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An Illustration to Ælfric's *De temporibus anni* in Ælfwine's *Prayerbook*

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Abstract: The present essay discusses a diagram found in London, British Library, Cotton Titus D.xxvii+xxvi, the so-called *Ælfwine's Prayerbook*. The diagram, which appears on fol. 21v (see Figure 1), has been interpreted by most scholars as an incomplete tidal *rota* or an incomplete wind *rota* (as it contains only 4 out of the canonical 12 winds). A detailed, comparative analysis of the features of the diagram, however, proves that the hypothesis of the tidal *rota* must be discarded in favour of that of the wind diagram. Moreover, an analysis of the manuscript contents and of the way in which the manuscript was written reveals a close connection between the diagram and Ælfric's *De temporibus anni*, showing that the diagram is complete in its present form, and was inspired by the Ælfrician text. My study shows that the *rota* constitutes an illustration to the discussion of the winds appearing in the *De temporibus anni* and, at the same time, a representation of the Cross and of the close connection between God and the natural world, perfectly integrated within Ælfwine's interests and architectural plans, as well as within the "visual-exegetical method" (Kühnel 2003) of the period.

1 Object and Purpose of the Study

London, British Library, Cotton Titus D.xxvi and London, British Library, Cotton Titus D.xxvii¹ are two small volumes making up the so-called *Ælfwine's Prayer-*

¹ In the rest of this essay, the two volumes will be referred to as D.xxvi and D.xxvii, respectively.

book.² The two volumes originally formed a single codex, in which what is now D.xxvii preceded D.xxvi (Henel 1942: xx; Ker 1957: no. 202). The 'Prayerbook' is actually a rather more complex volume, containing a variety of texts including a calendar, computistical texts and tables, scientific treatises, prognostics (like the *Dies aegyptiaci*), commonplace texts (such as the names of the Seven Sleepers), prayers, etc. (see Section 2 for further details). Both volumes forming the original manuscript were edited by Beate Günzel for the Henry Bradshaw Society in 1993, with the exception of Ælfric's *De temporibus anni*, the Passion according to St John (*Euangelium Iohannis XVIII–XIX*), and the Easter table (of which she only printed the obits).³ In the present essay, the various items contained in the manuscripts will therefore be numbered according to Günzel's edition.

Fol. 21v in D.xxvii features a diagram (86 mm in diameter) showing the four principal winds, which has been generally described by scholars variably as either an incomplete tidal diagram (Günzel 1993: 110) or an unfinished table of winds (Birch 1892: 276, "Appendix", item no. 4). In his 1942 edition of Ælfric's *De temporibus anni*, Henel, however, already drew attention to the connection between this diagram and Ælfric's description of the winds in his computistical work (Henel 1942: 104). I intend to demonstrate that this *rota* is indeed a wind diagram meant to illustrate Ælfric's *De temporibus anni* (which was copied on fols. 30r–54r of the same volume), and that it is not only complete, but also well integrated in the general ideological planning of the manuscript.

The true meaning and function of the diagram can only be understood by considering together various aspects of the manuscript, and in particular the owner and planner of the miscellany, the copying process, and the relationship between the various texts contained in the codex.

2 For complete bibliographical references on the manuscript, see Gneuss and Lapidge (2014: no. 380). See, in particular, Henel (1942: xix–xxi); Ker (1957: no. 202); Günzel (1993); Keynes (1996: "Appendix", 111–123 and pls. X–XX, reproducing D.xxvii, fols. 2r–21v). A digital reproduction of the manuscript is available on the British Library's website, in the "Digitised Manuscripts" section: <http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Cotton_MS_Titus_D_XXVII>.

3 Previous editions only included single texts or groups of texts (e.g. Liturgical calendar, Litany, Ælfric's *De temporibus anni*, Prognostics, etc.). For a list of relevant editions, see Gneuss and Lapidge (2014: no. 380).

2 The Manuscript: Origin, Date, Owner, Scribes, Contents and Structure

The codex was certainly written in Winchester, at the New Minster,⁴ presumably between 1023 and 1031 (Gneuss and Lapidge 2014: no. 380; Günzel 1993: 1–2).⁵ Ker states that “the manuscript was the personal property of Ælfwine” and that it was especially written for him (1957: 265–266). Various elements point in that direction, but the most important piece of evidence is given by item no. 14 (D.xxvii, fol. 13r), a note in cryptographic writing⁶ which explicitly refers to Ælfwine as the owner of the manuscript and also names the main scribe of the manuscript, Ælsinus or Ælsige (Günzel 1993: 70 and 109).⁷

Günzel (1993: 6–7) enumerates eleven scribes (named A–L but without J) working on the manuscript, with the two main scribes (A and B) working at the same time, in an alternate manner.⁸ Scribe A, Ælsinus, has been identified also as

4 Evidence thereof can be found in items no. 4 (Calendar), no. 16 (Easter table) and no. 75 (Litany of the Saints): both the Calendar and the Litany of the Saints contain a number of saints who were venerated especially in Winchester; moreover, both the Calendar and the Easter table feature the obits of the bishops of Winchester and the abbots of the New Minster (Günzel 1993: 50).

5 The *terminus ante quem* is given by the date in which Ælfwine became abbot (Knowles et al. 1972: 81 and 258), but see Ker’s dating to 1023–1035 (1957: no. 202). The *terminus post quem* is 1023, because the obits featuring in the Easter Table (item no. 16) up to 1023 were written as one block by the same hand (the main hand), thus presumably copied from a different, pre-existing source (Ker 1957: no. 202). For the date of the manuscript, see also Stokes (2014: 258). Further texts were added in the first half of the eleventh century (items nos. 40–42, 53–71, 77) and in the twelfth century (item no. 47). Subsequently, the manuscript probably ended up in a female environment, possibly Nunnaminster in Winchester (Günzel 1993: 3–4) and Sir Robert Cotton eventually acquired the manuscript in 1621.

6 The key to the cryptographic writing is given explicitly in London, British Library, Cotton Vitellius E.xviii, fol. 16v (Birch 1892: “Appendix”, item no. 4; Pulsiano 1998: 97–99). Pulsiano (1998: 99) also decodes Ælfwine’s signature in the last line of the cryptogram found on Cotton Vitellius E.xviii, fol. 16v: *Ælfuine me uurat. ræde ðu ðe cenne* ‘Ælfwine wrote me. Read you who might be able’. See also Scragg (2019).

7 Further evidence of Ælfwine’s ownership of the manuscript is given by other items, i.e. a miniature on D.xxvii, fol. 65v (item no. 45), depicting the Crucifixion, bearing an inscription containing a blessing for Ælfwine; a prayer (item no. 76.28) featuring Ælfwine himself as supplicant; and finally, the obits of six members of his family (his parents, one brother and three sisters) which were inserted in the Calendar (item no. 4) and the Easter table (item no. 16) (Günzel 1993: 13). Ælfwine’s own death date was later inserted in the Calendar and Easter Table (Günzel 1993: 101 and 110). On Ælfwine and Ælsinus, see also Gameson (2002: nos. 30, 45).

8 See also the very useful synopsis Günzel prints on pp. 10–11, where she assembles information on quires, folios, contents, scribes and rubrication. On the scribes, see also Scragg (2012: no. 222).

the main scribe of the *Liber vitae* of the New Minster (London, British Library, Stowe 944) as well as of a calendar and computus in Cambridge, Trinity College, R.15.32 (Ker 1957: no. 202; Günzel 1993: 8). Günzel claims that Ælfwine directed the compilation of the manuscript, but was not personally involved in the copying process. Conversely, Gameson (2002: 45) and Keynes (1996: 111–113) claim that Ælfwine and scribe B are probably the same person.⁹ The remaining scribes (C–L) are responsible for later additions, dating mainly to the first half of the eleventh century, with one (E) writing in the twelfth century.

