The Sense of Time in Anglo-Saxon England

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Abstract

Long before the invention of the mechanical clock, the monastic computus offered a model of time that was visible, durable, portable and objectifiable. The development of 'temporal literacy' among the Anglo-Saxons involved not only the measurement of time but also the ways in which the technologies used to measure and record time — from sundials and church bells to calendars and chronicles — worked to create and reorder cultural capital, and add new scope and range to the life of the imagination. Techniques of time measurement are deeply implicated in historical consciousness and the assertion of identity; this paper proposes some avenues of exploration for this topic among the Anglo-Saxons.

Keywords: computus; calendars; time; Bede; temporality

One of the more impressive aspects of *Beowulf* is its rich sense of time. Characters in the poem are constantly aware of past generations of ancestors and heroes. There is a kind of prehistory in the poem, the time in which the dragon's treasure was buried and ancient weapons were made, and an even more ancient past of which the characters are unaware, the beginnings of biblical history in which Cain killed Abel and was cursed by God. Various future events that take place outside the poem are hinted at; in ten breathtaking lines (ll. 2200–9) the poem races forward fifty years and suddenly Beowulf is an old man, and the narrative of the events of the years in between is fragmented, haunting, and only gradually revealed. The interweaving of these temporal layers gives the poem a deeply tragic sense of time, where the past is restless, demanding, pressing against the present — buried feelings and buried things are dug up, and ultimately bring to shattering ruin whatever one has managed to build up during brief moments of peace and strength.

But for all its obsession with time and memory, there is little indication of exactly *when* the action is taking place — all we know is that it happens in *gēardagum*, 'days of yore', the heroic equivalent of 'once upon a time'. Indications of great lengths of time in *Beowulf* are usually good round numbers. Grendel preys on the Danes

twelf wintra tīd, 'twelve winters' time' (l. 147);[1] Beowulf rules for *fīftig wintra*, 'fifty winters' (l. 2209), as does Hrothgar, although he calls it *hund missēra*, 'a hundred half-years' (l. 1769). Grendel's mother holds her cave under the mere for the same 'hundred half-years' (l. 1498),[2] a coincidence that suggests that the number simply means 'a long time'. Smaller units of time are noted more precisely; Beowulf is under water in Grendel's mere until *nōn dæges*, or the ninth hour, the middle of the afternoon (l. 1600); the dragon's preferred hour is *ūht*, the hour before dawn, the time of monastic vigils[3] (the dragon is called *eald ūhtsceaða* in l. 2271 and *ealdes ūhtflogan* in l. 2760). This conjunction of a vague roundness in larger units of time and a precision in smaller ones is found in many narratives, and presumably occurs as much for dramatic reasons as for historical ones — it serves the story to have us vividly imagine the time of day but only hazily picture the larger spans of years. But rather than speculate on its causes, I mention this difference in the texture of the temporal language of *Beowulf* as one instance of how the Anglo-Saxons talked about the passage of time. In this essay I would like to consider a few other texts, less poetic but I think not less important, that measure, describe or record time, and ask what we might learn from them about how the Anglo-Saxons imagined themselves in the temporal world, the large sweep of history, as well as the small repetitions of daily life.

Much has been written about how the Anglo-Saxons measured time, but relatively little about why, or in what circumstances. When did it seem important to note the year or the month, the day or the hour? What vocabulary was used to describe the passage of time in communities without calendars or timepieces? And more broadly, what relationship exists between a society's practices of measuring and recording time and the ways in which time is described or perceived?[4] In his intelligent and entertaining book *Revolution in Time*, David Landes confidently asserts that 'The clock did not create an interest in time measurement; the interest in time measurement led to the invention of the clock',[5] but the complex relationship of imagination and practice is not always reducible to a simple chain of cause and effect. It is often said, for example, that the modern world is ruled by the clock and the calendar, and a mechanical idea that time can be parcelled into neatly identical micro-packages, whether the billable minutes of the attorney or

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[1] Quotations from *Beowulf* are taken from Fr. Klaeber, *Beowulf and the Fight at Finnsburg*, 3rd edn (Boston: D.C. Heath and Company, 1950) and are noted by line in the text. Except where stated, translations throughout are my own.

[2] *Sōna þæt onfunde sē ðe flōda begong / heorogīfre behēold hund missēra, / grim ond grædig . . .* 'At once the one who had held the expanse of water for a hundred half-years, eager for battle, grim and greedy, perceived that . . . ', ll. 1497–9.

[3] *Uhtsang* is the common name of the monastic office of *vigilia* in Old English ecclesiastical works.

[4] One of the best discussions of this fundamental question is Barbara Adam, *Time and Social Theory* (Cambridge: Polity Press, 1990).

[5] David S. Landes, *Revolution in Time: Clocks and the Making of the Modern World* (Cambridge, MA, and London: The Belknap Press of Harvard University Press, 1983), 58.

the nanoseconds of the physicist.[6] This sense of time would seem to be insepara-
ble from our devices for measuring it — the ubiquitous watches, timers, schedules
and appointment books that seem to control our lives — yet complaints about the
tyranny of mechanical time are far older than these devices. Aulus Gellius quotes a
poem in *Noctes Atticae* that he attributes to Plautus, which laments:

> ut illum di perdant, primus qui horas repperit,
> quique adeo primus statuit hic solarium!
> qui mihi comminuit misero articulatim diem.
> nam me puero uenter erat solarium
> multo omnium istorum optimum et uerissimum:
> ubi is te monebat, esses, nisi cum nihil erat.
> nunc etiam quod est, non estur, nisi soli libet;
> itaque adeo iam oppletum oppidum est solariis,
> maior pars populi aridi reptant fame.[7]

Like writing, the act of reckoning time seems to generate an immediate nostalgia
for its own absence.

But even if the connections between our techniques of time measurement and
our perception of time are not so easily untangled, it can certainly be said that our
practices of timekeeping lend support not only to our laments over the dizzying
and dehumanizing pace of modernity but also to the underlying assumption that
time is a thing that exists apart from us, abstract, objective and standardized —
one hour being much like another, one minute being precisely measurable whether
in New York, Manchester, Beijing or on the surface of the moon. Our idea that
time consists of objective and identical units contributes, among other things, to
our sense that it is a thing that can be exchanged, particularly for money. We earn
an hourly wage, we 'spend time' — even 'quality time' — with our loved ones. We
estimate that some more efficient method of doing something 'saves time' for other
activities, or conclude that a boring lecture is a 'waste of time'. Spending, saving,
wasting — metaphorically speaking, time is indeed money. Such language exposes

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[6] See Gerhard Dohrn-van Rossum, *Die Geschichte der Stunde: Uhren und moderne Zeitordnungen*
(Munich: Carl Hanser, 1992), available in English as *History of the Hour: Clocks and Modern
Temporal Orders*, translated by Thomas Dunlap (Chicago: University of Chicago Press, 1996). See
also A.J. Turner, 'The Origins of Modern Time', in *Of Time and Measurement: Studies in the History of
Horology and Fine Technology* (Aldershot, Hampshire, and Brookfield, VT: Variorum, 1993), 18–24.
[7] 'The gods confound the man who first found out / How to distinguish hours! Confound him, too,
/ Who in this place set up a sun-dial / To cut and hack my days so wretchedly / Into small portions!
When I was a boy, / My belly was my only sun-dial, one more sure, / Truer, and more exact than any
of them. / This dial told me when 'twas proper time / To go to dinner, when I had aught to eat; / But
nowadays, why even when I have, / I can't fall to unless the sun gives leave. / The town's so full of
these confounded dials / The greatest part of the inhabitants, / Shrunk up with hunger, crawl along
the streets': *Noctes Atticae* 3.3.5; translated by John C. Rolfe in *The Attic Nights of Aulus Gellius*, Vol. 1,
Loeb Classical Library (Cambridge, MA: Harvard University Press, 1927), 247. Also cited in Landes,
Revolution in Time, 15–16.

the assumption that time is uniform, quantifiable and fungible, and this assumption underwrites and is underwritten by the techniques and devices we use to measure and record time. The same is surely true historically: the ways the Anglo-Saxons talked about time, and the things they were able to articulate about both large- and small-scale passages of time, were intimately connected to the methods they used for recording it, and the uses to which they put these methods. The traces of one may be discerned in the other, and by inference and extrapolation we may be able to understand, to some degree, the ways in which the Anglo-Saxon sense of time differed from our own.

Nearly twenty years ago Donald Wilcox charted what he calls 'The rise and fall of absolute time' from, roughly, Descartes to Einstein, and described the varieties of 'relative time' used by ancient and medieval writers. His work offers a usefully broad distinction with which to begin.[8] 'For historians before Newton', he writes, 'the time frame did not include a group of events; a group of events contained a time frame.'[9] Moreover, if time is relative it may also be multiform. In a series of seminal articles Jacques Le Goff explored various senses of time in the Middle Ages — merchant's time, ecclesiastical time, rural and urban time, and so on.[10] Guided by Le Goff's observation that different social groups have had different ways of reckoning, recording and presumably experiencing the passage of time, we ought to speak not of a single 'Anglo-Saxon sense of time' but of various conventions of marking time employed by different groups at different periods, and consider the intersections of these various ways as well as the kinds of discourses of temporality to which each might give rise.

