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

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CHAPTER 1

PREPARATION

As artefacts of the time and place in which they were made and used, medieval manuscripts retain, in the words of Erik Kwakkel, a ‘cultural residue’.¹ They offer clues about the needs of their readers, and the broader intellectual and textual culture in which these readers interacted with their books. At every stage of production, medieval bookmakers made a number of decisions about how to proceed with their creations. Each decision was made with the reader’s — and also, to an extent, the producer’s — needs and wishes in mind in regard to, for example, cost, size, quality, aesthetic, and end use. Each decision had the potential to leave a trace of these needs and wants in the features of the handmade book. Codicology is the analysis of these traces; together with palaeography, which focuses on handwritten historical scripts, studies using their principles allow us to query medieval manuscripts for information about their production, use, and the cultural contexts of both.

Codicology has been auspiciously described as an ‘archaeology of the book’.² Like archaeology, codicologists investigate and analyze each material aspect of their artefacts in an effort to gain insights into and comment upon the culture in which they were produced and used. Beyond being purely a relic of book culture in a particular time and place, medieval manuscripts can be understood more specifically as physical remnants of technologies. The technologies under consideration include the techniques and materials of preparation — for example, the process of making parchment — and also the book as a tool of knowledge transmission; in other words, as an information technology. The actual physical object in its material form, and the change and development of these physical technologies over time, show a drive to use and advance the available tools and techniques to improve the use-value of the book itself, and in turn, best facilitate the acquisition and spread of knowledge.

This study, and Chapter 1 in particular, approaches the books of Ten Duinen with these principles in mind. Using traditional codicological methods (described in the Introduction) together with computer-based quantitative approaches, it seeks to find and analyze trends and patterns within my selected corpus of manuscript units.³ Moreover, it looks at individual manuscripts to illustrate these trends and highlight irregularities. In many instances the features of Ten Duinen’s manuscripts studied in

¹ Kwakkel, ‘Decoding the Material Book’, pp. 60–76.

² The interpretation of codicology as ‘archaeology of the book’ seems to have been first made by Lieftinck in his inaugural lecture at Leiden University on 15 November 1963. See Gruijs, ‘Codicology or the Archaeology of the Book: A False Dilemma’, 87–108; the term’s attribution to Lieftinck is found at 89–90 n. 1.

³ The methodology used in this study is explained in more detail in Introduction 0.5. For a current (as of the time of writing) overview of the field(s) of codicology and palaeography and their different methodological approaches, see da Rold and Maniaci, ‘Medieval Manuscript Studies: A European Perspective’.

Chapter 1, including physical aspects of parchment and its dimensions (Part A), pricking and ruling (Part B), layout (Part C), and quires (Part D), echo what seems to be happening elsewhere in western Europe, as shown in comparison to the sample of manuscript units in my corpus which were produced outside the abbey, or as is established in literature. However, as demonstrated below, many of the physical features of Ten Duinen's homemade books, and their production techniques, are unique, customized to precisely what the monks desired in terms of appearance and use. Reasons for these differences are offered, where possible, in an attempt to rebuild the habits and motivations of Ten Duinen's scribes as they crafted their manuscripts.

Part A Parchment

1.1 Describing Parchment

Parchment is ubiquitously the primary writing support of the Early and High Middle Ages; as stated by Clemens and Graham in their *Introduction to Manuscript Studies*, it 'is literally the substrate upon which virtually all knowledge of the Middle Ages has been transmitted to us.'⁴ Despite its fundamental position as the support — the actual physical material — of the manuscript itself, there is no currently used international system of precise, consistent, or objective terminology with which to describe the way it looks or, perhaps as importantly, how it feels and behaves in movement. For now, writing in English, a codicologist can only hope to use words evocative enough of the experience of seeing and touching a manuscript to communicate observations. Indeed, such an attempt must suffice for my study.

It is worthwhile to acknowledge this lack of standard terminology and the factors contributing to it. As manuscript studies becomes increasingly global, cooperative, and translingual, such flaws in our ability to consistently communicate findings become more apparent, and perhaps more resolvable. However, any future effort to popularize a system of terminology is met with both motivating and dissuading influences from within the field itself. For instance, the growth of quantitative codicology as a methodological approach may encourage successful new attempts to classify features, including parchment, in a way that enables objective data collection. Relatively objective and consistent descriptive terms would likewise benefit digital humanities projects in manuscript studies; publicly searchable, and indeed buildable, manuscript databases would profit from a system of keywords broadly understood by users.⁵

Manuscript studies is also becoming increasingly digitized, which is in some ways a double-edged sword. This push for digitization enables scholars, and members of the public, to access 'manuscripts' from any device with an internet connection, but may also encourage institutions to decrease access to the physical book itself, as many

⁴ Clemens and Graham, *Introduction to Manuscript Studies*, p. 9.

⁵ E.g. *DigiPal* and Teeuwen, Renswoude, and Steinova, *Marginal Scholarship*.

manuscript scholars (perhaps especially junior ones) can report from personal experience. While the general appearance of parchment, for example, is easily observed — and in some ways, enhanced — by viewing it onscreen, its three-dimensional texture, suppleness, or stiffness are wholly lost. While descriptions of parchment ‘quality’, hand,⁶ or behaviour can accompany digital images, lesser *in situ* engagement with manuscripts might render knowledge of these aspects and their comparison rarer, and perhaps increasingly lead these tactile features to be viewed as unimportant.

1.2 Ten Duinen’s Parchment

Parchment exhibits extraordinary variety in terms of quality, texture, flexibility, colour, and thickness, and each variable is shaped both by the lives of the animals from which parchment was made, and by the manner in which the skin was processed. An animal’s age, sex, species, breed, health, diet, and environment all affect its skin’s appearance,⁷ while technique, chemicals, and instruments used by the parchmenter all play a posthumous role as well.⁸ Further, wear changes the way parchment looks in the present day: centuries provide ample opportunity for use and damage including, but by no means limited to, a spectrum of grimy fingerprinted corners, mould blooms or moisture stains, insect or rodent gnawing, and deliberate or accidental cuts and tears.

As would be expected of nearly all manuscripts of the twelfth and thirteenth centuries in the Latin West,⁹ each manuscript unit studied here from Ten Duinen’s library or scriptorium from c. 1126–c. 1250 is made entirely of parchment. The variety between (and indeed within) manuscript units, coupled with the subjectivity currently inherent in how parchment is assessed and described, makes it a challenging candidate for quantitative assessment. Rather than develop a method to classify parchment along lines of ‘good’ or ‘poor’ quality, some general characteristics and trends are discussed instead. First, there is often a clear distinction between the parchment used and probably produced at Ten Duinen, and that of the corpus units produced at other scriptoria. While the parchment used for manuscript units made elsewhere and acquired by the abbey fluctuates widely in appearance, the parchment of units likely to have been made at Ten Duinen is noticeably similar. That is to say, Ten Duinen’s community probably produced their own parchment, and followed a fairly consistent

⁶ ‘Hand’ is the term used to describe the texture, weight, and movement of textiles, which can arguably also apply sufficiently to parchment.

⁷ For detail on how these factors affect parchment and leather, see Reed, *Ancient Skins, Parchments and Leathers*, particularly pp. 35–37.

⁸ Reed, *Ancient Skins, Parchments and Leathers*, pp. 119–73.

⁹ While paper begins to crop up in southern Europe in documentary and chancery contexts in the twelfth century, the oldest surviving manuscripts of non-documentary texts are Italian and date to the second half (or even last quarter) of the thirteenth century. Paper caught on particularly slowly for non-documentary use in the Low Countries compared to the rest of Continental Europe, judging by surviving examples. Kwakkel, ‘A New Type of Book for a New Type of Reader’, 220–23.

technique in doing so during this early period of their scribal activity. Parchment alone does not indicate that a manuscript unit was made at Ten Duinen; however, based on the apparent consistency of their parchment, manuscript units that do not share this same parchment quality are unlikely to have originated in the abbey's scriptorium.

With a complete absence of hair or visible skin grain, it is impossible to discern with any certainty which species of animal parchment is made of without testing it on a cellular level.¹⁰ According to Derolez, it is absolutely necessary that Ten Duinen's larger manuscripts were made of calfskin, as sheep and goats were smaller in the Middle Ages and could not have reached the dimensions of these books.¹¹ Cattle, however, were likewise smaller, and a calf (when truly young enough to be called a calf) is not significantly larger, despite having longer legs, than an adult sheep. While Ten Duinen's manuscripts are often expansive, as is discussed further in this chapter, there are also many of less remarkable size. With the size of animals used for parchment, and examples from a broad range of dimensions in mind, size cannot be the only deciding factor for whether sheep or calves were used for parchment at the abbey.

From the perspective of resources, Ten Duinen had an enormous supply of sheep from which to obtain skins; the monks and lay brothers operated their own fleet of ships for wool trade in England by 1190,¹² and also sent wool inland to markets in Douay and Liège via canal systems.¹³ As one of the wealthiest monasteries in Europe, however, they certainly had the resources to support the large herd of cattle that would be required to obtain so many sheets of parchment (as each skin provides only one bifolium in the largest books). While the monks probably ate cheese, meat was disallowed for all healthy members of the community according to the Rule of Benedict,¹⁴ and the Cistercian General Chapter's *Statuta*.¹⁵ Archaeological studies of remains from medieval Ten Duinen confirm that this dietary rule was obeyed.¹⁶ However, beef may have been consumed by others affiliated with the abbey, such as nearby communities of laypeople, or it may have been sold at markets along with the abbey's other products. The abbey arguably had the resources to have kept either herd — sheep or cattle — for parchment.

¹⁰ Fiddymment, 'Biomolecular Codicology: How Non-Invasive Techniques Can Uncover the Secrets Hidden in Parchment', lecture at Leiden University, 22 April 2015. For an example this type of research see Teasdale et al., 'Paging through History'.

¹¹ Derolez cites manuscripts with a height of more 50 cm. Derolez, 'De wereld van het middeleeuwse boek', p. 110.

¹² Williams, *The Cistercians*, p. 391.

¹³ Williams, *The Cistercians*, p. 358.

¹⁴ 'Carnium vero quadrupedum omnimodo ab omnibus abstinenceur comestio, praeter omnino debiles aegrotos'. *Regula Benedicti*, Caput XXXIX: *De mensura ciborum*.

¹⁵ 'Nulli penitus in Abbatiis, Grangiis aut Cellarariis carnes denture, exceptis infirmis in Abbatia'. While only officially clarified in 1195, all houses obeying the Rule of Benedict were already abstaining from eating red meat. *Statuta 1195/10, Twelfth-Century Statutes*, ed. by Waddell, p. 312.

¹⁶ Poleta and Katzenberg, 'Reconstruction of the Diet in a Mediaeval Monastic Community from the Coast of Belgium', 525–33 (esp. 528–29).

Parchment from wool-bearing sheep, as all northern European breeds are, is sometimes noted as having a 'greasy' texture due to high fat deposits in the animals' skin, as well as having a yellow-white hair side and white or white-grey flesh side.¹⁷ Ten Duinen's parchment is not 'greasy',¹⁸ but rather has a distinctive suede-like surface texture, with occasional horn-like patches at the edges where the animals' legs were once attached.¹⁹ The hair side is often more yellow than the flesh side (more light ecru than yellow, perhaps) although there are many instances where the hair and flesh sides are virtually indistinguishable from one another by colour alone, as is more common with calf parchment.²⁰ As qualified above, however, a case for this corpus's parchment being either sheep- or calfskin is based only on conjecture; processing methods can have a significant effect on a skin's final appearance, and nothing convincingly bars either material outright.

Any measure of parchment quality is subjective and based on the judgement or experience of each person who handles the material in question. Derolez has noted that even the finest manuscripts of Ten Duinen's twelfth- and thirteenth-century scriptorium feature parchment of inconsistent quality and thickness. He suggests that the monks therefore must not have had the skill or knowledge to make better parchment, and eventually resolved this issue by purchasing their parchment from professionals in later centuries.²¹ It is true that the manuscript units from Ten Duinen's scriptorium in my corpus do have some parchment inconsistency; even those with the highest level of script and decoration have parchment with missing edges or corners, occasional holes from flaws in the animals' skin or the preparation process, and some variation in thickness, texture, and colour. While these imperfections present inconsistencies between one folio and the next, they are remarkably consistent in their appearance and use. That is, nearly all manuscript units have these imperfections in equal measure, and they are balanced throughout the units (as opposed to imperfect folios being relegated to final quires).

I argue, moreover, that this variety from sheet to sheet is not necessarily a reflection of the monks' parchment-making abilities. Their finest books, including for example **MSS 47, 105, 109, 111, and 118**,²² are also among their largest. Inconsistency

¹⁷ Lambskin, however, is yellowish on both hair and flesh sides. On the colour and texture of sheep parchment, see Reed, *Ancient Skins*, pp. 128–30; Clemens and Graham, *Introduction to Manuscript Studies*, p. 9; Derolez, *The Palaeography of Gothic Manuscript Books*, p. 31.

¹⁸ A composite of ten manuscript units from c. 1176–c. 1200, and of unknown origins, **MS 93** contains examples of this 'greasy' surface texture.

¹⁹ 'Horn-like' describes a smoother surface texture with less flexibility and usually less opacity. It is most common around edges where the folio was cut close to the edges of the skin. The difference in appearance and behaviour could be because these areas may have undergone greater tension in the stretching phase of preparation and/or because the texture and thickness of an animal's skin varies in different areas of their bodies. On animal skin thickness, see Reed, *Ancient Skins*, pp. 35–36.

²⁰ Clemens and Graham, *Introduction to Manuscript Studies*, p. 9.

²¹ Derolez, 'De wereld van het middeleeuwse boek', p. 111.

²² The colourfully illustrated c. 1200 copy of Hugh of Fouillois's *De volucibus* (**Bruges, GS, MS 89/54**) should certainly be included here; it is not, however, a part of my corpus as it is held in Bruges's Grootseminarie. For my corpus selection criteria, see Introduction 0.6.

in thickness, texture, colour, and shape are usually found in edges which were once attached to legs. As these larger volumes demand as much of the available skin as possible, areas which would usually be trimmed away are included to allow for greater size. Therefore, the parchment is not of poorer quality, per se, but rather more of it, including imperfections, is preserved for the sake of size. The way imperfect sheets are incorporated into these books shows that such inconsistencies were not viewed as aesthetically problematic.²³ Relative to contemporary manuscripts from elsewhere in the period, indeed they are not. Considered together, the manuscript units copied in Ten Duinen's scriptorium consist of finer parchment than the majority of those added to the abbey's library from elsewhere in the twelfth and thirteenth centuries.²⁴ While they may not offer as sophisticated examples of parchment as survives from later centuries, this 'utilitarian' parchment is, in my experience, of higher quality than much that which survives from this era in northwestern Europe.

