segment, they would end up not quite as similar to either each other or to the other Goscelin texts as a segment without such sources would be. However, it is also possible that these portions of the *VER* were not by Goscelin, but by a writer other than him or Folcard (either Tyler's Loire School poet or another anonymous writer).

Passages B, F, and G appear in segments that cluster tightly with Folcard's texts. In these instances, the changes in the frequency of common words bring them out of Folcard's normal range but not closer to those of the other author of the prose of the *VER*. If, as we have argued, all three of these passages are instances of a source strongly influencing Folcard's style, then there is something qualitatively different about the sources of these passages. These variations

in the frequencies of common words could be the result of the different effects of oral or written sources, or sources in Latin and vernacular languages, on Folcard's style. Passage G, the healing of the blind man at the end of II.3, is different in its frequencies of common words from the other very similar miracle stories in Book II of the *VER*; it likely has a different source from those miracles – a separate booklet or *libellus* in the vernacular or even an oral source from someone present at the episode. The lower frequency of *et* in B and F similarly points towards oral or vernacular sources for these passages, since at least some portion of the higher levels of *et* in other passages can be attributed to their more elaborate rhetorical style: longer sentences have more *ets*, as do those that include the ornamental use of paired nouns, adjectives, and verbs.

Passages B and F have the lowest frequency of *et* in the entire *VER*. There are none of Licence's Folcardian words in either passage, though *interdum* appears just before B and two instances of *proh dolor* are found soon after F. In content, both B and F imply that readers, if they knew the whole truth about the situations being described, would see the righteousness of the Godwin family. Both indicate that the author at this point has substantial knowledge not only of the specific activities of Earl Godwin and of Tostig, but also of their thought processes and individual personalities. There is no extant written source commissioned by Godwin or Tostig narrating these events and it is highly unlikely that one ever existed; given the circumstances of the *VER*'s creation, it is most likely that the specific information and even the unusual diction of these sections came directly from Edith in her role as Queen, reshaping versions of events to construct a history with the Godwin family on the side of right and good. The lower frequency of *et* in sections B and F is then explained by Edith's primary responsibility in the phrasing and presentation of these passages; as the Lexomic research discussed above shows, different authors produce different distributions of function words in their texts.

An identification of Edith as the probable source of both the information and the phrasing of sections B and F also explains the surprising behavior of segment I.3 in the cluster analysis that included both Goscelin's and Folcard's texts as well as the *VER*. Passage B makes up nearly 40% of I.3, so this segment is not nearly as Folcardian as the combination of segment I.6b and I.7, or the Book II materials. Similarly, segment I.7 alone, without the addition of 6b, did not always cluster with Folcard's texts in every permutation of the materials, and we now see why that might be: without I.6b, I.7 is also only

about 40% Folcardian. An understanding of the insertion of Edith’s voice in these sections, defending her family and “correcting” its history, adds another authorial strand to the composite text, complicating even further our understanding of its “authorship.”

Sections	Bk I, Ch1	Bk I, Ch3	Bk I, Ch 4	Bk I, Ch5	Bk I, Ch6a	Bk I, Ch6b	Bk I, Ch7	Bk II Ch 1-3	Bk II Ch 11
Possibly Goscelin, the Loire poet, or another author	Vertical lines		Vertical lines	Vertical lines	Vertical lines	Vertical lines			
Folcard		Horizontal lines		Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines
Edith		Dark block					Dark block		
Other Sources	Diagonal lines		Diagonal lines					Diagonal lines	

Figure 8. Diagram of the sections, sources and likely authors of the *VER*.

The diagram in figure 8 is our overall interpretation of the data regarding authors and sources for the composite *VER*. Not only do we identify Edith as the primary author of sections B and F, but we see the contents of these sections to emphasize how she shaped the final narrative.

8 The authorship of the composite text

That modern ideas of authorship are often not applicable to medieval works is a contemporary scholarly commonplace. Neither the traditional Romantic notion of the author as an individual creative genius producing work *ex nihilo*, nor the Foucaultian conception of the author as merely a ‘discursive function’ comes very close to describing the practice of textual creation in the Middle Ages (Barthes; Foucault; Kittang). But despite recent efforts, there exists no widely accepted model of medieval authorship, especially for anonymous texts (see essays collected in Rankovic). The action that corresponds most closely to the work performed by the Romantic idea of the author – the assembling of the specific words of an individual text – is just one in a chain of potential activities that can include compiling, translating, composing, redacting, and dictating, as well as literal writing (placing ink onto parchment) and copying. Any of the individual humans who performed the tasks described in Lars Mortensen’s model of medieval textual production – in which a text can evolve from oral interviews, through notes and drafts on wax tablets or disposable sheets, and into fair copy manuscripts that are then subject to

repeated revision and modification in a potentially recursive process – could reasonably be identified as an ‘author.’ It is not immediately obvious that one particular role should be privileged over the others.