One example of this interrelation of the discourses of temporality and the practices of timekeeping, and one of the most striking differences between medieval and modern senses of time, is the relation of time to the body. While we all understand that time is in us as much as we are in time — our physiology is imprinted with the earth's daily and monthly cycles — I suspect that very few of us actually measure time by whether we are sleepy or alert, fertile or infertile; nor are we usually aware, except in extraordinary circumstances like a transatlantic flight, how parochial and geographically rooted our bodily sense of time is. Throughout the ancient and medieval world, however, time was emphatically connected to one's physical situation in a particular place. Temporality depended on corporality — an hour in Rome or Athens was not the same as an hour in Egypt or Northumbria.

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[8] Donald J. Wilcox, *The Measure of Times Past: Pre-Newtonian Chronologies and the Rhetoric of Relative Time* (Chicago: University of Chicago Press, 1987). See Chapter 2, 'The Rise and Fall of Absolute Time', 16–50.

[9] Ibid. 9.

[10] See, for example, Jacques Le Goff, 'Au Moyen Âge: temps de l'Église et temps du marchand', *Annales ESC*, 15:3 (1960), 417–33, and 'Le temps du travail dans la "crise" du XIVe siècle: du temps médiéval au temps moderne', *Le Moyen Âge*, 69 (1963), 597–613; both available in English in Jacques Le Goff, *Time, Work, & Culture in the Middle Ages*, translated by Arthur Goldhammer (Chicago and London: University of Chicago Press, 1980), 29–42, 43–52.

This was not just a question of the needs of manual labour, working from sunrise to sundown and planting in due season, nor even of Augustine's philosophical observation that when we measure time we are not measuring passing things but our mind's responses to these things;[11] it is inherent in the measurement of time itself, by observation of the positions of the sun and stars.[12]

Calculating hours of the night by the stars, counting days of the month by the moon and noting the seasons by marking the sun's place on the horizon all required a clear sense of one's place on earth. Ancient megaliths like the circles at Stonehenge are great theatres in which the geography of time is dramatized, but to use even a simple sundial or track the constellations in the night sky one must know where one is and in which direction one is facing. The classical theory of the four humours asserts that the stars, the seasons and the calendar had a direct effect on one's health.[13] The diagrams found in manuscripts of computus expressing the syzygy of the *mundus-annus-homo* are a compact expression of this relationship.[14] Bede's *De temporum ratione* Chapter 35 explains this homology between the seasons, the elements and the hydraulics of the body at greater length:

> A quo *temperamento* uidetur *tempor*ibus inditum nomen; uel certe quia quadam suae similitudine qualitatis ad inuicem contemperata uoluuntur, tempora recte uocantur. Hiems enim, utpote longius sole remoto, frigidus est et humidus; uer, illo super terras redeunte, humidum et calidum; aestas, illo superferuente, calida et sicca; autumnus, illo ad inferiora decidente, siccus et frigidus. . . . quibus aeque qualitatibus disparibus quidem per se sed alterutra ad inuicem societate connexis, ipsa quoque mundi elementa constat esse distincta. Terra namque sicca et frigida, aqua frigida et humida, aer humidus et calidus, ignis est calidus et siccus; ideoque haec autumno, illa hiemi, iste ueri, ille comparatur aestati. Sed et homo ipse, qui a sapientibus microcosmos, id est minor mundus, appellatur, hisdem per omnia qualitatibus habet temperatum corpus, imitantibus nimirum singulis eius quibus constat humoribus, modum temporum quibus maxime pollet. Sanguis siquidem, qui uere crescit, humidus et calidus; cholera rubea, quae

aestate, calida et sicca; cholera nigra, quae autumno, sicca et frigida; phlegmata, quae hieme, frigida sunt et humida.[15]

The body is intimately implicated in the measurement and perception of time; time and the body were imagined as being made of the same stuff, ebbing and flowing according to similar cycles. This is only one way in which the practices of time-keeping — observational, local, physical — helped support a particular discourse of temporality that influenced geography, cosmology, medicine and the regulation of daily life.

The inevitable centre of gravity in any discussion of time among the Anglo-Saxons must be the works of Bede, who produced highly articulate accounts of his own sense of time both as a computist and a historian. In the second chapter of his *De temporum ratione*, Bede distinguishes between different ways of measuring time based on nature (such as the cycle of the year), custom (such as the division of the year into thirty-day months) or authority (either human, such as the Roman institution of a fifteen-year cycle of indictions, or divine, such as the observance of a weekly sabbath). The year is an obvious natural cycle, and as far as I know all cultures have had ways of marking the recurrence of important solar or lunar events within the year.[16] But Bede and other medieval writers were well aware that the divisions of time that appear to mark the regular rhythms of the moon or the sun are only approximations of their natural counterparts; nor was there any easy way to establish congruity between the lunar month and the solar year.[17] Time may arise from nature, created by God *quando sideribus caelo inditis praecepit ut sint*

[15] 'The seasons [*tempora*] take their name from this temperateness; or else they are rightly called *tempora* because they turn one into the other, being tempered one to another by some qualitative likeness. For winter is cold and wet, inasmuch as the Sun is quite far off; spring, when [the Sun] comes back above the Earth, is wet and warm; summer, when it waxes very hot, is warm and dry; autumn, when it falls to the lower regions, dry and cold. . . . It is also said that the very elements of the universe are distinguished by these divergent qualities, and that they are knit into a company with each other, but each to each. For earth is dry and cold, water cold and wet, air wet and warm, fire warm and dry, and therefore the first is likened to autumn, the next to winter, the next to spring, and the last to summer. And man himself, who is called "microcosm" by the wise, that is, "a smaller universe", has his body tempered in every respect by these same qualities; indeed each of its con-stituent humours imitates the manner of the season in which it prevails. For blood, which increases in the spring, is moist and warm; red bile, which [increases in] the summer, is hot and dry; black bile, which [increases in] the autumn, is dry and cold; and phlegmatic humours, which [increase in] the winter, are cold and moist': *Bedae Venerabilis Opera*, Part 6: *Opera didascalica 2*, ed. C.W. Jones, Corpus Christianorum Series Latina 123B (Turnhout: Brepols, 1977), 391–2, cited here as *De tem-porum ratione* (hereafter *DTR*); translated by Faith Wallis, *Bede: The Reckoning of Time* (Liverpool: Liverpool University Press, 1999), 100–1.
[16] See Martin P. Nilsson, *Primitive Time-Reckoning: A Study in the Origins and First Development of the Art of Counting Time among the Primitive and Early Culture Peoples* (Lund: C.W.K. Gleerup, 1920). On pre-conversion Anglo-Saxon practice see Kenneth Harrison, *The Framework of Anglo-Saxon History to A.D. 900* (Cambridge: Cambridge University Press, 1976), 1–14.
[17] See Joyce Hill, 'Coping with Conflict: Lunar and Solar Cycles in the Liturgical Calendars', in *Time and Eternity: The Medieval Discourse*, eds Gerhard Jaritz and Gerson Moreno-Riaño (Turnhout: Brepols, 2003), 99–108, for some strategies used by homiliarists for dealing with these incongruities.

in signa et tempora et dies et annos,[18] but our ways of measuring and describing it are human conventions. In the same work Bede describes the Hebrew, Egyptian, Roman, Greek and English ways of marking the months.[19] He notes not only their different names and starting points but also their various incompatibilities and imprecisions and, just as important, their spiritual implications: he ends his account of the names of the English months, which indelibly reflect their origins in pagan customs, with the prayer *Gratias tibi, bone Iesu, qui nos ab his uanis auertens tibi sacrificia laudis offerre donasti*.[20]

The alternation of day and night is an even more obvious natural cycle, but the ways by which we divide the course of the day into parts are human inventions. Bede notes two different ways of dividing the hours: the Roman division into twelve hours of daylight and twelve of darkness (in which case summer daylight hours are longer than winter daylight hours); or the 'equinoctial' method, in which the hours are equal but the number of hours given to daylight and darkness varies by season.[21] The former, he states, is the 'popular' method and the latter the scientific one — it is not clear, however, how Bede could have measured equinoctial hours since sundials designed to do this were not common in Europe until the fifteenth century;[22] presumably he is depending on his sources here. Byrhtferth and Ælfric, following Bede, both note the different meanings of the word *dæg* — *vulgariter* it means the period from sunrise to sundown; *naturaliter* it means the twenty-four-hour period from one sunrise to another.[23] Temporal perception changes when one goes from observing time to measuring it. As soon as we subject our observation

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[18] 'when He commanded that the stars which He had set in the heavens should be the signs of seasons, days and years': *DTR*, Chapter 2, ll. 29–30, quoting Genesis 1: 14.

[19] Ibid. Chapters 11–15.

[20] Ibid. Chapter 15, ll. 50–2; translated by Wallis, *Bede: The Reckoning of Time*, 54: 'Good Jesu, thanks be to thee, who hast turned us away from these vanities and given us [grace] to offer to thee the sacrifice of praise.'

[21] Bede, *DTR*, Chapter 3. In Chapter 5 he notes that a day properly has twenty-four hours; in Chapter 24, discussing a method for calculating the length of moonlight during the month, he appears to accept the practice of assigning twelve (unequal) hours to the day and twelve to the night.