1.3 Parchment of Acquired Manuscript Units

As stated, almost two thirds of the manuscript units in my corpus were produced outside Ten Duinen (78 of 133), and at some point acquired by Ten Duinen's library by means such as purchase, trade, or donation. Due to their diverse origins, little can be said about the parchment of these manuscript units as a group. They span the colour spectrum from white to very yellow, very supple (**MS 183**, probably from England) to rather stiff (**MS 55**, ff. 102–117), thin and lightweight (**MS 62**) to heavy (**MS 280**), greasy or waxy (**MS 93**, ff. 88–101, **MS 158**, ff. 181–127) to smooth textured (**MS 285**, from Italy). They were intended for a variety of uses and made in places that may have had significantly different available resources, which further impacted parchment quality and attributes. For example, the ten manuscript units of **MS 93**, containing thirteen different texts written by several hands of inconsistent quality, were probably booklets or casual copies that were bound together at some later point in the Middle Ages.²⁵ As these roughshod sermons, penitentials, commentary extracts, and other scraps were 'working' as opposed to 'display' copies, they apparently did not require the highest grade of parchment. Note the irregularly shaped folios, original tears with stitched repair, and the parchment's discolouration, graininess, and uneven opacity (Figure 1.1).

²³ Presumably, if they were concerned about imperfections, they could have acquired finer parchment from elsewhere, considering the abbey's wealth and frequent market participation.

²⁴ Subjective assessments of quality based on consistency of colour, size, thickness, and texture (insofar as it can be determined from present quality) were taken during *in situ* study of this corpus. Of manuscript units assigned to Ten Duinen's scriptorium, 56 per cent are categorized (subjectively) by me as 'Good' and 44 per cent as 'Medium'. Of manuscript units made elsewhere, only 25 per cent are categorized as 'Good', 60 per cent as 'Medium', and 15 per cent are classed as 'Poor'.

²⁵ The binding, while not a 'Ten Duinen binding', is classed by the Bruges Openbare Bibliotheek as an early Cistercian binding of the twelfth or (probably, in my opinion) thirteenth century. For criteria of an early 'Ten Duinen binding', see Derolez, 'Ten Duinen of Ter Doest?', 219–77.

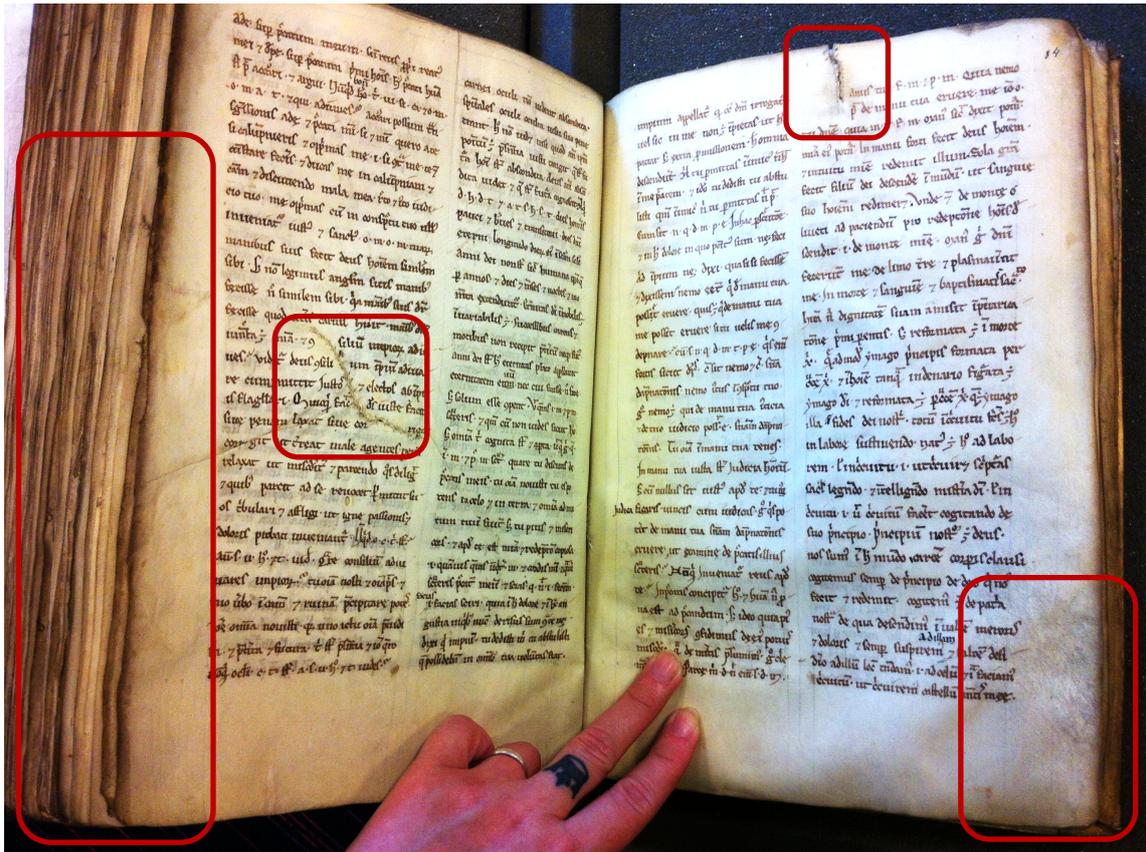


Figure 1.1. Bruges, OB, MS 93, ff. 83^v–84^r.
Irregular shape, stitched repairs, discolouration, graininess, and uneven opacity

At the other end of the spectrum, the first part of **MS 67** (ff. 1–66), of unknown origins, c. 1200, holding the *Glossa ordinaria super Marcum*, is written on soft-textured, consistently medium-thickness parchment. While surviving hair follicles betray the hair side, hair and flesh sides are both considerably white, and flaws particularly rare. This manuscript unit is carefully ruled with varying layouts throughout to accommodate changing volumes of main text and gloss, is written in a high-register script, and boasts colourful initials including gold leaf. Unlike **MS 93**, this part of **MS 67** was intended to be seen and appreciated, with parchment of a suitable quality to support such a work.

1.4 Folio Height

Certainly, the greatest factor in selecting parchment to use for a manuscript project was availability; a scribe or scriptorium's choice was naturally limited by what their resources afforded them, whether making parchment themselves from their own animals or purchasing it from a parchmener. Chapter 1.2 argues that Ten Duinen's own parchment was consistent and, generally speaking, of good quality, and that the parchment of manuscript units owned by the abbey but made elsewhere stretches across a broad spectrum of colour, quality, texture, and hand. Another important feature of this foundational material of medieval books should be addressed: size.

Compared to most contemporary manuscripts one encounters, the corpus of manuscripts studied here gives the impression that Ten Duinen's manuscripts are comparatively larger, as is demonstrated in this section. Analysis of the data gathered for this investigation confirms that my corpus does indeed contain large books (as defined in the following section), but more concretely, that the books made in Ten Duinen's scriptorium were more frequently large than those their abbey library acquired from elsewhere. While the acquired books cannot be taken as representative of a particular place, region, or all contemporary manuscript production, they do offer a fairly 'random' sample from widespread origins against which to compare products of Ten Duinen's own scriptorium, enabling a quantitative assessment of dimensions here.²⁶

What is meant when one speaks of 'large' books? There is, as yet, no consistent codicological terminology or methodology with which to discuss the measured or even relative size of medieval books. Some genre-specific studies have offered measurements: for example, Kwakkel has pegged Paris Bibles, used as textbooks by university students around 1200, at between 200 and 250 mm in height,²⁷ while Light describes a corpus of early thirteenth-century one-volume bibles, ranging from 260 to 480 mm high, as reasonably portable.²⁸ De Hamel, in his profile of Giant Bibles of the late eleventh through thirteenth century, describes these manuscripts as 'massive' and 'vast'²⁹ and provides a series of examples ranging from 310 to 670 mm in height.³⁰ For the most part, regardless of the size of the books they made, scribes throughout the medieval period usually adhered to a height-to-width canon of roughly 3:2.³¹ Gumbert's study of 390 manuscripts from the eighth through thirteenth centuries determined height-to-width ratio ranging from 0.67 to 0.72 (where height equals one).³² Indeed, establishing standard or absolute terms in regard to size would be untenable,

²⁶ The sample is not entirely random, naturally, for (at least) two reasons: because they were owned by Ten Duinen, there is perhaps a higher incidence of Cistercian origins, as obtaining them through their monastic network is perhaps a more likely scenario. Moreover, these were all books deemed 'portable' enough to be relocated; it is possible that books that never left their place of origin in this period may skew a little larger as they were retained as display copies or less easily transported elsewhere (discussed further later in this chapter). The origins of the acquired manuscript units are still considerably diverse; a few examples include **MS 183**, probably from England, **MS 285** from Italy, and **MS 116** from Germany, as demonstrated by their script characteristics.

²⁷ Kwakkel, 'The Cultural Dynamics of Medieval Book Production', p. 246.

²⁸ Light, 'French Bibles c. 1200–1230', pp. 158–59. A note on portability: **MS 105**, from the first quarter of the thirteenth century, retains its roughly contemporary binding (with damages and missing bosses). It measures 345 × 238 mm, and contains 150 folios, including the front flyleaf. As is, the manuscript weighs 3,355 grams, about the same as an average housecat. This book would probably fit at the smaller end of Light's corpus. (**MS 105**'s weight was graciously provided by Evelien Hauwaerts of the Bruges Openbare Bibliotheek.) De Hamel, *The Book*, pp. 117–19 also offers dimensions for a (seemingly) random sample of portable bibles.

²⁹ De Hamel, *The Book*, pp. 68 and 71, respectively.

³⁰ De Hamel, *The Book*, pp. 64–91.

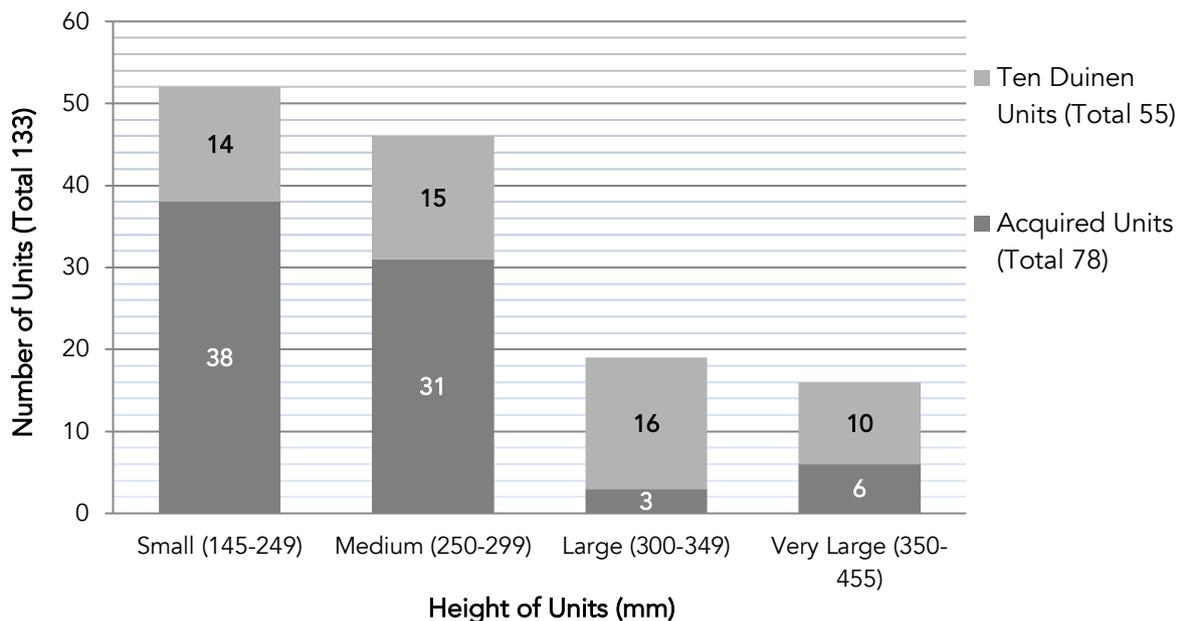
³¹ There are notable exceptions to this canon. See, for example, cantatoria such as **St Gall**, **Stiftsbibliothek, Cod. Sang. 359**, and holster books as described by Kwakkel, 'Dit boek heeft niet de vereiste breedte'.

³² Gumbert, 'The Sizes of Manuscripts', p. 279.

given the enormous variety of manuscript formats spanning time and space. Having no standard terminology for dimensions does, however, problematize discussions of dimensions in a broad sense.

For the purposes of both relative and quantifiable comparison, and to provide a framework within which to discuss dimensions, the books from Ten Duinen’s scriptorium and library (that is, both those made in-house and those acquired from elsewhere) are divided into four height categories: small (145–249 mm), medium (250–299 mm), large (300–349 mm), and very large (350–455 mm). To define the boundaries of these categories, the middle of the corpus’s height range (300 mm) was identified. The series under 300 mm was divided into two categories, ‘small’ and ‘medium’, and those of 300 mm and above were divided into ‘large’ and ‘very large’. Both the small and very large categories include a larger range than medium and large to compensate for outliers; both the smallest and largest book (145 mm and 455 mm, respectively) stand nearly 50 mm apart from the other books in their categories. Other divisions are presumably also feasible but seem no less arbitrary. The present system, while relying on quantitative data, provides a means to discuss the manuscripts in my corpus in terms of their relative height.

Figure 1.2. Height of Manuscript Units, Ten Duinen and Acquired



As indicated in Figure 1.2, nearly three quarters of the manuscript units in my corpus (98 of 133) are between 145 and 299 mm high, placing them in the small and medium categories. The small category has fifty-two manuscript units and medium forty-six manuscript units, leaving the remaining thirty-five manuscript units in the large or very large categories. Ten Duinen’s monks seem to have made books in a variety of sizes; small and medium units were nearly equally popular. Large manuscript units were more popular than very large manuscript units. Across the period of bookmaking

studied, however, surviving manuscript units made in the abbey's scriptorium indicate that books in the large category were most popular, but Ten Duinen's monks did not seem to significantly favour one particular book size.

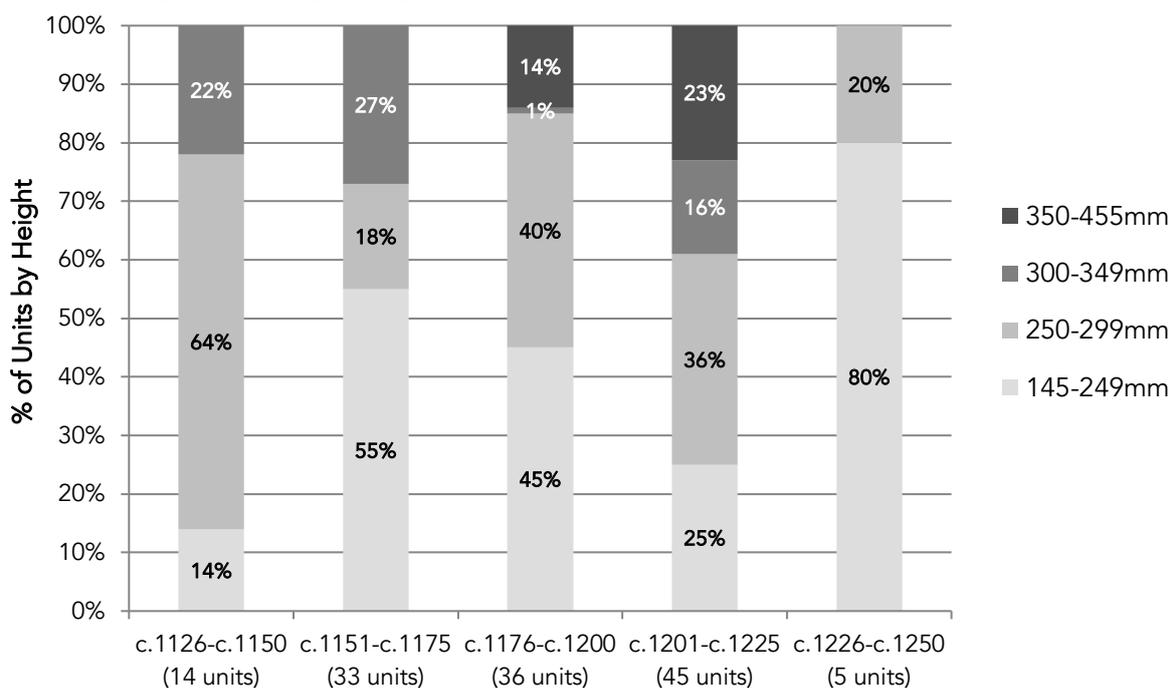
This more-or-less egalitarian approach to book size seems to be unique. While Ten Duinen's monks were producing folios both great and small, other scriptoria may have favoured (or only had the resources for) books on the smaller end of the spectrum. As noted above, 74 per cent of the total manuscript units in my corpus are under 300 mm in height. A disproportionate majority of these are non-Ten Duinen books. Only 12 per cent (9 of 78) of the acquired manuscript units are 300 mm or larger, compared to Ten Duinen's 47 per cent (26 of 55). Oppositely, 88 per cent of acquired units fit into the small and medium size categories compared to 53 per cent of Ten Duinen's. Simply put: between c. 1126 and c. 1250, Ten Duinen's monks made, and kept for their own library, books in a wide range of sizes. Moreover, while various-sized books from the same time period arrived at Ten Duinen, most of these books were small or medium-sized. The large books in Ten Duinen's library were significantly more likely to be homemade.