The contents of the manuscript are listed as follows in Gneuss and Lapidge's catalogue (2014: 305):

lunaria; prognostics; liturgical calendar with necrology; computus material ('Winchester Computus'); Ælfric, *De temporibus anni**; alphabet with OE sentences*; The Passion according to St John (Euangelium Iohannis XVIII–XIX); devotions to the Holy Cross; Offices of the Trinity, the Holy Cross, the Virgin; private prayers; directions for private devotions*; note in cryptography; notes on the names of the Seven Sleepers, on the age of the Virgin*, the Ages of the World, the length of Christ's body, on the rainbow; *Somniale Danielis*; medical recipe*; rules of confraternity*; collectar; litany; Euangelium Iohannis I.1–14.

Three miniatures featuring in the manuscript (in the two volumes) have been placed in key positions within the framework of the *Prayerbook*, as noted by Ker (1957: no. 202), as if to separate different thematic sections: a representation of the Crucifixion (Günzel's item no. 45; D.xxvii, fol. 65v) precedes "Devotions to the Holy Cross" (item no. 46); a representation of the Trinity with Virgin and Child (the so-called 'Quinity': item no. 48; D.xxvii, fol. 75v) introduces an "Office of the Trinity" (item no. 49), an "Office of the Holy Cross" (item no. 50) and an "Office of the Blessed Virgin Mary" (item no. 51); finally, a representation of St Peter (item no. 72; D.xxvi, fol. 19v) introduces the collectar at the "Commune sanctorum" (item no. 73), which, in turn, consists, at the beginning, of "Capitula. Vigilia unius apostoli"

⁹ See also Pulsiano (1998: 97–100) and the PASE database <<http://pase.ac.uk/index.html>>. There is evidence of key role figures who were actively involved in the copying of manuscripts. One such character is, for example, Osmund, bishop of Salisbury, who, we are told by William of Malmesbury (*Gesta pontificum anglorum*, ii.83.11–12), did not disdain to personally copy and bind books: *Veruntamen succedente sibi Osmundo uiro probatissimo, aecclesia ad summum deducta, et cetera que competeabant adaucta. [...] Librorum copia conquisita, cum episcopus ipse nec scribere nec scriptos ligare fastidiret.* 'His successor Osmund, a most respectable man, completed the church, and made other appropriate additions. [...] A large store of books was acquired, the bishop not disdaining to copy and bind them himself' (Winterbottom 2007: 288–289).

(‘capitula and collects for the feast of an apostle’; item no. 73.1).¹⁰ They therefore show careful planning of the various sections and of the general architecture of the codex, and a strong connection between texts and images.

The miniatures are reminiscent of the Utrecht style, in that they appear as outline drawings, lightly shaded in four colours: blue, green and two shades of brown/red (Günzel 1993: 8–12; Ker 1957: no. 202).¹¹ The same four colours are used in the diagram on fol. 21v (see Figure 1) and also to mark capitals in some texts, which shows that they are all to be considered as an integral part of the general architectural plan of the manuscript (see Section 4.1).¹²

3 The Immediate Context of the Diagram: The Computistical Section of *Ælfwine’s Prayerbook*

The computistical section – broadly intended¹³ – appears at the very beginning of the compilation, in volume D.xxvii, on fols. 2r–56v, items nos. 1–42, although some other computistical texts are scattered in the volumes. It covers the first eight quires of the manuscripts. A complete, orderly list of the contents of this section can be extracted from Günzel’s edition:¹⁴

- lunarium for bloodletting (item no. 1; fol. 2r);
- text on the ides and the nones of the months (item no. 2; fol. 2v);
- table on solar regulars, concurrents, lunar regulars and epacts (item no. 3; fol. 2v);

10 “Full-page drawings precede each of the three principal liturgical texts (D.xxvi, fol. 19v, D.xxvii fols. 65v, 75v): each is placed on the verso of the second leaf of a single bifolium” (Ker 1957: 265). On the miniatures, see, i.a. Günzel (1993: 12–15); Gameson (1992: 208, 212 and 216); Karkov (2006: 97–98, 100, 102–103); Keynes (1996: 111–113). Günzel (1993: 12) also notes that “the Trinity, the Virgin and St. Peter are the spiritual patrons of New Minster”.

11 Günzel (1993: 12) considers them additions to the original manuscript.

12 As the miniatures, in style, are reminiscent of the drawings in Stowe 944, some scholars have attributed them to the same artist (Keynes 1996: 111, 113; Günzel 1993: 12), but this is a controversial issue. For an opposing view, see Karkov (2006: 97–98 with n. 9); see also Temple (1976: no. 77).

13 Although some of these texts – for example prognostics, alphabets, commonplace notes on figures and measurements, or texts concerning such phenomena of the natural world as tides or winds – are not strictly related to the calculation of Easter, they regularly accompany computistical texts in medieval computus miscellanies, and are therefore to be considered as an integral part of the computistical knowledge of the time.

14 Günzel does not actually print a list of items as such; so I think it is useful to print it here. Bold is mine, to mark texts relevant to this discussion.

- calendar (item no. 4; fols. 3r–8v);
- tables with the ages of the moon for lunations of 30 and 29 days (item no. 5; fols. 9r–9v);
- table with the age of the moon for the first day of a month (item no. 6; fol. 10r);
- verses for the limits of Quadragesima (item no. 7; fol. 10v);
- verses for the limits of Easter (item no. 8; fol. 11r);
- tables with the limits of Septuagesima, Quadragesima, Easter and Rogation (item no. 9; fol. 11v–12r);
- horologium (item no. 10; fol. 12v);
- text on the calculation of the feast limits (item no. 11; fol. 13r);
- text on the calculation of the epacts and the concurrents (item no. 12; fol. 13v);
- text on the four ember days (item no. 13; fol. 13v);
- cryptographic note on the names of the owner and main scribe of the manuscript (item no. 14; fol. 13v);
- note on the names of the Seven Sleepers (item no. 15; fol. 14r);
- Easter table (item no. 16; fols. 14v–21r);
- **incomplete diagram on the relation between the moon and the sea**¹⁵ (item no. 17; fol. 21v);
- list of critical days for bloodletting (item no. 18; fols. 22r–23r);
- note on Christ's threefold becoming of man (item no. 19; fol. 23r);
- text on the *saltus lunae* 'leap of the moon' (item no. 20; fol. 23r);
- text on the length of the day (item no. 21; fol. 23v);
- text on the calculation of the full moon of Easter (item no. 22; fol. 23v);
- text on the days on which the Easter lunation cannot begin (item no. 23; fol. 24r);
- text on the calculation of the Easter limit and the age of the moon on Easter Sunday (item no. 24; fol. 24r);
- text on the spring equinox (item no. 25; fol. 24r);
- text on the fixation of Easter Sunday (item no. 26; fols. 24r–24v);
- text on the leap year (item no. 27; fol. 24v);
- text on the solar and the lunar years, and on the number of tides in a year (item no. 28; fol. 24v);
- text on the change of concurrents, epacts, etc. (item no. 29; fol. 24v);
- text on the lengths of the seasons (item no. 30; fols. 24v–25r);
- text on the calculation of advent (item no. 31; fol. 25r);

¹⁵ The object of the present essay, as defined by Günzel (1993: 110): "Incomplete Diagram: The Relation between the Moon and the Sea".

- prognostics by Pseudo-Esdras (item no. 32; fols. 25r–25v);
- text on the division of the year [OE] (item no. 33; fol. 25v);
- prayer (item no. 34; fols. 26r–27r);
- general lunarium (item no. 35; fols. 27r–29v);
- *Ælfric's De temporibus anni* [OE] (item no. 36; fols. 30r–54r);
- text on indulgence of days (item no. 37; fol. 54v);
- text on the feast limits [OE] (item no. 38; fol. 54v);
- text on the calculation of the concurrents and the epacts [OE] (item no. 39; fol. 55r);
- [– alphabet with prognostics [OE] (item no. 40; fols. 55v–56v);]¹⁶
- [– text on the relation between the sea and the moon [OE] (item no. 41; fol. 56v);]
- [– text on the age of the Virgin [OE] (item no. 42; fol. 56v).]¹⁷

The diagram on fol. 21v is therefore preceded by a long Easter table running from fol. 14v through 21r. The table is laid out in such a way as to comprise facing pages as a continuous writing surface. It is made up of twelve columns, of which seven appear on the verso and five on the recto.¹⁸ The final part of the table appears on fols. 20v–21r, taking up, approximately, one third of each facing page (six lines of text on each page). The remainder of the page, both on fol. 20v and on fol. 21r, was left blank. The diagram under investigation occupies the centre of fol. 21v, extending for most of the page, with a diameter of 86 mm. A new quire (d) begins on the facing page (fol. 22r), with a list of ‘critical days’ for bloodletting (see Chardonnens 2007: 520–523; Günzel 1993: 110). The diagram does not seem to have any thematic relationship with any of these adjacent texts.¹⁹

The fact that the diagram appears within the computistical section is, however, not surprising, as diagrams actually often accompany Easter tables and computistical texts.