[22] See Allan A. Mills, 'Seasonal-Hour Sundials', *Antiquarian Horology*, 19:2 (1990), 147–70. Both the Benedictine *Rule* and the *Regularis Concordia* assume that the monastic community would follow the unequal-hour system, but some Anglo-Saxon calendars make note of the varying number of hours of day and night in each month. An example in English is Cambridge, Corpus Christi College 422 (s. xi med., Winchester or Sherborne; Gneuss 111): *IANUARIUS . . . HABET DIES . XXXI . LUNA . [XXX]* Ðes monoð hæfð an . 7 xxx . daga . . . *NOX HORARUM . XVI . DIES UERO . VII* . Seo niht hæfð . xvi . tida 7 se dæg vii. The calendar is printed in Francis Wormald, *English Kalendars before A.D. 1100*, Henry Bradshaw Society 72 (London: Harrison and Sons, 1934), 184–95.

[23] Both derive ultimately from Bede, *DTR*, Chapter 5. See *Byrhtferth's Enchiridion*, eds Baker and Lapidge, 2.3.12–17 (pp. 104–5), and *Ælfric's De temporibus anni*, ed. Heinrich Henel, Early English Text Society 213 (London: Oxford University Press, 1942), 1.24 (p. 10): *We hatað ænne dæg fram sunnan upgange oð æfen. ac swa ðeah on bocum is geteald to anum dæge fram ðære sunnan upgange oð þæt heo eft becume þær heo ær uppstah. on ðam fæce sind getealde feower 7 twentig tida* ('We call one day from the Sun's rising until evening. But yet in books a day is reckoned from the Sun's rising until it comes again to where it had risen. In that space are counted twenty-four hours').

to description and measurement, 'natural' time has an element of convention in it: irregular and fluid intervals become regular and fixed, recurring cycles become sequences, common words acquire uncommon meanings, and measurement tends to take on the quality of an abstraction, a thing apart from the things it measures.

The seasonal course of the year may be the limit of the natural cycles whose recurrence we routinely notice in everyday life; any system for counting the years themselves must be based on some fixed point or memorable event, whether personal, familial, historical or political. Most familiar to us is the system of reckoning from the fixed point of the supposed date of the birth of Christ, the *Anno Domini* system made popular by Bede's *Ecclesiastical History*,[24] but this was just one of several methods available to the Anglo-Saxons for indicating the year in which something occurred. Different methods were used, often simultaneously, and each may be said to have its own implications for the way one imagines time.[25] One of the most common alternatives was to use the number of years since a ruler, pope, bishop, or abbot came to power, so-called 'regnal-year dating'.[26] Noting the date of an event by the year of a king's reign is not only a natural mnemonic, it is a way of asserting the king's right to control time, his place in history, his command of the power of the chancery and the production of records. It is no less a demonstration of secular power over time than the interpolation of new months to honour an emperor, or the imposition of a new calendar that counts the current year as 'One'.

The most common occasion for the use of the regnal-year system was in the dating formulae of early charters, documents in which the power of the king to define time is brought together with his power to bestow rights and dispose of property.[27] Regnal-year dating was common until the tenth century on the Continent.[28] Anglo-Saxon charters show a wider variety of methods for marking the date, ranging in rough order of commonality from the combination of indiction and *Anno Domini*, which is found precociously early in comparison to Continental

[24] See Georges Declercq, *Anno Domini: The Origins of the Christian Era* (Turnhout: Brepols, 2000). Daniel P. McCarthy, 'The Emergence of *Anno Domini*', in *Time and Eternity*, eds Jaritz and Moreno-Riaño, 31–53, re-examines the use of this system before Bede; McCarthy attributes its invention to Eusebius rather than Dionysius Exiguus.

[25] A useful introduction and bibliography can be found in R. Dean Ware, 'Medieval Chronology: Theory and Practice', in *Medieval Studies: An Introduction*, ed. James M. Powell, 2nd edn (Syracuse, NY: Syracuse University Press, 1992), 252–77, and Faith Wallis, 'Chronology and Systems of Dating', in *Medieval Latin: An Introduction and Bibliographical Guide*, eds F.A.C. Mantello and A.G. Rigg (Washington, DC: Catholic University of America Press, 1996), 383–7. On year dating see Deborah Mauskopf Deliyannis, 'Year-Dates in the Early Middle Ages', in *Time in the Medieval World*, eds Chris Humphreys and W.M. Ormrod (Woodbridge: York Medieval Press, 2001), 5–22.

[26] See Heinrich Fichtenau, '"Politische" Datierungen des frühen Mittelalters', in *Intitulatio*, ed. Herwig Wolfram, 2 vols (Vienna: H. Böhlau, 1973), ii. 453–548.

[27] A useful introduction to Anglo-Saxon charters can be found in Susan Kelly, 'Anglo-Saxon Lay Society and the Written Word', in *The Uses of Literacy in Early Medieval Europe*, ed. Rosamond McKitterick (Cambridge: Cambridge University Press, 1990), 36–62.

[28] See Deliyannis, 'Year-Dates in the Early Middle Ages'.

charters, to the regnal year plus indiction, to a precise dating by day, month and year — although dates more precise than a year are uncommon in earlier charters — to a complete lack of date.[29] A charter is, as Susan Kelly has noted, 'essentially an ecclesiastical document',[30] and the early preference for *Anno Domini* dating in Anglo-Saxon charters reflects this ecclesiastical influence, but we may also infer from the variety of systems used in charters that fixing a date was not a simple or automatic act but rather a challenging and potentially complicated one. The beginning of a king's reign was not always a clearly marked event on a single day; in the case of Æthelred 'the Unready', for example, more than a year passed between his accession in March of 978 and his coronation in May of 979.[31] The year *Anno Domini* was not as clear-cut as one might expect either; there was considerable debate over whether the year began on 25 December, 1 January, 25 March or on some other date.[32] One might also have to choose a system for noting the day: the Roman system of Ides, Nones and Kalends; the ecclesiastical cycle of feast days; or a forward count from the first of the month. The very fact that there were such choices to be made suggests a different conception of time from our own. Each of these choices creates a point of reference, a temporal order that reflects an ideology; fixing a date meant fixing one's place in history, an act charged with political and spiritual implications.

The practice of regnal-year dating encourages certain kinds of temporal discourse and precludes others. This can best be seen in its literary analogue, the royal genealogy that traces the descent of a ruler back through generations to the founder of the kingdom. A genealogy fixes a relative chronology without necessarily placing the lineage in an absolute temporal framework; in its recitation of names and commemoration of ancestry, genealogy ultimately serves as a framework for narrative. The genealogy that opens the Parker manuscript of the *Anglo-Saxon Chronicle* is a good example of how a system that marks time by remembering a chain of ancestors has been made to fit, somewhat awkwardly, into a system (ultimately derived from monastic annals) that counts time from a fixed reference point:

[29] See Kenneth Harrison, 'The *Annus Domini* in Some Early Charters', *Journal of the Society of Archivists*, 4:7 (1973), 551–7. On charters generally see F.M. Stenton, *The Latin Charters of the Anglo-Saxon Period* (Oxford: Clarendon Press, 1955); *Anglo-Saxon Charters*, ed. A.J. Robertson (Cambridge: The University Press, 1956); P.H. Sawyer, *Anglo-Saxon Charters: An Annotated List and Bibliography* (London: Royal Historical Society, 1968); and more recently Susan D. Thompson, *Anglo-Saxon Royal Diplomas: A Palaeography*, Publications of the Manchester Centre for Anglo-Saxon Studies 6 (Woodbridge: The Boydell Press, 2006).

[30] Kelly, 'Anglo-Saxon Lay Society and the Written Word', 43.

[31] Simon Keynes, *The Diplomas of King Æthelred 'the Unready', 978–1016: A Study in their Use as Historical Evidence* (Cambridge: Cambridge University Press, 1980), 233.

[32] For debate over the beginning of the year see Reginald L. Poole, 'The Beginning of the Year in the Middle Ages', *Proceedings of the British Academy*, 10 (1921–23), 113–37; Kenneth Harrison, 'The Beginning of the Year in England, *c*.500–900', *Anglo-Saxon England*, 2 (1973), 51–70; M.R. Godden, 'New Year's Day in Late Anglo-Saxon England', *Notes & Queries*, NS 39:2 (1992), 148–50. Written calendars always begin on 1 January, even though the liturgical year begins in Advent.