One might be tempted to conclude from the above analysis that Ten Duinen's scribes preferred to make larger-format books much more often than did the scribes who made the other books in Ten Duinen's possession. Indeed, if the acquired manuscript units are representative of the types of books made elsewhere, this would be true. There are, however, potential problems with such a claim. Not least among these issues is portability. As mentioned, it is conceivable that smaller books travelled from their origins more frequently than did larger books, simply because their transport is more practical. While noteworthy that the larger manuscript units surviving from Ten Duinen's library are disproportionately homemade, other factors, unforeseen and unresolved here, besides a preference for big books may be at play. While Ten Duinen's homemade books indeed skew large in the context of their own library, their apparent largeness would be better verified in a comparable study of contemporary books in other medieval libraries.

Did manuscripts in Ten Duinen's library from the mid-twelfth to mid-thirteenth century remain static in terms of size, or are there changes in their dimensions over time? That is, as time progressed, did the manuscripts in my corpus get bigger or smaller, or did they occupy roughly the same size range?

Figure 1.3 shows few convincing patterns over time in regard to manuscript unit size; the proportion of each size category increases and decreases irregularly across all quarter centuries. This may be an effect of the small sample size: there are only fourteen manuscript units from c. 1126–c. 1150, and only five from c. 1226–c. 1250. However, in my corpus very large manuscript units make their first appearance during the last quarter of the twelfth century. Small and medium manuscript units are represented in each quarter century, together forming the core of the manuscript units across the entire study period.

Figure 1.3. Height Range of Manuscript Units by Quarter Century, Full Corpus



There may be a clear reason for the prevalence of small and medium parchment folios: they were probably the easiest to obtain. While a very large bifolium requires the skin of a larger animal, smaller sheets can be sourced from both smaller and larger animals. For example, a very large bifolium may be cut from the entire skin of a large calf, but not a small sheep. A small bifolium can be supplied from a small sheep, and moreover, a large calf can supply several such bifolia, stretching the resource further. Skins with many flaws can be trimmed down into smaller sheets, avoiding areas not worthy for writing, whereas large sheets require that imperfect sections undergo minimal trimming in favour of retaining size (as explained in Chapter 1.2), perhaps making large, suitable sheets of parchment harder to come by, or more resource-demanding, than smaller ones.

Part B Pricking and Ruling

1.5 Pricking Processes

After the parchment was prepared — the skin soaked, stretched, scraped, pumiced, trimmed, and pounced — it was far removed from its first life as an animal and transitioned to its new role as a vehicle for text. Presumably, sheets of parchment were laid out in piles, perhaps by size and quality, for the scribe to select from based on the requirements of the book he was about to copy. It was then prepared for writing, first by pricking and then by ruling, to create the columns and lines of the layout. Before discussing how the scribes of Ten Duinen laid out their pages for text, I first consider

some of the myriad ways in which this could be done in the later twelfth and first half of the thirteenth century.

When a manuscript features the hand of more than one scribe but retains consistent layout throughout, perhaps pricking and ruling was performed by a single monk to ensure consistency between quires. Alternatively, maybe each scribe prepared his own parchment, but did so in the same manner as his colleagues according to a shared house style. When manuscripts and scriptoria do not exhibit this consistency from quire to quire it suggests that pricking and ruling may have been done in an ‘every man for himself’ manner, where the scribe prepared his own parchment as needed according to what the particular project demanded.³³ It is virtually impossible for us to determine today which of the first two preparation routines was used (whether a single scribe pricked and ruled for all, or a house style dictated layout). But, it can be quite clear, if a number of different pricking and ruling features are considered together, when the third ‘every man for himself’ approach was taken within a single manuscript or a specific scriptorium.³⁴ Indeed, considered alongside other codicological and palaeographical characteristics, pricking, ruling, and the layout they create may be an identifying feature of a scriptorium,³⁵ or even a particular scribe.³⁶

The choices available in preparing a sheet of parchment for writing are potentially countless. While these choices may be made consistently from quire to quire, an exponential number of differences can occur across time, place, scriptorium, and from scribe to scribe. Firstly, there might be variety in the tool or placement of prick marks; holes may have been made by a rounded compass point in one manuscript and a flat knife point in another, for example.³⁷ There are a variety of witnessed pricking positions: some scribes pricked as close to the edge of the page as possible to ensure the holes were trimmed off when the manuscript was bound, while others pricked closer to the textblock; some chose to prick all inner margins, while others never did. Likewise, there can be great variation in the number of lines or the space between lines in like-sized manuscripts, or in how far each line stretches beyond the textblock into the margin. Bounding lines might be single or double on either side of columns, or columns may feature a vertical line bisecting the empty space between them. Tools and methods used for creating the line itself — dry point, plummet, or ink — are usually

³³ Scribes do not usually indicate whether they prick and rule their own manuscripts. Gullick provides two examples of eleventh- or early twelfth-century colophons in which scribes say they prepared the page themselves. Gullick, ‘How Fast Did Scribes Write?’, p. 54 n. 12.

³⁴ Gullick, ‘How Fast Did Scribes Write?’, p. 55 n. 14, discusses a French manuscript (**New York, Grolier Club, MS 13**, c. 1150–c. 1200) that is a particularly good example of this practice: of four scribes, two use parchment with only outer margin pricking and rule in hard point, while the other two prepare their page with both inner and outer margin pricking and rule in plummet. Scribes three and four also created different ruling patterns for their textblocks. Ker, *English Manuscripts*, p. 44 also provides an example of the same inconsistencies found among Cirencester pricking and ruling between 1147 and 1176.

³⁵ See, for example, Jones, ‘Where Are the Prickings?’, 81; and ‘Pricking Manuscripts’, 389–403.

³⁶ The pricking, ruling, and layout patterns of **MSS 105, 109** (ff. 1–87), **111**, and **118**, together with script and other features, indicate that they share the same scribe, as discussed in Chapter 2.

³⁷ For a discussion of tools potentially used for pricking, see Jones, ‘Pricking Manuscripts’.

dictated by time period, although two may be used contemporaneously in a single scriptorium during transitional periods, depending on scribal preference or experimentation. Furthermore, a scribe may have decided to try a different method for one or more of these features mid-project for one reason or another, thus creating a finished product that looks — sometimes only slightly — off-kilter.³⁸

1.6 Pricking Location

Once the scribe made all the preliminary decisions about *mise en page*, the parchment was ready to be pricked for ruling. Depending on the chosen dimensions of his textblock, how many columns it would hold, how bounding lines would be arranged, how many lines they would contain, and whether special lines were required for gloss, the scribe decided where to poke tiny holes through the parchment using a sharp point.³⁹ There are four locations where pricking may be witnessed: in the top and bottom margins, in the outer margin, and in the inner margin. Top and bottom margin pricking was ubiquitous, although it is often trimmed away (and thus not examined much here), because it marks where to place the vertical bounding lines of columns. Horizontal ruling, which guides the lines of text and is therefore much more abundant, required many more pricks in the outer and sometimes inner margins. While outer margin pricking appears alone, inner margin pricking was done only together with outer margin pricking.

The pricking and ruling process, while following a general set of steps, varied slightly depending on where the parchment was pricked and the method of ruling.⁴⁰ When pricked only in outer margin, after the rough edges at the animal's legs and neck were removed, sheets of parchment were laid out in stacks, either folded into bifolia or flat. Pricks were made in the upper and lower margins for the bounding lines, and the outer edges — if folded first, only on the opening edge but not the fold — for the text

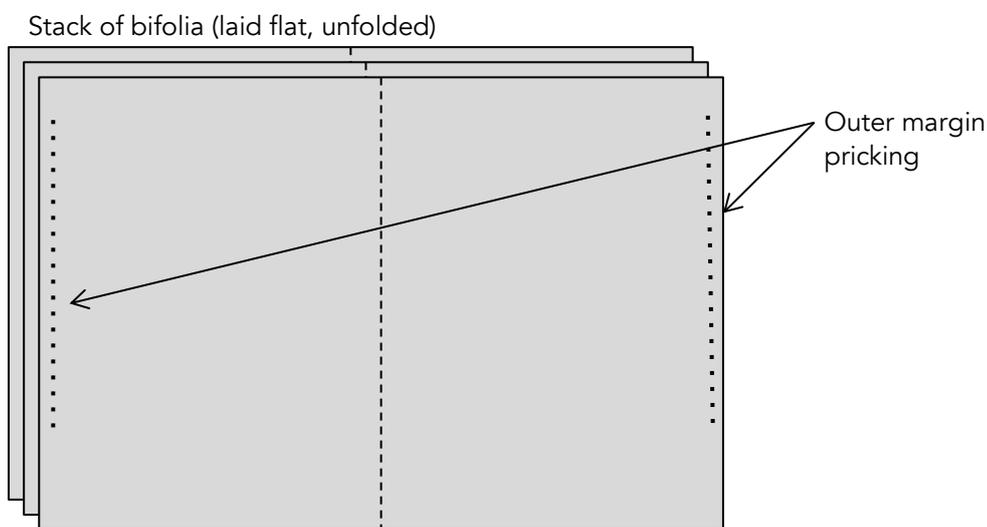
³⁸ A composite of ten manuscript units with thirteen different texts, **MS 93** contains several varying pricking and ruling methods: the scribe of ff. 10^r–33^v, who continues a text written by another scribe (ff. 1^r–9^v), did not use inner margin pricking in quire 2 or 4, but does in quire 3. This scribe reappears in ff. 55^v–81^v and again uses inner margin pricking from ff. 54–60, but then switches to an entirely different ruling system (with no surviving pricking) in the next quire as he continues to write the same text.

³⁹ Any sharp point could presumably be used, such as a knife tip, awl, compass point, nail, or some other object. Pricking wheels have also been imagined but given that no such instruments survive and the unnecessary work required in creating and maintaining their equidistant, equal-length points, their existence in the Middle Ages is doubtful. See Jones, 'Pricking Manuscripts'.

⁴⁰ These descriptions are simplified, and there could be further variations in the process. Note that rather than pricking for each line, sometimes in the later Middle Ages a few basic marks were made, and then lines drawn using a ruling frame, board, or rake. None of these later methods could have been used in this corpus, as they result in no full rulings (i.e. lines, usually at the top, bottom, and occasionally the middle of the textblock, that stretch beyond the textblock into the margin or to the edge of the folio), and each manuscript unit contains full rulings. For further discussion of these methods, however, see Derolez, *The Palaeography of Gothic Manuscript Books*, p. 36; Derolez, 'Ruling in Quattrocento Manuscripts', pp. 291–301; Gumbert, 'Ruling by Rake and Board', pp. 44–48.

lines (Figure 1.4).⁴¹ Pricking completed, setting his straightedge between the sets of tiny top and bottom holes, the scribe marked out the vertical bounding lines of the column(s) and textblock. Writing lines were then added between these bounding lines by laying a straightedge horizontally across the whole open bifolium, guided by the pairs of holes on each outer edge, and drawing lines for both sides in one movement: the left side became a verso when bound, and the right a recto. If necessary, the bifolium was turned over and the other side ruled in the same manner.⁴² Once ruled, bifolia were folded in half to make two folios (four pages) on which pricking is only found on the opening edges of each.

Figure 1.4. Pricking in Piles, Outer Margin Only

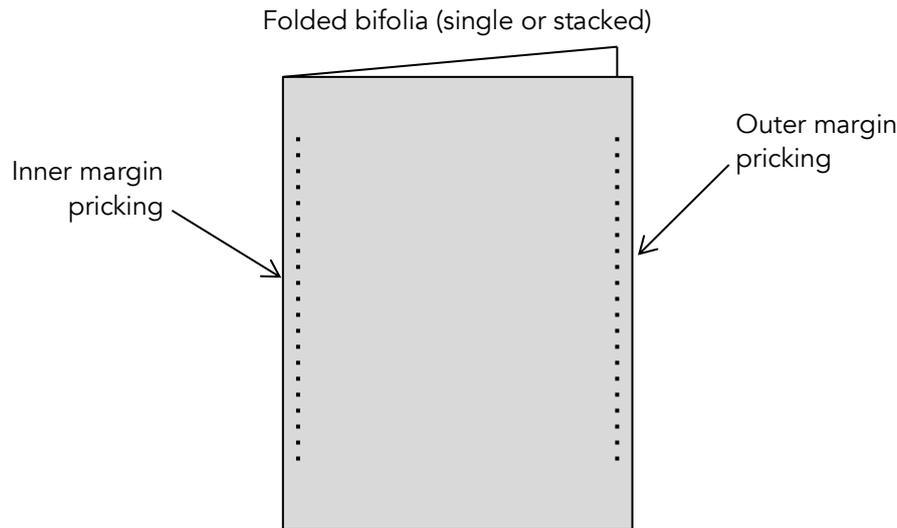


When inner margin pricking is present, the bifolia were necessarily folded *first* and were then pricked along both the outer edge and along the fold, usually a centimeter or two from the edge (Figure 1.5). When each bifolium is opened, it shows four vertical lines of pricking: both outer edges, and a row on either side of the centre fold. A straightedge would then be used to draw lines separately first across one side and then the other by matching edge pricking to centre pricking.

⁴¹ **MS 27**, made at Ten Duinen c. 1151–1175, was apparently pricked in piles. All pricking holes from ff. 1–74 line up in placement and angle — they were made with a knife point or another ‘slit’-causing instrument — with multiple other folios, but vary gradually in size with the largest holes indicating placement at the top of a pile and smallest at the bottom. Errors that repeat identically on several folios also indicate pricking in piles (or sometimes in quires), and are seen in **MSS 28, 79, 82, 105**, and others.

⁴² With dry point ruling, which does not require drawing lines on both sides of the parchment, ruling could be done for both sides of a folded bifolia in one action, or on multiple sheets in stacks.