The mixture of Lexomic and traditional textual analysis methods used in this paper have, in the particular case of the *VER*, allowed us to identify the traces of the work of multiple authors – Folcard, the Loire Poet (as identified by Tyler), Queen Edith, and possibly Goscelin or other(s) – each of whom had different and specific roles in the production of the text. Evidence indicates that all of them composed sections of the text at the sentence level, and any or all of the four might also have redacted, edited and augmented the text he or she received. However, only one of these authors was *also* responsible for the *VER* at a higher level of abstraction. Only Edith caused the text to be brought into being.

Although she did not physically write the *Vita* herself, putting ink onto vellum, Edith created the form of the final work to be not just about saintly King Edward, but also the ways that his accomplishments were brought about by her own greatness and, more circumspectly, that of the Godwin family. A plausible scenario of textual creation begins in early 1065 with Queen Edith asking Bishop Herman to recommend a highly literate cleric to produce an *encomium* to the Godwins. Perhaps he sends Goscelin to work at the queen’s bidding; perhaps he sends a relatively new arrival from the continent, a cleric who can write poetry in the vein of the new Loire School as well as more traditional narrative prose. If the pre-Conquest prose author and the poet are not the same person, the poet must have begun work somewhat simultaneously with the first prose writer, composing a series of poems full of classical and Christian allusion to be added to the in-process prose text, creating a generically sophisticated prosimetrum. These poems are aware of the growing tensions between Harold and Tostig, and strive to present Edith as a figure of Concord and Peace in the face of escalating conflict.

Such a commission would appear to be a substantial opportunity for Herman to ingratiate himself even more with his powerful, royal patron. Throughout the spring and summer of 1065, this person or pair composes the bulk of ‘book one,’ but by the autumn of 1065 the Northern Rebellion, the exile of Tostig, and Edward’s declining health make this original narrative an awkward fit to the current situation. By spring of 1066, Edward is dead and work on the *VER* has largely ceased, as Edith’s brothers prepare to engage in armed conflict against each other, and her place in the new (and ultimately temporary) hierarchy is unclear.

In any case, the texts of the prose chapters and the poems must have been stored or copied separately. In the text's extant form, the content and theme of the poems sometimes align precisely with the prose chapters; for example, the celebratory poem about the gift of a ship from Godwin to Edward fits neatly between book one's chapter one (the narrative of Edward's rise to the kingship with Godwin's help) and chapter two (a celebration of Edith and the Godwin family in general). At other times, the composite and asynchronous nature of textual production creates abrupt or uneasy changes in tone. Poem six, which warns of fratricide, civil war, and even cannibalism, must have been composed after the Northern Rebellion (autumn 1065), but it precedes book one, chapter six, which celebrates the 1063 military victories of Harold and Tostig that brought peace to the kingdom and allowed the flourishing of the religious building programs of Edward at Westminster and Edith at Wilton.¹²

12. See Tyler, *England in Europe*, 151–77, for her analysis of the ways the classical allusions in these poems contribute to the 'instability' of the text and its ambivalent attitudes towards the Godwin family. See also Otter, "Closed Doors," for close analysis of Poem Seven, the epithalamium for Edith that follows the prose description of her building of Wilton in book one, chapter six.

The narrative of the Northern Rebellion is then not related until book one, chapter seven (and thus is starkly separated from the poem that would most sensibly complement that narrative). The chapters proceed in chronological order, but the insertion of the poems between the chapters is neither smooth nor seamless. The placement of poem six implies that the final compiler had the right number of poems and the right number of prose chapters, but that the two sets did not mesh thematically as well as they had been intended to. The lack of poems to punctuate book two also indicates that the poet/pre-Conquest author had departed the project (and maybe the country) before the text was fully complete: definitely composed after the battle of Stamford Bridge in September of 1066 and probably after Hastings in October 1066, the last of the poems introduces the second book and reframes the text's overall purpose as a hagiographical celebration of Edward, and then the voice of the poet departs the text as the prose recitation of Edward's miracles begins.

