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Written Culture at Ten Duinen: Cistercian Monks and Their Books, c. 1125-c. 1250

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CHAPTER 4

NAVIGATIONAL AIDS

The first two chapters of my study explore key elements of manuscript production both at Ten Duinen and with respect to the manuscript units that the abbey's library had acquired from other monasteries. The choices made during the preparation and copying stages not only determine the appearance of a manuscript, but also hint at how its makers envisioned its use. Chapter 3 probed further into how the manuscript units of my corpus were designed to be used, and actually were used, by looking at a number of clues. I first identified two types of reading aids — interpretive and navigational — and defined them within the context of this study. I then explored the appearance and use of interpretive aids in my corpus.

Continuing on the subject of use, Chapter 4 identifies navigational aids in my study's corpus and describes how they may have been used by Ten Duinen's monks. It also queries why these navigational aids were added to Ten Duinen's books: what does their presence tell us about the intellectual activities of the abbey in the twelfth and thirteenth centuries?

4.1 Navigational Aids at Ten Duinen

Following the previous chapter's division of reading aids into two key types — interpretive and navigational — this chapter explores the latter's appearance and use in Ten Duinen's manuscripts. As Tether defines them, navigational reading aids are 'paratextual signposts' that enable readers '(a) to navigate their way through (or jump to sections of) a text or (b) to cross-refer easily between related materials'.¹ While the interpretive aids discussed in the previous chapter assist the reader in understanding the text they accompany, navigational reading aids act as 'roadmaps'.² Aids of the page, which have meaning only within the context of their immediate surroundings, tell the reader 'a new section starts here': paragraph marks and initials perform this function. Aids of the volume, which have a broader structural or ordinal context beyond the page, say 'this section is here, relative to other sections': running titles fulfil this purpose. Some navigational aids do both; for example, an incipit rubric marks out where a new section begins on the page. If the order of sections in the whole volume is known to the reader, moreover, it also indicates the rubric's relative place within the text. Even better, if rubrics are accompanied by a chapter table listing them in order, an unfamiliar reader can still find a particular section relative to those before or after it.

Navigational aids can be built upon one another to make searching for specific material even easier: if ordinal numbers accompany rubrics both on the page and in

¹ Tether, *'Mise en page'*, 23.

² Gumbert, 'Points and Signposts?'.

chapter tables, the reader has both relative (chapter table and rubric) and absolute (ordinal) reference points to guide their way. Some of these buildable navigational aids are, however, dependent on another tool in order to function. For example, while a rubric functions on its own by indicating the topic of the following text, a chapter table is useful only when it relates to rubrics that are easily located throughout the book. Likewise, ordinal numbering is only meaningful as a navigational tool when a numbered chapter table is present: if there is no means of linking specific material to its partnered numeral, the ordinal context is lost to all but the most familiar reader.³

The following analysis of navigational aids begins with one of the smallest aids that functions only in the context of the page, then focuses on those which operate across multiple folios to help navigate through a section, or even through the entire volume. The balance of this chapter therefore surveys, in turn, paragraph marks, initials (both in-text and multi-line), rubrics for incipits and explicits, running titles, chapter tables, and, finally, foliation.

4.2 Paragraph Marks

The paragraph mark is perhaps the simplest and most diminutive navigational aid. Over the production period of the manuscript units in my study's corpus (c. 1126–c. 1250), the paragraph mark takes two main forms, both of which appear with considerable variety. The first form generally emerged in the twelfth century as what Parkes calls a *paragraphus*.⁴ At its simplest, the *paragraphus* resembles a **T** or **I**, and when more decorative often looks like a harp with one or more 'strings' attaching the curved top bar to its diagonal or vertical stroke (Figure 4.1).⁵ *Paragraphi* sometimes feature a stroke of attention-grabbing colour (usually red) when executed by the ink of the main scribe, or are drawn entirely with the rubricator's red ink.

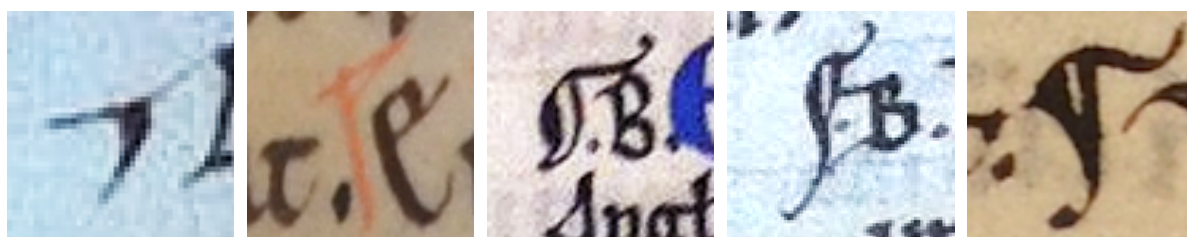


Figure 4.1. From left to right: Bruges, OB, MS 59, f. 21^r; MS 152, f. 93^r; MS 67, f. 2^v; MS 72, f. 42^r; MS 277, f. 134^r

³ Without a numbered chapter table linking topics or rubrics to the chapter number, the number itself would not be a particularly useful navigational aid, but could serve as a mnemonic device to the familiar reader: that is, one might remember certain sections according to number, and in this way find them again by searching for their positions in the volume relative to other numbered sections.

⁴ Parkes, *Pause and Effect*, p. 305.

⁵ Parkes, 'Layout and Presentation', p. 68, describes the simpler style of *paragraphus* as a 'gallows' and the more detailed version as 'an elaborate long-s'.

At the end of the twelfth century a new form of paragraph mark emerged, called the *paraph*, which was shaped like a **C**, based on the *littera notabilior* for ‘capitulum’.⁶ As the early thirteenth century witnessed a fashion for red and blue alternating initials, these paraps often followed suit, taking the colour opposite that of the adjacent initial (Figure 4.2). *Capitulum*-style paraps used at Ten Duinen sometimes appear to be a mix of the earlier and later signs: while the body has gained a bulging bow, its tail still swings to the left (Figure 4.2, top right).

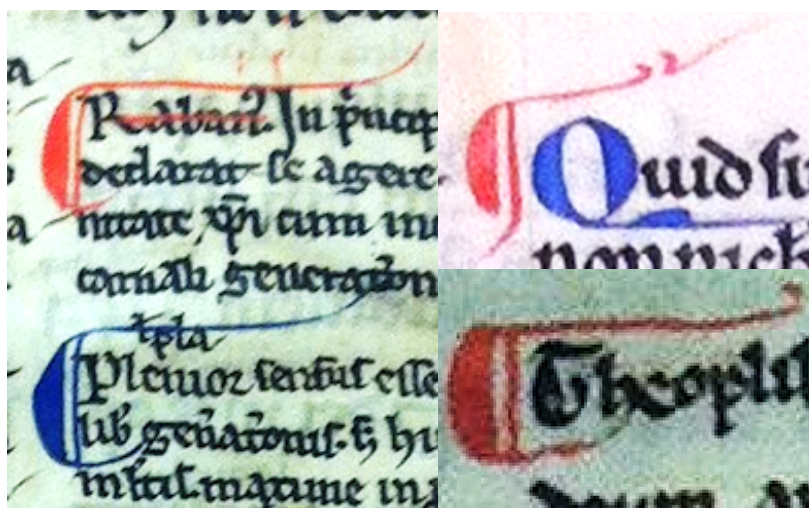


Figure 4.2. Bruges, OB, MS 62, f. 4^v (left); MS 67, f. 132^r (top right); MS 62, f. 79^v (bottom right)

Throughout most of the Middle Ages, both styles of paragraph mark separate distinct sections of text. They appear before segments of continuous text concerned with a particular theme (like our modern line breaks and indentation), before items in a list (as we use bullet points), and before citations (similar to our quotation marks or indentation of longer quotations). They also appear before headings or chapter numbers, often in addition to rubrics or display script (Figure 4.3), and also demarcate small portions of text that have run over from the previous line (Figure 4.4). Further, they can be found before interlinear and marginal glosses (Figure 4.5).⁷ With this broad range of uses, their specific meaning is not always immediately apparent and must be determined contextually.

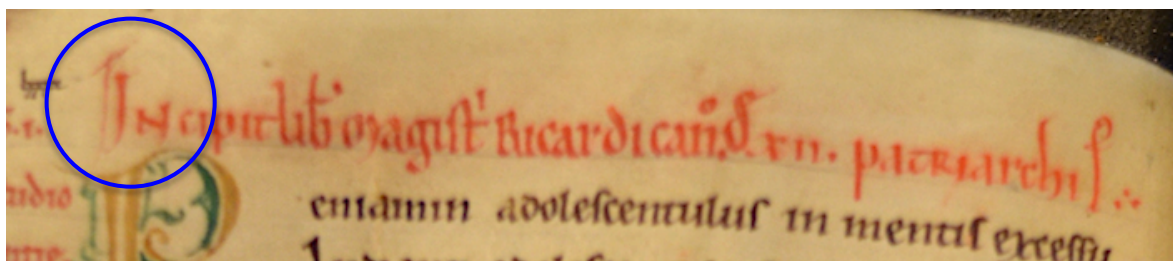


Figure 4.3. Bruges, OB, MS 152, f. 84^v. *Paraphus* used before an incipit, with rubric in display script

⁶ Parkes, ‘Layout and Presentation’, pp. 68–69.

⁷ Parkes, ‘Layout and Presentation’, p. 68. Weston also notes their use to call out corrections (‘The Spirit of the Page’, p. 65).