Figure 1.5. Pricking Outer and Inner Margin



Although such a minuscule aspect of the physical page, pricking sometimes reveals subtle clues about how the manuscript was made, and even about the scriptorium in which it was made. Because outer margin pricking is usually placed at the very limits of the margin it is often lost in trimming, performed either in the process of adding its first binding or during later rebinding. In some cases, the proximity of pricking to the folio edge indicates that it was intended to be lost; it was added to serve the eye during production, and not be seen thereafter. Likewise, inner margin pricking, although it cannot be trimmed off, is often obscured in the gutter of tight bindings.

Now that pricking locations and processes have been outlined, evidence from Ten Duinen's manuscripts may be explored in greater detail. A closer look at the surviving pricking in both homemade and acquired manuscript units reveals valuable evidence of how Ten Duinen's scriptorium practices may have differed from those demonstrated elsewhere, especially in regard to inner margin pricking, and possible reasons for why this may have been the case.

1.7 Inner Margin Pricking at Ten Duinen

Manuscript units in my corpus of Ten Duinen's books regularly feature inner margin pricking. While not wholly foreign to codicologists handling twelfth- and thirteenth-century manuscripts, the frequency with which it appears seems unusual. As quantitative study often supports what is generally observed or intuitively felt, data supports that, indeed, Ten Duinen's homemade manuscript units contain inner margin pricking considerably more often than do those the abbey acquired from elsewhere.

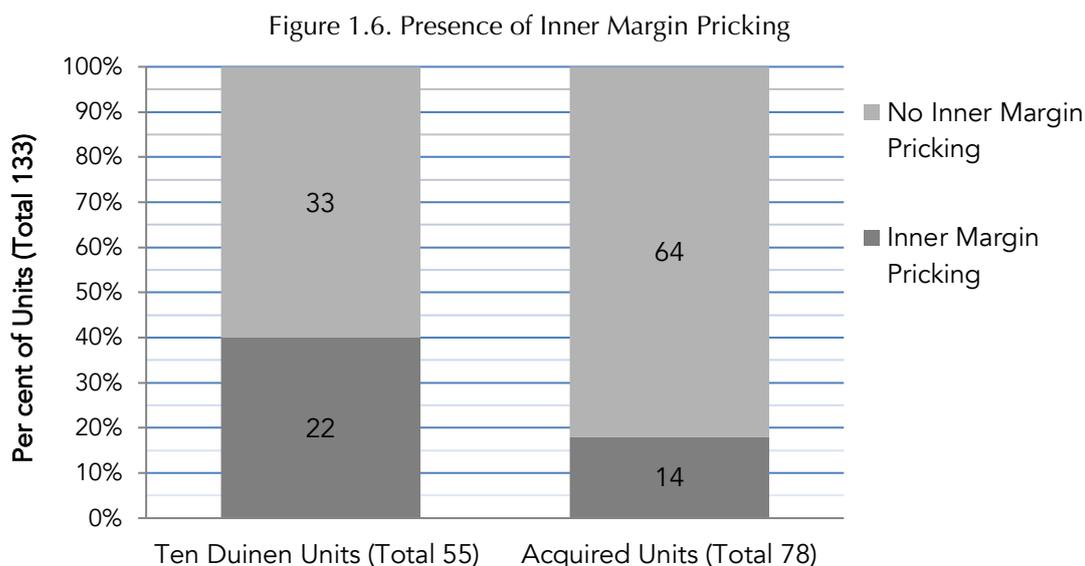


Figure 1.6 demonstrates a much higher incidence of inner margin pricking in the manuscript units made at Ten Duinen than in those they acquired from elsewhere. Whereas their peers chose to prick the inner margins of their bifolia in only 18 per cent of these manuscript units, Ten Duinen’s monks chose to do so in 40 per cent of their own; more than twice as often. Why is this remarkable, and what might it tell us about Ten Duinen’s scriptorium and the makers and users of their books?

That there is such a high incidence of inner margin pricking in Ten Duinen’s homemade manuscript units is significant in light of the accepted scholarly narrative about the practice. According to a number of scholars, through to the early Carolingian period inner margin pricking was common only in Insular manuscripts, or those made in Continental centres under Insular influence. At the same time, Continental manuscripts had only outer margin pricking.⁴³ By the tenth century, all scriptoria apparently followed the Continental method and inner margin pricking all but disappears for a few centuries.⁴⁴

Then, according to this common narrative, pricking practices change in the mid-twelfth century as inner margin pricking appears more abundantly in Continental manuscripts.⁴⁵ According to Clemens and Graham, it became ‘normal practice’ everywhere between 1150 and 1250 to use inner margin pricking; no data supporting this assessment is offered, so it is presumably anecdotal.⁴⁶ The prevalence of inner margin pricking in Ten Duinen’s homemade manuscript units compared to their acquired manuscript units demonstrates that what was a ‘normal practice’ was perhaps

⁴³ See, for example, Bischoff, *Latin Palaeography*, trans. ó Cróinín and Ganz, p. 22; Jones, ‘Pricking Manuscripts’; Clemens and Graham, *Introduction to Manuscript Studies*, p. 16.

⁴⁴ Clemens and Graham, *Introduction to Manuscript Studies*, p. 16.

⁴⁵ Gullick, ‘How Fast Did Scribes Write?’, p. 41.

⁴⁶ Clemens and Graham, *Introduction to Manuscript Studies*, p. 16. Also anecdotally, while many manuscript researchers will have seen a number of mid-twelfth to early thirteenth-century manuscripts with inner margin pricking, I suspect that few would argue that it is particularly common, especially across all of Europe and the British Isles as Clemens and Graham propose.

significantly more 'normal' in some centres than others. Ker spots inner margin pricking's return to England as of c. 1150, and notes that it occurs in all but 'small manuscripts'. This indicates that inner margin pricking is common in English manuscripts of the period and that size is a contributing factor in its appearance, although Ker does not suggest what drives the link between the two.⁴⁷ Vezin agrees that this was a common feature of Insular manuscripts in the period.⁴⁸ According to Derolez, inner margin pricking 'seems to be peculiar to thirteenth-century codices'.⁴⁹ However, it is witnessed in several earlier manuscripts from Ten Duinen,⁵⁰ and is even spotted in a late eleventh-century manuscript by Gullick.⁵¹ Jones worked extensively on pricking in the 1940s, studying over one thousand manuscripts made before the thirteenth century. He does not record a single instance of inner margin pricking in the twelfth century, nor ever occurring outside Insular scriptoria, which we can now identify as a flaw inherent to such an immense undertaking relying primarily on the information offered by catalogues.⁵²

The discussion of pricking in the mid-twelfth through mid-thirteenth century is by no means finished. There are opportunities to further pinpoint the frequency, time period, and regions where inner margin pricking was practiced. Although inner margin pricking is seldom mentioned in manuscript catalogues (hence Jones's challenge in locating the feature for his study), it is visible in high resolution digital images, provided a manuscript's binding is loose enough to photograph into the gutter. Additionally, consideration of why inner margin pricking was reintroduced at this time is worthwhile, yet is virtually overlooked in publications to date. This study aims to address some of these ongoing questions. Although the scope of my corpus is limited, it offers a fruitful example of what data-based quantitative studies can reveal about codicological trends.

1.8 Inner Margin Pricking and Dimensions

According to Derolez, inner margin pricking was done 'in order to obtain the same pattern on all pages, the rectos being a mirror image of the versos'.⁵³ This aesthetic concern is entirely feasible: Romanesque (and Cistercian) art and architecture are characterized by symmetry. However, Ker's observation that inner margin pricking in

⁴⁷ Ker, *English Manuscripts*, p. 43.

⁴⁸ Vezin, 'La réalisation matérielle des manuscrits latins pendant le haut Moyen Age', 30–31.

⁴⁹ Derolez, *Gothic Manuscript Books*, p. 35.

⁵⁰ These manuscripts, **MSS 9, 33, 47, 79, 82, 88, 93, 131, 161, 183, and 280**, are among those studied in Derolez, 'Ten Duinen of Ter Doest?', released one year after his *Palaeography of Gothic Manuscript Books*. If he accepts my closer dating of these manuscripts, he might perhaps adjust this statement or, as his earlier generalization indicates, Ten Duinen's books are in this regard an anomaly.

⁵¹ Gullick, 'How Fast Did Scribes Write?', p. 54 n. 13.

⁵² Jones, 'Pricking Manuscripts'.

⁵³ Derolez, *Gothic Manuscript Books*, p. 35.

twelfth-century English manuscripts was a feature of larger books demands a closer look.⁵⁴

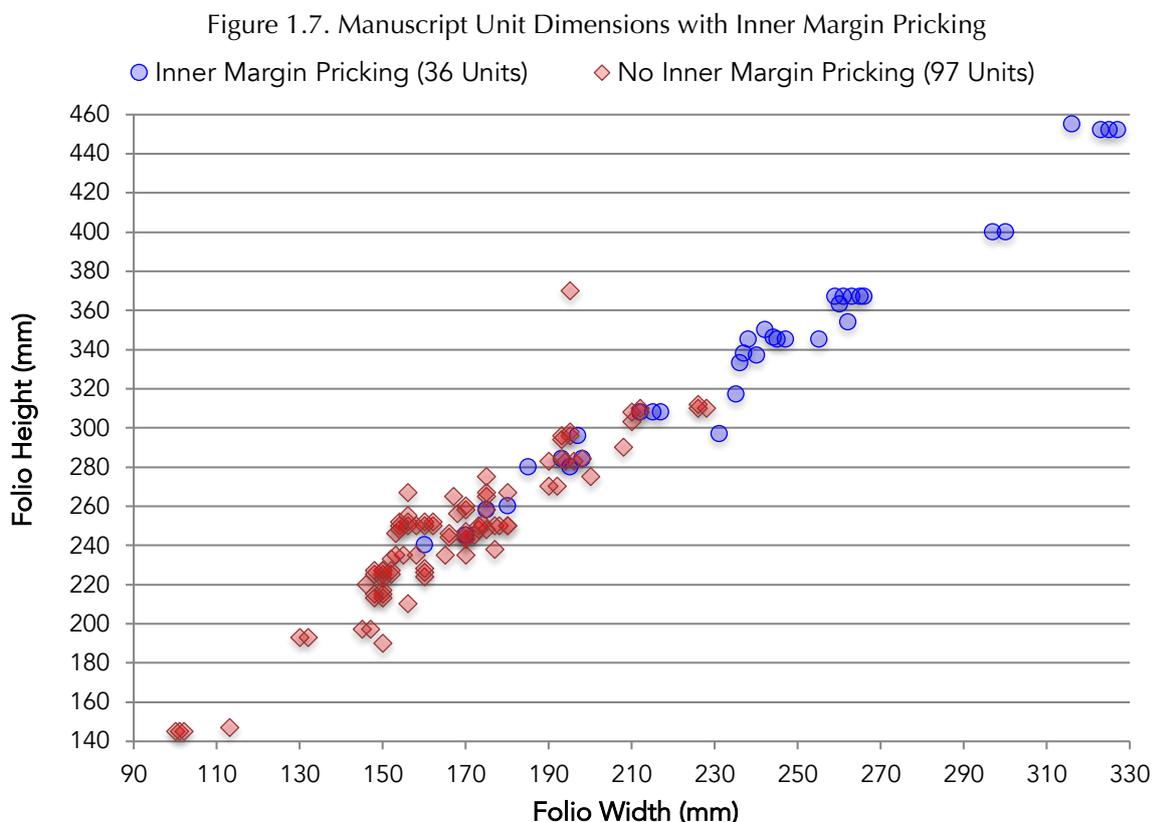


Figure 1.7 plots each manuscript unit in my corpus by approximate folio width and height.⁵⁵ The pattern produced by these 133 markers agrees with Ker's observation that smaller manuscripts do not have inner margin pricking: inner margin pricking at Ten Duinen is more common among the corpus's larger manuscripts. While there is no definite width at which manuscripts decisively gain this feature, all manuscript units wider than ± 230 mm have it. Each of these has a height greater than ± 315 mm, which situates them in the 'large' and 'very large' categories outlined in Chapter 1.4. Therefore, while Derolez's attribution of inner margin pricking to an aesthetic desire for symmetry is still reasonable, I argue that there is a more significant correlation between manuscript width and inner margin pricking demonstrated in my corpus, and that it can probably be extrapolated to other contemporary examples.

While the symmetrical aesthetics of inner margin pricking may certainly have appealed to twelfth- and thirteenth-century readers, the practice is perhaps a functional

⁵⁴ Ker, *English Manuscripts*, p. 43.

⁵⁵ Because several sets of manuscript units share dimensions on account of belonging to the same manuscript (that is, multiple manuscript units by multiple scribes may be bound together, and thus share dimensions), duplicates were adjusted by one or two millimetres to provide them with a separate but comparable marker in Figure 1.7's plot. The margin of error for any manuscript measurement is always within a few millimetres due to uneven edges and human error; this adjustment of markers by a few millimetres when necessary does not disrupt the relative accuracy of this plot.

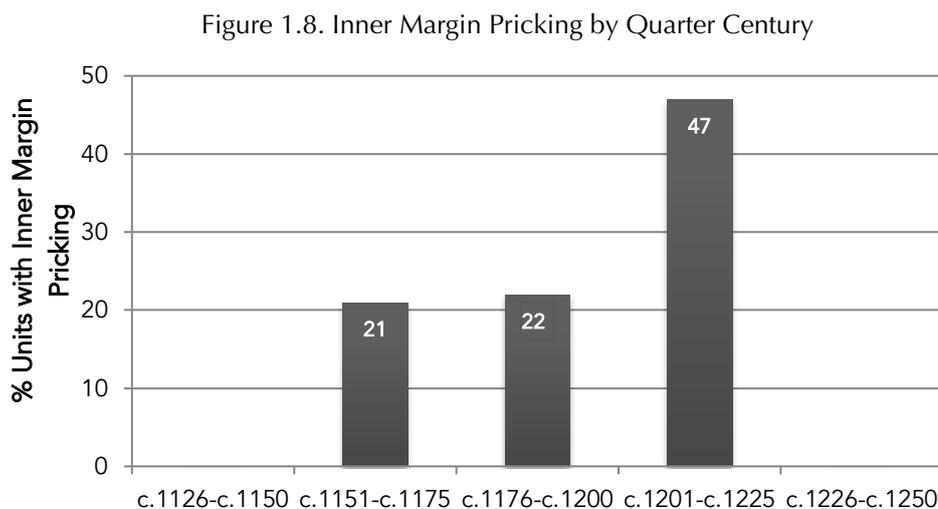
solution to a challenge unique to ruling larger manuscripts. That is, the longer the distance between two points, the harder it is to draw a straight line between them without error. The difficulty depends on a number of human factors, such as the strength of one's grip, steadiness of hand, reach, and the surface and straightedge chosen for the task; I invite the reader to experiment with drawing particularly long lines steadily themselves. Consider the physical mechanics of ruling: the straightedge is placed on top of the surface to be ruled, guided by a pair of pricks placed at either edge of the parchment to guide each line. One hand must hold the straightedge in place, while the other draws the line. While holding the straightedge firmly, a certain amount of downward pressure is necessary to prevent slipping, especially as the drawing hand must also exert pressure against the straightedge to ensure a straight line. Insufficient pressure exerted by the holding hand means the straightedge will slip, while insufficient pressure exerted by the drawing hand means the line will depart from the straightedge: both errors result in a shaky or broken line. Moving the holding hand to adjust the pressure along the straightedge while drawing is possible, but also bears the risk of inadvertently shifting the straightedge itself. The longer the line to be drawn, the higher the potential for a slip to occur, particularly at the points on the straightedge furthest from the holding hand, and the further the drawing hand must reach to make a line.