ÞY GEARE ÞE WÆS AGAN FRAM CRISTES ACENnesse .cccc. wintra ⁊ .xciiii. uuintra, þa Cerdic ⁊ Cynric his sunu cuom up æt Cerdicesoran mid .v. scipum; ⁊ se Cerdic wæs Elesing, Elesa Esling, Esla Gewising, Giwis Wiging, Wig Fre- awining, Freawine Friþugaring, Friþugar Bronding, Brond Bęldæging, Bęldæg Wodening. Ond þæs ymb .vi. gear þæs þe hie up cuomon geeodon Westseaxna rice, ⁊ þæt uuærun þa ærestan cyningas þe Westseaxna lond on Wealum geeo- don; ⁊ he hæfde þæt rice .xvi. gear, ⁊ þa he gefor, þa feng his sunu Cynric to þam rice ⁊ heold .xvii. winter. Þa he gefor, þa feng Ceol to þam rice ⁊ heold .vi. gear. Þa he gefor, þa feng Ceolwulf to his broþur, ⁊ he ricsode .xvii. gear, ⁊ hiera cyn gęþ to Cerdice. Þa feng Cynegils Ceolwulfes broþur sunu to rice ⁊ ricsode .xxxi. wintra, ⁊ he onfeng ærest fulwihte Wesseaxna cyninga, ⁊ þa feng Cen- walh to ⁊ heold .xxxi. wintra, ⁊ se Cenwalh wæs Cynegilses sunu; ⁊ þa heold Seaxburg his cuen an gear þæt rice æfter him. Þa feng Æscwine to rice, þæs cyn gęþ to Cerdice, ⁊ heold .ii. gear. Þa feng Centwine to Wesseaxna rice Cynegils- ing ⁊ ricsode .vii. gear. Þa feng Ceadwalla to þam rice, þæs cyn gęþ to Cerdice, ⁊ heold .iii. gear. Ða feng Ine to Seaxna rice, þęs cyn gęþ to Ceardice, ⁊ heold .xxxvii. wintra. Þa feng Eþelheard to, þæs cyn gęþ to Ceardice, ⁊ heold .xiiii. winter. Þa feng Cuþred to, þæs cyn gęþ to Cerdice, ⁊ heold .xvii. gear. Þa feng Sigebryht to, þæs cyn gęþ to Cerdice, ⁊ heold an gear. Þa feng Cynewulf to rice, þæs cyn gęþ to Ceardice, ⁊ heold .xxxi. wintra. Þa feng Beorhtric to rice, þæs cyn gęþ to Cerdice, ⁊ heold .xvi. gear. Þa feng Ecgbryht to þam rice ⁊ heold .xxxvii. wintra ⁊ .vii. monaþ, ⁊ þa feng Eþelwulf his sunu to ⁊ heold nigonteoðe healf gear. Se Eþelwulf wæs Ecgbryhting, Ecgbryht Ealhmunding, Ealhmund Eafing, Eafa Eopping, Eoppa Ingilding, Ingild Cenreding, ⁊ Ine Cenreding ⁊ Cuþburg Cenreding ⁊ Cuenburg Cenreding, Cenred Ceolwalding, Ceolwald Cuþwulf- ing, Cuþwulf Cuþwining, Cuþwine Celming, Celm Cynricing, Cynric Cerdicing. Ond þa feng Eþelbald his sunu to rice ⁊ heold .v. gear. Þa feng Eþelbryht his broþur to ⁊ heold .v. gear. Þa feng Eþered hiera broþur to rice ⁊ heold .v. gear. Þa feng Ęlfred hiera broþur to rice, ⁊ þa was agan his ielde .xxiii. wintra ⁊ .ccc. ⁊ .xcvi. wintra þæs þe his cyn ærest Westseaxna lond on Wealum geeodon.[33]

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[33] *The Anglo-Saxon Chronicle: A Collaborative Edition*, Vol. 3: *MS A*, ed. Janet M. Bately (Cambridge: D.S. Brewer, 1986), 1–2. The text appears under the proper year in other versions and as a sepa- rate document. See David N. Dumville, 'The West Saxon Genealogical Regnal List: Manuscripts and Texts', *Anglia*, 104 (1986), 1–32, and 'The West Saxon Genealogical Regnal List and the Chronology of Early Wessex', *Peritia*, 4 (1985), 21–66. The translation is from *The Anglo-Saxon Chronicles*, ed. Michael Swanton (London: Phoenix Press, 2002), 2, 4: 'In the year when 494 years had passed since Christ's birth, Cerdic and Cynric his son landed at Cerdic's Shore with 5 ships. And that Cerdic was Elesa's offspring, Elesa Esla's offspring, Esla Gewis' offspring, Gewis Wig's offspring, Wig Freawine's offspring, Freawine Frithugar's offspring, Frithugar Brand's offspring, Brand Bældreg's offspring, Bældreg Woden's offspring. And 6 years after they landed, they conquered the West Saxons' kingdom; and these were the first kings who conquered the West Saxons' land from the Britons. And he held the kingdom 16 years, and then when he departed his son Cynric succeeded to the kingdom and held it 17 years. Then when he departed Ceol succeeded to the kingdom and held it 6 years. Then when he departed Ceolwulf his brother succeeded and he ruled 17 years; and their ancestry goes back to Cerdic. Then Cynegils, Ceolwulf's brother's son, succeeded to the kingdom and ruled 31 years, and he was the first of the West Saxons' kings to receive baptism. Then Cenwalh succeeded and held it 31 years; and that Cenwalh was Cynegils' son. And then his queen, Seaxburg, held the kingdom

This lengthy list of names also suggests a problem inherent in forcing genealogical reckoning into a fixed or absolute system: even with repeated cross-referencing of relationships, the difficulty of remembering, copying and counting the generations made error inevitable.[34] Genealogy, however, serves other purposes than measuring years: it is a way of establishing royal legitimacy and building cultural identity, a shorthand for heroic history. As David Dumville has noted, 'Genealogy allowed the ruling dynasties to present the past (and, by implication, the future) in terms of their own history.'[35] It can be shaped to make a moral point. Bede's *Historia ecclesiastica* 3.1 notes that the two successors of the Northumbrian King Edwin, Osric and Eanfrid, were so unfortunate that *cunctis placuit regum tempora computantibus, ut ablata de medio regum perfidorum memoria, idem annus sequentis regis, id est, Osualdi, uiri Deo dilecti, regno adsignaretur* ('all those calculating the reigns of kings have agreed to expunge the memory of these apostate kings and to assign this year to the reign of their successor King Oswald, a man beloved of God').

Finally, time counted in regnal years provides a relative chronology of memory without being implicated in a concept of 'temporality': just as a method of writing may lead to, but does not necessarily guarantee, a surrounding culture of literacy that subsumes other forms of communication — the pre-Christian use of runes, one could argue, is an example of a system of writing not grounded in a culture of literacy — so a system for remembering notable events need not imply a culture of temporality founded on an abstract or objective notion of time that is regarded as separate from, and prior to, the lived experience of days and seasons.

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one year after him. Then Æscwine, whose ancestry goes back to Cerdic, succeeded to the kingdom and held it 2 years. Then Centwine, Cynegils' offspring, succeeded to the West Saxons' kingdom and ruled 7 years. Then Cædwalla, whose ancestry goes back to Cerdic, succeeded to the kingdom and held it 3 years. Then Ine, whose ancestry goes back to Cerdic, succeeded to the West Saxons' kingdom and held it 37 years. Then Æthelheard, whose ancestry goes back to Cerdic, succeeded and held it 14 years. Then Cuthred, whose ancestry goes back to Cerdic, succeeded and held it 17 years. Then Sigeberht, whose ancestry goes back to Cerdic, succeeded and held it one year. Then Cynewulf, whose ancestry goes back to Cerdic, succeeded and held it 31 years. Then Beorhtric, whose ancestry goes back to Cerdic, succeeded and held it 16 years. Then Egbert succeeded to the kingdom and held it 37 years and 7 months; and then his son Æthelwulf succeeded and held it eighteen and a half years. That Æthelwulf was Egbert's offspring, Egbert Ealhmund's offspring, Ealhmund Eafa's offspring, Eafa Eoppa's offspring, Eoppa Ingeld's offspring, Ingeld Cenred's offspring, and Ine Cenred's offspring, and Cuthburg Cenred's offspring and Cwenburg Cenred's offspring, Cenred Ceolwald's offspring, Ceolwald Cuthwulf's offspring, Cuthwulf Cuthwine's offspring, Cuthwine Ceawlin's offspring, Ceawlin Cynric's offspring, Cynric Cerdic's offspring. And then Æthelbald his son succeeded to the kingdom and held it 5 years. Then his brother Æthelberht succeeded and held it 5 years. Then their brother Æthelred succeeded and held it 5 years. Then their brother Alfred succeeded to the kingdom; and he was then 23 years old; and it was 300 and 96 years since his ancestors had first conquered the West Saxons' land from the Britons.'

[34] The genealogy states that there are 396 years from Cerdic's conquest of the West Saxons in 500 to the accession of Alfred, but the years given (16 +17 + 6 + 17 + 31 + 31 + 1 + 2 + 7 + 3 + 37 + 14 + 17 + 1 + 31 + 16 + 37 and 7 months + 18 and 6 months + 5 + 5 + 5) add up to only 318 years and 1 month.

[35] David N. Dumville, 'Kingship, Genealogies and Regnal Lists', in *Early Medieval Kingship*, eds P.H. Sawyer and I.N. Wood (Leeds: School of History, University of Leeds, 1977), 72–104, here at 83.