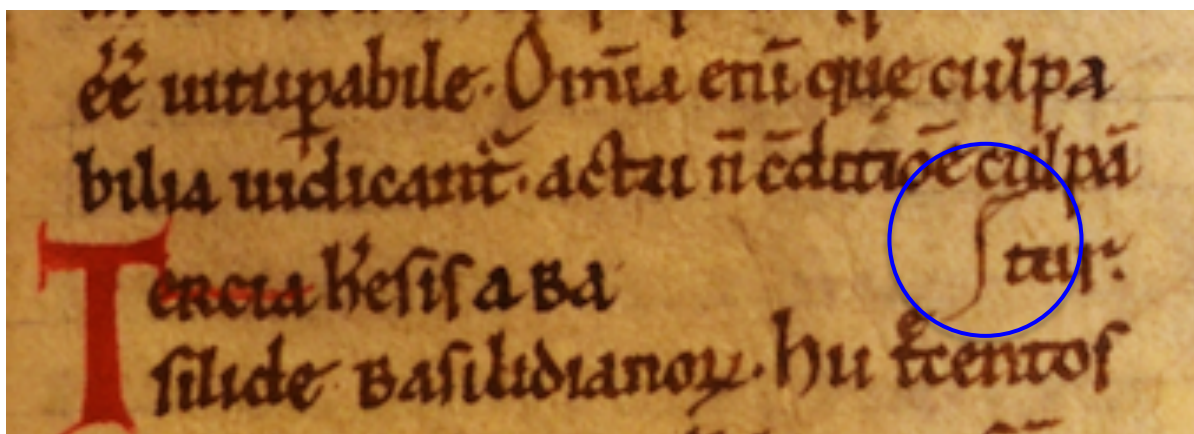


Figure 4.4. Bruges, OB, MS 158, f. 82r. Paragraphus used to indicate line carry-over

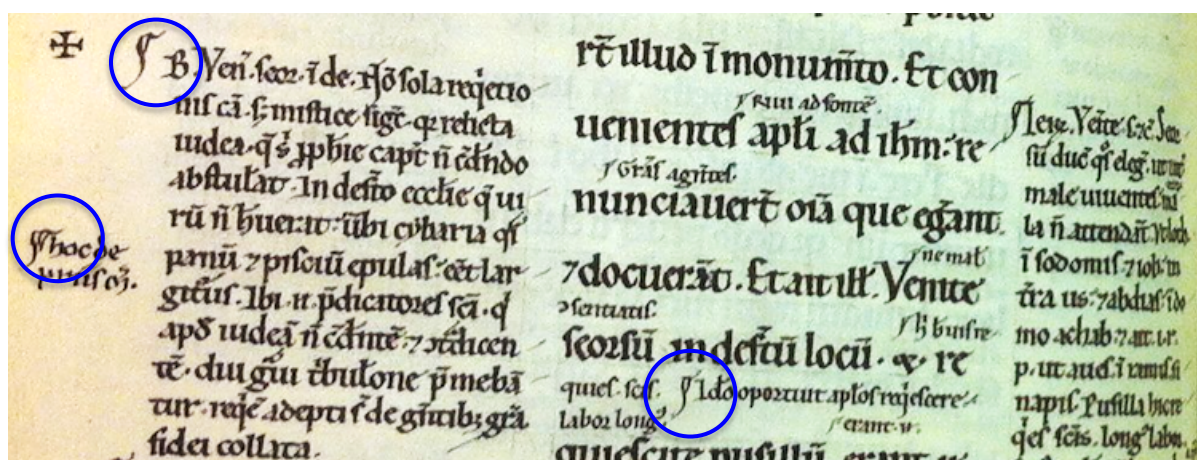


Figure 4.5. Bruges, OB, MS 72, f. 21v. Paragraphi used before interlinear and marginal glosses, and before marginal author citations

Each of the abovementioned functions of paragraph marks serves to guide the reader's eye through the page, to make the text's structure clear and its content visually digestible. Although each of these functions is witnessed in manuscripts from Ten Duinen's library (both homemade and acquired from elsewhere), this navigational aid is not widespread in my corpus. Paragraph marks usually appear consistently throughout the manuscript units in which they are found, yet occur in only thirty-one manuscript units (just under 25 per cent). Although this mark had a long tradition and several clear contextual meanings, there is a logical reason to not use them: a variety of more specific and eye-catching reading aids could express the same desired meaning. For example, marginal author citations, word-symbols often written in red, perform well at guiding the reader to distinct sections of text in addition to supplying their own interpretive information (as outlined in Chapter 3.5). Interlinear glosses are distinctive in their miniature script, not needing a prefacing paragraph mark to distinguish them. Titles, incipits, and explicits are usually placed marginally or on separate lines than the main text, are written in display script or rubricated, or utilize a combination of these elements to set them apart for the reader. Perhaps the most effective rival of the paragraph mark in guiding the reader through distinct sections of the page is also the most decorative: the initial.

4.3 Initials

An initial, in a manuscript context, is an enlarged first letter of a word that starts a new clause, which acts as a signpost of a new section. Initials, also called *littera notabiliores* ('more noticeable letters'), were added first by Irish scribes in the Early Middle Ages to mark and emphasize the beginning of a text or new section, and were later adopted on the Continent as a ubiquitous and enduring aspect of Western punctuation.⁸

Throughout most of the twelfth century they were placed in the margin next to the textblock or straddle the leftmost bounding line. By the thirteenth century, however, they are set within the textblock, often with only flourishes stretching into the margin.⁹ Initials are found in virtually every size, quality, and type of script. They range in size from a single line to an entire folio; vary in complexity from a larger scale of the same text hand to intricate masterpieces of animal, floral, and human forms; and differ in media from plain black or brown ink to embossed gold leaf and rich pigments. They can act as simple 'capitals' as found at the beginning of sentences in the age of print, or as complex symbols and stories designed for the viewer to meditate on Scripture, God, and Creation.¹⁰

Initials, while acting out a variety of other roles, are important navigational tools. While they perform as punctuation by clarifying syntax — announcing 'a new sentence or section starts here' — they also increase the textblock's legibility by visually differentiating lines, thus preventing eye-skips while reading.¹¹ Moreover, they offer suitable places to pause: should a reader look up from his or her book, they offer useful cues for where in the text to resume, which is especially valuable if consulting several books at once or pausing frequently to meditate on a passage, both of which were vital aspects of monastic reading in the twelfth and thirteenth centuries.¹²

Initials were also employed as mnemonic devices: early copies of Hugh of St-Victor's works 'took full advantage of coloured initials to give each opening a quasi-distinct image to aid memorization'.¹³ Their use in the context of memory can be two-fold: first, in the sense of Hugh's memory training, they enable the reader to form 'mental pictures' that impress upon the mind both the image and the text

⁸ Parkes, 'Reading, Copying and Interpreting', p. 97.

⁹ Parkes, 'Layout and Presentation', p. 65.

¹⁰ Brown, *The Lindisfarne Gospels*, has aptly described the meditative function of initials.

¹¹ An 'eye-skip' (also known as 'homeoarchy') is 'the unintentional movement of the eye when reading from one word, line, or letter to another that is not in fact the next' (OED Online, 12 December 2016). Eye-skips often leave their trace as scribal errors, and generally occur when a textblock contains little visual differentiation between lines, causing the eye to reread a line, or jump up or down to another line on the page, often when it repeats a word in the line where the eye-skip occurred.

¹² Consulting multiple books and reading their texts selectively and non-sequentially is discussed by numerous sources in the context of 'scholastic reading'; for a concise assessment of this type of reading within a monastic context, see Weston, 'The Spirit of the Page', especially pp. 99–100; for meditational reading, see pp. 37–42.

¹³ Saenger, 'Reading in the Later Middle Ages', p. 121.

accompanying them.¹⁴ Secondly, in the sense of navigation, they can potentially act as reminders: when searching for a particular topic in a familiar book, a reader might remember, for example, that the folio sought is a recto about a third of the way through the volume with a red and blue one-line initial **A**, or that it is a few pages past a yellow and green multiple-line initial **S**.

Between 1145 and 1151 the Cistercian General Chapter issued statutes specifying that initials 'should be of one colour and not decorated with painting'.¹⁵ This was sometimes disregarded, as evidenced by the considerable number of finely decorated Cistercian manuscripts from the second half of the twelfth century and beyond, including some produced at Cîteaux itself.¹⁶ However, Cistercian manuscript decoration of the second half of the twelfth and first half of the thirteenth century often shares a similar austerity of style (see Chapter 3.3, Figure 3.1) spread by the transmission of books through regional and filial networks.¹⁷ Ten Duinen's surviving manuscripts do not always follow the prescription of monochrome initials: large foliate initials are often subtly bi-coloured (see Chapter 2, Figures 2.12, 2.13, and 2.17). In addition to these more colourful styles, there are also a number of impeccably executed single-colour (red, blue, and sometimes green or yellow) large initials (Figure 4.6).



Figure 4.6. Bruges, OB, MS 156, f. 93^v (left); MS 19, f. 124^r (top right); MS 17, f. 58^v (bottom right)

¹⁴ On 'mental pictures' and their use in memory training and medieval pedagogy, see Carruthers, *The Book of Memory*, pp. 221–60.

¹⁵ Jamroziak, *The Cistercian Order*, pp. 175–76; see also Williams, *The Cistercians*, p. 101.

¹⁶ See Załuska, *L'enluminure et le scriptorium de Cîteaux*.

¹⁷ Jamroziak, *The Cistercian Order*, p. 176.

Moreover, some of their acquired books contain initials, often colourful, that are uncharacteristic of the abbey's own decorative productions (Figure 4.7), as do a few exceptions from the abbey's scriptorium which may feature the contribution of a visiting or commercial artist (Figure 4.8). Sometimes the only large or ornamental initial is found on the opening folio, indicating that it is more decorative than navigational.