To illustrate, consider the preparation of **MS 105**, a codex of one manuscript unit containing 149 folios with inner margin pricking, made at Ten Duinen c. 1200. It measures 345 mm high by 240 mm wide, which makes it larger than the hypothetical median manuscript unit of this corpus (300 mm by 213 mm) but by no means the largest. With folios that are 240 mm wide, each open bifolium spans 480 mm: nearly half a metre.⁵⁶ Each textblock contains thirty-nine lines ruled in plummet (and thus ruled individually rather than in a stack). Without inner margin pricking, it would be a challenging feat to rule consistently across such a wide span thirty-nine times per bifolium side (totalling nearly 6,000 long lines) without facing a considerable number of potential slips. By first folding the bifolia, pricking along both the folded and the cut edges, and then ruling each shorter side separately, the scribe could more easily avoid mistakes. Inner margin pricking was a sensible means by which the monks of Ten Duinen were able to successfully prepare larger books, which, as shown in Chapter 1.4, they may have made more regularly than did other contemporary scriptoria. This apparent desire for larger books, which encourages the use of inner margin pricking, may explain why Ten Duinen shows a higher incidence of the practice in their own scriptorium than do the manuscript units that they owned which were made outside the abbey.

⁵⁶ The largest manuscript in my corpus is **MS 9**, of unknown origins and comprising a single manuscript unit of 108 folios made in c. 1176–1200. At 455 mm by 315 mm, each bifolium is 630 mm across. It contains inner margin pricking, which is the only pricking that survives; this means that at the time of ruling, this manuscript was even larger and has since been trimmed.

1.9 Inner Margin Pricking Trends over Time

Derolez's observation that inner margin pricking 'seems to be peculiar to thirteenth-century codices'⁵⁷ does not hold true for manuscript units from Ten Duinen's scriptorium and library made before c. 1200. This feature appears more in thirteenth-century manuscripts, but is also found in a considerable proportion of manuscript units from the second half of the twelfth century. As demonstrated in Figure 1.8, of the sixty-nine manuscript units made between c. 1151 and c. 1200 in this corpus, 22 per cent feature inner margin pricking, which is a significant enough amount to suggest that this practice was consistently employed earlier at Ten Duinen, and as Ker suggests in regard to English manuscripts, probably also emerged elsewhere in the twelfth century.⁵⁸ Not only does the data indicate that inner margin pricking began to be used in Ten Duinen's scriptorium as early as c. 1150, it also suggests that it is more frequently found in manuscripts that open to a breadth of a half meter or wider. Here, the co-occurrence of large dimensions and inner margin pricking is best demonstrated in the first quarter of the thirteenth century; as shown in Figure 1.3, this was the period with both the highest proportion of manuscript units with folio heights over 300 mm,⁵⁹ and with the highest proportion of inner margin pricking, as presented in Figure 1.8.



A closer look at pricking in my corpus agrees with Ker's previously published findings about the emergence of inner margin pricking in the mid-twelfth century, and also offers new ideas about why inner margin pricking was employed from a practical perspective of accuracy and physical ability. It also suggests that this practice was perhaps much more common at Ten Duinen than at the scriptoria from which they acquired manuscripts, which may place Ten Duinen's monks at the forefront of new production innovations and trends in twelfth-century book production.

⁵⁷ Derolez, *Gothic Manuscript Books*, p. 35.

⁵⁸ Ker, *English Manuscripts*, p. 43.

⁵⁹ In this study manuscripts of this height are classed as 'large' and 'very large'; see Chapter 1.4.

Part C Layout

1.10 Ruling Methods

Although pricking patterns contribute to our understanding of scriptorium practices and scribal preferences in their own right, as demonstrated in Part B, they are not stand-alone features of manuscript *mise en page*. Pricking is part of a two-step process: it exists to guide the ruling onto which the text is copied. Therefore, pricking patterns that best support the subsequent ruling were chosen, and ruling could take on a wide variety of potential layouts. Scribes had numerous decisions to make, for example, between single or double bounding lines to mark out the textblock or divide it into columns, whether the writing lines were visible only between the bounding lines or stretched across the whole folio, if areas should be left unrulled for miniatures or other decoration, or if any glosses required a different set of ruling than that of the main text. Further, the instrument used to make the lines must be chosen, although the technique used was usually dictated by the era's fashion: dragging a blunt, pointed tool across parchment created the ridge and furrow of blind ruling; a stick of some mineral or metallic substance left thin grey or brown lines; ink in black, brown, or perhaps a more vibrant colour marked a bolder frame for the text.

Ruling layouts and methods vary in their subtlety. A folio with a one-column textblock with single vertical bounding lines in nearly invisible blind ruling has a rather quieter look than a folio boasting a three-column textblock with double bounding lines applied in coloured ink. Script and decoration aside, ruling unquestionably has a profound effect on a manuscript's appearance. Ruling functions not only as a practical means of guiding the scribe's work as he lays down his text, but also acts indirectly as an important visual element of the manuscript. Moreover, different levels of attention or care affects the look of the final product in much the same way as different grades or executions of script might.

Over the course of the Middle Ages, there were three primary methods for ruling manuscripts in the West: drypoint or blind ruling, plummet ruling,⁶⁰ and ink ruling.⁶¹ Blind ruling was virtually the only method used from the ninth century into the twelfth century. It was made by dragging a dry, blunt, pointed instrument such as a stylus along a straightedge across the parchment, either individually or in a stack with all hair-sides

⁶⁰ 'Plummet' is used to indicate any method in which a mineral or metallic substance such as lead, graphite, silver, chalk, charcoal, or any other dry, coloured substance was used to make a line. The catch-all French term 'crayon', defined by Muzerelle, *Vocabulaire codicologique*, as a 'petit bâtonnet de matière minérale traçante' (221), is avoided to prevent confusion with the English meaning of crayon, which implies a wax substance.

⁶¹ Ruling rakes, frames, boards, and other such instruments are not discussed here, as they pertain to a particular type of manuscript (i.e. Humanistic and paper) and production zone (usually Italy) at the very end of the medieval period. For investigations of these methods, see Gumbert, 'Ruling by Rake and Board'; Derolez, 'Ruling in Quattrocento Manuscripts'.

facing the same direction.⁶² The result was a furrow on the side that received the pressure and a ridge on the opposite side, which gave the scribe a faint yet sufficiently textured line to follow as he wrote. This method usually required that the folios were arranged in one way to be ruled, and then rearranged prior to writing, as opposed to simply drawing off the top of a stack: many, if not most, scriptoria followed what is now known as the Rule of Gregory, which dictates that quires were arranged with hair-side facing hair-side, and flesh facing flesh (thus ridges to ridges, furrows to furrows) to ensure both sides of an opening had a consistent and orderly appearance.⁶³

During the twelfth century, the tool used for blind ruling was gradually replaced with a pointed piece of plummet.⁶⁴ Unlike blind ruling which marked both recto and verso of several sheets of parchment at once, plummet ruling required that each sheet be ruled individually on each side. The resulting lines appear in shades of grey or brown, or barely appear at all. Motivations for the change from one method to another are only occasionally discussed in literature.⁶⁵ Saenger argues that plummet ruling worked together with canonical word and line separation to ‘better guide the reader’s eye’ than did text copied on dry point ruling.⁶⁶ As Derolez and Lemaire note, this increase in labour had a particular advantage in that plummet could be covered in illustrations, whereas ridges and furrows became readily visible through an image by redistributing any paint applied to them.⁶⁷ Plummet offered more spontaneity in planning decoration and a more appealing end result. Further, because plummet ruling does not permanently score the parchment, it does not cause the breakthrough or cracking along lines that occasionally results from blind ruling and, unlike blind ruling, it can be erased.

There is another practical explanation for the switch from blind to plummet ruling in the twelfth century: the desire to customize each and every page to the needs of the text. Because ruling each side individually means that the layout can be different from one folio to the next, and even between recto and verso, plummet ruling allowed

⁶² Derolez and Bischoff disagree on whether it was more common for the ridge to be on the flesh side (Derolez) or on the hair side (Bischoff). Derolez, *Gothic Manuscript Books*, p. 35; Bischoff, *Latin Palaeography*, trans. by ó Cróinín and Ganz, p. 22.

⁶³ For a concise explanation of Gregory’s Rule, see Lemaire, *Introduction à la codicologie*, pp. 46–49. For a discussion of variations of it and a case study of how such practices can aid in studying a scriptorium’s output, see Rand, *A Survey of the Manuscripts of Tours*, Vol. 1, pp. 12–18.

⁶⁴ Manuscripts with blind ruling can date as late as the third quarter of the twelfth century; see Clemens and Graham, *Introduction to Manuscript Studies*, p. 17.

⁶⁵ Derolez, ‘De wereld van het middeleeuwse boek’, p. 113 offers a problematic account of the switch from blind to plummet ruling. He suggests that the only explanation (‘de enige verklaring’) for the change to a visible layout, as seen most effectively in the complex ruling of twelfth-, thirteenth-, and even fourteenth century manuscripts, was that scribes were trying to imitate the visible structures of Gothic architecture. As the ribs and columns that supported the great churches were part of the aesthetic of the building itself, he argues that scribes must have wanted this aesthetic in their books as well. While a growing affinity for the aesthetics of new construction styles may have contributed to the change, there are several more practical and obvious explanations for it. He does not reintroduce this explanation in his subsequent work.

⁶⁶ Saenger, ‘Reading in the Later Middle Ages’, p. 123.

⁶⁷ Derolez, *Gothic Manuscript Books*, p. 35; Lemaire, *Introduction à la codicologie*, p. 110.

scribes to adapt each textblock to the requirements of each section of text to a high degree.

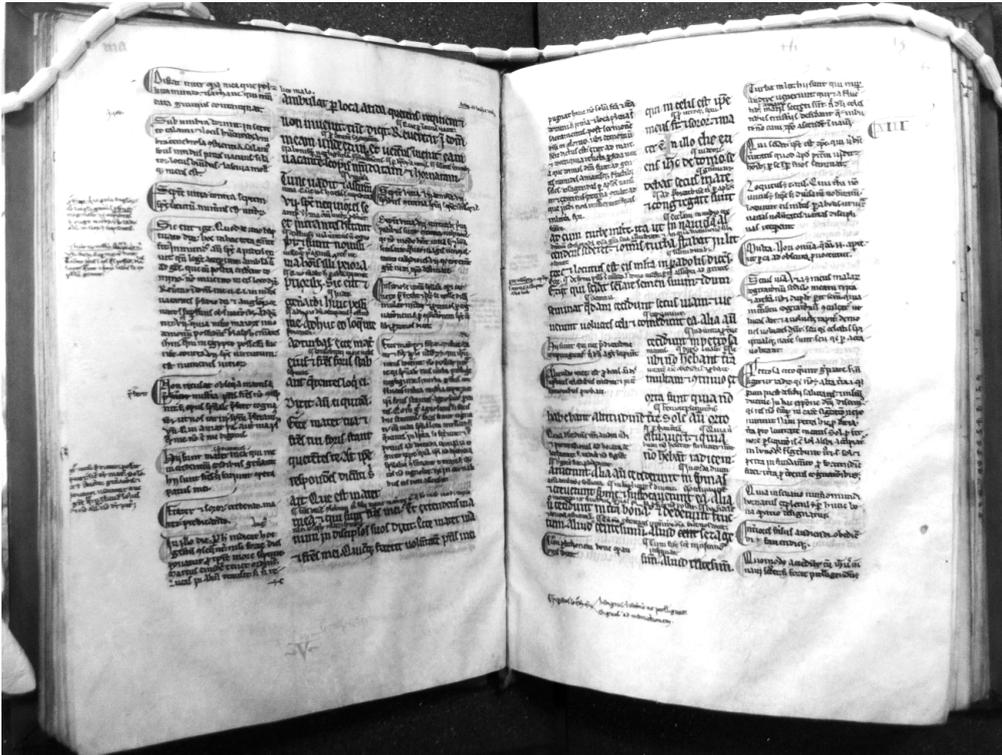


Figure 1.9. Bruges, OB, MS 62, ff. 43^v–44^r

The ability to customize each and every folio is particularly beneficial for presenting a glossed text: varying amounts of main text and gloss could be planned for every textblock, each with their own system of ruling, as is demonstrated in **MS 62**, ff. 4^r–78^v, a c. 1226–c. 1250 gloss on Matthew (Figure 1.9). Considered in this light, is not coincidental that the shift in ruling methods occurred alongside an increase in heavily glossed manuscripts (particularly of the Bible) driven by the scholastic commentary tradition growing within emerging twelfth-century cathedral schools.⁶⁸

While it serves practical needs, visible ruling is undeniably also part of the folio's aesthetic. Ink ruling, following the same principles as plummet ruling, began to appear in the thirteenth century. Given its even higher visibility — red, pink, and purple were used in addition to black and brown — it plays a significant decorative role in addition to its primary function.⁶⁹ While none of the manuscripts in my corpus contain ink ruling, which is unsurprising given its rarity in early thirteenth-century manuscripts, there is a c. 1200 manuscript, now **Bruges, OB, MS 402**, which contains some red ink

⁶⁸ Rodney M. Thomson came to the same conclusion about the connection between the adoption of plummet ruling and the appearance of glossed manuscripts produced as part of twelfth-century scholasticism; see his 'Technology of Production of the Manuscript Book', p. 81.

⁶⁹ Derolez, *Gothic Manuscript Books*, p. 35.

ruling apparently added during original preparation.⁷⁰ Suitably attributed to Ter Doest on account of its characteristic early binding,⁷¹ it shows that in Ten Duinen’s filial network the practice of ruling with ink might have appeared earlier than was usual.

As noted, plummet ruling replaced blind ruling by the end of the twelfth century. One would not reasonably expect to encounter many manuscripts from the late twelfth century with blind ruling and indeed, in my corpus in which most of the manuscript units date from the third quarter of the twelfth century and later, one does not (Figure 1.10).

Figure 1.10. Blind Ruling by Quarter Century

	# Units in Corpus	% Units in Corpus	# Units w/ Blind Ruling*	% Units w/ Blind Ruling*
c. 1126–c. 1150	14	10.5	4	28.6
c. 1151–c. 1175	33	24.8	4	12.1
c. 1176–c. 1200	36	27.1	1	2.8
c. 1201–c. 1225	45	33.8	0	0
c. 1226–c. 1250	5	3.8	0	0
TOTAL	133	100	9	6.8

* Includes all units containing blind ruling including those where plummet ruling is also present.

While almost one third of the earliest manuscript units in my corpus (from c. 1126–c. 1150) include at least some blind ruling, that proportion dwindles significantly in the following quarter century, to null by the century’s end. Moreover, of the five manuscript units made after 1150 with blind ruling, two also contain plummet ruling; they seem to embody this transition. Probably from early in the third quarter of the twelfth century, **MS 161** is for the most part ruled in plummet: of 152 folios, only the first few are ruled with drypoint. The single manuscript unit from the last quarter of the twelfth century that does include blind ruling — ff. 59^f–74^v of **MS 59** — also contains plummet ruling. The two other units of this *Glossa ordinaria* manuscript are dated to the previous quarter century (c. 1126–c. 1150), and both are ruled in drypoint. This final manuscript unit may have been added later to replace lost material, after the point at which blind ruling had taken precedence at the scriptorium in which this manuscript was made.