16 Items 40–42 were added slightly later by scribes C and D, and were not, therefore, part of the original computistical compilation. Here they are given in square parentheses. For scribal succession, see Section 2 above.

17 The Passion according to St John (John XVIII–XIX) begins on the following folio (item no. 43; fol. 57r), in a new quire (the ninth), and is followed by a prayer to the Cross (item no. 44; fol. 64v) and by the miniature on the Crucifixion (item no. 45; fol. 65v).

18 More computistical texts follow, up to fol. 56v.

19 The twelve columns contain: concurrents, year numbers, epacts, Easter limits, Dominical letters, the dates of Easter, the dates of Quadragesima, the total of weeks and days to be counted between Christmas and Quadragesima, indictions, the *cyclus lunaris*, the dates of Septuagesima and the age of the moon at Easter (Günzel 1993: 25). Günzel only prints the obits (item no. 16, pp. 109–110).

4 The Diagram on Fol. 21v

4.1 Structure of the Diagram

The diagram on fol. 21v is made up of five concentric circles – alternating blue, brown/red, blue, green and blue lines, from the innermost to the outermost circle – split into twelve sectors by twelve radiating blue straight lines, departing from the second, brown/red circle (see Figure 1). The names of the four headwinds – *Subsolanus*, *Auster*, *Fabonius* [sic], *Septemtrio* – have been inscribed in four of the twelve sections, in the band which is delimited by the third and fourth circles. Four blue crosses have been drawn at the top of each headwind sector. The other eight sectors in the band are all empty, as are all the other sectors in the diagram, and there is no indication of tides in the diagram, nor any further information added.

4.2 Earlier Interpretations

In the Appendix of his 1892 edition of the *Liber vitae*, Birch explicitly draws a parallel between this diagram, which he defines “a table of winds, unfinished”, and a *rota* featuring in the so-called ‘Byrhtferth’s glosses’ accompanying Bede’s *De temporum ratione*, as printed by Migne (1862) in *PL* 90 (see Figure 2):

A table of winds, unfinished, evidently an intended copy of Bede’s scheme in Migne’s Bede, vol. i, p. 423 (*Patrol. Cursus*, vol. 90). (Birch 1892: 276)

In her edition, Günzel, who considers the diagram as a proper, incomplete tidal *rota* (1993: 28, 110), makes reference to the same ‘pseudo-Byrhtferthian’ tidal diagram as the probable source of her item no. 17:

The relation between the moon and the sea is also discussed by Bede, *De Temporum Ratione* ch. 29 ‘De concordia maris et lunae’ and *De Natura Rerum* ch. 29 ‘De aestu Oceani’. Both books are accompanied by the so-called ‘Byrhtferth Glosses’ (*Bridferti Ramesiensis glossae*). Byrhtferth adds one and the same diagram as illustration to *D[e] T[emporum] R[atione]* ch. 17 ‘De lunae cursu per signa’ (*PL* 90, 385–86) and *DTR* ch. 29 ‘De concordia maris et lunae’ (*PL* 90, 423–24). This diagram is probably the source of no. 17 (incomplete). (Günzel 1993: 28)²⁰

²⁰ See Migne, *PL* 90 (1862: 385–386), ch. 17: “De lunae cursu per signa”, and (1862 : 423–424), ch. 29: “De concordia maris et lunae”. The same diagram appears, she notes, within a commentary to Bede’s *De natura rerum* by Abbo of Fleury, as printed by Migne at 259–260 (ch. 39, “De aestu Oceani”). Migne also prints the very same diagram at 277–278. Quite a lot has been written on the so-called ‘Byrhtferth’s glosses’. For an analytical summary, see Wallis (1999: xciv–xcv); see also Günzel (1993: 28 n. 43).

The parallel Birch and Günzel draw is probably partly based on the fact that extant tidal *rotae* often also contain information on the winds – see, for example, Paris, Bibliothèque nationale de France, Lat. 5543, fol. 135v, or London, British Library, Harley 3017, fol. 135r (see Figure 3). As an Anglo-Saxon parallel, Günzel mentions the diagram in London, British Library, Cotton Julius A.vi,²¹ fol. 15r (1993: 200, note to item no. 17), which, however, does not bear the names of the winds (see Figure 4). She describes the diagram printed by Migne in details, and compares it to the one in D.xxvii, fol. 21v (item no. 17) in the following terms:²²

Byrhtferth's diagram shows the revolution of the moon round the earth. The points of the compass are given by the names of the twelve winds. The 30 days of a lunation are arranged clockwise. The neap tides and the spring tides are marked a few days before the complete moon quarters on the 5th, 13th, 20th and 28th days of the lunation. No. 17 only gives the names of the four cardinal winds: *Auster* (south), *Favonius* (west), *Septemtrio* (north) and *Subsolanus* (east). There are four crosses which probably mark the spring tides and the neap tides, but they are not at the same places as the *malinas* and the *ledones* in Byrhtferth's diagram. (Günzel 1993: 28)

4.3 Standard Tidal *rotae* vs. the Diagram in D.xxvii

As Günzel's description shows, tidal *rotae* thus have indeed a more complex structure, aimed to accommodate information on the age of the moon. The basic type (e.g. Oxford, St John's College, 17,²³ fol. 8r) generally consists of three or four circular concentric bands divided into 30 sectors (sometimes 29). In the four-circle systems, two of the bands bear the words *Luna* and *Aqua*, respectively, throughout; another band indicates the moon's age with numbers from 1 to 30, whilst the remaining band is divided into four subsectors, bearing numbers from 1 to 7 and from 1 to 8 alternatively (see Figure 4). In three-circle *rotae*, the word *Luna* is abbreviated and appears before the number representing the moon's age (see Figure 3). A *T–O* map is often inserted in the inner circle, for orientation purposes.²⁴ Finally, the words *malina* and *ledo* are

21 S. xi in, prob. Canterbury Christ Church; prov. Durham. For ninth-century tidal *rotae*, see Jones (1943: 126, 365) and Hughes (2003: 1–24); Hughes's list is an updated version of Jones's one.

22 By "Byrhtferth's diagram", Günzel means the diagram from the so-called "Byrhtferth's glosses" printed by Migne in *PL* 90 and not the diagram in Oxford, St John's College, 17, fol. 7v and London, British Library, Harley 3667, fol. 8r. She explains that these glosses are not by Byrhtferth of Ramsey.

23 Gameson (1999, no. 794): "s. xii in (c. 1110), Thorney".

24 A *T–O* map takes the name from the words *Orbis terrarum* and is a specific type of map, often accompanying Isidore's works, that depicts the ecumene by use of a *T* inscribed in a circle (the *O*). Both letters represent waterways encircling and separating the three continents: Asia (to the top), Europe (lower left) and Africa (lower right).

added to the diagram.²⁵ These are generally placed around the outer edge of the diagram, often – but not always – enclosed in four additional small circles (see Figures 2–3), but they can also be placed around the inner circle (see Figure 4). None of these ‘characteristic’ features of tidal diagrams appears in D.xxvii, fol. 21v, which lacks not only the legends but also the structural elements described above.