At some point soon after the Conquest, Edith determines to complete her book. Her place at Wilton is not as secure as she would like; she resides there as the honored, widowed Queen of King Edward, not as the sister of the defeated King Harold, and she needs to emphasize the former and minimize the latter. Tyler's analysis of Wilton's reception of the text argues that Edith largely failed in her goal for the text to "promote the good reputation of Edith among the West Saxon aristocracy" as Wilton in the later eleventh century demonstrated itself as "a foundation eager to disassociate itself from the Godwine dynasty" (*England* 214, 215). However, Edith was at least somewhat successful in her design

13. The standard print edition is Dumville, Keynes, *et al.* For manuscript D, see Cubbin. Tony Jebson's open-access edition is referenced throughout.

to style herself as Edward's respectable widow rather than the disgraced Harold's sister; when she died less than a decade later, the D manuscript of the *Anglo-Saxon Chronicle* included notice of her death:¹³

Eadgyð seo hlædie forðferde, seo wæs Eadwardes geresta, seofon niht ær Christesmæssan on Wincestr, 7 se cyngc hig let bryngan to Westmysntre mid mycclan weorðscype, 7 leide heo wið Eadwarde cyngc hire hlaforde

(The Lady Edith died, she who was Edward's consort, seven nights before Christmas in Winchester, and the king [William] had her brought to Westminster with great honor, and she lies with King Edward her lord). (Jebson, annal for 1076)

The version of events presented in the *VER* and its celebration of Edith may have contributed to the Chronicler's decision to include her death as one of the important events of that year – and to present her in relation to her husband, not to the family of her birth.

In the early months of 1067, then, Edith uses her remaining influence with Ealdred or Herman to secure the services of a literate cleric to reshape and complete her encomium text; Folcard presents himself in response to her request. Rather than the lucrative opportunity of the pre-Conquest commission, this post-Conquest work is a politically and culturally delicate task because it awkwardly, perhaps even dangerously, affiliates Folcard and his superior with the failed house of Godwin. Tyler even suggests that “it is not accidental that it [the *VER*] is anonymous,” since any of the text's creators would have realized the political risks of explicit, named association with the Godwins (“Skype”).

Retired at Wilton, Edith has more opportunity than she did as Queen Consort to work directly with the cleric-author, so she is able to reshape the text's purpose, emphasizing the moral goodness of her now-dead family members within Folcard's narration of the events that led to the Conquest and the eventual canonization of Edward. Folcard also engages in some revision of the chapters composed before the Northern Rebellion in order to align those earlier chapters with the text's new purpose. Once his work for the Dowager Queen is done, she sends Folcard (back) to Ealdred, and he then composes the *VJB*.

During the post-Conquest segment of the textual production, Edith may have had the secretarial services of some of the Wilton nuns or oblates at her call as well – even as Edith composed and collaborated with Folcard, the person inscribing the words in draft on wax tablets or on parchment in permanent form is likely to have been

one of the highly-educated female residents of Wilton Abbey, acting as *scriptrix* to assist the Dowager Queen in her endeavor (for discussion of the high levels of literacy at eleventh-century Wilton, see Hollis, “Wilton” and Tyler, *England* 213–20).

Much more than simply a patron who provided financial incentive and general instructions, Edith participated in the creation of the text to such an extent that she even influenced the sentence structure of the final product as she directed the changes in purpose and narrative content. Tyler notes that “in order to understand how the *Vita Ædwardi* fits into literary history we must ascribe determining agency to its female patron and audience” (*England* 202). Modern readers can now see Edith not as a distant patron but as an active creator of her book. She ably accessed the cultural prestige of Latin for her text, a prestige that spanned the entire medieval period (Momma 226–27). Edith’s multi-lingualism is crucial here as well: through her education and her marital and familial relationships, she was functional in Latin, English, forms of French, Danish and, if the later *Edwardi* texts are to be believed, in Irish as well (Barlow, *The Life* 22–23). As such, she experienced no linguistic gaps among her contributors and their written and oral sources, from the Loire poet’s French to the Old English of the *Anglo-Saxon Chronicle* to the Latin of church documents and Queen Emma’s previous *Encomium*. Edith had the language skills to be involved at the micro level at every step of the process.

As noted in the preface to this essay, many feminist scholars have argued for years that varieties of medieval women’s literacies and textualities have been obscured by male medieval scribes and our modern scholarly assumptions of masculinity in medieval textual creation. An understanding of the *VER* as a composite text with multiple contributors and sources furthers both this specific discussion and broader revisions to the concept of ‘authorship’ in medieval literature.¹⁴ The narrative of composition suggested here is somewhat analogous to the practices of the ‘writers’ room’ utilized by modern TV shows or of ‘studio sessions’ during which bands compose new songs, so that creation of the final product is a group rather than a solitary effort, with ideas and phrases constantly drafted, revised, and changed within group processes and dynamics.