Political time is local and personal; a king's reign is most memorable and mean-ingful within his kingdom and during his lifetime. Problems arise with the passage of time, as the king's reign recedes in memory, or with geographical expansion and the circulation and collation of documents using different sets of regnal years. The complexities to which this could lead can be seen in the formula used by Theodore to record the decrees of the Synod of Hatfield in 679:

> In nomine Domini nostri Iesu Christi Saluatoris. Imperantibus dominis piissi-mis nostris Ecgfrido rege Humbronensium, anno decimo regni eius sub die XV kalendas Octobres indictione octaua, et Aedilredo rege Mercinensium, anno sexto regni eius, et Alduulfo rege Estranglorum, anno septimodecimo regni eius, et Hlothario rege Cantuariorum, regni eius anno septimo.[36]

More important, political time is discontinuous and inherently fragmented; it starts over again for each new king. But in fact few methods of marking years in the early Middle Ages, even those which did not use a variable political situation as a temporal reference point, were continuous. The system of specifying years by a fifteen-year cycle of indictions, for example, taken over by the papacy from late Roman notarial practice and commonly used in Anglo-Saxon charters alongside the *Anno Domini*, noted the place of a year in the current indiction cycle but did not number the cycles themselves, so that an event taking place 'in the fifth year of the indiction' needed another reference point to anchor it to a particular time.[37] Lack of continuity or fixed reference was apparently not perceived as a problem to the users of such systems; charters and decrees were not produced as documents for historians but as gestures of power or symbols of property rights, souvenirs of relationships whose warrant lay not in the document itself but in the scene of its creation and ratification. But relative and cyclical systems for counting years provide no framework for discussing the distant past nor, more importantly, for imagining the future; regnal years are really useful only for marking a lifespan, or at best two. Using regnal years allows one to recollect events in time but not to talk about time itself — the system offers a chronology without temporality.

Historians such as Eusebius, Jerome, Orosius, Gregory of Tours or Bede, who were interested in surveying longer units of time and larger series of events, needed a system for counting years that transcended local polities and the cyclical recurrence of the indiction. Each of these writers came up with a different sys-tem, partly because their sources did so and partly because there was, until well

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[36] 'In the name of the Lord Jesus Christ our Saviour, and in the reign of our most religious lords, namely Ecgfrith, king of the Northumbrians, in the tenth year of his reign — on the day of the XVth kalends of October in the eighth indiction — in the sixth year of the reign of Æthelred, king of the Mercians: in the seventeenth year of the reign of Ealdwulf, king of the East Angles; and in the sev-enth year of the reign of Hlothhere, king of Kent': Bede, *Historia ecclesiastica* 4.17, translation slightly adapted from *Bede's Ecclesiastical History of the English People*, eds Bertram Colgrave and R.A.B. Mynors (Oxford: Clarendon Press, 1969), 385.

[37] Simon Keynes (*The Diplomas of King Æthelred*, 232) points out that indictions were not always cal-culated correctly, and were sometimes 'supplied merely as a chronological conceit'.

after Bede, no widespread agreement on a method of large-scale reckoning, no 'concept of a single time embracing all human history'.[38] Eventually, of course, the method of counting years from the *Anno Domini* became standard in the West, but even Bede, who is generally credited with its popularity, did not use it exclusively. His *Historia ecclesiastica*, for example, uses *Anno Domini* dating but often supplies other points of reference such as the reign of an emperor or king, or the founding of Rome; in Book 1 the year *Anno Domini* is often used only to indicate the accession of a Roman emperor, with subsequent events being dated by the years of that emperor's reign. Bede's practice, particularly his recourse to different systems within the same text, suggests not only the difficulty of collating diverse sources against a single standard but also the apparent difficulty of determining what an appropriate standard might be. Like the habit of noting the indiction alongside the *Anno Domini* in charters when strictly speaking the *Anno Domini* renders the indiction cycle superfluous, Bede's work shows the durability of different practices of timekeeping, and thus the persistence of potentially conflicting discourses of temporality among the Anglo-Saxons. In his *Chronica maiora* at the end of *De temporum ratione*,[39] Bede takes as his reference point the even more universal *annus mundi*, the beginning of the world,[40] and counts forward by biblical lifespans linked one to another in consecutive order, in what is essentially a gigantic version of the narrative and genealogical method of reckoning.

Ordering the past, bringing the diverse chronologies of the ancients under one temporal regime, was the project both of universal historians like Jerome and national historians like Bede. Counting the future, on the other hand, was the special problem of the computus and those concerned with calculating the proper date of Easter. Easter, being tied to the date of Passover, is by convention celebrated on the first Sunday after the first full moon after the vernal equinox, and the liturgical custom of Lent requires that it be calculated in advance, not simply observed as it occurs; to find the date of Easter one must be able to co-ordinate and predict the conjunction of uneven lunar, solar and weekly cycles. The complex system of charts, tables, texts and diagrams devised to temper these uneven and incommensurable cycles into a usable system is arguably the most fruitful collective scientific endeavour of the early Middle Ages. As a number of scholars have noted,[41] the computus is not really a text by a named author, although it was occasionally presented as such, but rather a collection of texts from various

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[38] Wilcox, *The Measure of Times Past*, 128.

[39] Bede, *Chronica maiora*, in *Bedae Venerabilis Opera*, Part 6, ed. Jones, 461–535; translated by Wallis, *Bede: The Reckoning of Time*, 157–237.

[40] Calculating the *annus mundi* from biblical chronology is itself no easy task. The Vulgate does not agree with the Septuagint, and both contain discrepancies within themselves that make a simple calculation impossible. Bede's *annus mundi* (3952 BC) is derived from the Vulgate (Harrison, *The Framework of Anglo-Saxon History*, 54) and differs from that of Gregory of Tours's *Historia Francorum*, Victorius of Aquitaine's *Cursus Paschalis* and Eusebius's *History*, as well as from most later estimates.

[41] See, for example, *Byrhtferth's Enchiridion*, eds Baker and Lapidge, xl.

sources, some excerpted from longer works, others brief mnemonic verses or instructional texts, others essentially captions to accompany tables and diagrams, all arranged, expanded and abridged according to the available materials and their compilers' abilities. A full history of the development of the computus has yet to be written.[42] For the present study, however, it is notable that the temporal discourse of the computus was expressed primarily in mathematical and visual terms, not in narratives;[43] computus manuscripts represented time textually and spatially by means of tables, *rotae* and lists.[44]

The ability to calculate future dates, or even the power to consult a chart containing this information, made possible an entirely new perspective on the nature of time. Time could be imagined not just through the memory of famous persons and great events but through image and number alone. The power of this knowledge led Isidore of Seville to exclaim, echoing Cassiodorus, *Tolle numerum in rebus omnibus, et omnia pereunt. Adime saeculo conputum, et cuncta ignorantia caeca conplectitur.*[45] Bede attached a 532-year Great Paschal table to his *De temporum ratione* listing the dates of Easter for the years 532 to 1063. He was aware of the implications of his Paschal table not only for imagining the future but also for remembering the past. Introducing his table, he says that:

> Quatenus legentes quique non solum praesentem uel futurum prospicere, sed et praeteritum omnem paschalis statum temporis inenarrabili possent intuitu

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[42] A useful introduction to this complex subject is found in *Byrhtferth's Enchiridion*, eds Baker and Lapidge, xl–lx. Other important introductions to computus are *Bedae Opera de temporibus*, ed. Charles W. Jones (Cambridge, MA: Medieval Academy of America, 1943), 75–113; Alfred Cordoliani, 'Les traités de comput du haut Moyen Âge (526–1003)', *Archivum latinitatis medii aevi*, 17 (1942), 51–72, and 'Contribution à la littérature du comput ecclésiastique au Moyen Âge', *Studi medievali*, 3rd ser. 1:1 (1960), 107–37; 2:1 (1961), 169–208. See also the introduction to Wallis, *Bede: The Reckoning of Time* and the works cited in the 'Bibliographic Note', 430–1, as well as her 'The Church, the World and the Time: Prolegomena to a History of the Medieval *Computus*', in *Normes et pouvoir à la fin du Moyen Âge. Actes du colloque 'La recherche en études médiévales au Québec et en Ontario', 16–17 mai 1989 — Montréal*, ed. Marie-Claude Déprez-Masson (Montreal: Éditions CERES, 1989), 15–29.

[43] On the illustrations in scientific manuscripts of the earlier Middle Ages see John E. Murdoch, *Album of Science: Antiquity and the Middle Ages* (New York: Scribner, 1984).

[44] Easter tables generally give the Golden number and lunar epact (both represent the place of the year in the nineteen-year cycle), the concurrent and Dominical letter (representing which day of the week falls on which day of each month) and often the place of the year in the fifteen-year indiction cycle. They often contain peculiar marks against a particular year, although the meaning of these is not always clear. Henry Marriott Bannister, 'Signs in Kalendarial Tables', in *Mélanges offert à M. Émile Chatelain*, ed. E. Dennery (Paris: Champion, 1910; repr. Geneva: Slatkine, 1976), 141–9, assumes these show the date the manuscript was written, but palaeographical and other evidence often contradicts his findings. See Rebecca Rushforth, *An Atlas of Saints in Anglo-Saxon Calendars*, ASNC Guides, Texts, and Studies 6 (Cambridge: Department of Anglo-Saxon, Norse, and Celtic, University of Cambridge, 2002), 9–10.