It is true that the crosses here may have a similar function to the *malina* and *ledo* inscriptions, but they occupy different places in relation to their compass location, when compared to *malina* and *ledo* in the diagram printed in *PL* 90: in D.xxvii, the crosses clearly mark (clockwise) South, West, North, and East, as explicitly indicated by the names of the headwinds (see Figure 1), whilst, in what Günzel calls “Byrhtferth’s diagram” (see above, Section 4.2 and note 22), *malina* and *ledo* are marked above the South-East, South-West, North-West and North-East sectors, as indicated by the names of the winds and also by the *T–O* map inserted in the middle (see Figure 2). There are, however, some tidal diagrams where *malina* and *ledo* are placed above the cardinal points of the compass (as in London, British Library, Cotton Julius A.vi, fol. 15r, for example; Figure 4); so this element cannot in itself clarify the nature and function of the diagram. The crosses drawn in D.xxvii, however, are all the same, and would therefore not allow a distinction between *malina* and *ledo*.

Thus, there seems to be no reason to connect the diagram in D.xxvii, fol. 21v, to a tidal *rota*, especially considering that winds are not relevant for the calculation of the times of spring tide and neap tide, and are not always copied in tidal *rotae*. See, for example, once again, the tidal diagram in London, British Library, Cotton Julius A.vi, fol. 15r (Figure 4) or the one in Oxford, St John’s College, 17, fol. 8r, both having no winds.²⁶

Günzel is forced to define the diagram as “incomplete” (1993: 28 and 110) because it lacks all the fundamental parts of a tidal *rota*, both in terms of structure and content. As the only information we have in the diagram is the name of the four headwinds, the most reasonable assumption is that it is in fact a wind diagram (*rota ventorum*), as indicated by Birch and Henel, and the hypothesis of the diagram being a tidal *rota* must be discarded.

²⁵ The words *malina* and *ledo* indicate the times of the ‘spring tide’ and the ‘neap tide’ (i.e. the very high tide and the very low tide, respectively, occurring twice in each month, when the attraction forces of the sun and the moon are combined). On the concepts of *malina* and *ledo*, see also Wallis (1999: 306–312) and Teresi (2007: 352–353 n. 44).

²⁶ Even the immediate context of the diagram does not evoke tides or related topics. A brief note on the solar and lunar years and on the number of high tides and low tides in a year appears in the manuscript, but was copied on fol. 24v (item no. 28) and has therefore no spatial contiguity with the diagram. Furthermore, it was copied by a different scribe (B). The Old English text on the relation between the sea and the moon featuring on fol. 56v (item no. 41) is one of the early additions by scribe D.

This particular diagram, however, also differs in many respects from ‘standard’ *rotae ventorum*. It appears rather unusual as it is oriented to the South-East and only bears the names of the four headwinds, disregarding the remaining standard eight sidewinds. I intend to argue that, despite these apparent incongruities, not only is this diagram a *rota ventorum* in its own right, but that it is complete in the present state, bearing all the information it was originally meant to convey, and therefore far from being the only ‘incomplete’ text in this carefully planned miscellany. A brief description of standard wind *rotae* is, however, necessary to prove my point.

4.4 Standard Wind *rotae* vs. the Diagram in D.xxvii

Standard wind *rotae*²⁷ appearing in Anglo-Saxon or early Norman manuscripts generally feature twelve winds, following either Isidore’s list drawn from his *De natura rerum* or the one featuring in his *Etymologiae*. In the *Etymologiae* (XIII.xi.2–3), Isidore begins his list with the four headwinds, starting with the East wind, *Subsolanus*. He then completes the full list of twelve winds, naming the two subwinds flanking each headwind (see the table in this section for a schematic list):

Ventorum quattuor principales spiritus sunt. Quorum primus ab oriente **Subsolanus**, a meridie **Auster**, ab occidente **Favonius**, a **septentrione** eiusdem nominis ventus adspirat; habentes geminos hinc inde ventorum spiritus. Subsolanus a latere dextro **Vulturnum** habet, a laevo **Eurus**: Auster a dextris **Euroaustum**, a sinistris **Austroafricanum**: Favonius a parte dextra **Africanum**, a laeva **Corus**: porro Septentrio a dextris **Circium**, a sinistris **Aquilonem**. Hi duodecim venti mundi globum flatibus circumagunt. (Lindsay 1911: XIII.xi.2–3)

‘There are four principal gusts of winds. Of these the first, **Subsolanus**, blows from the East; from the South **Auster**; from the West **Favonius**; from the North the wind of the same name [i.e. **Septentrio**]. They all have twin gusts of winds on each side. Subsolanus has **Vulturnus** on the right side and **Eurus** on the left; Auster has **Euroaustum** on the right and **Austroafricanus** on the left; Favonius has **Africanus** on the right side and **Corus** on the left; finally, Septentrio has **Circius** on the right and **Aquilo** on the left. These twelve winds surround the world’s globe with their breezes’.²⁸

Isidore also provides the Greek names of some of the winds (XIII.xi.6–13).²⁹ In his *De natura rerum* (ch. xxxvii, “De nominibus uentorum”, 1–4), Isidore names all

²⁷ On winds and wind diagrams, see, among others, Obrist (1997: 33–84); Obrist (2004); Henel (1942: 104–106) and Teresi (2008: 427–446).

²⁸ Translations are mine unless otherwise specified. I wish to thank Christoph Hauf for improving my translations of some of the Latin passages cited.

²⁹ *Notus* (for Lat. *Auster*); *Libonotus* (for Lat. *Austroafricanus*); *Zephyrus* (for Lat. *Favonius*); *Argesten* (for Lat. *Corus*); *Boreas* (for Lat. *Aquilo*).

twelve winds systematically in Latin and Greek, starting this time with *Septentrio*, the North wind, and proceeding in triads, i.e. giving headwind and flanking subwinds. The description of the first triad will suffice as an example:

Ventorum primus cardinalis **Septentrio**, frigidus et niualis; flat rectus ab axe et facit arida frigora et siccas nubes; hic et **Aparctias. Circius**, qui et **Thrascias**; hic a dextris Septentrionis intonans facit niues et grandinum coagulationes. **Aquilo** uentus, qui et **Boreas** uocatur, ex alto flans, gelidus atque siccus, et sine pluuiis, qui non discutit nubes, sed stringit; unde et non inmerito diaboli formam induit, quia iniquitatis frigore gentilium corda constringit. (Fontaine 1960: 295)

‘The first cardinal wind is **Septentrio**, cold and snowy; it blows straight from the North Pole and brings dry cold and dry clouds; it is also called **Aparctias. Circius**, also named **Thrascias**, roaring to the right of Septentrio, brings snow and hail. The wind **Aquilo**, which is also called **Boreas**, blowing from on high, is cold and dry, and without rain; it does not chase away the clouds, but rather makes them thicker. Thus, and with good reason, it may appear as a devil, since it tightens the hearts of people with the cold of iniquity’.

The text then proceeds with the remaining three triads. The complete table of Latin and Greek names for headwinds and sidewinds, in this tradition, is therefore the following:

LATIN NAMES			GREEK NAMES	
Headwinds	Sidewinds		Headwinds	Sidewinds
Subsolanus	Vulturnus Eurus	EAST	Apeliotes	Caecias Eurus
Auster	Euroauster Austroafricus (<i>Etym.</i>) ³⁰	SOUTH	Notus	Euronotus ³¹ Libonotus
Favonius	Africus Corus	WEST	Zephyrus	Lips Argestes
Septentrio	Circius Aquilo	NORTH	Aparctias	Thrascias Boreas

³⁰ *Austroafricus* (Gr. *Libonotus*), the sidewind to the left of *Auster/Notus*, is wrongly called *Euronotus* in the *De natura rerum* (and in some of the texts/*rotae* drawing on this work). In the *Etymologies*, Isidore clearly explains that the names of the sidewinds to the right and left of *Auster* are given by a combination of the names of their two adjacent winds, so that *Eurus* + *Auster* > *Euroauster* (Gr. *Euronotus*) and *Auster* + *Africus* > *Austroafricus* (Gr. *Libonotus*): *Euroauster dictus quod ex una parte habeat Eurum, ex altera Austrum. Austroafricus, quod iunctus sit hinc et inde Austro et Africo. Ipse et Libonotus, quod sit ei Libs hinc et inde Notus* (XIII.xi.6–7) ‘Euroauster is called [this way] because it has Eurus on the one side and Austrum on the other; Austroafricus because it is adjacent on one side to Auster and to Africus on the other; Also Libonotus because it has Libs on one side and Notus on the other’.