Our analysis of the authorship of the *VER* illuminates the weaknesses of the modern scholarly acquiescence to the Romantic model of a single, implicitly male author, individually creating an entire text. Just as the *VER* challenges modern definitions of historiography and hagiography (as ably described by Victoria B. Jordan), it

14. See, for example, Minnis; Partridge and Kwakkel; D’Angelo and Ziolkowski. Most of these scholars, however, focus on known, named authors from the High and later Middle Ages.

challenges as well modern ideas of ‘the author.’ A form of this Romantic model, ‘The Anonymous,’ who never existed as an individual, is the actual fiction in this discussion. In seeing Edith and her team working cooperatively over a lengthy period of time, we are chronologically and culturally extending Kimberly Benedict’s analysis of collaborative authorship between religious women and scribes in the High and Later Middle Ages. An eleventh-century secular woman, Edith was in a similarly ‘dominant role’ as that which Benedict identifies for the women in the pairs and groups she analyzes; exercising power over the men and women on her team, the Queen directed the project of her book (Benedict x). Our argument also complements Therese Martin’s use of the term ‘maker’ to refer to medieval women who patronized art objects and thus were integral parts of the creative process (30). We recognize Edith as *auctrix* of the *VER*: not an ‘author’ in the isolated, individualistic Romantic sense, but as “she that originates a thing” (*auctrix*). While *auctrix* refers more usually in medieval Latin to the Virgin Mary, its usage is appropriate here as well, since Edith organized, directed, and contributed to the text: she is the originator of the *VER*, and because Modern English no longer uses ‘authoress,’ the most accurate translation of *auctrix* is simply “author.” Edith is the author of the *Vita Ædwardi Regis*.

The composite nature of the *VER* improves our understanding of Queen Edith’s authorial and patronage practices in the fraught decade of 1060–70, demonstrating some of the ways medieval secular women could use patronage and commissions to tap into religious networks and literary expertise for their own purposes. Like her mother-in-law Emma, Edith understood the importance of publicizing her version of events. After the Conquest, in her retirement at Wilton, Edith would have had substantial motivation to invest time, money, and effort in bringing about the creation of this work that would celebrate her role in her family’s greatness, mourn the tragedy of its fall, and affirm the holiness of her dead, royal husband, all as part of her campaign to maintain her economic, social, and political status under the aegis of the new Norman rulers.

The *VER* is thus a composite text financed, directed, and coordinated by Edith; it was produced over an extended period of time by at least three contributors (the queen, the Loire-School poet, and Folcard) with the possibility of more (Goscelin or other anonymous writers), some of whom used written and oral sources produced by still other contributors. This understanding of the *Vita Ædwardi Regis* helps to us to recognize that the actual practice of textual creation