[45] 'Take number away, and everything falls into ruin. Remove computus from the world, and blind ignorance will envelop everything': Isidore, *Etymologiae*, ed. W.M. Lindsay (Oxford: Clarendon Press, 1911), 3.4.

respicere, atque ad dilucidationem priscae lectionis annos omnes, qui aliquando in quaestionem uenerant, quando uel quales fuerint, euidentius agnoscat.[46]

The Paschal table is a kind of time machine that allows one to survey the past and future, a powerfully concrete way to imagine time stretching forwards and backwards in an orderly series, a numbered progression of years that could be predicted and counted, and gradually, as is evident in many manuscripts, filled with memorabilia.[47]

What is important above all about this model of time, even beyond its regularity, is that the memorabilia could be added later: the framework came first. The computus allowed time to be *counted* by equal years, even though it might be remembered by extraordinary events. Time could be thought to exist separate from the events that occur in it; temporality could be imagined as prior to chronology. The Paschal table presented a model of time freed from the limits of individual experience or local perspective, standing apart from and above events in order to bring them under a single chronological regime. It provides something like a visual prologue to the modern concept of objective or absolute temporality, an image of long spans of time unspooling across the page in a regular sequence, numerical and cyclical, from the past into the future.

More concretely, the temporal system of the computus made possible the kind of historiography that located a long series of events precisely in a chain of years and a calendar of days, and recorded irregular events against a regular and fixed series of numerical dates — although as the *Anglo-Saxon Chronicle* suggests, the imposition of one type of temporality on another was not always a smooth process. And generally speaking, the precise accounting of years to which we are accustomed when we think seriously about the past seems to have been of little interest outside the Easter computus and universal or national historical narratives like Bede's *Historia ecclesiastica*. Eddius Stephanus's life of Bishop Wilfrid, written probably within a decade of Wilfrid's death in 709, gives no external references to a date or era at all.[48] The anonymous author of the *Historia abbatum*[49] carefully notes the date and weekday of Ceofrith's death in Langres, Burgundy (Friday 25 September), as well as the time of day, and gives an elaborate reckoning of his age, but specifies the year only by the recurring cycle of indictions:

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[46] 'Thus whoever reads them can, with unerring gaze, not only look forward to the present and future, but can also look back at each and every date of Easter in the past; and in order to clarify an ancient text, he can clearly identify all the years, since it sometimes is doubtful when and of what sort they were': *DTR*, Chapter 65, ll. 24–9; translated by Wallis, *Bede: The Reckoning of Time*, 156.

[47] On monastic annals and historiography see Reginald L. Poole, *Chronicles and Annals: A Brief Outline of their Origin and Growth* (Oxford: Clarendon Press, 1926).

[48] *The Life of Bishop Wilfrid by Eddius Stephanus*, ed. Bertram Colgrave (Cambridge: The University Press, 1927). This fact is noted in Harrison, *The Framework of Anglo-Saxon History*, 50.

[49] *Venerabilis Baedae Historiam ecclesiasticam gentis Anglorum, Historiam abbatum, Epistolam ad Ecgberctum, una cum Historia abbatum auctore anonymo*, ed. Charles Plummer, 2 vols (Oxford: Clarendon Press, 1896), i. 388–404.

> Peruenit autem Lingonas Burgundiorum ciuitatem die septimo kalendarum Octobrium, sexta sabbati . . . Erat enim septuaginta et IIII annorum, presbyterii gradu functus annis quadraginta VII, abbatis locum per se regens annis XXXV. . . . Peruenit autem Lingonas Ceolfridus circa horam diei tertiam, septimo kal. Octob. ut diximus, incipiente indictione XV. . . . Contigit autem ut ipso die, quo uenerat, circa horam X migraret ad Dominum.[50]

When Bede incorporates these details into his own *Historia abbatum*, however, he substitutes for the indiction the year *Anno Domini* (716), placing the event within a fixed temporal framework:

> Perueniens namque Lingonas circa horam diei tertiam, decima ipsius diei hora migrauit ad Dominum . . . Obiit autem septimo kalendarum Octobrium die, anno ab incarnatione Domini septingentesimo sextodecimo, feria sexta, post horam nonam.[51]

But Bede's practice is exceptional, more characteristic of historiography than hagiography. Most lives of holy men and women might name the Roman emperor reigning at the time of a saint's martyrdom, but seldom the year in which the martyrdom occurred. Yet each life is carefully fixed in its appropriate date on the calendar. The saints are part of yearly, cyclical time, not linear, historical time.

Just as the practice of celebrating Easter on a date determined by the irregular congruence of solar and lunar time required the creation of a precise system of long-span time reckoning, the liturgical year and the monastic hours required that days and months be noted in a similarly precise, regular and predictable manner.[52] The structured course of daily, weekly and yearly prayer, infinitely varied by season and celebration but deeply repetitive in its recurring details, seems to have instilled an unprecedented temporal awareness in the life of monks, and is an essential part of the spiritual discipline that shaped the monastic self; the ideal of a *regula* was first and foremost a subordination of the individual will to a rigorously detailed schedule.

In order to celebrate the ecclesiastical feasts throughout the year, not only the great feasts of the temporale such as Lent and Easter but also the celebrations of

[50] Ibid. i. 400, 401, 402; cited in Harrison, *The Framework of Anglo-Saxon History*, 42. 'He arrived in Langres, a city of the Burgundians, on the seventh Kalends of October, the sixth day of the week . . . He was then seventy-four years old, having been a priest forty-seven years, ruling as abbot thirty-five years. . . . Ceolfrith came to Langres around the third hour of the day, on the seventh Kalends of October as we have said, the beginning of the fifteenth indiction. . . . It happened that on the very same day he arrived, around the tenth hour he journeyed to God.'

[51] *Venerabilis Baedae Historiam ecclesiasticam*, ed. Plummer, i. 385, 386: 'arriving in Langres around the third hour of the day, his soul journeyed to God around the tenth hour of the same day . . . He died on the seventh Kalends of October, in the seven hundred and sixteenth year from the incarnation of our Lord, on the sixth day of the week, just after the ninth hour.'

[52] Jacques Biarne, 'Le temps du moine d'après les premières règles monastiques d'Occident (IVe–VIe siècles)', in *Le temps chrétien de la fin de l'Antiquité au Moyen Âge, IIIe–XIIIe siècles*, ed. Jean-Marie Leroux, Colloques internationaux du CNRS 604 (Paris: Éditions du CNRS, 1984), 99–112.

the feast days of the saints, it was necessary to observe the days of each month systematically — that is, to establish a calendar to chart the course of the liturgical year. By the end of the Roman period the calendar, whether carved in stone, painted on walls or written in books, had become a catch-all for a wide variety of information: market days, religious festivals, astrological conjunctions, agricultural activities, political gatherings, historical commemorations, civic events, lucky and unlucky days, and so on.[53] The Church, which adopted the Roman calendar more or less wholesale, might have had little trouble adapting this device for use as a record of the ever-growing number of saints' days and feasts in the liturgical year.[54] But as Richard Pfaff has noted, most psalters before the ninth century do not, in fact, have calendars;[55] nor do most of the psalters imported to England from the Continent in the tenth and eleventh centuries. Calendars are not found as integral parts of sacramentaries until the later tenth century, although they would obviously have been useful there.[56] Pfaff argues that the calendar form with which we are most familiar developed 'out of a core of computistical material and Easter tables', combined with lists of saints and a 'self-consciousness about the sanctoral cycle'.[57] The earliest full calendars — that is, those which could be used as a guide to liturgical practice — appear in connection with martyrologies;[58] the earliest psalter calendars appear in the tenth

[53] See, for example, Werner Bergmann, 'Der römische Kalender: Zur socialen Konstruktion der Zeitrechnung. Ein Beitrag zur Soziologie der Zeit', *Saeculum*, 35 (1984), 1–16.

[54] A comprehensive handlist of Anglo-Saxon psalters can be found in Phillip Pulsiano, 'Psalters', in *The Liturgical Books of Anglo-Saxon England*, ed. Richard W. Pfaff, Old English Newsletter Subsidia 23 (Kalamazoo, MI: Medieval Institute, Western Michigan University, 1995), 61–85. A number of Anglo-Saxon calendars are printed in Wormald, *English Kalendars before A.D. 1100*, but a far more thorough study is Rushforth's *Atlas of Saints in Anglo-Saxon Calendars*. I am deeply indebted to these works for the information that follows; I regret that limitations of space have forced me to remove citations of scholarship on individual manuscripts.

[55] Richard W. Pfaff, 'Why Do Medieval Psalters Have Calendars?', in *Liturgical Calendars, Saints, and Services in Medieval England*, Variorum Collected Studies (Aldershot, Hampshire, and Brookfield, VT: Ashgate, 1998), Chapter 6, 1–15, here at 2–4.

[56] Ibid. 9: 'of the roughly thirty sacramentaries from the eighth to the thirteenth centuries that I have checked — Continental as well as Insular, Young Gelasian, Gregorian, mixed, Anglo-Saxon, and miscellaneous — none has a calendar attached integrally until within a couple of decades on either side of the year 1000.'

[57] Ibid. 15. Metrical calendars, more martyrologies than liturgical guides, are found in a number of manuscripts, including London, BL Cotton Galba A. xviii (s. ix¹, Liège or Rhiems; in England by early s. x; Gneuss 334), a psalter to which a metrical calendar and computus material were added s. x in.; London, BL Cotton Julius A. vi (s. xi in., Canterbury; Gneuss 337), an illustrated metrical calendar and computus materials prefacing a hymnal; London, BL Cotton Tiberius B. v (s. xi, Canterbury? Winchester?; Gneuss 373), an illustrated metrical calendar among computus texts; Oxford, St John's College 17 (*c.*1110, Thorney), a metrical calendar among computus materials.