³¹ See the previous note.

Drawing heavily on Isidore's *De natura rerum*, Bede gave his own description of the twelve winds in his *De natura rerum* (ch. xxvii, "Ordo Ventorum", 1–17), starting with *Septentrio* and proceeding with the same triadic format (Jones 1943: 218–219), and naming the same twelve winds.

Isidore's and Bede's texts were often accompanied by diagrams, especially wind *rotae*, with the winds arranged circularly around the earth. These diagrams, however, as already mentioned, also circulated in isolation, within computistical material.

Thus, drawing on this tradition, standard wind *rotae* not only show all twelve winds, but also tend to be oriented either to the East (i.e. with *Subsolanus* at the top) or to the North (i.e. with *Septentrio* at the top), on the basis of these very popular descriptions. Some examples, *inter alia*, can be found in London, British Library, Cotton Tiberius E.iv, fol. 30r and Oxford, St John's College, 17, fol. 40v (Figure 5). If the diagram in D.xxvii, fol. 21v were based on Isidore or Bede, therefore, it would presumably feature all twelve winds and would also be oriented to the East or to the North, like the other diagrams deriving from these sources that have come down to us. Our diagram, to the contrary, has only four winds (the headwinds) and the South-East at the top (see Figure 1).

The fact that our *rota* unusually only features four winds is presumably the reason why it has been deemed "unfinished" or "likely incomplete".³² However, there may be other explanations for this reduction in the number of winds. Henel's reference to this particular diagram, in his edition of Ælfric's *De temporibus anni*,³³ appears very relevant here, as the features of the *rota* under investigation seem indeed to point to Ælfric's *De temporibus anni*, which was copied in the same manuscript, on fols. 30r–54r (item no. 36 in Günzel's edition).

5 The Relationship between Ælfric's *De temporibus anni* and the Diagram in D.xxvii

The Ælfrician computistical text survives in eight manuscripts, with dates ranging from the end of the tenth to the second half of the twelfth century.³⁴ In D.xxvii,

³² See Birch's statement above (Section 4.2) and see also the British Library's website description at <http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Cotton_MS_Titus_D_XXVII>.

³³ "[A] table showing these four winds [is found] in MS. Titus D.xxvii, fol. 21v (cp. Birch, *Liber Vitae*, p. 276)" (Henel 1942: 104); see also Blake (2009: 127).

³⁴ See Cameron (1973: 87), item no. 1.9.4 "De temporibus anni"; Ker (1957: 518); Gneuss and Lapidge (2014: 888, s.v. Ælfric of Eynsham] *De temporibus anni*); Gameson (1999: 160, s.v. Ælfric of

Ælfric's treatise is found on fols. 30r–54r (quires 5, 6, 7 and partly 8, all copied by scribe A, i.e. Ælsinus), beginning under the heading “De primo die seculi, siue de equinoctio uernali”.³⁵

Drawing mostly on Bede's *De temporum ratione* – but partly also on *De temporibus* and *De natura rerum* –, Ælfric's treatise is a discussion of natural science, with chapters on computus, celestial bodies, astronomical cycles, the four elements, meteorology and other natural phenomena (fourteen chapters in total).³⁶ Chapter x – “De duodecim uentis” (“On the twelve winds”, Günzel's item no. 36.10; fols. 46v–48v) – enumerates the Latin names of the four headwinds³⁷ (only the Greek name *Zephirus* for *Fabonius* is given), describing them in the following terms:

Seo lyft ðonne heo astyred bið is wind. Se wind hæfð mislice naman on bocum. Ðanon ðe he blæwð, him bið nama gesett. Feower heafodwindas sind; se fyrmesta is easterne wind, **Subsolanus** gehaten, forðan ðe he blæwð fram ðære sunnan uppsprince 7 is swiðe gemetegod. Se oðer heafodwind is suðerne, **Auster** gehaten; se astyrað wolcnu 7 ligettu, 7 mislice cwyld blæwð geond þas eorðan. Se ðridda heafodwind hatte Zephirus on Greciscum gereorde, 7 on Ledenum **Fabonius**; se blæwð westan, 7 ðurh his blæd acuciað ealle eorðlice blæda 7 blowað, 7 se wind towyrpð 7 ðawað ælcne winter. Se feorða heafodwind hatte **Septemtrio**; se blæwð norðan ceald 7 snawlic, 7 wyrçð drie wolcnu.

‘When the air is stirred up, it becomes wind. The wind has various names in books. Its name is established according to the direction from which it blows. There are four principal winds; the first is the easterly wind, called **Subsolanus** because it blows from the direction of sunrise, and which is very moderate. The second principal wind is the southerly, called **Auster**. It propels clouds and lightning, and blows various plagues around this earth. The third principal wind is called *Zephirus* in the Greek language, and in Latin **Fabonius**. It blows from the west, and

Eynsham] *De temporibus anni*); Henel (1942: ix–xxxix); Blake (2009: 9–35). In addition to our manuscript, the Ælfrician computistical text is found in Cambridge, University Library, Gg.3.28; London, British Library, Cotton Tiberius B.v, vol. 1, fols. 2–73, 77–85 + Nero D.ii; Vatican City, Biblioteca Apostolica Vaticana, Reg. Lat. 1283, fol. 114; London, British Library, Cotton Vitellius C.viii, fols. 22–25; Cotton Tiberius A.iii, fols. 2–173; Cotton Caligula, A.xv, fols. 120–153; and Cambridge, Corpus Christi College, 367, pt. 2, fols. 1, 2, 7–10 (Blake 2009: 1–3). Five manuscripts contain the whole text or most of it, while three only contain selected sections or passages. See Table 1 in Blake's edition (2009: 10).

³⁵ As Ker (1957: no. 202) explains, the order of the various parts of the treatise is here different, and what is normally considered the beginning of the text in most editions is found here at the end: it begins at the bottom of fol. 50r, with the heading “De temporibus anni. I” – followed by the chapter on Creation on fol. 50v – and ends on fol. 54r.

³⁶ “De die”, “De primo die sæculi sive de equinoctio uernali”, “De nocte”, “De anno”, “De mundo”, “De equinoctiis”, “De bissexto”, “De saltu lune”, “De diuersis stellis”, “De duodecim uentis”, “De pluuiia”, “De grandine”, “De niue”, “De tonitru”. The title of the first chapter is an editorial emendation, as it is not found in any of the extant manuscripts.

³⁷ In D.xxvii they are copied on fols. 47v/6 to 48v/5.

through its force all earthly plants take life and flourish, and this wind casts out and thaws each winter. The fourth principal wind is called *Septemtrio*. It blows from the north, cold and snowy, and produces dry clouds'. (Blake 2009: 94–95)

Thus, Ælfric's brief section on the names of the winds only mentions the four headwinds (i.e. *Subsolanus*, *Auster*, *Fabonius* and *Septemtrio*) and highlights their characteristics. It is followed by a paragraph which explains the existence of the remaining eight sidewinds, but these are not named, apart from *Aquilo* (Greek *Boreas*). Ælfric claims that it would be *æðryt* 'tedious' and *menigfeald* 'complex' to speak about them, thereby suggesting that they are not important and do not need to be learned:

Das feower heafodwindas habbað betwux him on ymbhwyrfte oðre eahta windas, æfre betwux þam heafodwindum twegen windas. Ðæra naman 7 blawunge we mihton secgan gif hit ne ðuhte *æðryt* to awritenne. Is swa ðeah hwæðere an ðæra eahta winda, *Aquilo* gehaten, se blæwð norðan 7 eastan, healic 7 ceald 7 swiðe drie; se is gehaten oðrum naman *Boreas*, 7 ealne ðone cwyld þe se suðerna wind *Auster* acenð, ealne he todræfð 7 afligð. Us ðincð to *menigfeald* þæt we swiðor embe ðis sprecon.