Figure 4.7. Top (l-r): Bruges, OB, MS 55, f. 3^r; MS 56, f. 128^r; MS 67, f. 1^r;
Bottom (l-r): MS 163, f. 1^r; MS 257, f. 234^r



Figure 4.8. Bruges, OB, MS 147, f. 1^r. A multicolour foliate initial in a Ten Duinen-produced manuscript

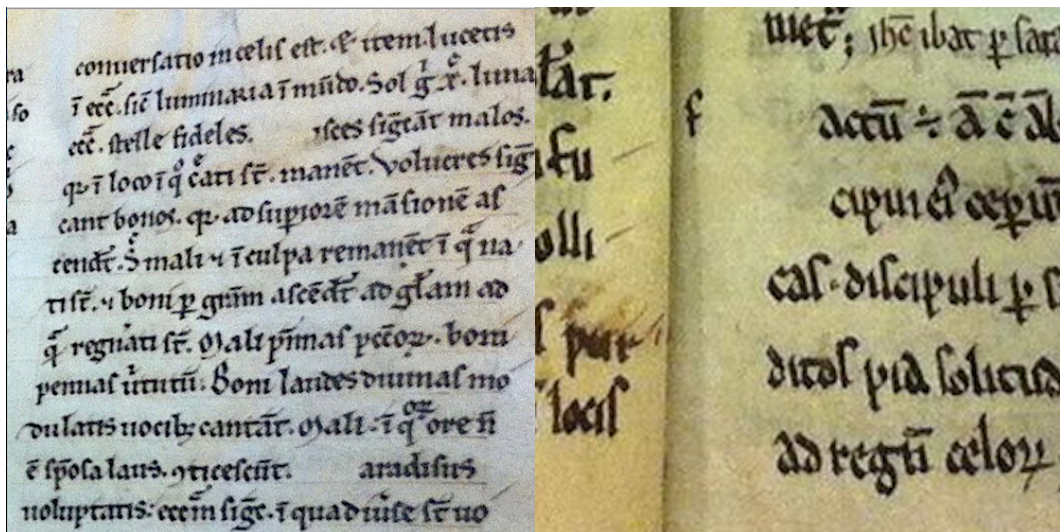


Figure 4.9. Bruges, OB, MS 93, ff. 3^r (left) and 63^r (right). Left: gaps left in two places for initials; Right: a cue letter in the inner margin instructing that an F is needed

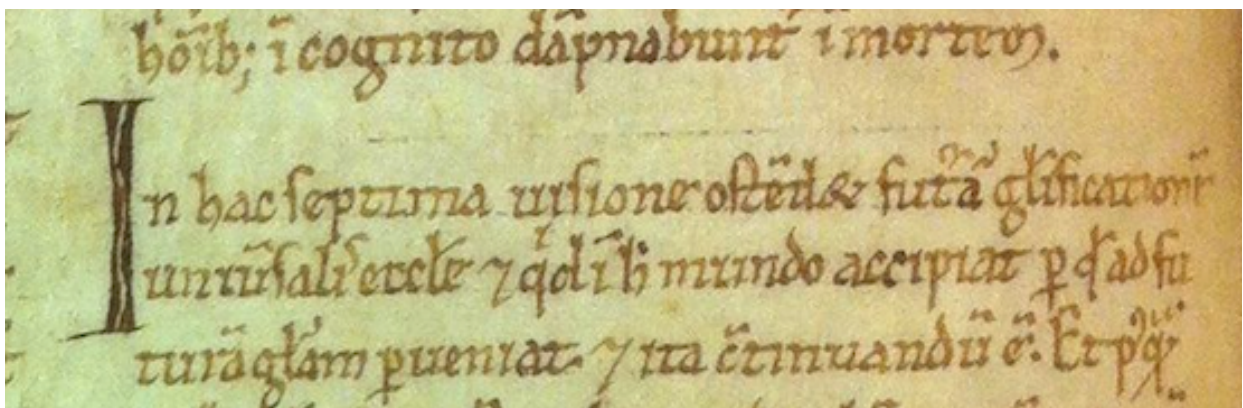


Figure 4.10. Bruges, OB, MS 55, f. 73^v. A modest initial by the text's scribe

About one third of the manuscript units in my corpus contain no initials at all. In some cases, initials were planned, but never executed: **MS 93** is one such case, where the scribe even wrote cue letters in the margin to instruct the rubricator or artist what belonged in the gaps he left (Figure 4.9). Some other manuscript units feature only initials executed by the main scribe in the same ink as the rest of the text (Figure 4.10), others small, simple red, blue, or green initials, or early red and blue pen-work designs (Figure 4.11).

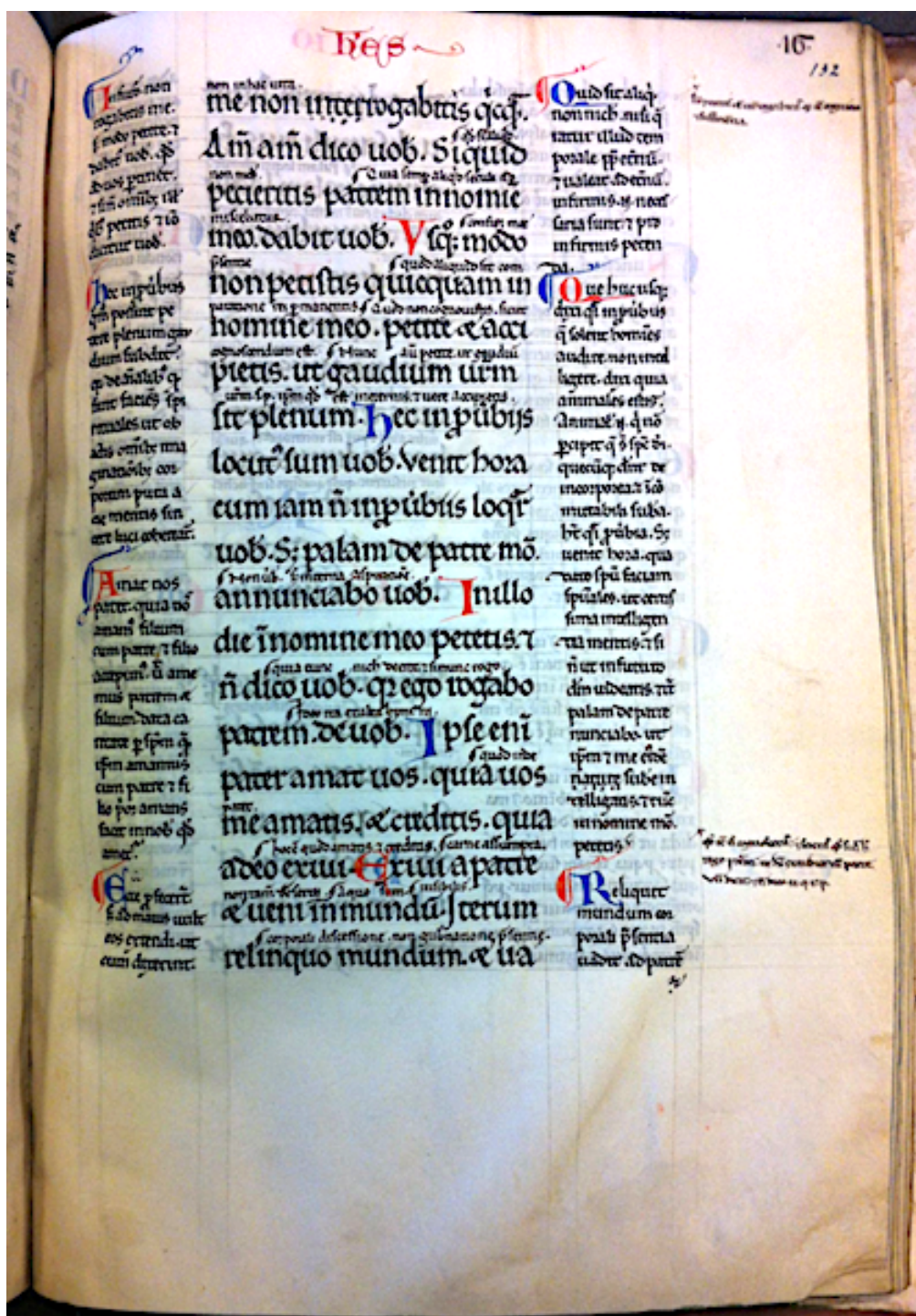


Figure 4.11. Bruges, OB, MS 67, f. 132^r. Alternating red and blue initials

4.4 Rubrics

The word 'rubric' comes from the Latin *rubrica*, for 'red earth' or 'ochre',¹⁸ presumably after the pigment from which iron-red ink had initially been made. Colour aside, 'rubric' now refers (among other things) to a section heading, which is precisely what it was in the Middle Ages. Although usually red, rubrics could also be written in the same ink as the main hand or in other colours. While often written in a display script (such as Uncial, Rustica, Capitalis, or even a mixture),¹⁹ they were also written in the same script as the main text (Figure 4.12). Further, rubrics might be accompanied by a simple or significant initial, could take up only a single line or be enlarged, and could appear either in the text block or alongside it in the margin. They were often filled in after the completion of the main text by the rubricator, who might be a different individual or the scribe who completed the rest of the text: because a display script is often used, it is generally difficult or even impossible to tell. In some cases notes, like the cue letters mentioned in the previous section on initials, survive in the margin — probably meant to be obscured by the gutter or trimmed off the edge when bound — to tell the rubricator what to put in the space provided (Figure 4.13).



Figure 4.12. Bruges, OB, MS 183, f. 1r.

Rubric in the same script as the text with incipit in a mixed display script

¹⁸ Lewis and Short, *A Latin Dictionary*.

¹⁹ According to Parkes, 'Reading, Copying and Interpreting', pp. 64–65, the 'most important component of any layout is the deployment of display script to identify features on the page that are fundamental in the presentation of any text: headings, and the beginnings of chapters, paragraphs and sentences'. Display scripts had been used for centuries; they are practically a 'given' in the layout of a medieval manuscript from any era. As such, and because they do not function alone as a reading aid, but rather enhance rubrics and incipits, they are not discussed in depth here. For an introduction to different display scripts with examples, see Brown, *A Guide to Western Historical Scripts*.