[58] See, for example, Paris, BNF Lat. 10837, the 'Calendar of St Willibrord' (s. viii in., England? Echternach?; Gneuss 897); *The Calendar of St. Willibrord from MS. Paris. Lat. 10837*, ed. H.A. Wilson, Henry Bradshaw Society 55 (London: Harrison and Sons, 1918). Although it contains many of the features of later psalter calendars, it is attached to a copy of the *Martyrologium Hieronymianum*.

century,[59] and do not seem to have been a regular feature in psalter manuscripts until the eleventh century.[60] What is particularly striking about this evidence is that virtually all the calendars that might serve as a guide to the feasts of the liturgical year, even those in psalters, appear to have been included as an adjunct to the computus, and a number of calendars appear not in psalters at all but in computus manuscripts.[61] The calendar supplied general information on the astronomical shape of each month as well as the critical information needed, in the form of the Golden numbers and Dominical letters down the left-hand columns of each page, to locate Easter. In addition, most calendars also have indications of fortunate and unfortunate days, or accompanying texts relating one's health or fortune to the cycles of the year and month, features that are common in computus manuscripts.[62]

[59] Examples include Oxford, Bodl. Lib. Junius 27, the 'Junius Psalter' (s. x[1], Winchester?; Gneuss 641), a sparse calendar, with some metrical elements; Salisbury, Cathedral Library 150 (c.969–78, West Country; Gneuss 740), a calendar with computus materials, fos 1r–11v; London, BL Add. 37517, the 'Bosworth Psalter' (main text written s. x; calendar added s. x/xi, Canterbury; Gneuss 291).

[60] Examples include London, BL Arundel 155 (c.1012–23, Christ Church, Canterbury; Gneuss 306), with a calendar appearing among prayers and computus materials, fos 1r–10r; Rome, BAV Cod. Reginensis Lat. 12 (s. xi med., Canterbury? Bury St Edmunds; Gneuss 912), with a calendar among computus materials, fos 1r–20v; Oxford, Bodl. Lib. Douce 296, the 'Crowland Psalter' (s. xi med., Crowland; Gneuss 617), with a calendar with computus materials, fos 1r–7v; London, BL Arundel 60 (s. xi[2], c.1075? Winchester NM; Gneuss 304), with a calendar among computus materials, fos 1r–12r; London, BL Cotton Vitellius E. xviii (s. xi, Winchester; Gneuss 407), with a calendar among computus materials and charms, fos 2r–17v. Some psalters are missing some prefatory material, which may have included a calendar. These include Paris, BNF Lat. 8824, the 'Paris Psalter' (s. xi med., unknown; Gneuss 891); London, BL Cotton Tiberius C. vi (s. xi[3], Winchester; Gneuss 378); Rouen, Bibl. mun. 231 (s. xi ex., Canterbury; Gneuss 920). Paris, BNF Lat. 10062, fos 162r–163v (s. xi in., Canterbury; Gneuss 895) is a bifolium from an otherwise unknown calendar, now a flyleaf to a later manuscript.

[61] Examples include Oxford, Bodl. Lib. Digby 63 (s. ix[2], Northumbria; in Winchester by s. x; Gneuss 611); Paris, BNF Lat. 7299 (s. x/ix, Ramsey?, later in Fleury; Gneuss 888); London, BL Cotton Titus D. xxvii (c.1025, Winchester NM; Gneuss 380); Cambridge, Trinity College R.15.32 (c.1025, Winchester NM; Gneuss 186), calendar and computus on pp. 13–36 added to already existing computus materials; Cambridge, Corpus Christi College 422, the 'Red Book of Darley' (s. xi med., Winchester or Sherborne; Gneuss 111), contains masses, offices and a sacramentary, but the calendar appears among computus material; London, BL Cotton Nero A. ii, fos 3–16 (s. xi[2/4], Winchester?; Gneuss 342), originally part of London, BL Cotton Galba A. xiv, a Prayer Book; Cambridge, University Library Kk.v.32 (s. xi ex., SW England; Gneuss 26); London, BL Cotton Vitellius A. xii (s. xi ex., Salisbury; Gneuss 398); London, BL Egerton 3314 (s. xi ex., Canterbury; Gneuss 411), once part of London, BL Cotton Caligula A. xv; Durham, Cathedral Library Hunter 100 (s. xi(?), not in Wormald); London, BL Royal 12. D. iv (s. xi/xii, Canterbury; Gneuss 478.5), a calendar without saints' days. Oxford, Bodl. Lib. Hatton 113 (s. xi[2], Worcester or Evesham; Gneuss 637) is primarily a Wulfstan homiliary, and Cambridge, Corpus Christi College 9 (s. xi[2], Worcester; Gneuss 36) an office and legendary, but both have a calendar and computus added as prefatory materials.

[62] On these see László Sándor Chardonnens, *Anglo-Saxon Prognostics, 900–1100: Studies and Texts* (Leiden and Boston: Brill, 2007) and Roy Michael Liuzza, 'Anglo-Saxon Prognostics in Context: A Survey and Handlist of Manuscripts', *Anglo-Saxon England*, 30 (2001), 181–230.

The calendar was not only a way to locate one's self within the course of the year but also a record of local history and assertion of communal identity, listing commemorations of saints and feast days. A calendar, by what it includes and excludes, presents a view of the world. The liturgical calendar punctuates time with feast days, which are particular ways of recognizing and marking the passage of the seasons, and offer thereby a guide for acting, feeling, praying and celebrating on any given day. The calendar became a system for transforming the historical time of the saints' lives into the cyclical timelessness of their commemoration, its months and days filled with exemplars of Christian virtue and reminders of salvation history, and the seasons of the year are subsumed into the seasons of the liturgy. The Christian calendar gave a new rhythm to the rituals of time that was separate from — even when it coincided with — the traditional cycles of agricultural activity; the Christian calendar transformed timekeeping into a spiritual exercise.

Living in a sacralized cycle of days and hours sanctified by prayer had as much consequence for the medieval view of the world as our mechanical and objective sense of time has had for ours; every system for marking time is a way of organizing and accounting for life. But along with this emotional and spiritual orchestration comes a visual and spatial organization: what the Paschal table does for the years, the calendar does for a single year, providing a textual archive, expandable within the limits of its structure, in which events like the death of an abbot or the translation of a saint's relics might be recorded. A calendar is not a collection of narratives like a martyrology but a visual model of the year, a twelve-page series of registers in which each month fills one page — in effect, each month becomes conceivable as a page to be filled. Time as a lived experience could be visually reconstituted as a list, a booklet; memorable events could be located precisely in the space of the page, and counted forward or backward within the year. As writing is to speech, so a calendar is to time: a tool for making it visible, durable, portable and objectifiable.

The construction of visual models for both cyclical and linear time, and the ability to imagine time as a matrix that exists apart from and prior to the events that fill it, were developments whose consequences were as profound and long-lived, in many respects, as the introduction of literacy and the ability to represent language visually. These new visual models of time reflected new cultural attitudes towards time, and laid the foundation for new discourses of temporality. It would be wrong to say, however, that the Anglo-Saxons 'progressed' from a narrative to a visual sense of time, from chronology to temporality, or from the fluid observational time of the sundial and sky to the regular and abstract time of the Paschal table and liturgical calendar. Rather, like oral and literate ways of communicating, different temporal practices coexisted, each useful in its own context, each influencing the other. A good example of this is the *Menologium*, which prefaces the version of the *Anglo-Saxon Chronicle* in London, BL Cotton Tiberius B. i.[63] This

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[63] s. xi med., Abingdon?; Gneuss 370.2. The poem is edited in *The Anglo-Saxon Chronicle: A Collaborative Edition*, Vol. 5: *MS C*, ed. Katherine O'Brien O'Keeffe (Cambridge: D.S. Brewer, 2001), 3–10.

poem, which has suffered a critical neglect that few would say it has not deserved, presents a narrative chronology of feast days going forward through the year, one after another — five days after this comes that, and four weeks less two days is this, and so on:

CRIST WÆS ACENNYD   CYNINGA WULdor
on midne winter,   mære þeoden,
ece ælmihtig,   on þy eahteoðan dæg
hælend gehaten,   heofonrices weard.
Swa þa sylfan tiid   side herigeas,
folc unmæte,   habbað foreweard gear,
for þy se kalend us   cymeð geþincged
on þam ylcan dæge   us to tune
forma monað;   hine folc mycel
Ianuarius   gerum heton.
And þæs embe fif niht   þætte fulwihttiid
eces drihtnes   to us cymeð,
þæne twelfta dæg   tireadige,
hæleð heaðurofe   hatað on Brytene
in foldan her.   Swylce emb feower wucan
þætte Solmonað   sigeð to tune
butan twam nihtum,   swa hit getealdon geo,
Februarius fær,   frode gesiþas,
ealde ægleawe.[64]

Pauline Head has noted the lively and active language used to describe the seasons — they travel, arrive, glide, stride into town, while the speaker and his audience observe or 'hold' (*healdan*) the liturgical seasons and feasts of the saints.[65] This depiction of time gliding past a stationary observer is somewhat akin to what Nicholas Howe has called 'narrative geography',[66] arising from the sense of being *in* time the way one is in a landscape, not standing above it, registering time as a lived process, somewhat like a pageant or passing parade, not as an abstract product.