'The four principal winds have between them in rotation eight other winds, always with two winds between the principal winds. Their names and characteristics we could describe if it did not seem **tedious** to write about. However, one of the eight winds is called *Aquilo*. It blows from the north-east, high, cold and very dry. It is called by another name, *Boreas*, and it completely disperses and drives away all the plague which the southern wind *Auster* produces. It seems to us too **complex** that we should speak further about this'. (Blake 2009: 94–95)

If we compare this information with the legends in the diagram on fol. 21v, we cannot but observe that the latter is a congruent and systematic representation of the Ælfrician text: the four headwinds that he thinks should be named and learned (*Subsolanus*, *Auster*, *Fabonius* and *Septemtrio*) are well represented; the crosses above the legends clearly stress their status as headwinds;³⁸ and finally only the Latin forms of their names are given.³⁹ What is more, the spelling of the legends in the diagram coincides with the spelling on fols. 47v–48v (e.g. *Fabonius* and *Septemtrio*).

The two texts appear therefore to be undoubtedly connected, all the more so if one takes into account the fact that the *De temporibus anni* in D.xxvii was copied immediately after the third quire, that is the one ending with the Easter table and

³⁸ For a parallel use of these crosses, see, for example, the wind diagram in Laon, Bibliothèque municipale, 422, fol. 5v.

³⁹ As noted above, Ælfric only gives the Greek names *Zephyrus* and *Boreas*.

the diagram under investigation (see above, Section 3). Günzel's scribal synopsis (1993: 10) shows that scribe A (Ælsinus) copied the first three quires, up to fol. 21 (items nos. 1–17, ending with the Easter table and the diagram), then proceeded with his copying work on quire five,⁴⁰ which – quite strikingly for the sake of this essay – begins with the *De temporibus anni* (fols. 30r–54r; item no. 36). The present distance, in the manuscript, between these two texts (the diagram and Ælfric's *De temporibus anni*; see the list in Section 3) must therefore be perused under a different light, since the texts appear contiguous in Ælsinus's copying process, with the diagram placed immediately between the Easter table and Ælfric's treatise.

It is rather hard, however, to assign the diagram in D.xxvii to scribe A (Ælsinus) with any degree of certainty,⁴¹ and it is even harder to ascertain if the diagram was drawn before the copying of the *De temporibus anni* or added later. It is tempting, though, to assume that, with the Easter table being concluded on fol. 21r, space was left on fol. 21v for additional material to be inserted, perhaps a 'suitable' item to connect the two sections thematically. And it is plausible that either Ælfwine (scribe B?), or, less likely, Ælsinus himself (i.e. scribe A), contrived the plan to fill the blank space on fol. 21v with the wind diagram conceptually 'excerpted' from the *De temporibus anni*.

An illustration of Ælfric's treatise would perfectly fit the late Anglo-Saxon England trend for diagrams illustrating computistical and natural science texts, like those featuring, for example, in the great computistical miscellanies revolving around Abbo of Fleury and Byrhtferth of Ramsey (e.g. Oxford, St John's College, 17).

Since no other Ælfrician copy of the *De temporibus anni* appears to be accompanied by a wind diagram,⁴² and as no other existing wind *rotae* share similar features (see above, Section 4.4), we may conclude that the diagram on fol. 21v was not copied from an existing model: more likely the diagram originated in this very manuscript and was meant by Ælfwine to illustrate the discussion on the winds in Ælfric's computistical treatise. This 'uniqueness' should not surprise, as this is the case also with the Crucifixion miniature. As Karkov (2006: 98) notes, this miniature "has no single identifiable source, and no exact parallels; in other words, it was designed specifically for its place and role in this one manuscript". The same, I believe, applies to the wind diagram on fol. 21v.

⁴⁰ Quire four was the work of scribe B (fols. 22r–29v; items nos. 18–35).

⁴¹ Günzel's prospectus on p. 7 leaves out item no. 17, but, as mentioned already, she assigns this item to Ælsinus (scribe A) in her scribal synopsis on p. 10. On the basis of my inspection of the manuscript, however, I would tend to ascribe the legends of the diagram to scribe B rather than scribe A.

⁴² Most of the copies of Ælfric's *De temporibus anni* appear in computistical clusters, which in some cases also contain maps or diagrams (as in London, British Library, Cotton Tiberius B.v), but the diagram under investigation does not appear in any other manuscript, to the best of my knowledge.

Images have a key role in this book, as pointed out by Karkov:

They also form a diagram of salvation for the individual soul, to map the reader's progress into the meaning and function of the book, to locate him physically and spiritually in time and space, and to relate this manuscript, its meaning, and its reader, to a series of other books and readers (or witnesses). (2006: 98)

Being part of this set of images in the manuscript, the diagram in D.xxvii also partakes of the same importance and function. Similar to the miniatures, the diagram also acts as a structural pillar in the economy of the manuscript: it connects, ideologically, the cosmological section of the miscellany with the devotional part, in a way that will be explored in Section 6.

6 The Role of the Cross in Ælfwine's Plan for the *Prayerbook*

A very important additional feature of this wind diagram is the symbolic representation of a Cross emerging from the way in which the diagram was drawn. The four sectors representing the headwinds and culminating with the tiny blue crosses can be seen as forming the four flaring arms of a bigger Cross, a symbolic reference to God, Christ, Salvation, the End of Time and God's creation, as well as God's power over the natural elements. This symbolic representation is by no means a unique feature of this diagram.⁴³ It is a rather common element of scientific and computational diagrams, as shown by Bianca Kühnel (2003) in her study on the *Maiestas Domini* in scientific diagrams and quincux structures. In the early Middle Ages, and especially in the Carolingian period and later, scientific diagrams and Christian art met in what Kühnel calls a "visual-exegetical method", a practice that bridged the gap between science and faith by depicting the relationship of God and Christian doctrine with the natural world (Kühnel 2003: 13–22). Among other things, Kühnel's study discusses the way in which a Cross emerges in the tidal *rotæ* found in Paris, Bibliothèque nationale de France, Lat. 5543, fol. 135v, and in London, British Library, Harley 3017, fol. 135r. These two diagrams also contain the names of the winds, as mentioned above (Section 4.3), but they only bear the names of the side-winds, leaving the headwinds sectors either blank (as in the case of Paris, Bibliothèque nationale de France, Lat. 5543, fol. 135v) or filled with colour (as in London,

⁴³ See, for example, the way in which the legends *malina* and *ledona* have been arranged in a cruciform way in London, British Library, Cotton Julius A.vi, fol. 15r (Figure 4).

British Library, Harley 3017, fol. 135r, which can be seen in Figure 3). The names of the headwinds are only given as additional information on the sidewinds (e.g. *Vulturnus qui et Calcias dexterior Subsolanus* ‘*Vulturnus*, also called *Calcias*, blowing at the right of *Subsolanus*’).⁴⁴ Kühnel notes how, as a consequence, in these two tidal *rotae* a Cross emerges from the interplay between written and empty space (the latter being either white or filled with colour).⁴⁵ This interplay between written and empty space can also be seen in the wind diagram in D.xxvii, where the Cross emerges from written space, on the basis of the peculiar features of the account on the winds in Ælfric's *De temporibus anni*. The four headwinds he mentions become the four flaring arms of the Cross; thus the paucity of information in Ælfric's account is transformed into added value: a symbol of the Cross and Salvation, and of God and cosmic harmony, bearing on the relationship between the Creator and his Creation, i.e. the natural world.