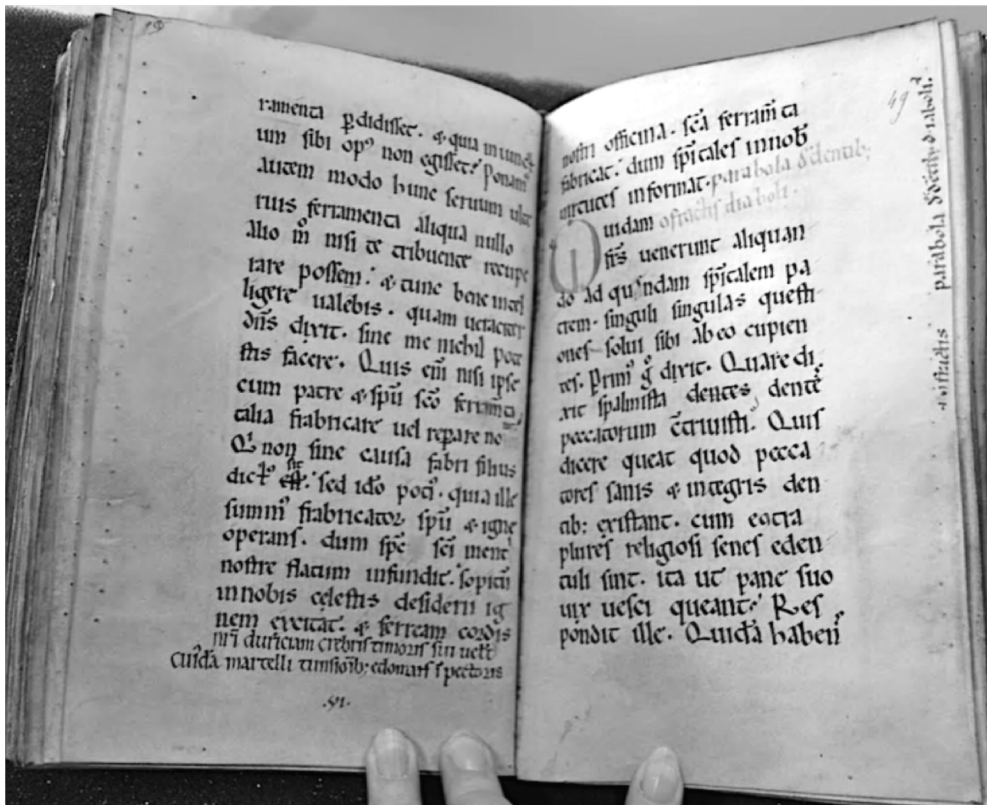


Figure 4.13. Bruges, OB, MS 297, ff. 48^v–49^r. Notes for the rubricator in the outer margin of f. 49^r, with insufficient space left by the main scribe

In instances where instructive notes are left for the rubricator, a few production scenarios are conceivable. In one, the scribe continued his work of copying, handing folios or quires to the rubricator for completion as he worked, and thus the rubricator had no access to the exemplar as his colleague was still using it. In an alternative scenario, the exemplar was no longer available — perhaps returned to its lender — by the time the rubricator was able to complete his task, and therefore notes were left to enable later completion. Or, it was simply faster for the rubricator to work with short marginal instructions than it would be for him to verify against the exemplar, folio by folio, especially if the new copy differed visually from the original.

Rubrics have one principal job: to announce to the reader that a particular book, chapter, or section is about to begin or has reached its end. That is, they signal ‘key moments in a text’.²⁰ This navigational aid is valuable to two types of readers. To those reading a book consecutively from beginning to end, a rubric announces a change, provides context for the following narrative, and offers a perfect location to pause with a memorable marker at which to resume. For those reading non-sequentially or selectively,²¹ it guides them in their search for a specific section, enabling them to

²⁰ Tether, ‘*Mise en page*’, 23.

²¹ ‘Non-sequential’ reading is the term preferred by Tether (and others cited by her); both ‘non-sequential’ and ‘selective reading’ are used by Weston to describe the activities of a reader who chooses only a specific section or sections of a book, as opposed to reading it from cover to cover in its entirety. Tether, ‘*Mise en page*’; Weston, ‘*The Spirit of the Page*’, especially pp. 99–100.

efficiently scan only the rubrics as they flip through a manuscript for the desired location. When accompanied by a chapter table, the value of rubrics further increases as a search tool.

Rubrics usually hold two types of information: either an announcement of the incipit or of the explicit. An incipit is the opening words or phrase of a text, and the explicit the closing; both (but particularly the incipit) are used to identify a particular manuscript or text in modern catalogues, and also in medieval booklists, sometimes in place of the text's title.²² Incipit rubrics, especially from the thirteenth century onwards, may be accompanied by a chapter number.²³ Some rubrics hold an explicit statement followed by the incipit statement for the following section (Figure 4.14).²⁴



Figure 4.14. Bruges, OB, MS 111, ff. 1^v and 2^r. Left: Opening rubric, 'Incipit Retractationes ...' Right: Closing rubric, followed by the next section's opening: 'Explicit retractatio. Incipit liber primus'

Although not all rubrics in my corpus are red (see Figure 4.4 of **MS 158**, where the initial ink is used to 'highlight' the simple rubric), they are nearly ubiquitous. Rubrics are only routinely absent in cases where the scribe wrote only a short stint between segments by another scribe (or scribes), or those where a short text was added to an empty space following a longer text. When rubrics are present, they are simple, effective navigational aids of both the page and the volume. To the continuous reader they serve as transitions from one section to the next within the same page; to the searcher, as quickly registered markers of specific sections.

²² Sometimes the incipit of the second opening is instead used. Explicit is used to identify where a manuscript leaves off, and therefore whether the text is complete.

²³ Chapter numbers and their increased use in the thirteenth century are discussed further in Chapter 4.6.

²⁴ Rubrics are not themselves the incipit and explicit, but are sometimes misidentified as such. Incipits and explicit are properly the first and last words of the text itself, while rubrics announce them using standard formulae beginning with the words 'incipit' (here begins) and 'explicit' (here ends) followed by the title of the book or chapter.

Running titles, like rubrics, are a medieval feature that persists as a mainstay of modern printing layout. Stretching across the top margin of the page, they indicate at a glance what section of the book is open to the reader. As noted by Parkes, the practice of adding running titles began in Late Antiquity but waned in the Early Middle Ages, only returning as a standard apparatus in the twelfth century. Running titles are most useful in manuscripts made up of longer texts with many books, and in compilations of multiple works or authors.²⁵ These titles vary in length, sometimes including just the book number (for example, just 'III' for *Liber III*), and at other times a title, the author, or both. They might appear only on either the folio rectos or versos, but frequently span across both top margins of an opening, with author on one side and book on the other. Running titles are often integral parts of the layout with dedicated ruling to guide either the scribe or rubricator on where to place them. They became increasingly common in the thirteenth century and were sometimes added to older books by later users, either freehand or above later ruling.²⁶

[illegible]

Figure 4.15. Bruges, OB, MS 9, f. 38^v. Partial running title (*Lib* for 'Liber') bisected by trimming

Original running titles (or traces of them) can be found in twenty-six of the 133 corpus manuscript units (19.5 per cent), with an additional nine featuring titles that were apparently added after the initial production of the text. As fifty-seven of the

²⁵ Parkes, 'Reading, Copying and Interpreting', p. 66.

²⁶ Running titles reappeared in the twelfth century and were especially common in thirteenth-century copies of long texts, but decreased in popularity in the fourteenth century. Parkes cites one of the earliest datable examples of this returning navigational aid in an eighteen-book compilation of canon law, Ivo of Chartres's *Decretum*, copied at Christ Church, Canterbury before 1127 ('Reading, Copying and Interpreting', pp. 66–67).

corpus manuscript units are bound in Campmans bindings, and most others having been bound at least once prior to their current binding, it is unclear how many of Ten Duinen's books originally included now-lost running titles. Given their common presence in other contemporary manuscripts, they were probably relatively common. While not particularly beneficial to the continuous reader — presumably he would already know from the most recent rubric what section of his book was open before him — running titles enable expedient searching. When looking for a specific section, a selective reader first opens his book to the approximate opening (for example, halfway through the volume) of the text he seeks. Then, using the running title, he orients himself within the work, knowing either from familiarity, a table of contents, or a chapter table, where the sought-after passage should be relative to the title he now sees at the top of the folios before him. Flipping backward or forward, he can then locate the needed section by its running title, and then zeroes in on his search by using supporting navigational aids: rubrics, chapter numbers, and initials.²⁷

With searching activities in mind, the presence of running titles suggests that the monks of Ten Duinen selectively consulted at least a fifth of their books. The need for efficient navigation through longer texts or whole volumes fulfilled by running titles points to specific 'scholarly' activities — namely, thematic sermon writing, compilation of compendia and florilegia, and their requisite cross-referencing of authoritative texts — that characterized intellectual developments of the twelfth and thirteenth centuries. This seems to have occurred at Ten Duinen as elsewhere in Western Europe.²⁸ Evidence of these activities taking place at Ten Duinen is further supported by the presence of chapter tables and foliation, analyzed in the following two sections of this chapter.

4.6 Chapter Tables

What Richard Rouse calls 'aids to searching' — indices, alphabetical order, and foliation — are among the most important innovations of the twelfth and thirteenth centuries.²⁹ Their introduction reflects a 'revolution' in medieval approaches to sources: they show a need to efficiently and effectively locate specific material in a text in an unprecedented way. Naturally, earlier readers also consulted their texts selectively: florilegia and compendia were popular in the Carolingian era and earlier,³⁰ and their

²⁷ Weston points out that in cases where running titles appear on their own without supporting navigational reading aids 'their primary function is to help the reader navigate large sections of the volume, and not to help the reader look up and find specific chapters and sections of text' ('The Spirit of the Page', p. 120). That is precisely why in the scenario described here the searcher uses the running titles to their 'lowest common denominator' (i.e. to find a general section) and must then switch to page-specific aids to reach sought-after material.

²⁸ Rouse and Rouse, '*Statim invenire*', pp. 201–28; R. Rouse, 'Cistercian Aids to Study', pp. 123–34.

²⁹ R. Rouse, 'Cistercian Aids to Study', p. 124.

³⁰ Hamesse, 'The Scholastic Model of Reading', p. 107; for Carolingian florilegia see, for example, Matthews Sanford, 'The Use of Classical Latin Authors in the *Libri Manuales*'.

production necessitated the gathering of diverse material chosen from numerous sources. However, never before had the desire to find material resulted in the systematic creation and application, at a variety of centres, of different searching apparatus.³¹

Rouse describes the use of searching tools as having an ‘identifiable and almost explosive beginning’.³² While he aptly demonstrates with specific examples the origins of early ‘aids to study’ (that is, tools that are independent of the texts they enable searches of, such as alphabetical *distinctiones*), there is a navigational aid that foreshadowed these tools: chapter tables. Although not as complex or sophisticated as alphabetical subject indices, these lists of sections or chapters are usually found at the beginning of a longer text or a miscellany. As rudimentary search tools, they offer a guide to the relative place of specific texts within the volume. Their inclusion demonstrates a desire to take stock of the material available, and its approximate place within books. Some chapter tables simply list the chapters or sections with a brief title according to their theme, while others include chapter numbers which correspond to numerals placed in rubrics or alongside them in the margin. If not included at the time of production, chapter tables often made their way into the opening of manuscripts in subsequent decades and centuries (sometimes added to a flyleaf). Likewise, chapter tables without numbers often gained them from later users. These additions and adaptations signal that later readers customized their books to new or developing needs.