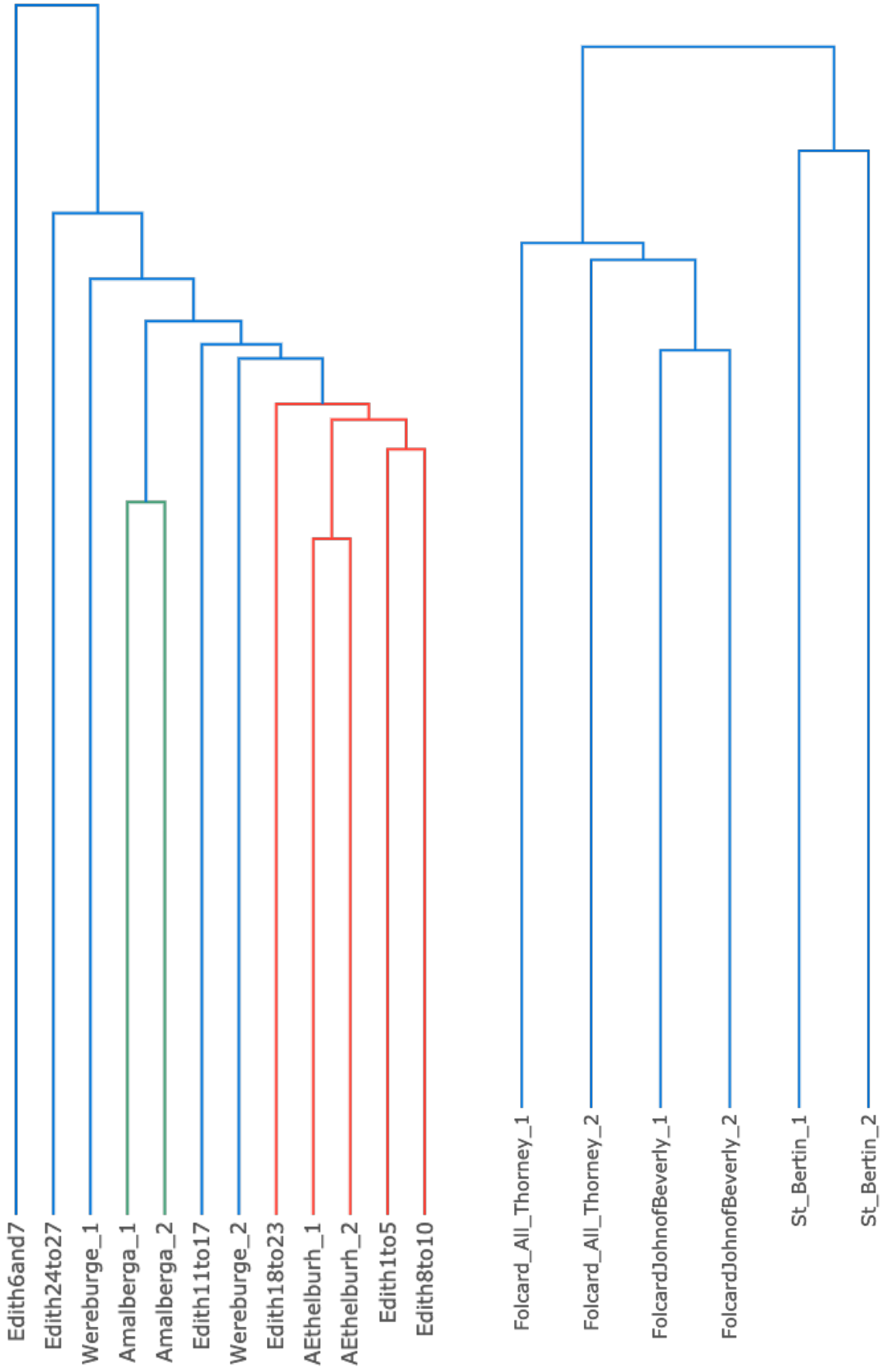
in the Middle Ages was a collaborative effort among patrons, writers, translators, editors, archivists and copyists, each of whom was an individual person with his or her own talents, idiosyncrasies and agendas. The realization of a controlling, organizational intellect behind this collaborative production both explains the text's final, complex form and identifies Edith as its ultimate author.

Appendix: Contents Table, *Vita Ædwardi Regis*:

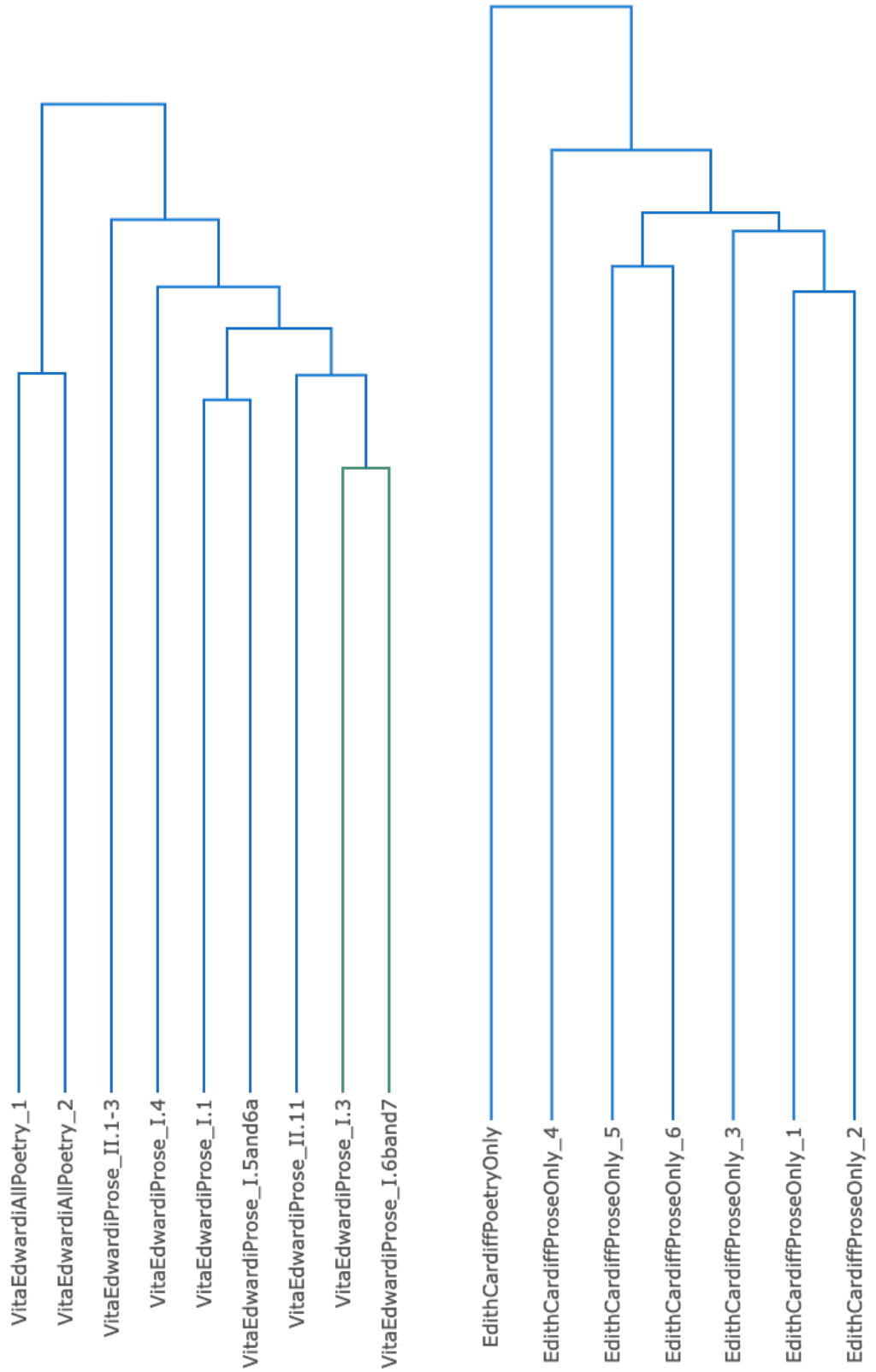
Item	Contents	Barlow pgs	MS folios	word count
Poem one	Invocation of/dialogue with the muse and patron	2–9	38r–38v	546
Chapter one File I.1	Godwin's rise under Cnut; his support of Edward; praise of Edward	8–21	38v–40v	1254
Poem two	Celebration of Godwin's gift of a ship to Edward	20–21	40v (right before a missing section)	296
(Barlow includes	<i>Textual restorations from</i>	<i>Osbert/Richard</i>	<i>here as ch.2)</i>	
Poem three	Praise of Godwin's children; warnings of the fragility of peace	26–29	41r–41v	253
Chapter three File I.3	Tension between Godwin and Edward; Crisis of 1051 (exile to Flanders)	28–39	41r–43v (crumbling MS corner here)	1211
Poem four	Lament for unjust suffering in general (and of Earl Godwin in particular)	38–39	43v	132
Chapter four File I.4	Resolution of Crisis of 1051 (Godwin's reinstatement)	38–45	43v–44v	723
Poem five	Analogies of Godwin/ Edward with David/ Saul	44–47	44v–45r	290
Chapter five File I.5	Death of Godwin; descriptions of Harold and Tostig; their journeys to Rome	46–57	45v–47r	1197
Poem six	Warnings of and laments about fraternal discord related to Harold and Tostig	58–61	47r–48r	353
Chapter six File I.6	Celebration of Tostig's and Harold's endeavors; Edward builds Westminster; Edith builds Wilton	60–73	48r–50r	1354
Poem seven	Praise of Wilton, Mary, and Edith	72–75	50r–50v	296
Chapter seven File I.7	Northern Rebellion; break between brothers; death of Edward	74–83	50v–52r	989
(Barlow's Book	Two Begins)			

Poem eight	Mourning for lost peace; reconfigured plan for the text	84–91	52r–54r	665
Book II, Chapters 1–3 File II.1–3	Two of Edward’s healing miracles	90–97	54r–54v	552
(restored miracles	from various places)	(96–115)	(missing folios)	
Book II, chapter 11 File II.11	Details about Edward’s death	116–127	55r–57r	1337

Ancillary Figure 1. Dendrogram of the *Vita Amalbergae* w/other texts by Goscelin.
Ancillary Figure 2. Dendrogram of the *Vita S. Bertini* w/other texts by Folcard.