The central role played by the Cross in *Ælfwine's Prayerbook* has already been noted. As Keynes (1996: 112) states, “[o]ne striking feature of the texts which he entered in the book is the sense which they convey of a personal and particular devotion to the Holy Cross”. The most notable instance is the miniature illustrating the Crucifixion, on D.xxvii, fol. 65v. Ælfwine's own name appears in this miniature, in the inscription *Hec crux consignet Ælfwinum corpore mente, in qua suspendens traxit Deus omnia secum* ‘May this Cross, hanging upon which the Lord drew all things to himself, consecrate Ælfwine in body and in mind’ (Keynes 1996: 113). A prayer to the Cross precedes the miniature, on fol. 64v (item no. 44) and it is then followed by Devotions to the Holy Cross (item no. 46; fols. 66r–73v) and by the Office of the Holy Cross (item no. 50; fols. 80r–81v). Furthermore, in the so-called ‘Quinity’ (the miniature in D.xxvii, fol. 75v) God Father, the adult Jesus, the infant Jesus and the dove representing the Holy Ghost all have cruciform nimbuses,⁴⁶ and it is tempting to link these four cruciform nimbuses, appearing within the roundel surrounding the Quinity, to the four cross-headed winds in the wind *rota*.⁴⁷ It is certainly a fact that the headwinds in the diagram have been marked with tiny crosses, which, beside marking the headwinds status, might also have the function to signal the big iconic Cross given by the shape of the four-wind diagram, and

⁴⁴ At least in three cases out of four, as one of the headwinds (*Septentrio*) remains unmentioned.

⁴⁵ Speaking about the diagram in Harley 3017 (Figure 3), in particular, she highlights the fact that this interplay causes the emergence of two distinct Crosses: “the belt of the winds surrounding the earth comprises eight inscribed and four un-inscribed radial sections, suggesting an interplay between two crosses with flared arms” (Kühnel 2003: 70).

⁴⁶ The same applies to Christ in the Crucifixion miniature.

⁴⁷ In the Quinity, only four characters wear cruciform nimbuses. The Virgin wears a crown.

therefore point to God/Christ as source of the harmony of the universe, beginning and end of all things, to respond to Ælfwine's own conception and devotion.

7 Conclusions

Far from being an incomplete diagram of the relationship between the moon and the tides, the *rota* drawn on fol. 21v in D.xxvii should be interpreted as a complete diagram of the headwinds, as exposed in Ælfric's *De natura rerum*, ch. x "De duodecim uentis". It was probably added on a blank folio, at Ælfwine's desire, in order to link the strictly cosmological part of the *Prayerbook* to the devotional part, symbolically representing the Cross, and therefore the relationship between God and the natural world. It is an example of the so-called "visual-exegetical method" that was a feature of the early Middle Ages, and fits in perfectly with Ælfwine's devotional focus on the Cross and Salvation. The diagram thus not only bears a link to the text to which it refers in the manuscript, but, far more importantly, expresses a connection between God and his Creation.

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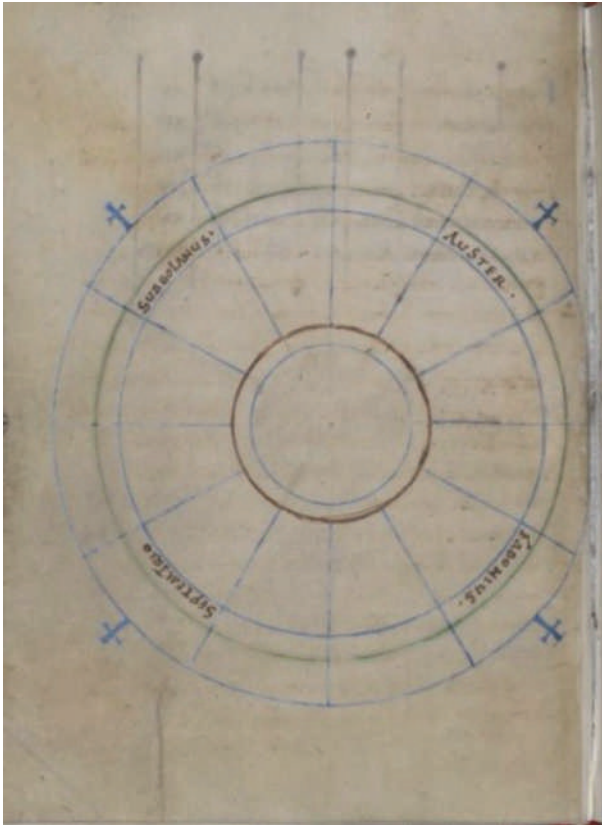
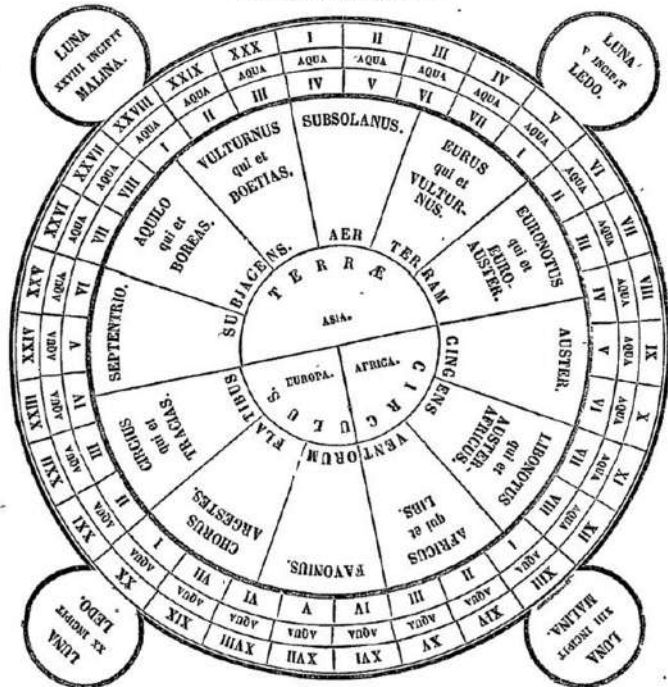


Figure 1: London, British Library, Cotton Titus D.xxvii, fol. 21v: Wind *rota*
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ortum omnemque ecesum ipse quoque emisso sul
 forvoris, quod Græci *ῥέμα* vocant, impetu littora late
 coteget, eodemque revocato detegat, ac dulces
 fluminum ocerus salis abunde commisceat simul
 et accumulet undis; nec mora pretereunte luna re-
 cedens et ipse, nativæ huiusmodi mensuræque
 relinquat, tanquam lune quibusdam aspirationibus
 sequinoctialis solstitia solito validius exstans. Per
 octonos autem annos, ad principia motus et paria
 incrementa, certissimo lunæ revocatur ambitu.
His temporibus Aquilonia tonente mittitur quam cum in

invitus protrahatur, et iterum ejusdem vi cessante
 in mensuram propriam refundatur. Sicut enim luna,
 juxta quod et supra docuimus, III punctorum spacio
 quotidie tardius oritur, tardius occidere quam pridie
 orta est vel occiderat solet, ita etiam maris æstus
 uterque, sive diurnus sit, et nocturnus, seu matutinus
 et vespertinus, ejusdem pene temporis intervallo
 GLOSSÆ ET SCHOLIÆ.

*Austro digressa propiore nisu vim suam exercet. Maris
 enim accessus atque recessus, malina etiam et ledon
 naturæ consequentia, etc. Hæc igitur glossa jam super-
 rius, in 15 c., est scripta, quia licet ibi satis convenit.
 Item de concordia maris et lunæ.*



Sicut luna per dies duodecim naturali cursu sui
 tarditate de Occidente in Orientem vespertina refundit,
 ita etiam æstus Oceani nunc vespertinus per
 dies quindecim fit matutinus, aut matutinus quoti-
 dianus detractus impedito, vespertinus assurgit.
 Et sicut luna quatuor punctorum spacio quotidie
 tardius oritur, tardius occidere quam pridie orta est
 vel occiderat, solet, ita etiam maris æstus sive diur-
 nus sit et vespertinus, seu matutinus et vespertinus,
 ejusdem pene temporis intervallo, tardius quotidie
 venire, tardius redire non desinit. Quæstio, quare
 luna in quinquaginta novem diebus, quinquages
 novies non circuit terræ orbem, quæ sic solvitur.
 Duos cursus facit luna: unum cum firmamento, quod
 volvitur circa terram in viginti quatuor horis, alterum

contra firmamentum. Firmamentum enim in quin-
 quaginta novem diebus, quinquages novies terræ
 circuit orbem; luna autem quia unum cursum non
 cessat facere contra firmamentum cursus (sic); unde fit
 ut in duobus suis mensibus a quinquaginta novem
 diebus non amplius quam quinquies septies terræ
 ambiat orbem.