However, twelfth-century chapter tables, including those found in Ten Duinen’s books, are often copied from the exemplar, and as such may have a tradition of inclusion with the text. They are frequently found following a prologue, in the same hand as the rest of the text, rather than tacked onto the beginning as an addition by a later hand. This placement after the prologue may have helped increase their chance of survival: it is not uncommon for manuscripts to be missing their first folio (or more); together with the final page, it experienced the greatest wear and tear from repeated opening of the book, rubbing of the binding, and amplified exposure to whatever elements — such as moisture, mould, and pests — it might encounter. Moreover, if a manuscript endured a period in a damaged binding or unbound, there is even greater chance of loss at the front or back, which may have affected the survival of chapter tables disproportionately compared to some other reading aids.

As with running titles, it is difficult to quantify how many of Ten Duinen’s manuscript units were once prefaced with chapter tables due to possible loss or removal. In their current state, there are about forty manuscript units with either a chapter table or table of contents³³ in the same binding, dating no later than the close

³¹ R. Rouse, ‘Cistercian Aids to Study’, p. 124.

³² R. Rouse also identifies the origins of several searching tools as Cistercian, which is significant in light of their usual attribution to the early universities and the mendicant orders (‘Cistercian Aids to Study’, pp. 124–25, quote at p. 124).

³³ Tables of contents follow the same principles as chapter tables by telling the reader which texts are found in the volume, and in which order. If listing several short texts, they can provide just as much

of the thirteenth century. In some cases, such as **MS 131**, rather than chapters, the list includes the titles and order of the volume's various short texts; it is later than each of the works it references (datable to the first half of the thirteenth century) and includes an insertion by another hand who also numbered the different texts (Figure 4.16, left). Notably, of the seven different texts in this manuscript, three of them contain their own original chapter tables with numbers (Figure 4.16, right). Some manuscripts, like **MS 183**, have chapter tables that were originally numberless, but which gained them at a later point. Still other manuscripts, such as **MSS 67** and **83**, now lack chapter tables but may have had them at or near the time of production: they feature both running titles and chapter numbers, the value of which are greatly improved by the chapter tables which often accompany them.

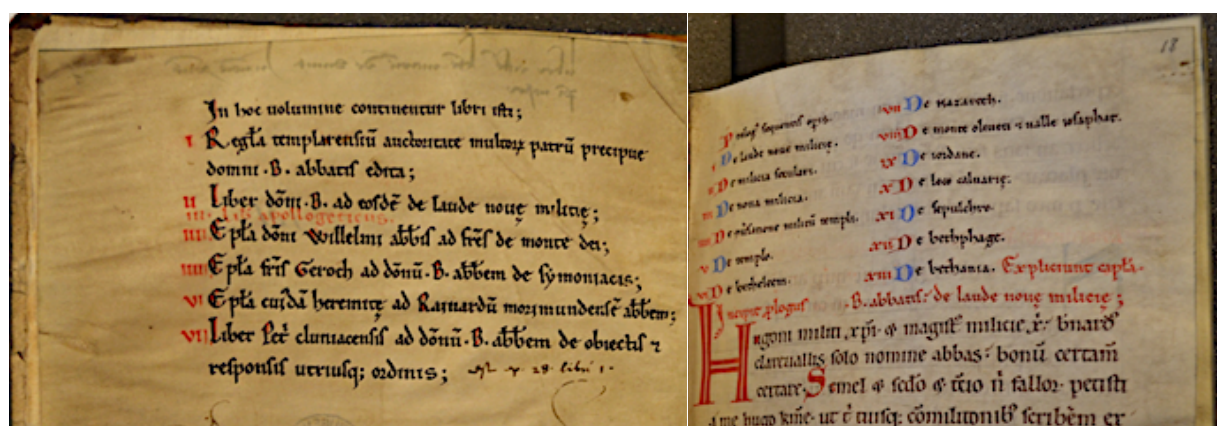


Figure 4.16. Bruges, OB, MS 131, f. 1^v (originally a flyleaf) and f. 18^r.
Table of contents for volume (left) and chapter table for the second text (right)

As suggested above, chapter tables are precursors to more advanced search tools, such as subject and alphabetical indexes.³⁴ Two manuscript units found in **MS 56** hold lists that might be considered a combination of both chapter table and subject index. The first, found on f. 2^v and written in the first quarter of the thirteenth century, lists readings from Matthew for Sundays and feast days. Added in a casual script to the back of what was originally a flyleaf (a bifolium containing canticles), it precedes Geoffrey Babion's *Glossa super Mattheum* and offers both numeral and textual cues. Each cue is related to the incipit of each section: for example, the Epiphany Vigils reading (column A, fourth from top) is apparently located at the section labelled xix (19) and reads

information about relative position as do chapter tables. If listing only a few longer texts, however, they are less useful than chapter tables, which tend to deal with smaller divisions of text (i.e. chapters).

³⁴ There are two indexes in **MSS 116** and **277** that are palaeographically datable to the last quarter of the thirteenth century and first quarter of the fourteenth, respectively; they do not fit within the parameters of my corpus, but deserve mention. The index in **MS 116** is written on the opening flyleaf's recto and verso, includes a number of topics and themes, and gives their location using Ten Duinen's foliation and the column (a, b, c, or d) of the opening they appear on. The index in **MS 277** is written on what was once the manuscript's pastedown; it was perhaps pried up for this purpose. It also uses Ten Duinen's foliation and seems to be thematically arranged. The manuscript contains a number of sermons and patristic extracts, and thus was probably used for composing sermons. (With thanks to Erik Kwakkel for dating advice for these two hands.)

‘defuncto herode’ (Figure 4.17). This means the reading should begin ‘defuncto autem Herode ecce apparuit angelus Domini in somnis Ioseph in Aegypto’ (now identified as Matthew 2:19).

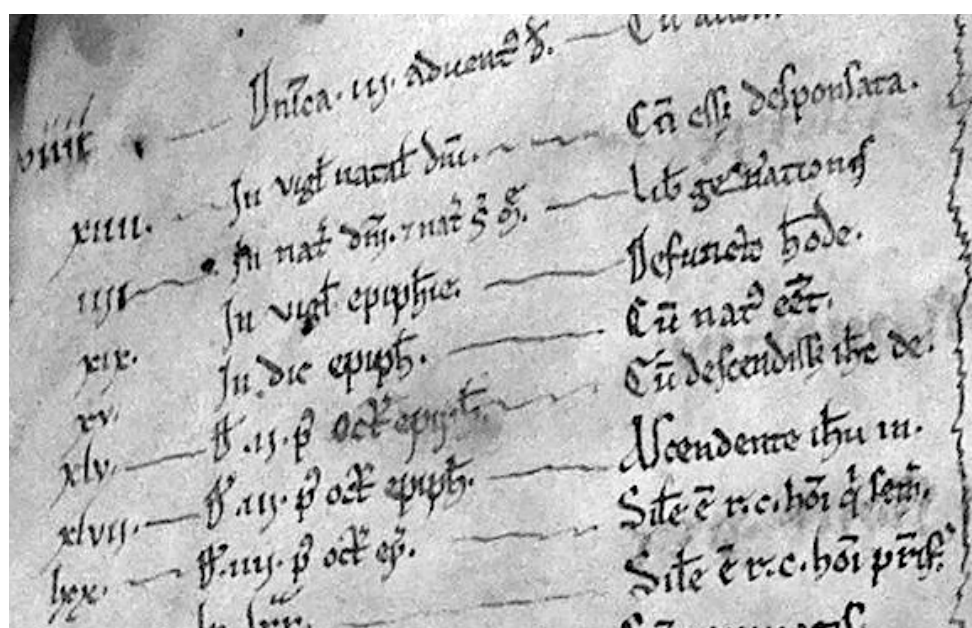


Figure 4.17. Bruges, OB, MS 56, f. 2^v. Index for liturgical readings in Matthew

The second text in this same binding, *Mattheus glossatus*, likewise has a corresponding chapter table (c. 1201–c. 1225) with textual cues and numerals on ff. 188^v–189^r, formerly a flyleaf and pastedown. The numerals are placed in the top corners of folio rectos (not next to the text referenced), and yet are not quite foliation. While many numerals are trimmed, sometimes several appear per page: f. 142^r holds at least three. For example, the reference beginning ‘vulpes foveas habent’ (the foxes have holes; Matthew 8:20) is found halfway down column A of the table (Figure 4.18). Located at section 25 (xxv), it is found on f. 141^r, with the initial of ‘vulpes’ standing out from the text block (Figure 4.19). It is not properly the beginning of the verse, but is the beginning of Jesus’s speech, which is an arguably more important moment in the text and undoubtedly familiar to a monastic reader.

xxi	petre et dabo tibi.	lxxvi	Non timere.
xxii	Ascendite a falsis.	lxxvii	Quis parat malum in se.
xxiii	Cum descendisset ihesus monte.	lxxviii	Si peccaverit in te frater tuus.
xxiiii	De puero crucurionis.	lxxix	De eo qui non potuit dei servus.
xxv	Vulpes foveas habent.	lxxx	Si licet homini dimittere uxorem.
xxvi	Ascendente ihesu in navi.	lxxxi	Magis quam deus.
xxvii	De demonibus nullis in potest.	lxxxii	Ecce nos reliquit omnia.
xxviii	Ascendit ihesus in navi.	lxxxiii	Simile est regnum dei.