1.11 Ruling Patterns

While the presence of ruling, blind or plummet, is a standard feature of manuscripts, its particular pattern can vary significantly between books, quires, and even folios. Scribes could arrange lines in virtually any pattern they considered best suited to the text they

⁷⁰ I have not seen **MS 402** *in situ*, but from photographs provided by Evelien Hauwaerts of the Bruges Openbare Bibliotheek, the ink ruling appears to be original rather than retraced over earlier plummet ruling.

⁷¹ Derolez, ‘Ten Duinen of Ter Doest?’, 264.

copied. Ten Duinen's scriptorium seems to have used an 'every man for himself' approach to preparing the page, as there is limited consistency in ruling patterns between manuscript units produced at the abbey. Naturally, manuscript units made in other scriptoria share limited uniformity as each is ruled according to the preference of the scribe who made them, or that of the scriptorium in which he worked. There is thus little to be said collectively or quantitatively about ruling patterns in Ten Duinen's books.⁷²

Some brief remarks, however, can be made. Firstly, as noted by Derolez, the oldest manuscripts from Ten Duinen often have double vertical bounding lines around their textblocks which sometimes hold decorative and simple initials.⁷³ Of the fourteen manuscript units from c. 1126–c. 1150, only three (all in **MS 83**) have single bounding lines. Later examples of double bounding lines are easily found, such as in **MSS 17** and **19** from c. 1200. Furthermore, most textblocks feature double horizontal bounding lines at both top and bottom which stretch across the margin toward the folio gutter and edge. These are usually the first and second, then penultimate and last lines.⁷⁴ Two-column layouts from c. 1176–c. 1225 also usually feature single (**MSS 109** and **111**) or double (**MS 17**) horizontal lines mid-textblock that stretch across the breadth of the folio. The vertical bounding lines which divide the textblock into columns also stretch to the top and bottom of the folio. There is, however, inconsistency in the number of these inter-column lines; they are occasionally doubled, sometimes trebled, and both patterns might even be found in the same manuscript unit, as seen in **MS 17**.

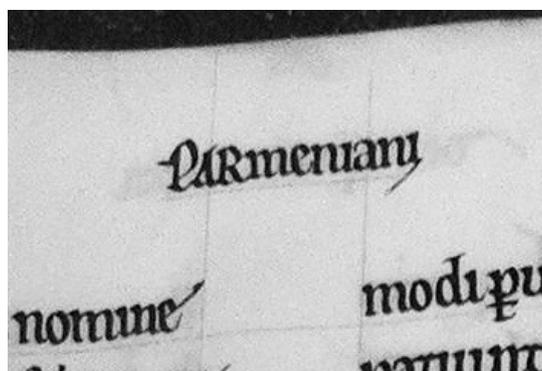


Figure 1.11. Bruges, OB, MS 118, f. 105'.
Close-up of plummet ruling

When it comes to layout, it seems that inconsistency, or maybe experimentation, is often the rule. While there is no clear ruling house style at Ten Duinen, four manuscript units — **MSS 105, 109** (ff. 1–87), **111**, and **118** — provide an interesting

⁷² Derolez, 'De wereld van het middeleeuwse boek', pp. 114–19 provides an analysis of ruling patterns from Ten Duinen, including diagrams and discussion of some challenges of ruling for gloss, although none of my corpus manuscripts are discussed. Examples are either attributed to Ter Doest, or beyond the time period of this study.

⁷³ Derolez, 'De wereld van het middeleeuwse boek', p. 114.

⁷⁴ Sometimes other lines, such as the first and third, are instead extended. Minor inconsistencies like these hinder quantitative study of a small corpus; far too many variations exist to categorize patterns.

case of an individual scribe's style. In these four manuscript units, a single scribe is the only contemporary hand, including notes and rubrics; he may have also added the initials.⁷⁵ These four manuscript units share nearly the same dimensions, number of lines per textblock, pricking and ruling patterns, and overall aesthetics. The ruling pattern is identical for each: inner and outer margin pricking supports a two-column layout with single vertical bounding lines around the textblock and between columns. These lines reach to the head and foot of the page, and running titles are centred between them (Figure 1.11).⁷⁶ Double horizontal lines stretch across the whole folio from the first and second, then penultimate and last text lines. A single horizontal line also stretches across the folio at the textblock's mid-point. This ruling pattern is well suited to the low demands of the gloss-free texts in these four manuscripts, while its simplicity and subtlety integrate smoothly into the overall aesthetic of this particular scribe's work.

1.12 Columns

The textblock is essentially made up of two structural components: column(s) and lines. As evidenced by various codicological overviews, most textblocks contain one or two columns,⁷⁷ although examples of more are found, particularly in the earliest days of the codex.⁷⁸ There were a number of reasons why a scribe might have chosen a particular number of columns: the demands of the text, legibility, and aesthetics all played roles. For example, a glossary with many short entries, and the reader's likely desire to search these entries quickly for a particular word, probably led scribes to write them in multiple short columns for ease of use and economy of space.⁷⁹ Likewise, glossed texts were often presented in formats of two or more columns to offer the commentary directly alongside the main text, thus allowing the reader to consult both without losing his place or turning the page.

When the text itself makes no particular demands of the layout, legibility — determined by factors including the width of the textblock, the size and regularity of the script, and the space between lines — could also influence the scribe's choices in preparing his folios for writing. The longer a line of text, the more probable that a reader will lose his place, both while reading and copying, resulting in an 'eye-skip'. The incidence of such errors increases when the script shows limited variety in letter

⁷⁵ This scribe's hand is further described in Chapter 2 and is also the focus of my Manuscript Collaboration Hub blog; see Janzen, 'Ten Duinen, c. 1200: Scribe and Artist, or Scribe as Artist?', *Manuscript Collaboration Hub*.

⁷⁶ **MS 111** has no running titles but it does not appear, based on the proportions of the other three manuscripts, that they were originally present and since trimmed off.

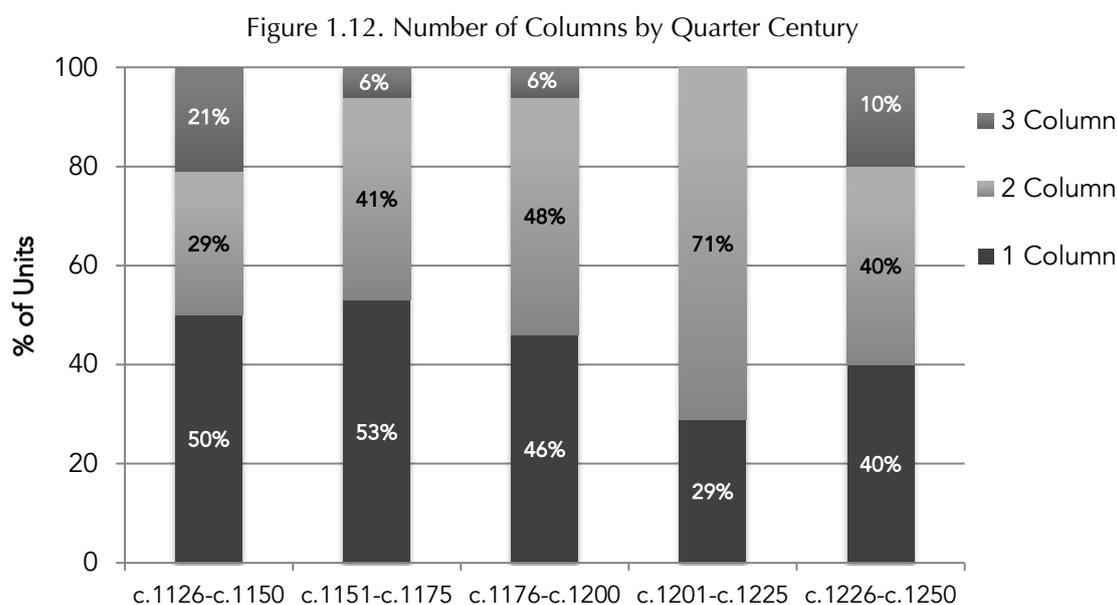
⁷⁷ Examples are found in Derolez, *Gothic Manuscript Books*; Bischoff, *Latin Palaeography*, trans. by ó Cróinín and Ganz; Clemens and Graham, *Introduction to Manuscript Studies*.

⁷⁸ Bischoff, *Latin Palaeography*, p. 27.

⁷⁹ **Leiden, Universiteitsbibliotheek, VLF 24** contains glossaries from ninth-century Tours in four columns; on this and other glossary manuscripts, see the volumes edited by Bremmer and Dekker, most recently *Fruits of Learning*.

forms, such as regularity in height, width, and curvature. Eye-skips are even more common when there is considerable line compression or script density. Avoiding these characteristics may have been a consideration in laying out texts like the thirteenth-century Paris Bibles: the challenge presented by the small, regular, and very dense script is off-set by arranging the text into two short columns, as carrying the eye across the entire width of the textblock for dozens of condensed lines per folio would result in a higher degree of reading error. This principle is still central to modern typography. Newspapers endure in their familiar short columns to enhance the legibility of their small, dense script, and studies on how these same text and layout variables affect on-screen reading appear frequently in our era of digital texts.⁸⁰

My corpus features mostly one- and two-column layouts. There are eight manuscript units with three columns, found in **MSS 55, 59, 62, and 83**, each of which holds a biblical commentary containing the biblical text in larger script accompanied by gloss in smaller script. Whether impromptu, copied from an exemplar alongside the main text, or a combination of the two, the layouts of these manuscript units show that gloss was intended as part of the overall textblock from the early production stages, and thus whether ruled or unruled, the gloss was structured as a separate column, unlike marginal notation.



A closer look at column layout by quarter century (Figure 1.12) reveals some patterns: firstly, with the exception of manuscript units from c. 1201–c. 1225, one- and two-column layouts are both consistently popular for most of the studied period. In the first quarter of the thirteenth century, two-column layouts are considerably more

⁸⁰ Examples from this vast field include Dyson, ‘How Physical Text Layout Affects Reading from Screen’, 377–93; Paterson and Jordan, ‘Effects of Increased Letter Spacing on Word Identification and Eye Guidance During Reading’, 502–12; Beymer, Russell, and Orton, ‘An Eye Tracking Study of How Font Size and Type Influence Online Reading’, 15–18.

common. There is a potential explanation for this preference for two-column formats: as demonstrated in Chapter 1.4 and Figure 1.3, which examine folio height by quarter century, the highest proportion of large and very large manuscript units were made in this period. It was probably desirable to divide wider textblocks into two columns to make shorter, more readable lines; increased use of two-column formats probably resulted from increased manuscript size.

1.13 Lines

Like other elements of *mise en page*, the number and spacing of lines was chosen by the scribe to best present the text he or she copied. Several factors governed this choice, including the anticipated appearance, a desire for economy (or alternatively, luxury), the amount of text to be copied, and perhaps the fashion of the period. The degree of line compression often differs between manuscripts written in Caroline minuscule and those written in Gothic script; at some point along the continuum joining these two types of script, more lines of text were added per textblock, and lines therefore grew closer together. This may mean that the script itself became smaller, or that there is less negative space (i.e. 'white space') between the bodies of letters on one line and those in the lines above and below, leading to a more 'cramped' appearance.

There are two queries to be made about this perceived transition towards higher line compression. Is there a relationship between line height and the number of lines in a textblock? Does ruling lines closer together coincide with a higher number of lines per textblock? While it might seem like a forgone conclusion that closer lines indeed means more lines, there is actually a wide range of possibilities in the relationship between the two. Given the variety of folio dimensions (on which, see Chapter 1.4), a textblock could feature almost any number of lines, depending on how close a scribe wished to place them to one another.

In plotting each manuscript unit in my corpus by line height and number of lines,⁸¹ a trend appears (Figure 1.13). There are outliers, but overall, more lines mean closer lines (or, put another way, greater line compression). What this graph does not tell us is the relative dimensions of these textblocks; all sizes are represented without differentiation. Questions still remain: do larger textblocks tend to have more lines, or do they instead use the additional area to feature larger script, or leave more room between lines for a more spacious appearance? Do smaller folios use smaller script to make economical use of the page? The manuscript units in my corpus represent various scribal choices. Rather than revealing a consistent pattern (for example, larger textblocks have more lines and smaller textblocks have fewer), scribes seem to have

⁸¹ Line height is automatically generated in my corpus database by dividing the values of textblock height by the number of lines. The result, therefore, contains fractions (to two decimal points) in most cases. This explains why the values are not whole numbers, although one would not physically measure line height to a fraction of a millimeter.

ruled their lines in the number or height dictated by the needs of the text they copied and the preferences of their intended readers.

Figure 1.13. Line Height and Number of Lines (All Manuscript Units)