[64] ll. 1–19: 'Christ, king of glory, was born on midwinter, the famous Prince, eternal and almighty, [and] on the eighth day was named "Saviour", guardian of Heaven's kingdom. And on that same day vast crowds, numberless peoples, keep the year's beginning, because the kalends is set to come to us in our town on that same day in the first month; a great people years ago called him January. And five nights later the baptismal time of the eternal Lord comes to us, which battle-brave and glorious heroes among the Britons call Twelfth Day in this land. And then four weeks later *Solmonath* arrives in town (minus two nights), as was reckoned long ago by wise companions, the course of February, by the old wise ones.'

[65] Pauline Head, 'Perpetual History in the Old English *Menologium*', in *The Medieval Chronicle: Proceedings of the 1st International Conference on the Medieval Chronicle, Driebergen/Utrecht, 13–16 July 1996*, ed. Erik Kooper (Amsterdam and Atlanta, GA: Rodopi, 1999), 155–62, here at 157. This is a marked difference from the Latin metrical calendars noted above, which announce days and commemorations in staid hexameters, unconnected to one another.

[66] Nicholas Howe, *Writing the Map of Anglo-Saxon England* (New Haven: Yale University Press, 2008), 191, and see generally his 'An Angle on this Earth: Sense of Place in Anglo-Saxon England', *Bulletin of the John Rylands University Library of Manchester*, 82:1 (2000), 3–27.

But the *Menologium* is a journey through the Church year, derived from the calendar, as the poem's counting forward and backward suggests — the poem is a kind of narrative reappropriation of the visual filing cabinet of the ecclesiastical calendar. Narrative and spatial ways of imagining time, like oral and written forms of communication, are interdependent, not exclusive.

Ecclesiastical practices of timekeeping introduced not only new ways of imagining time but also a new sense of the need for precision in observing the hours, days and years. With any change comes resistance, and with new awareness, anxiety; new discourses of temporality inevitably disrupted the ways people imagined and experienced time. I have noted elsewhere the many ways in which Old English texts reveal a degree of anxiety over historicism — not just the fear of historical oblivion but a concern with maintaining a historiographical discourse in which the present exists in an ethical relationship to a past that is dependent upon it for its continued existence, a resistance to placing memory within a larger and entirely fixed framework of consecutive years, recorded in writing, deferring to abstract sequence as the enabling mode of remembrance.[67] This resistance to historicism is evident in everything, from the obsession with ruins in the elegies to the ambivalent status of monumental commemoration in *Beowulf*, to the tendency of the authors of the *Anglo-Saxon Chronicle* to rise to, or in some cases lapse into, heroic or elegiac verse for key moments in its otherwise chronologically organized account, drawing on the resonances of the poetic tradition rather than the prose annals to assert continuity and repetition, rather than distance or difference, between the past and present. I think one might discern a similar note of anxiety over temporality: most obviously the fear of being late, woven into the very fabric of Benedictine observance; in Bede's reluctance to impose measurement upon the smaller units of hours and minutes;[68] in the more or less constant concern — apparently not unfounded — that astronomical observation might lead to astrological speculation;[69] in a fear of the hubris that is inherent in a record of years whose forward arc stretched into the precincts of the last days themselves. The acceptance of a fixed reference point for the counting of years, combined with the belief that the world had a trajectory which it traversed in six ages from creation to the present day, might encourage heretical speculation about the end of the present age and the imminent end of time, a charge from which even Bede had

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[67] See R.M. Liuzza, 'The Tower of Babel: *The Wanderer* and the Ruins of History', *Studies in the Literary Imagination*, 36:1 (2003), 1–35, and '*Beowulf*: Monuments, Memory, History', in *Readings in Medieval Texts: Interpreting Old and Middle English Literature*, eds Elaine Treharne and David Johnson (Oxford: Oxford University Press, 2005), 91–108.

[68] See Bede, *DTR*, Chapter 3.

[69] See M.L.W. Laistner, 'The Western Church and Astrology during the Early Middle Ages', *Harvard Theological Review*, 34:4 (1941), 251–75; Theodore Otto Wedel, *The Mediæval Attitude toward Astrology, Particularly in England*, Yale Studies in English 60 (New Haven: Yale University Press, 1920); J.D. North, 'Medieval Concepts of Celestial Influence: A Survey', in *Astrology, Science and Society: Historical Essays*, ed. Patrick Curry (Woodbridge: The Boydell Press, 1987), 5–17.

to defend himself.[70] The great importance that Bede attached to the Easter contro-versy, and his condemnation of the stubborn unwillingness of the Irish to defer to the Roman Church in this matter, is well known. Bede's concern with uniform-ity of Paschal observance was not merely an assertion of Roman hegemony or a mathematical pretext for national antipathies but a deeply charged anxiety over how we are situated in time, how accurately we have orientated our lives in rela-tion to the Incarnation of Christ. Having different ways of measuring sacred time within the same faith calls into question all the ways of locating oneself in time, and ultimately vitiates the very act of doing so. Aware as he was of the danger-ously conventional nature of systems of reckoning time, Bede was concerned that his temporal practice would transcend culture and convention and be congruent with the Divine Order established by God and revealed in the cosmos. For Bede there must be one calendar, as there must be one truth and one Church. His *De temporum ratione* starts with a lesson in how to count but ends with a reflection on Doomsday; it moves quite logically from numbering, to reckoning Easter, to contemplating the end of the world. The proper organization of time, as his work suggests, was no less than the proper organization of the world and the individual soul within it, the proper orientation to God, *qui novit temporum fines: imo ipse labentibus temporum curriculis finem cum voluerit imponet* ('who knows the limits of the ages; indeed, when He sees fit, He himself shall decree an end to the unstable cycles of time').[71] The ability to measure time places one in an eschatological relationship to it: as soon as we can count it we are aware that it is running out.

This may be, finally, the most profound difference between Anglo-Saxon time and our own: the sense that time is finite, and that it devolves as it approaches its destination. This tragic view of temporality is as much secular as it is biblical, as Germanic as it is Christian. A number of royal charters begin with a pious refer-ence to 2 Corinthians 4: 18, *Omnia quae uidentur temporalia sunt, et quae non uidentur aeterna sunt* ('For things which are seen are temporal, but things which are not seen are eternal'); the homilist famously says *ðeos woruld is on ofste,* 7 *hit nealæcð þam ende,* 7 *þy hit is on worulde aa swa lencg swa wyrse* ('This world is hurrying, and nearing its end, and in this world it is always the longer the worse'), to which the poet adds *Her bið feoh læne, her bið freond læne, her bið mon læne, her bið mæg læne, eal þis eorþan gesteal idel weorþeð* ('Here wealth is fleeting, friends are fleeting, man is fleeting, woman is fleeting, all the foundation of this world will stand empty').[72]

[70] Bede, *Epistola ad Pleguinam*, in *Bedae Venerabilis Opera*, Part 6: *Opera didascalica 3*, ed. C.W. Jones, Corpus Christianorum Series Latina 123C (Turnhout: Brepols, 1980), 618–26; translated by Wallis, *Bede: The Reckoning of Time*, 405–15.

[71] Bede, *DTR*, Preface.

[72] Wulfstan, *Sermo Lupi ad Anglos*, in *The Homilies of Wulfstan*, ed. Dorothy Bethurum (Oxford: Clarendon Press, 1957), 255; 'The Wanderer', in *The Exeter Book*, eds George Philip Krapp and Elliott Van Kirk Dobbie, Anglo-Saxon Poetic Records 3 (London: George Routledge & Sons; New York: Columbia University Press, 1936), 137, ll. 108–10.

The few examples presented here may give some sense of the various ways of speaking of time, reckoning time and being in time among the Anglo-Saxons. Modernity requires that 'time' be an objective, external, discrete entity, separate from the events that occur within it, just as space exists apart from the objects that fill it; but time is also a lived experience, a way of situating oneself in the world, and an enabling structure for other forms of perception, modes of discourse and patterns of culture. It is contingent, and it inheres in cultural productions. Temporality is central to culture, but it is seldom explicated; literary critics have often remarked on the Anglo-Saxon fascination with ruins, those ancient works of giants, and we are all familiar with the heroic quest for a *dom* that would endure forever, but what do we know about how a year felt, or a day, or an hour? Recapturing this sense of embodiment in time, and the diverse ways it could be manifest, must also be part of our work as literary and cultural historians. A culture's sense of time leaves its mark on its vision of the past, its hope for the future; on ideas about duration and longevity, youth and age, permanence and transience; on ritual and ceremony; on modes of remembrance and terrors of oblivion. Our tendency to push technical works like calendars and treatises on time reckoning to the margins of literary study, leaving them to the historians of science or of liturgy, only makes it more difficult for us to understand the frameworks in which the Anglo-Saxons thought about the past, the present and the future. Scientific and technical works on time and chronology trace a network of connections between (among other things) salvation, science, politics, history, memory and power; if we allow these texts to remain on the margins of scholarly inquiry we will have a distorted sense of how the Anglo-Saxons found and fixed their place in their world.