Figure 4.18. Bruges, OB, MS 56, f. 188^v. Table of passages in Matthew

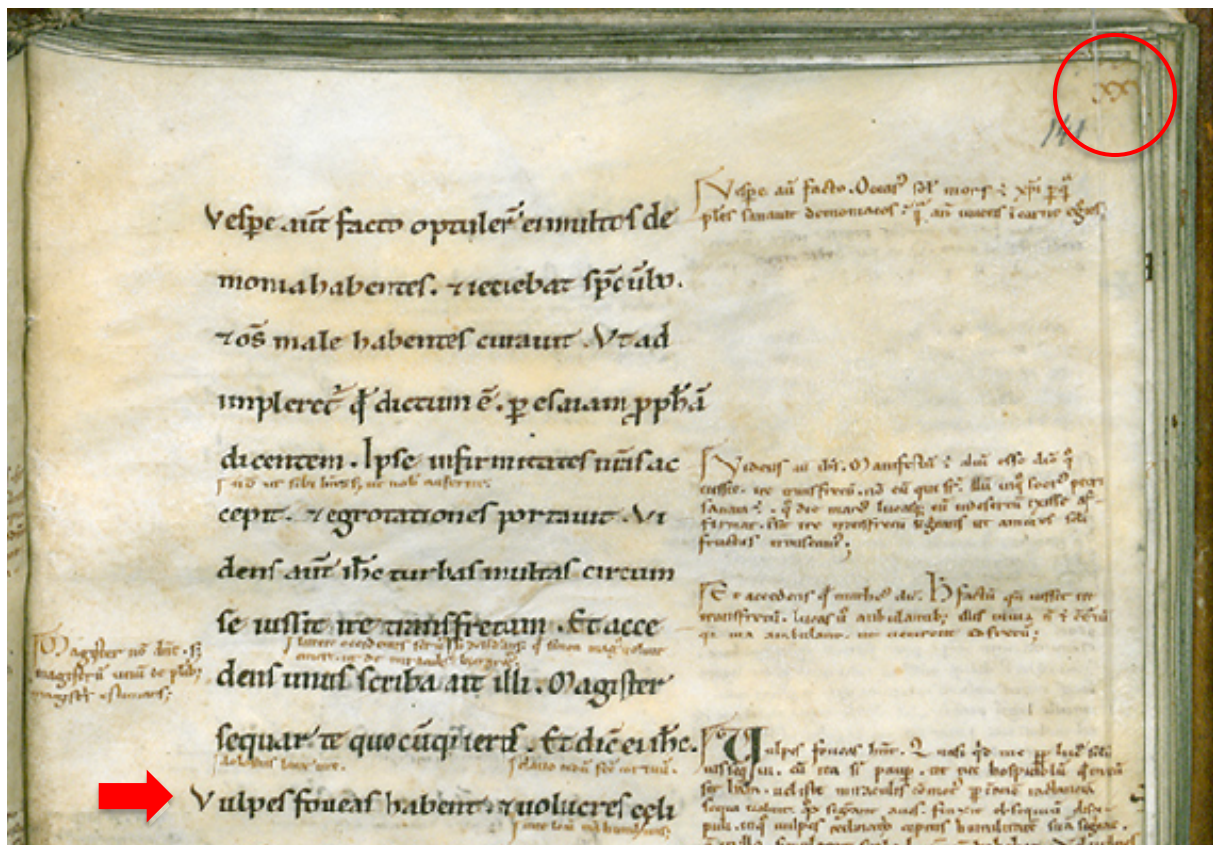


Figure 4.19. Bruges, OB, MS 56, f. 141r. Trimmed reference in recto corner and passage ('vulpes ...')

By using the chapter table (more properly a section table) at the back of **MS 56** to locate the desired passage, the reader then flips backwards in the manuscript; using the numerals in the top corners, and with the help of the marginal initial, he finds the sought segment. This system of text and chapter number is already leaps and bounds ahead of flipping through pages to find specific texts without a guide, but there is further improvement to be made in the thirteenth century: the introduction of foliation.

Chapter numbers paired with tables are helpful in navigating through a volume in search of a particular text, as demonstrated above. Chapter tables do, however, have significant flaws: they are not themselves easily searchable, and one cannot anticipate absolutely where numbered chapters occur throughout the text, as they are of unequal distribution. The method used in the second text of **MS 56** exemplifies some of the flaws in early searching tools. The first flaw is in the organization criteria. Here, noteworthy sections of text are ascribed a number, which then takes organizational precedence over the text: the table of these entries is arranged in numerical order rather than according to an aspect of the text, meaning that the searcher must skim through the entire table until he encounters the desired cue; for example, the 'vulpes' discussed above. This labour is averted by inherent or imposed organization, such as grouping by theme (animals, perhaps) or alphabetically.

Next, while the chapter numbers are easily found in the upper recto corners, they are not consistently spaced throughout the book; as previously noted, some folios feature only one, while others have several, because either the cited sections are

variable in length, or some folios contain more noteworthy items than others. This means that users can make no spatial estimates as they search: one span of ten folios may contain twice as many numerals as another, making it so that the user has to consult the corner numerals every few folios to orientate himself within the volume. For example, five turned folios does not mean five numerals are skipped, and a different number of skipped numerals can occur for every group of five folios: this means that turning pages in multiples has unpredictable outcomes (a good tool is, of course, predictable). Navigational aids such as this combination of table and numerals provide a relative system — that is, each section of the manuscript can be found relative to another section — but are far less efficient than absolute systems (i.e., one consistent ordinal measure against which a text can be referenced per folio). In this light, foliation, as an absolute and consistent system of measurement, is a remarkable improvement in terms of efficiency and accuracy when navigating through an entire text and locating a specific item within it.

4.7 Foliation

Foliation is one of the most useful navigational aids of the book, and yet took well over a millennium to gain traction. Its slow introduction suggests that the benefits it offers were not particularly interesting to readers throughout much of the Middle Ages. Foliation identifies (by numbers or letters) each consecutive folio of a book, marked most commonly on the recto; pagination, on the other hand, continuously numbers each page, both recto and verso separately. Foliation was first witnessed in Antiquity,³⁵ but did not appear with any degree of regularity until the thirteenth century,³⁶ and did not become common until well into the age of print.³⁷

Ten Duinen's books contain unique, distinctive, systematically applied, and relatively early foliation in the context of this aid's broader use. This foliation is an important feature in identifying which manuscripts units were owned by Ten Duinen's library in the thirteenth century; together with early ownership inscriptions, they offer a key method by which to differentiate between the early manuscripts of Ter Doest and Ten Duinen. Ter Doest's library (and community) was absorbed by its motherhouse in 1624, gaining the abbey's 'Duinenkruisje' stamp (a small cross in black ink frequently witnessed in manuscripts owned by the later abbey) and contemporary Campmans bindings.³⁸

³⁵ See, for example, the papyrus fragment of the Pauline Epistles at the University of Michigan made c. 150–c. 250, **P.Mich.inv. 6238**, recto.

³⁶ For a discussion of other examples of foliation claimed to be early, see Appendix C.

³⁷ Incunabula were neither paginated nor foliated, but did sometimes include leaf signatures on the first half of each quire. This is an interesting challenge for digital presentation; see the Polonsky Foundation Digitization Project, 'Working with Foliation and Signatures'.

³⁸ Liefstinck's *De librijen en scriptoria* claimed that Ten Duinen's scriptorium served both Ten Duinen and Ter Doest, and thus foliation is found in the manuscripts of both houses. This is unsupported by evidence, particularly that presented by Derolez in 'Ten Duinen of Ter Doest?' in regard to the bindings

Ten Duinen's foliation is placed in the top verso corner of all folios (including those of the occasional pastedown and flyleaf) and is made up of letters and dots instead of the Roman numerals witnessed elsewhere. It uses the contemporary Latin alphabet, **a** through **z** (barring **j**, **u**, and **w**), and adds **&** and the symbol for **con** (similar to **9**) to make up a sequence of 25. After the first sequence of letters, a dot is placed to the left of the letters for the second sequence, and in the third sequence, to the right. Next, two dots are placed to the left, and then two to the right (Figures 4.20 and 4.21). The next sequence places one dot above each letter, the following places two above, and the final surviving sequence features a dot with a line descending from it to the left of the letters.³⁹ This system has been called 'clumsy'⁴⁰ but at a time prior to the general adoption of Arabic numerals, it is effective at helping the reader locate specific sections of text. Presuming one knows the sequence — easily learned, given its consistency across all volumes — it operates as well as Roman numerals do, and with fewer characters. One of its most remarkable aspects is simply that it *is* alphabetical. According to the medieval perspective, rational or logical order (that of Creation's hierarchy) was primary. Alphabetical order, while completely ordinary to us, was viewed as an arbitrary system with no authority. It was not until the early thirteenth century that it was accepted,⁴¹ so while not wholly revolutionary, the adoption of the alphabet as an organizational system at Ten Duinen in the mid-thirteenth century is still notable.



Figure 4.20. Bruges, OB, MS 277. Foliation :a–:G

and ownership inscriptions of both abbeys. Simply put, none of the manuscripts with a Ter Doest binding or inscription contain any trace of foliation. Others, including R. Rouse in 'Cistercian Aids to Study', pp. 129–30, have mistakenly forwarded this position.

³⁹ R. Rouse, 'Cistercian Aids to Study', p. 130, cites seventeen sequences, but only the ones described above are witnessed. As each sequence contains 25 letters applied consistently in all volumes, seventeen is not feasible: it would result in manuscripts of 425 folios. It is possible 'seventeen' here is mistakenly printed in place of 'seven', and the final sequence of dot-with-line was accidentally overlooked.

⁴⁰ R. Rouse, 'Cistercian Aids to Study', p. 130.

⁴¹ R. Rouse, 'Cistercian Aids to Study', p. 131.



Figure 4.21. Bruges, OB, MS 280. Foliation :9–:p

Like running titles, which also occupy the upper margin, foliation is frequently bisected by later trimming, in some cases with only indistinguishable traces remaining on a folio or two. It does, however, survive in a significant proportion of manuscripts: seventy-two of 133 units bear foliation, including twenty probably not made at the abbey, but acquired from elsewhere before the end of the thirteenth century. It may have been applied to all manuscripts owned by Ten Duinen at this time, or at least those which were stored in the library.⁴² It was also applied by a single hand, probably in one effort (on account of its consistency),⁴³ which means that it was not a scriptorium feature as it is sometimes described,⁴⁴ but instead carried out after production, probably by the librarian (who was often the cantor).⁴⁵ While one might argue that it was added by a single reader for his own use and not again consulted, this is evidently not the case: later tables and indices rely upon the system.⁴⁶ In addition to their aid in attributing manuscripts to Ten Duinen's early library, these sequences are useful in determining if different manuscript units were bound together in the thirteenth century

⁴² Manuscripts stored in other parts of the abbey, such as liturgical books kept in the sacristy, may not have undergone systematic foliation even if the library books did. Those books used in service and stored outside the library were probably not used (or used far less) in the non-liturgical contexts that would necessitate topical searches in which foliation would be particularly useful.