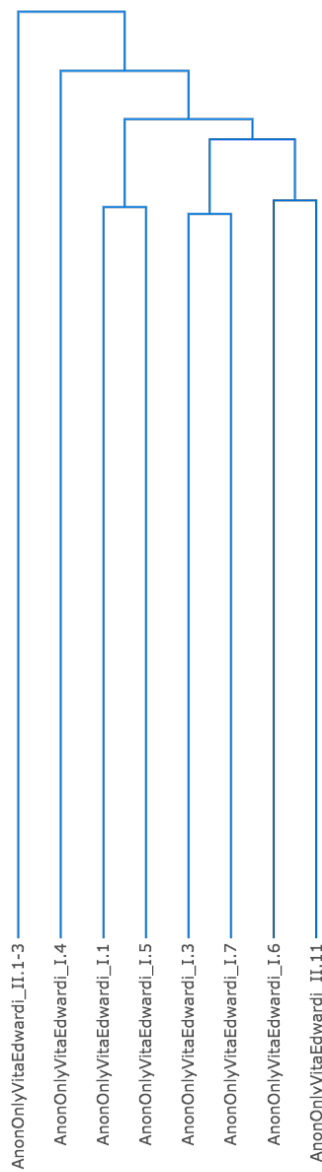


Ancillary Figure 3. Dendrogram of poetry and prose of the *VER* (segments of c. 1200 words).
 Ancillary Figure 4. Dendrogram of poetry (one segment of 1452 words) and prose of the *Vita Edithae* (segments of c. 1500 words).