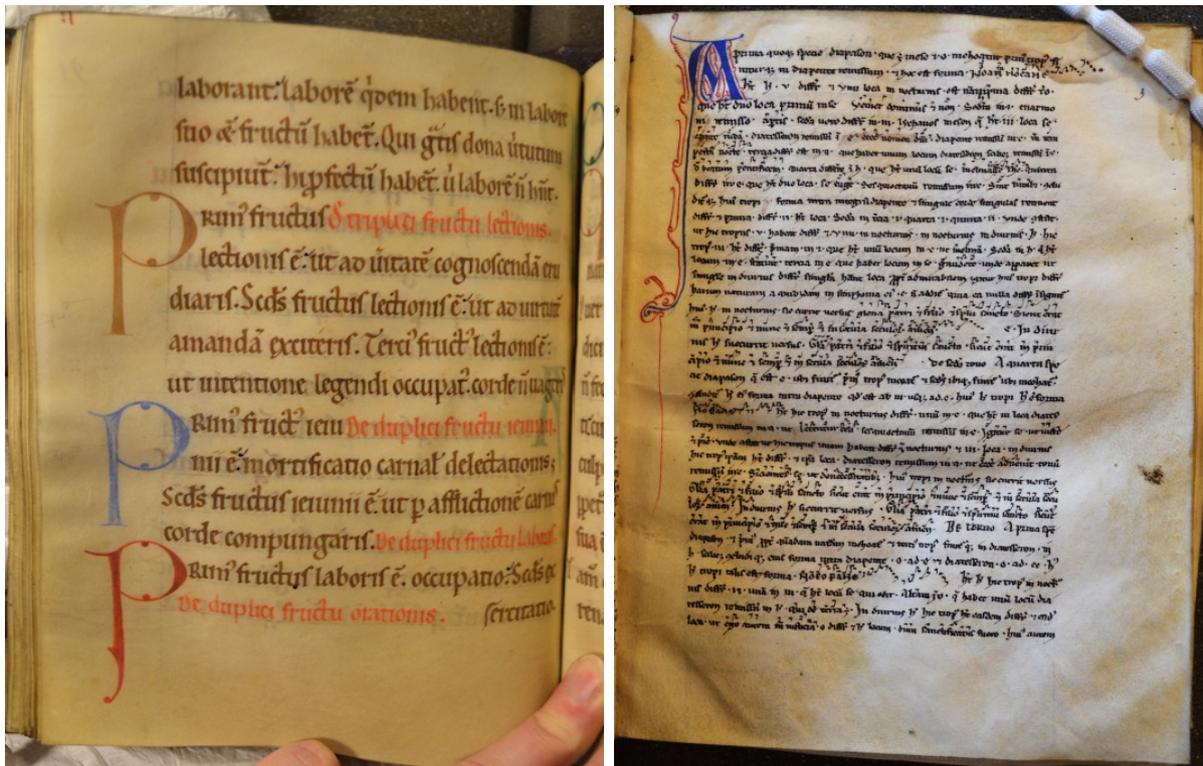
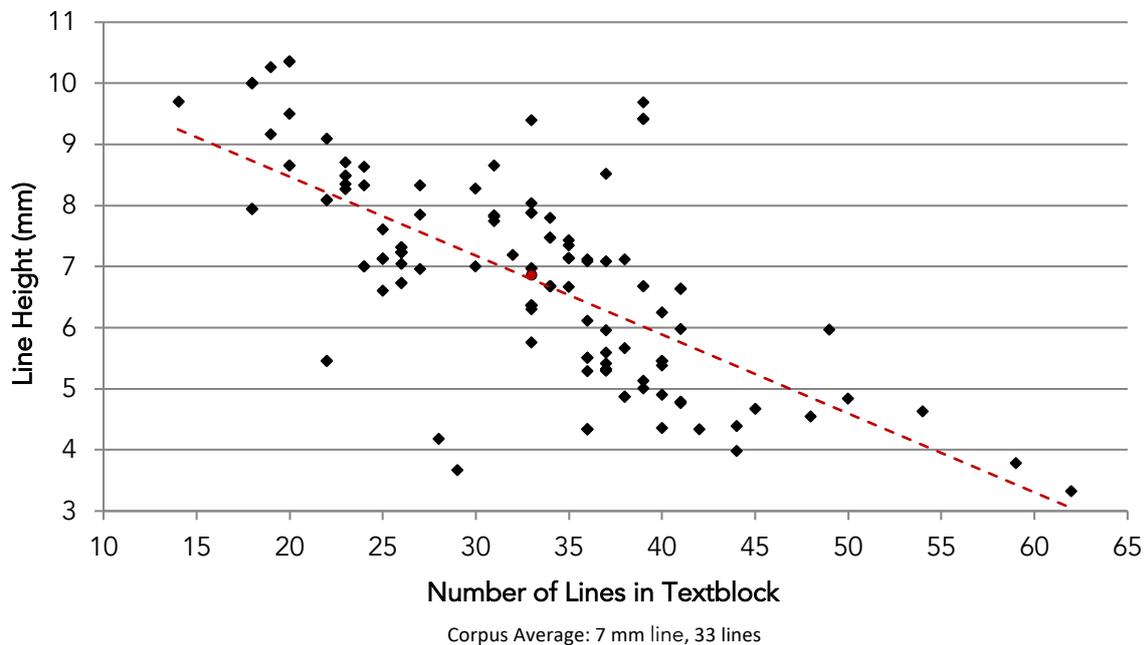


Figure 1.14. Bruges, OB, MS 156, f. 93^v (left) and MS 532, f. 3^r (right)

Consider, for example, **MS 156** and **MS 532** (Figure 1.14). Dating to c. 1176–c. 1200, **MS 156** is one of the smallest manuscript units in my corpus at 190 mm by 150 mm, and features a textblock of 136 mm by 99 mm. It also has the fewest lines per folio

(fourteen) but boasts large, spacious script. A similarly sized manuscript at 197 mm by 145 mm, with a comparable textblock of 156 mm by 94 mm, **MS 532** from c. 1201–c. 1225 bears thirty-six lines of tiny script. These manuscript units share similar dimensions but vary significantly in the amount of text they carry. Their different presentations may result from a combination of several factors: the structure of the texts they hold (**MS 156** contains several works by Hugh of St-Victor, and **MS 532** a collection of Boethius with short segments of Martianus Capella), the available parchment, the readers' expectations of appearance and legibility, the scribes' skills and preferences, and the context in which they were meant to be read, to name only a few.

1.14 Margins

While the textblock is the focal point — indeed the *raison d'être* — of most manuscript folios, the margin is vitally interesting. The margin may contain a number of features of importance to codicologists and historians, from navigational reading aids that enabled searchers to hunt for specific information in the text, to interpretative reading aids guiding readers in how to approach it,⁸² and even notes indicating how users then digested the material.

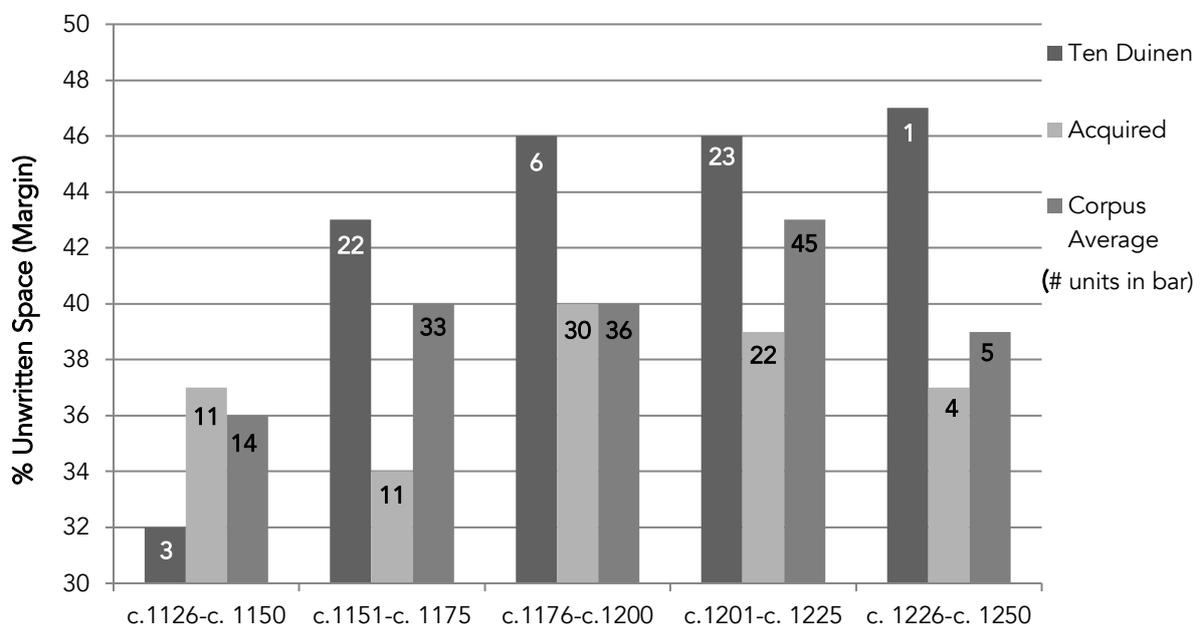
The proportion of the page left as negative space around the textblock is found by determining the ratio of the textblock area (height by width) to total folio area. The average marginal space in my corpus is 41 per cent (meaning conversely that 59 per cent of the page is prepared to hold text). The size of the margin may offer insights into the resources available to the scribe, the needs of the reader, and even the context of the manuscript's use. For example, spacious margins might indicate that the scribe had enough available parchment to 'waste' pages by not filling them to capacity with text, perhaps favouring an aesthetic ideal of empty space. Alternatively, it might suggest that the text copied was deemed of such worth (for example, the intrinsic value of the Bible as the Word of God) that no expense should be spared in creating an optimal copy. Or, perhaps that the reader expected plenty of unwritten space in which to add his own gloss or notes post-production, in the way commonly seen in books of the twelfth-century cathedral schools and budding universities. Small margins (the effects of heavy later trimming notwithstanding) can suggest the opposite: that resources were sparse or too expensive to spare; that the text was a working copy or perceived as relatively unimportant, making presentation less significant; or that the reader's contributions were unexpected.

Cultural and economic changes could potentially affect page layout and marginal space through factors like those mentioned; several are imaginable at Ten Duinen over the course of the period examined here. Since its foundation as a Cistercian monastery of perhaps only two dozen men in 1138, to the mid-thirteenth century when it supported 120 choir monks and 248 lay brothers, Ten Duinen experienced enormous

⁸² Interpretive aids are discussed in Chapter 3.

growth and profit,⁸³ which undoubtedly increased its access to and demand for bookmaking resources. Furthermore, as a hub between Britain and France, with involvement in interregional political affairs, and as a frequent participant in markets throughout Flanders,⁸⁴ Ten Duinen most certainly witnessed the intellectual developments which characterize the twelfth century as a period of 'Renaissance'.⁸⁵ These influences may have impacted the supplies of Ten Duinen's bookmakers and the needs of their readers. While different factors could play out in many of the choices scribes made during manuscript production, issues of resource availability and reader notation are perhaps particularly prescient to folio layout, and indeed the margin, as discussed in this section. But first, did the margins of Ten Duinen's manuscripts, both homemade and acquired, change over the 125 years studied?

Figure 1.15. Average Margin Per Cent by Quarter Century: Ten Duinen, Acquired, and All Origins



As illustrated in Figure 1.15, there is significant transformation in the relative size of margins between c. 1126 and c. 1250 among both the manuscript units made at Ten Duinen and those the abbey acquired from elsewhere. There is a clear trend for the margins of Ten Duinen's homemade manuscript units to get larger, plateauing from c. 1176 to c. 1225 at 46 per cent of total folio area. Although there is only a single manuscript unit in my corpus attributed to Ten Duinen's scriptorium after c. 1226, it too follows this trend of margin growth, with 47 per cent of the folio surrounding the textblock. The acquired manuscript units show inconsistent average margin size across

⁸³ Jordan, 'Gender Concerns', 76.

⁸⁴ See Introduction 0.1 on the abbey's growth and participation in political and economic affairs. Williams, *The Cistercians*, pp. 391, 396, 398; Southern, *Western Society and the Church*, p. 267.

⁸⁵ Consider, for example, change in commentary traditions driven by the cathedral schools of the twelfth century, and the budding universities and scholastic method of the thirteenth. See (among many others) various chapters of *Renaissance and Renewal in the Twelfth Century*, ed. by Benson and Constable.

the studied period; notably, the margins are only larger than Ten Duinen's average prior to c. 1150, peaked at 40 per cent of the folio between c. 1176 and c. 1200, and thereafter became gradually smaller.

While the margins of acquired manuscript units also grow sharply towards the year 1200, it appears that the scribes of Ten Duinen strove for larger margins in their books both earlier, and at a faster rate, than those scribes in other scriptoria who made the abbey's acquired manuscript units. Moreover, the degree of growth suggests Ten Duinen's proportionally increasing margins (and conversely, decreasing textblocks) were not coincidental, but deliberate. What drove this desire for more marginal space? If form follows function, increased marginal space might indicate change in the way the book was used.

As mentioned above, there was a possible impetus for increased margin size in northwestern Europe; firstly, the rise of cathedral schools in the twelfth century and flourishing of universities in the thirteenth expanded the educational contexts in which books were used. These new 'scholastic' readers carried their books to class, where a master would lecture on the text at hand, and the student would note this interpretation directly into the margins of his book.⁸⁶ Further, the methods of *quaestio* and *disputatio*, wherein scholars would debate a posed question using an arsenal of authoritative sources,⁸⁷ required quick location of material. To support this new 'selective and non-sequential approach to reading',⁸⁸ new navigational reading aids were developed (such as the foliation added to Ten Duinen's manuscripts in the thirteenth century, discussed in Chapter 4), while the use and combination of established ones (such as running titles, rubrics, and paragraph marks) was heightened.⁸⁹ Many of these reading aids, in addition to gloss or marginal notation, occupied the margins. Presumably, as these features were increasingly used, one might expect larger margins intended to accommodate them.

While a new scholarly milieu might have played a role in the growing margins of books made outside Ten Duinen between the mid-twelfth and mid-thirteenth centuries, it probably does not adequately address this feature in their homemade books of this period. For one, Cistercians were generally late to the scholastic game. In 1139 Bernard of Clairvaux directly resisted the growing scholastic movement, arguing at Paris that knowledge is reached through love, and not reason or logic. The Order, choosing mystical over scholastic theology, and valuing remoteness and isolation (at least officially), systematically avoided these urban-centred intellectual movements until the second quarter of the thirteenth century.⁹⁰ It was not until 1245, under the urging of Pope Innocent IV and Stephen Lexington's forward-thinking abbacy at Clairvaux, that a

⁸⁶ See, among others, Catto, 'University and Monastic Texts', pp. 221, 223.

⁸⁷ Marenbon, 'Life, Milieu, and Intellectual Contexts', p. 23.

⁸⁸ Weston, 'The Spirit of the Page', p. 99.

⁸⁹ For a summary of the 'scholastic' book and its employment of already-developed reading aids, see Weston, 'The Spirit of the Page', pp. 102–08. For a brief overview of reading aids used in the period 1100–1425, see Parkes, 'Layout and Presentation of the Text', pp. 55–74.

⁹⁰ Lekai, *The Cistercians*, pp. 77–78.

Cistercian school was established at Paris and abbots encouraged to foster learning in their monasteries.⁹¹

Another considerable complication arises in attempting to explain why Ten Duinen's margins grew towards 1200: Ten Duinen's monks did not often annotate their books. Their homemade books contain marginal notation less frequently than do books acquired by the abbey from elsewhere. Did they perhaps plan to annotate, and laid out space for it, but then avoided writing in their books? Or maybe they never planned to write in the margins, but simply appreciated the aesthetics of a 'roomy' page. Marginal notation and possible motives for and against it at Ten Duinen are further explored in Chapter 3.8. At present, strong claims of why Ten Duinen's scribes created such large margins in comparison to those of their acquired manuscript units must be shelved.

Part D Quires

1.15 Quire Preparation and Structure

The collection of sheets of parchment into quires could be performed before or after pricking and ruling, but necessarily before writing. A scribe might prepare folios for writing and then arrange them into quires, prick them together, and, if blind ruling is used, perhaps rule them at the same time. It is often impossible to tell which process was used, but careful consideration of pricking can sometimes indicate the order of preparatory steps chosen by the scribe, and specifically whether quires were arranged before or after pricking and ruling.

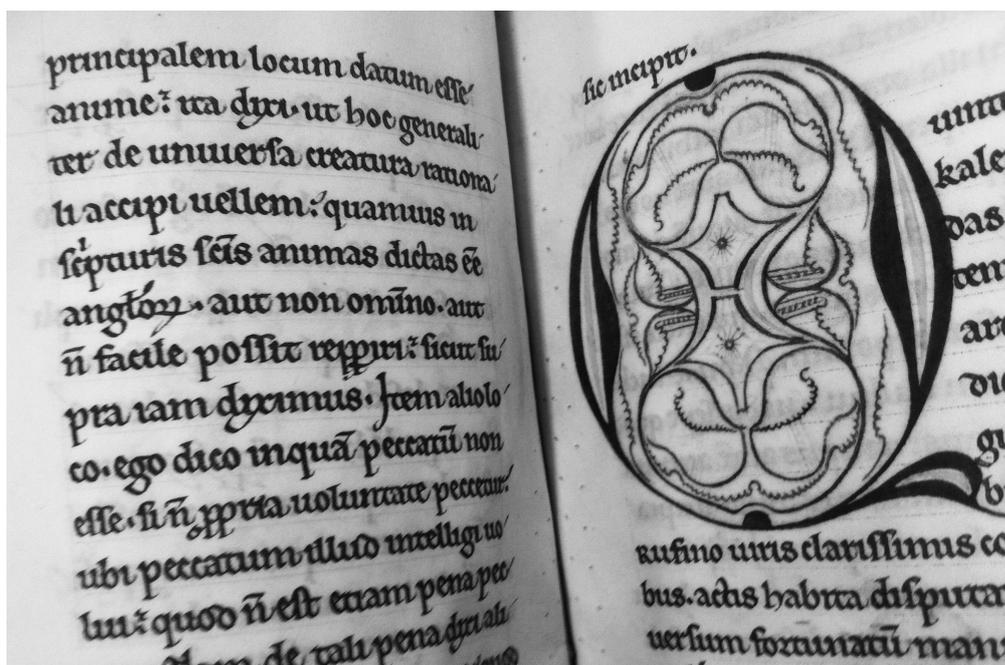


Figure 1.16. Bruges, OB, MS 105, ff. 94^v–95^r

⁹¹ Lekai, *The Cistercians*, pp. 80–82.