⁴³ Liefstinck argues that the foliation of **MSS 47** and **48** was applied by a different hand than the rest (*De librijen en scriptoria*, p. 58). **MS 48**'s is nearly fully trimmed off, but that of **MS 47** is arguably less certain: the letters do perhaps appear smaller, but the ink has feathered and bled too much, in my opinion, to single it out as different without other cause to believe this is indeed the case.

⁴⁴ R. Rouse, 'Cistercian Aids to Study', p. 129.

⁴⁵ Webber, 'Reading in the Refectory', p. 46.

⁴⁶ See Chapter 4.6.

— depending on whether the sequence is continuous, broken, or abandoned altogether between manuscript units — and also indicate mid-volume folio loss. Further, trimming of the foliation points with certainty to rebinding, and moreover helps determine the earliest approximate date at which it was added to Ten Duinen’s manuscripts, as explored in detail in Chapter 5.

As with other marginal features, foliation can be particularly challenging to date. Individual numbers or letters lack the types of context — space and separation, relationship to the line of writing, and most importantly, relationship to other letters and graphs around them — that suggest *ductus* and style, and which are used in palaeographical dating methods. Barring specific indicators, such as appearing in a distinct type of datable script (cursive documentary script, for example), or sharing the same ink and nib as another main text or marginal hand, dating must be either approximated according to the evidence that can be gleaned from the script itself, or from other internal evidence in the manuscripts in which it features. Lieftinck, and other scholars citing his work, dates the foliation to the first half of the thirteenth century. Evidence uncovered by this study instead points to a date in the second half of the thirteenth century.

There are two indicators of a post-1250 date for Ten Duinen’s foliation: the first quire of **MS 130**, containing a chapter table, is palaeographically datable to the mid-thirteenth century, according to Gothic features like bow breaking, angularity, letter biting (see **de**), and sharp square feet at the end of minims (Figure 4.22).⁴⁷ This first quire is unaccounted for in the volume’s foliation,⁴⁸ and also does not use it to direct the reader to each section it lists; if foliation had been recently added in the first half of the thirteenth century when the chapter table was created, its system would logically have been used to make the tables functional as search tools. The other, stronger, evidence for a date after c. 1250 is found in **MS 10**: its pastedowns and flyleaves are from an antiphonal in a stylized script with Gothic features datable to the second half of the thirteenth century (Figure 4.23).⁴⁹ These materials are foliated along with the rest

⁴⁷ See Introduction 0.5 for an explanation of this study’s dating methodology.

⁴⁸ That the chapter table was not included in the foliation may reflect the binding situation of the material now held in **MS 130** at the time of foliation. At foliation, **MS 130**’s twelfth-century manuscript units were in an earlier binding than their current late thirteenth- or fourteenth-century binding (see Chapter 5.4). Had they already been present in the binding at the time of foliation, the first quire would have been foliated with them, as was done in all other foliated manuscripts. However, this first quire, probably written prior to the foliation (otherwise one would expect the still-new system would have been added to the chapter table) was not bound with these quires. As **MS 130**’s current binding considerably post-dates its c. 1126–c. 1150 material, perhaps the chapter table was written on a loose quire; their condition, especially compared to the material they accompany, is consistent with having spent time unbound.

⁴⁹ **MS 10**’s pastedowns and flyleaves (one bifolium in the front and another in the back) show some notable Gothic elements, such as bow-breaking and clear distinction between thin and thick strokes. However, the hand also shows some earlier elements, such as separation or kissing (not biting) between **d** and **e**, roundness on the curves of **e**, **u**, and **d**, and on the arches of **n** and **m**. These recycled leaves were, moreover, planned for musical notation (although never completed) and consequently feature irregular spacing between lines, words, and even letters in the same word. All of these peculiarities make precise dating challenging. The date claimed here was decided in consultation with Erik Kwakkel.

of the manuscript, which means that Ten Duinen's foliation was added after their creation date, i.e. post-c. 1250. Moreover, while challenging to date letters independent of their relationship with others in a word or string of text, the letter forms themselves are consistent with a post-c. 1250 date. They are neatly but casually applied, and somewhat unusual: more 'complicated' letters usually requiring several pen lifts or changes of direction are here executed in as few strokes as possible. The letters **b**, **d**, **G** (a majuscule), and **m** are particularly simple forms compared to their appearance in contemporary bookhands.

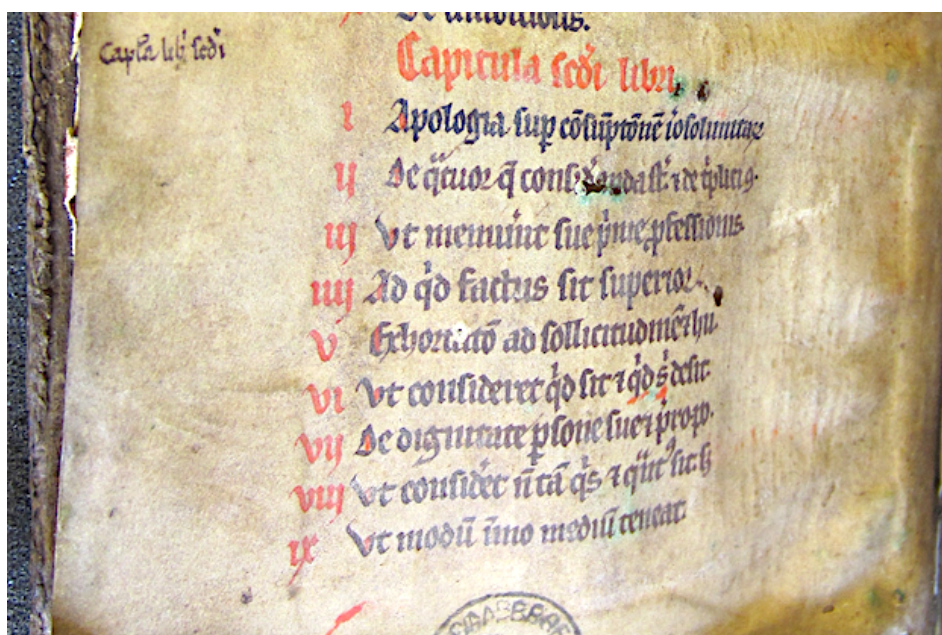


Figure 4.22. Bruges, OB, MS 130, f. 1^v. c. 1226–c. 1250.
Photo courtesy of Evelien Hauwaerts, Bruges Openbare Bibliotheek

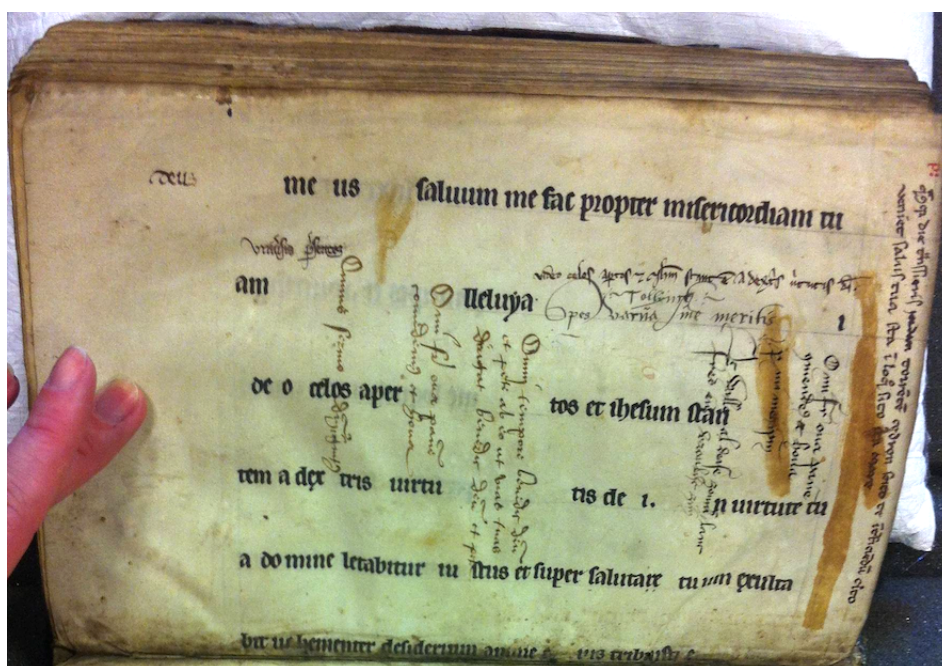


Figure 4.23. Bruges, OB, MS 10, back flyleaf. c. 1251–c. 1300

The latest possible date for the addition of foliation is also somewhat complicated. Based on surviving examples, no manuscripts written below top line attributed to Ten Duinen's library have foliation: based on palaeographical features, this change from writing above top line to below seems to have taken place nearer mid-century than the beginning of the fourteenth century.⁵⁰ With just the surviving examples as evidence, it is not currently possible to offer a more accurate date. At this stage, given the evidence that is available in my corpus, it must suffice to date Ten Duinen's foliation, probably applied in a single event and most certainly by a single hand, to the second half of the thirteenth century, probably closer to 1250 than 1300.