JOAN. NOV. SCHOLIÆ.—*Maximo autem præ omnibus
 admiranda natura Oceani. Sunt et horum pleraque
 ex Plinii cap. 97 lib. II. Distinguit autem Beda æstum
 maris in duas species, quarum una malinam vocat
 a majore luna, corruptis vocibus, tunc enim accidit;
 aliam ledonem seu ledonam (nam utrumque in-
 venio apud Bedam) quasi *læsa* vocant. Verum hæc
 vocabula quibus non legi.*

Figure 2: Migne, PL 90 (1862: 423–424): Tidal rota with names of the winds

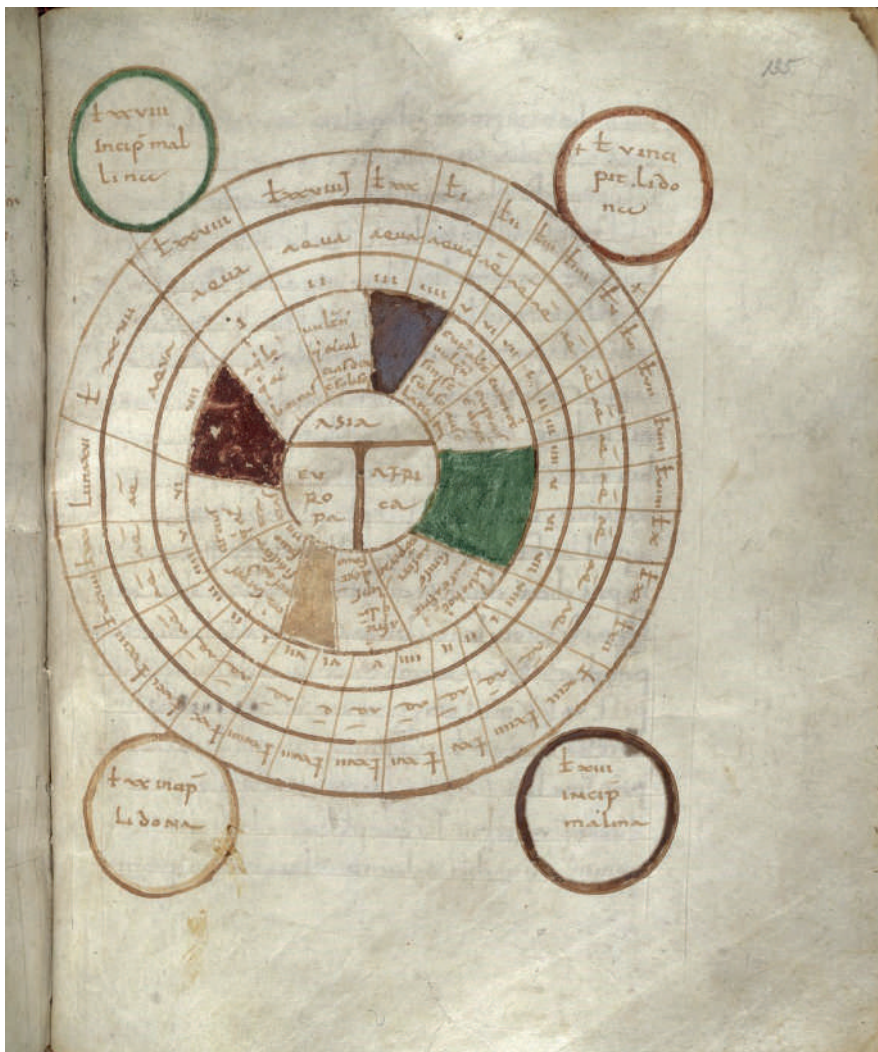


Figure 3: London, British Library, Harley 3017, fol. 135r: Tidal rota with winds and Cross
 © British Library Board

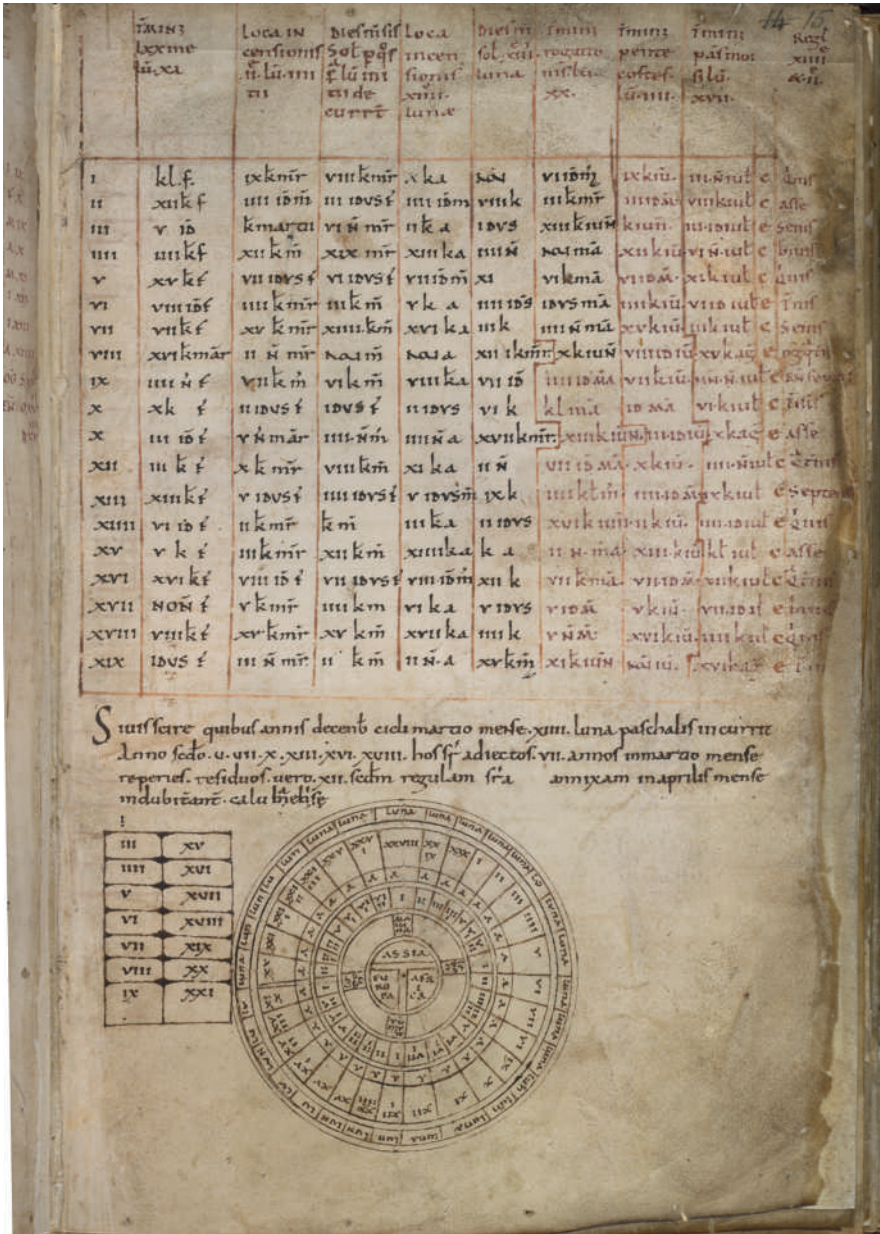


Figure 4: London, British Library, Cotton Julius A. vi, fol. 15: Tidal rota with no winds © British Library Board