Pricking, and pricking errors, that align from one folio to the next, but which span more than one quire, indicate that **MS 82**, made at Ten Duinen in the third quarter of the twelfth century, was pricked in piles, and then ruled and arranged into quires. Conversely, **MS 79**, from the same quarter century as **MS 82**, shows pricking patterns — and again, errors — that indicate it was arranged into quires and then pricked; ff. 125–132 were clearly pricked together as a quire, according to the wobbly extra line of pricking in the upper outer margin. Likewise, **MS 105**, also made at Ten Duinen around 1200, was arranged into quires and then pricked, as indicated by the erroneous second row of pricking in the inner margin of the twelfth quire (Figure 1.16 and cover).

While the point at which Ten Duinen's scribes arranged their folios into quires varied, as demonstrated by the aforementioned examples, they consistently chose the same number of leaves per quire. In fact, all manuscripts in my corpus, including material from both Ten Duinen's scriptorium and from other scriptoria, contain quires of eight leaves (four bifolia), with few exceptions. Nearly all quires are arranged according to the Rule of Gregory (described in Chapter 1.10) with hair sides facing out — that is, the first recto and last verso of each quire is the side of parchment that once held the animal's coat — with occasional discrepancies due to error, singletons which disrupt the pattern, or binding technique. For example, the first quire of **MS 19** (c. 1200) opens on the flesh-side instead of the hair-side of its first folio because the hair-side recto of the quire's first leaf is used as the contemporary binding's pastedown and is therefore glued to the inner cover. Although a gathering of eight folios, the quire only contains seven 'loose' folios prepared for writing, but still ends with a hair side facing out. The following quire is arranged with the expected eight folios with hair sides facing out. The multiple manuscript units of **MS 28** (c. 1200), however, break more strongly from the usual quire structure and contain quires of seven, eight, and ten folios, including several singletons. Some bindings are too tight to confidently determine quire arrangement, for example, those of **MSS 33, 56, and 285**. Despite these occasional tight bindings, the medieval or early modern bindings of most of the corpus manuscripts are loose enough, through either wear or technique, to easily determine their quire structure.

1.16 Folio Loss, Quire Loss, and Insertions

Despite aiming for consistent quires of eight folios, there are some cases where missing folios result in incomplete quires. For example, **MS 233** (c. 1201–c. 1225) lacks some of its otherwise regular quire signatures, has catchwords that mismatch with the following folio's text, shows discontinuity in its thirteenth-century foliation, and holds scraps of torn-out folios, indicating significant damage. In addition to the remnants of six folios torn out between ff. 1^v and 2^r, features of f. 9^v illustrate the considerable loss that continues throughout the book: its quire signature indicates it was once the end of the third quire, making it formerly f. 24^v if the quires had originally contained the usual

eight leaves. We know that in fact they did, as the thirteenth-century foliation at the top left corner is **&**. In Ten Duinen's unique foliation system, which is discussed in more depth in Chapter 4.7, **&** followed the twenty-three-letter alphabet, confirming that this was indeed the original twenty-fourth folio. Moreover, the catchword found at the lower inner margin ('creaturae') does not match the first word of the following folio.

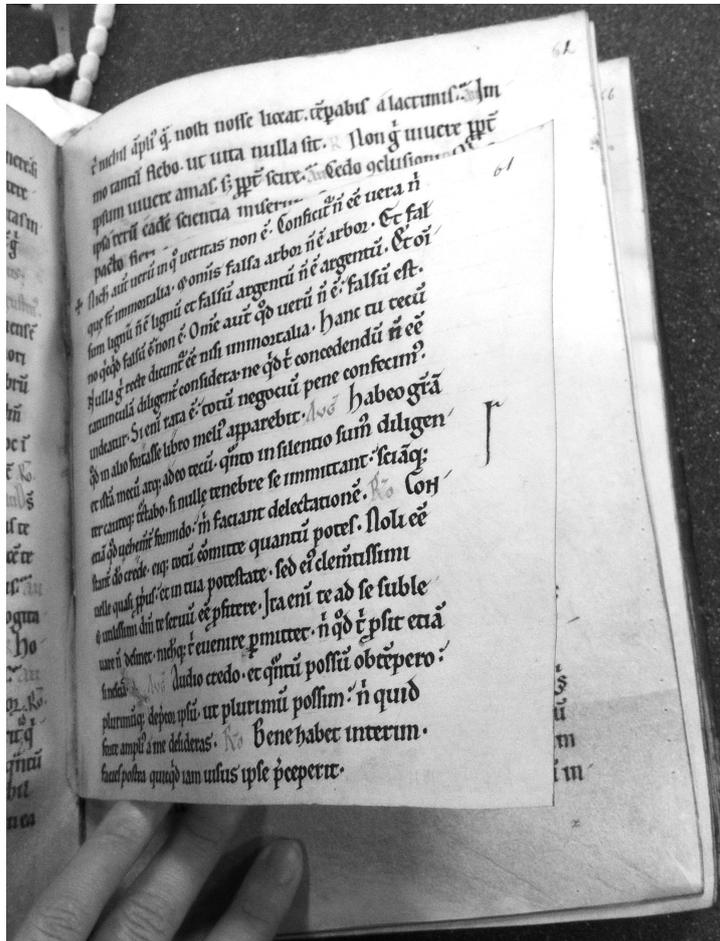


Figure 1.17. Bruges, OB, MS 116, f. 61^r. Insertion

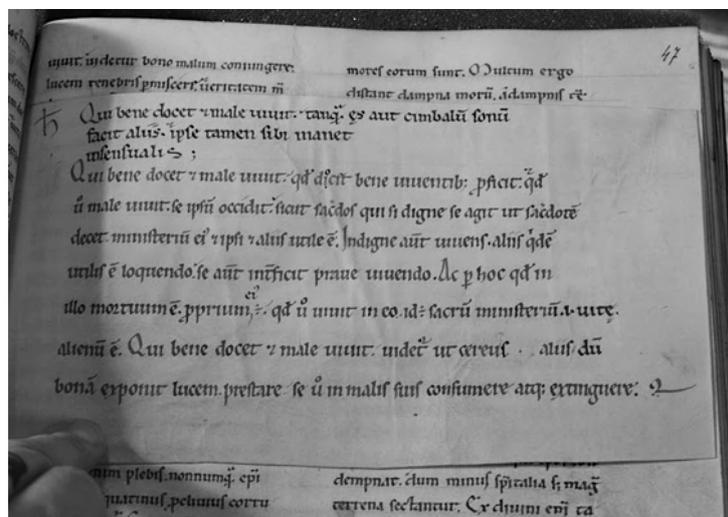


Figure 1.18. Bruges, OB, MS 161, f. 47^r and unfoliated insert

There are, moreover, several cases in which singletons or a bifolium were added to accommodate shorter texts and additions, such as the bifolium added to the beginning of **MS 72** for the volume's table of contents, or to hold remaining text when a full quire was unnecessary. An insert in **MS 116** contains, in a contemporary hand, a passage omitted from the previous folio. Its dimensions may have been driven by economy, conceivably by employing an otherwise unusable scrap (Figure 1.17).⁹² A similar insertion is found in **MS 161** between ff. 46 and 47 (Figure 1.18). The parchment was cut to fit seven lines of text added by the same scribe as the rest of this manuscript unit, but a near-contemporary reader seems to have been dissatisfied with this correction and intervened further with his own.

1.17 Conclusions

This chapter analyzed the material features of Ten Duinen's books, both homemade and acquired, within the context of contemporary book culture. A codicological study, relying on observations made during both *in situ* examination of each manuscript unit and quantitative analysis of their features collectively, reveals much about the production of manuscript units in my corpus, and why they were made in this way. The above investigation of parchment, pricking, layout, and quires introduces new evidence, while also confirming and questioning some earlier findings about the physical features of twelfth- and early thirteenth-century manuscripts, both from Ten Duinen and more generally. While the manuscript units made outside of Ten Duinen cannot be considered representative of all manuscripts made across Europe c. 1125–c. 1250, they do represent some of the materials and models available to Ten Duinen's scribes while they were producing books themselves.⁹³ As such, they provide a useful balance against which to weigh Ten Duinen's scriptorium practices, including both those which seem predictable and those which may be uncommon.

The parchment from which the studied manuscript units were made stretches across a broad spectrum, from soft, supple, and white, to shiny, horn-like, and considerably yellowed. As the animals from which parchment were produced varied wildly in terms of species, condition, and regional characteristics, and the preparation processes differed from place to place, diversity is to be expected in a collection with wide origins such as the monks of Ten Duinen managed to acquire. Notably, however, the parchment produced at the abbey itself was particularly consistent. Albeit imperfect, with occasional holes and varying opacity, it is stable in its creamy colouring and suede-like texture. It seems that in order to maintain the largest possible

⁹² The final folio of **MS 82**, f. 180, contains only a few lines of text in the first column of the recto. The rest of the folio, except for the area containing text and a strip in the inner margin still held in the binding, has been removed. Given the strip included in the binding, it seems to have been cut after writing, rather than before as in **MSS 116** and **161**.

⁹³ Ten Duinen's scribes doubtlessly borrowed books from other institutions to copy, which were then returned; these exemplars are unidentified and thus unavailable for study here.

dimensions, the monks of Ten Duinen often used areas of the skin that other bookmakers might have trimmed away, resulting in uneven size, irregular corners, and inconstant thickness. Whether the monks drew their skins from Ten Duinen's vast resources of sheep or kept a large number of cattle alongside them is not entirely clear.

A look at the dimensions of the folios in my corpus revealed a size discrepancy between Ten Duinen's books and those they acquired from elsewhere. Ten Duinen's bookmakers and readers seem to have made a considerable proportion of large books; the books they made for themselves were quantifiably larger than those they acquired from other scriptoria. This may be in part because it is easier to transport smaller books, thus larger homemade books may have been more likely to stay where they were made, and smaller books more likely to find homes in other libraries.

One of the smallest production features, pricking, reveals a method in which Ten Duinen's scribes may have been somewhat unusual in performing. Earlier literature by various scholars suggests that the prevalence of inner margin pricking is a somewhat nebulous topic; anecdotal claims variously suggest it is 'normal' by 1150,⁹⁴ that it appears commonly in all but 'small manuscripts' in England,⁹⁵ and that it 'seems to be peculiar to thirteenth-century codices'.⁹⁶ Another quantitative study, relying heavily on catalogues, argues that it does not exist at all, ever, on the Continent.⁹⁷ Although using a small sample, this study shows that nearly a fifth of the corpus's manuscript units that were made between c. 1125 and c. 1250 at other scriptoria and later acquired by Ten Duinen's library have inner margin pricking. More remarkable, however, is that Ten Duinen's scribes pricked the inner margins of 40 per cent of their surviving manuscript units. Moreover, there is a direct correlation between the size of the book and inner margin pricking: the wider the book, the more likely it is to appear. I argue that inner margin pricking might have been practiced more frequently in larger books to make ruling easier.

Despite Ten Duinen's scribes sharing pricking practices to some degree, they did not express a particular preference when it came to ruling the page for writing; some manuscripts bear similar ruling patterns, but no prominent trends emerge in their homemade books (nor in their acquired texts). It is commonly accepted that plummet ruling replaced blind ruling over the course of the twelfth century, and this change is wholly supported by the ruling methods used in my corpus. In my view, literature to date contains inadequate discussion of why this transition occurred. Derolez and Lemaire have reasonably argued that plummet ruling could be more easily covered in illustrations whereas ridges and furrows became readily visible by redistributing any paint applied to them.⁹⁸ I suggest that in addition to preventing the cracking and breaking along drypoint ruling (which readers were no doubt starting to see among

⁹⁴ Clemens and Graham, *Introduction to Manuscript Studies*, p. 16.

⁹⁵ Ker, *English Manuscripts*, p. 43.

⁹⁶ Derolez, *Gothic Manuscript Books*, p. 35.

⁹⁷ Jones, 'Pricking Manuscripts', 389–403.

⁹⁸ Derolez, *Gothic Manuscript Books*, p. 35; Lemaire, *Introduction à la codicologie*, p. 110.

their older books by the twelfth century), plummet ruling offered a new opportunity for variety: ruling each recto and verso individually meant that the layout could differ on each and every folio. It could also be erased should changes be needed, unlike permanent drypoint lines. Plummet ruling allowed scribes to easily customize every textblock to the needs of their text to a high degree, an option that must have been especially useful for the layouts of the new glossed texts of the twelfth-century cathedral schools and thirteenth-century universities.

The bookmakers of Ten Duinen, as well as those who made the books they acquired from outside the abbey, seem to have been on board with switching ruling methods, the impetus for which may have been broadly linked to what Kwakkel calls ‘a new type of book for a new type of reader’.⁹⁹ The scribes of these manuscripts did not, however, seem to adopt greater line compression, a feature recognized as one of the codicological symptoms of so-called Gothic manuscripts. In this transitional era, while monks of other orders flocked to the great cathedral schools and universities, the Cistercians, including those of Ten Duinen, seem to have refrained from scholastic pursuits until after 1224. Therefore, while increased line compression might be found in corpora from other institutions in this period, Ten Duinen seems to have neither produced nor acquired manuscripts with this hallmark (although it certainly did in the later thirteenth century).

Ten Duinen’s books also present an unusual trend in margin proportions. While the acquired books in Ten Duinen’s library demonstrate fluctuating margin size during the studied period, Ten Duinen’s scribes dramatically and progressively made their margins increasingly larger towards and into the thirteenth century. By the mid-twelfth century, Ten Duinen’s manuscript margins are overall proportionally larger in comparison to the textblock than are the margins of their acquired books. This choice to make larger margins was possibly aesthetic, for another way in which the scribes and readers of Ten Duinen were seemingly unique was that despite these spacious margins, they seldom wrote in them. Potential reasons for why they left few textual hints of their interaction with their books are considered in Chapter 3.

As seen in the consistency of their parchment, Ten Duinen’s scribes also maintained consistency in their quire structure. Likewise their contemporaries, as nearly all complete quires in my corpus contain eight folios arranged with hair side facing hair side, flesh facing flesh, and with the hair sides facing out when the quire is gathered. While their acquired books contain full-sized folios in all cases, there are a few cases in Ten Duinen’s homemade books of parchment insertions cut to accommodate small segments of text. Further aspects of book production at Ten Duinen, especially evidence of how the scribes divided their labour of copying, are explored in Chapter 2.

⁹⁹ This phrase commonly used by Erik Kwakkel in lectures and conversation about twelfth- and thirteenth-century manuscripts is also the title of his 2003 chapter on the introduction of paper to vernacular book production in the later Middle Ages.