This distinctive foliation system is not the only one present in Ten Duinen's books. Several other manuscripts — **MSS 56, 62, 67, 72, 130, 152, 163, and 284** — contain different types of foliation. Each of them is made up of Roman numerals, and they are variously applied to the recto or verso. In fact, Ten Duinen's characteristic foliation is demonstrably not the oldest system present; **MSS 130** and **152** contain both Ten Duinen's red letters as well as tiny Roman numerals, possibly carried out by the same hand in both manuscripts (Figure 4.24). While the faded red letters are intact in both volumes, the Roman system is bisected and sometimes removed entirely by trimming in **MS 130**, indicating that in this manuscript at least, it both predates the Ten Duinen system and the binding.⁵¹

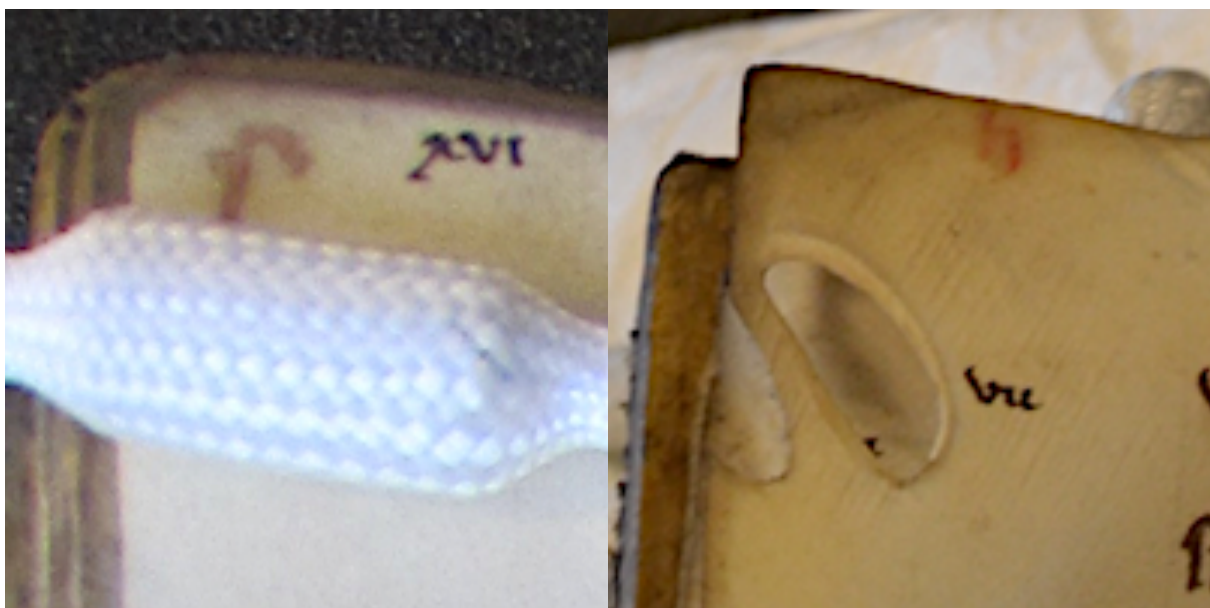


Figure 4.24. Bruges, OB, MS 130, f. 25^v (left) and MS 152, f. 11^v (right). Black Roman numeral foliation (**xvi** and **vii**, respectively) with Ten Duinen's characteristic red letter-dot system (**s** and **h**, respectively)

⁵⁰ When selecting manuscripts for my corpus, it became apparent that based on the incidence of so-called 'Gothic features', the switch to writing below top line occurred at Ten Duinen early in the third quarter of the thirteenth century; see Introduction 0.5 and 0.6 for this study's dating methodology and corpus selection. Concerning the switch from writing above top line to writing below, see Ker, 'From 'Above Top Line' to 'Below Top Line'', pp. 13–16.

⁵¹ This binding is especially difficult to date; see Chapter 5.

Although such a small feature, the addition of foliation to the manuscripts in Ten Duinen's library offers an important insight into intellectual activity at the abbey. Rouse calls the development of their own distinctive system 'a unique local response to a common need'. This need was to access and mine written material with the greatest possible efficacy.⁵² Systematic application of foliation, not just to a few books, but to much or possibly all of their collection at the time, shows that members of Ten Duinen's community (or at bare minimum, the individual who added the foliation and those who utilised it in their notes, indexing, and a bookmark)⁵³ were using their books in this way. But to what end? According to Rouse, for sermon-writing.⁵⁴ Sermons had evolved from the homilies of Antiquity to the thematic or scholastic sermons of the thirteenth century, which were influenced by the *disputationes* of the schools and the increasing importance of authoritative texts (mostly by the Fathers and other leading Church figures) as proofs of Scriptural truth.⁵⁵ These new sermons were a direct response to the intellectual developments of the twelfth century, as well as the increased significance and practice of preaching within the Church. Cistercians appeared late on the scholastic scene of the urban schools and early universities: it took them until 1245 to set up their own school in Paris, while the Benedictines, for example, had formally been there since the 1170s.⁵⁶

Cistercians were, however, at the forefront of devising innovative new tools — which were later adopted at the schools — to maximize the navigational interface of their books and increase the efficacy of their searches.⁵⁷ Sermons needed to be composed and delivered at each Mass and on each feast day, resulting in prolific output. While less spiritually involved with the world outside monastery walls than other monastic orders, the white monks still had a duty of pastoral care to their own community, and to their large ranks of lay brothers. Ten Duinen was one of the largest Cistercian communities of twelfth- and thirteenth-century Europe,⁵⁸ making the pastoral

⁵² R. Rouse, 'Cistercian Aids to Study', pp. 130-31 (quote at p. 130).

⁵³ This thirteenth-century (or later) bookmark, is not a part of this corpus but bears mention. According to R. Rouse, it is a strip of parchment about 20 cm long with a reminder of the foliation's alphabet sequence on one side and the letters A to G on the other to represent vertical positions on the page. A rotating disk with I-IV, to represent columns in an opening, is attached ('Cistercian Aids to Study', p. 130). A reader could then use A-G to more specifically reference his text and set the disk to remind himself of which column he had been reading. There are no images of this bookmark available at the time of writing. However, similar bookmarks are known. Ten Duinen's bookmark is probably similar to the example with a sliding disk (as evidenced by the writing on its parchment scrap, the manuscript is c. 1200) found in **Harvard University, Houghton Library, MS Typ 277**.

⁵⁴ R. Rouse, 'Cistercian Aids to Study', pp. 131-32. Rouse and Rouse, '*Statim invenire*', pp. 201-25.

⁵⁵ Wenzel, *Medieval Artes Praedicandi*, Chapter 2, 'Scholastic Sermon Structure', pp. 23-86.

⁵⁶ According to Matthew Paris, a contemporary Benedictine chronicler, Cistercians eventually joined in to 'avoid the contempt of Dominicans, Franciscans and erudite seculars' who viewed them as dull farmers; see Lekai, *The Cistercians*, p. 79

⁵⁷ The role of Cistercians at the forefront of book technologies is demonstrated with numerous specific examples throughout R. Rouse, 'Cistercian Aids to Study', and Rouse and Rouse, '*Statim invenire*'.

⁵⁸ Ten Duinen prospered especially under the abbacy of Nicolas van Belle (1232-1253), when the community reached 120 monks and 248 lay brothers. Its size peaked by c. 1300 with 211 choir monks and over 500 lay brothers; see Lekai, *The Cistercians*, pp. 44, 91; Jordan, 'Gender Concerns', p. 76.

responsibilities of their abbots and scholars likewise enormous. In this light, it is fascinating to discover how some of the smallest features of the manuscripts they read are vestiges of this vital spiritual task.

4.8 Conclusions

While interpretive aids function independently of one another and their meaning relates only to the referenced text, navigational aids are often buildable, working together in stages in both the page and volume to narrow the reader's search from broad (text, chapter, or section) to specific (opening, folio, or sentence). In this corpus of Ten Duinen's twelfth- and early thirteenth-century manuscript units, paragraph marks are not used extensively, perhaps because of the non-specificity of their meaning. Initials, however, are relatively prevalent in manuscript units from both the abbey's own scriptorium and in those made outside the abbey in my corpus. Acting as decoration, *aide-mémoires*, and navigational aids, Ten Duinen's initials do not stray far from Cistercian statutes guiding the sober use of colour, but nonetheless function as aesthetically pleasing and useful tools in their manuscripts.

Rubrics are nearly ubiquitous in the manuscripts of this corpus. They play an important role not only in indicating the beginning and end of particular chapters or passages of text, but also in acting as prominent signposts throughout the volume. They work either independently or as flags bearing the information laid out in running titles and chapter tables. Running titles added either at the time of writing or by later users were often victim to trimming, but still survive in about a fifth of Ten Duinen's manuscript units. Perhaps more than all abovementioned features, they indicate that books were read selectively and non-sequentially by Ten Duinen's monks: virtually pointless as a tool for the continuous reader, they are useful only to the searcher flipping through multiple folios at a time in pursuit of a specific part of the book before him.

Content and chapter tables are precursors to innovative search tools like the index, and likewise reflect non-sequential reading at Ten Duinen. They represent a desire to take stock of available texts in a single binding, specific sections of these texts, and the relative places of each within the manuscript. When these tables are accompanied by numerals, moreover, their efficacy as search tools improves significantly. The addition of numerals to tables and rubrics offers a more accurate, if still relative, means of locating specific texts by placing them in ordinal sequence.

Although added after the production of this study's manuscript units, Ten Duinen's characteristic foliation is addressed here as it is central to distinguishing manuscripts owned by Ten Duinen in the thirteenth century from those owned by Ter Doest. Developed in response to an apparent need for systematic and optimally efficient search tools, foliation was added to many, or perhaps all, of Ten Duinen's manuscripts owned before 1300, and survives in over half of the corpus manuscript

units. Attributed to the first half of the thirteenth century by previous literature, the evidence presented in this chapter repositions it to the second half of the century. Its systematic application in Ten Duinen's library, as well as later indexes using the system to locate specific topics and themes, supports Rouse's argument that Cistercians used these search tools for composing sermons. While not as early as previously claimed, Ten Duinen's foliation still reflects a spirit of practical innovation at the abbey in support of intellectual endeavours.

Beginning with materials and preparation, moving on to the application of script, and finally in Chapters 3 and 4 to reading aids and marginal notation that enhance use, the internal physical features of Ten Duinen's manuscripts are each explored in my study. This foray into the world of Ten Duinen's book production and use in the first century of their establishment as a Cistercian monastery now turns in Chapter 5 to the manuscript's shield, protector, and outer face: its binding.