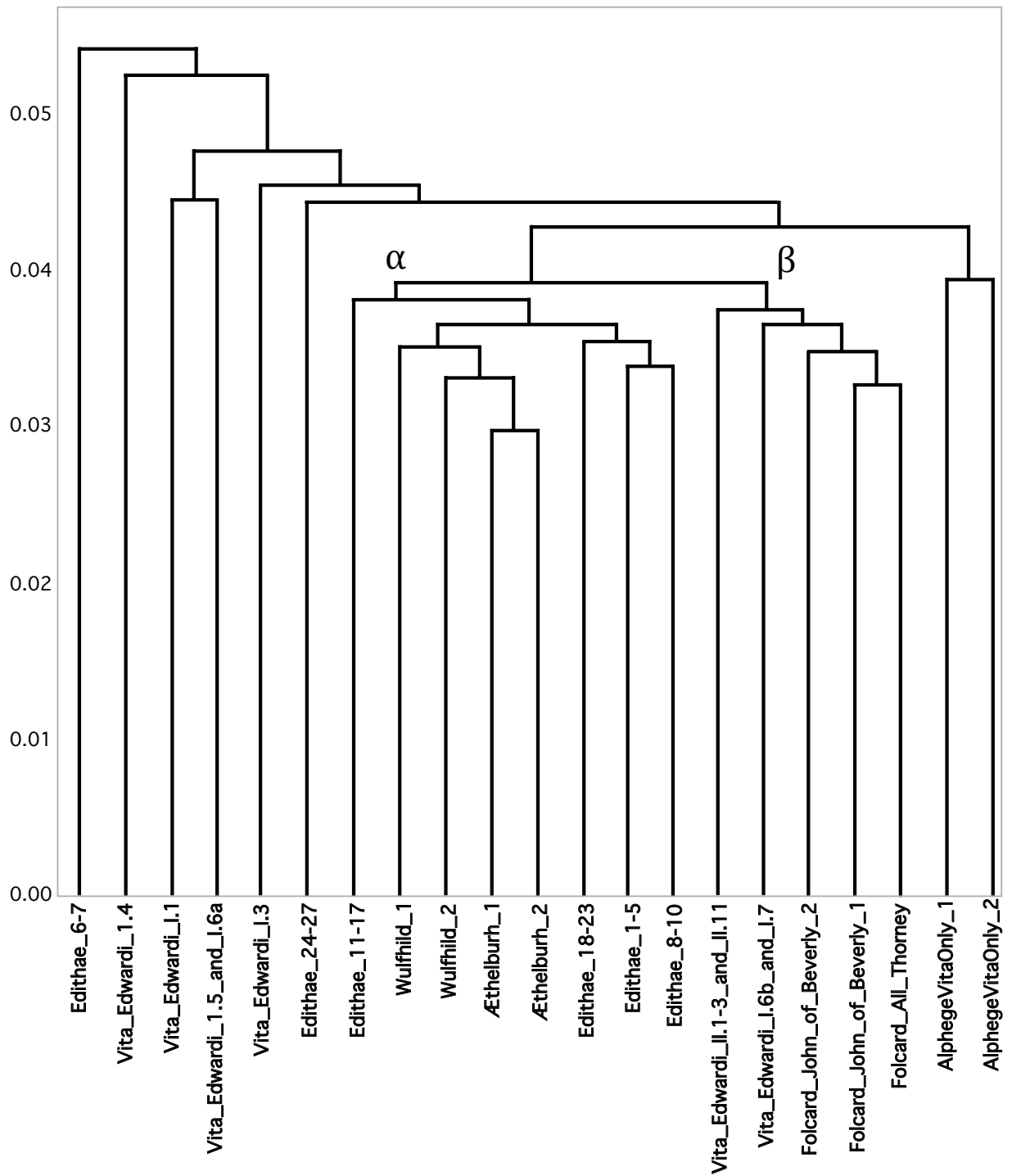


	FullText	I.1	I.3	I.4	I.5	I.6	I.7	II.1-3	II.11
Rank	Word	Word	Word	Word	Word	Word	Word	Word	Word
1	et	et	et	et	et	et	in	et	et
2	in	in	in	in	in	in	et	in	in
3	ut	ut	ut	ut	ut	ad	ad	rex	ad
4	ad	non	a	ab	non	quam	ex	a	cum
5	cum	dei	ad	cum	cum	non	eius	ad	ut
6	non	cum	cum	eius	eius	cum	cum	ut	uel
7	a	eius	non	pro	a	ex	quod	erat	dei
8	eius	regni	etiam	se	suo	quoque	non	eius	non
9	ex	sibi	ducis	ducis	quoque	a	a	cum	a
10	est	hic	quod	a	est	per	aut	ille	qui

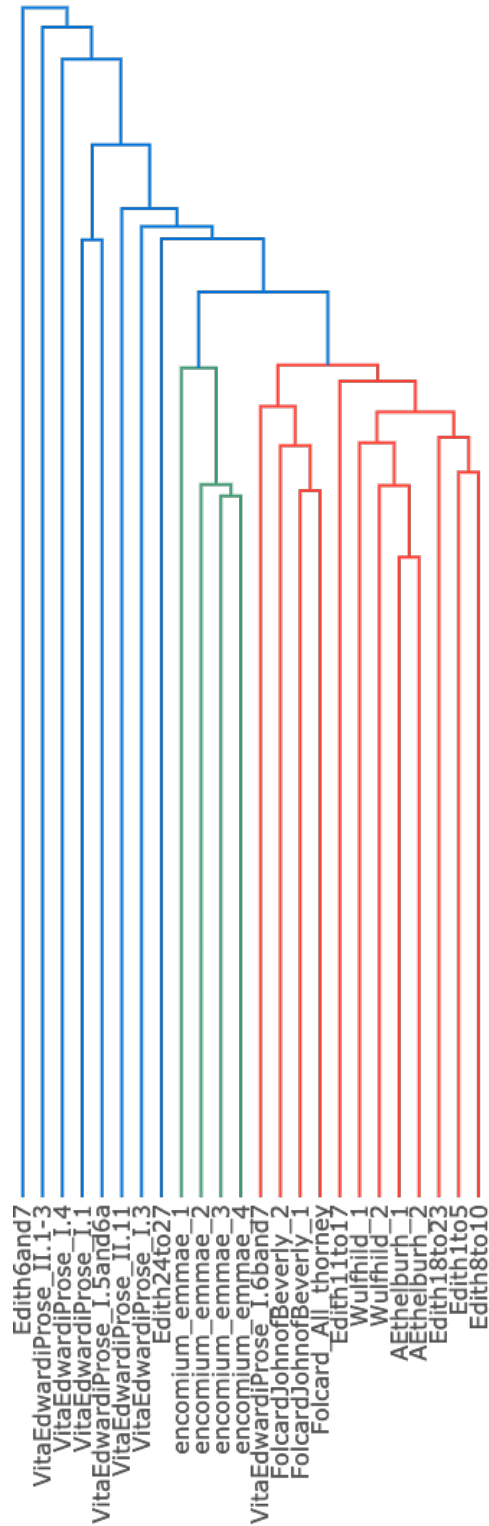
Ancillary Figure 5. Table of "Top Words" for separate *VER* chapter segments.



Ancillary Figure 6. Dendrogram of *VER* segments with "StopWords" function applied to *et*, *ad*, *in*, *ut*, and *cum*.



Ancillary Figure 7. Dendrogram of core texts in the study with Osbern of Canterbury's *Vita Elphegi* (segments of c. 1600 words).



Ancillary Figure 8. Dendrogram of core texts in the study with the *Encomium Emmae* (segments c. 2000 words).

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